

EDITED BY

JENS

FORSSBÆCK

LARS

OXELHEIM

≡ The Oxford Handbook *of*
**ECONOMIC AND
INSTITUTIONAL
TRANSPARENCY**

THE OXFORD HANDBOOK OF

**ECONOMIC AND
INSTITUTIONAL
TRANSPARENCY**

CONSULTING EDITORS

Michael Szenberg

Lubin School of Business, Pace University

Lall Ramrattan

University of California, Berkeley Extension

THE OXFORD HANDBOOK OF

ECONOMIC AND
INSTITUTIONAL
TRANSPARENCY

Edited by
JENS FORSSBÆCK
and
LARS OXELHEIM

OXFORD
UNIVERSITY PRESS

OXFORD

UNIVERSITY PRESS

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide.

Oxford New York
Auckland Cape Town Dar es Salaam Hong Kong Karachi
Kuala Lumpur Madrid Melbourne Mexico City Nairobi
New Delhi Shanghai Taipei Toronto

With offices in
Argentina Austria Brazil Chile Czech Republic France Greece
Guatemala Hungary Italy Japan Poland Portugal Singapore
South Korea Switzerland Thailand Turkey Ukraine Vietnam

Oxford is a registered trademark of Oxford University Press
in the UK and certain other countries.

Published in the United States of America by
Oxford University Press
198 Madison Avenue, New York, NY 10016

© Oxford University Press 2015

All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system, or transmitted, in any form or by any means, without the prior
permission in writing of Oxford University Press, or as expressly permitted by law,
by license, or under terms agreed with the appropriate reproduction rights organization.
Inquiries concerning reproduction outside the scope of the above should be sent to the
Rights Department, Oxford University Press, at the address above.

You must not circulate this work in any other form
and you must impose this same condition on any acquirer.

Library of Congress Cataloging-in-Publication Data

CIP data is on file at the Library of Congress

ISBN 978-0-19-991769-3

1 3 5 7 9 8 6 4 2
Printed in the United States of America
on acid-free paper

CONTENTS

<i>List of Figures and Tables</i>	ix
<i>Preface</i>	xiii
<i>List of Contributors</i>	xvii

PART I INTRODUCTION

1. The Multifaceted Concept of Transparency	3
JENS FORSSBÆCK AND LARS OXELHEIM	

PART II POLICY TRANSPARENCY

2. Constitutional Transparency	33
RICHARD J. SWEENEY	
3. Monetary Policy Transparency	68
PETRA M. GERAATS	
4. Fiscal Policy Transparency	98
IAIN BEGG	
5. Transparent and Unique Sovereign Default Risk Assessment	116
EDWARD I. ALTMAN AND HERBERT A. RIJKEN	
6. Transparency and Competition Policy in an Imperfectly Competitive World	144
PHILIPPE GUGLER	
7. Transparency in International Trade Policy	166
MICHAEL G. PLUMMER AND ALISSA TAFTI	
8. Transparency of Climate Change Policies, Markets, and Corporate Practices	179
THOMAS L. BREWER AND MICHAEL MEHLING	

9. Transparency of Human Resource Policy 198
ERIK MELLANDER
10. Transparency of Innovation Policy 219
BO CARLSSON

PART III INSTITUTIONAL, MARKET, AND REGULATORY TRANSPARENCY

11. Labor Market Transparency 241
ESKIL WADENSJÖ
12. Transparency of Financial Regulation 258
JAMES R. BARTH, APANARD (PENNY) PRABHA, AND CLAS WIHLBORG
13. Price Transparency and Market Integration 286
RICHARD FRIBERG
14. Transparency and Inward Investment Incentives 304
FREDERICK LEHMANN AND ANA TERESA TAVARES-LEHMANN
15. Transparency and Corruption 323
ALVARO CUERVO-CAZURRA

PART IV CORPORATE TRANSPARENCY

16. Multinational Corporations' Relationship with Political
Actors: Transparency versus Opacity 341
PERVEZ N. GHOURI, AMJAD HADJIKHANI, AND CECILIA PAHLBERG
17. Corporate Governance and Optimal Transparency 359
TOM BERGLUND
18. Transparency Differences at the Top of the Organization:
Market-Pull versus Strategic Hoarding Forces 371
WINFRIED RUIGROK, DIMITRIOS GEORGAKAKIS, AND PEDER GREVE
19. Governance Transparency and the Institutions of
Capitalism: Implications for Finance 387
RAJ AGGARWAL AND JOHN W. GOODELL
20. Transparency and Executive Compensation 413
RAGHAVENDRA RAU

21. Transparency and Disclosure in the Global Microfinance Industry	434
LEIF ATLE BEISLAND, ROY MERSLAND, AND TROND RANDØY	
22. Accounting Transparency and International Standard Setting	456
SIDNEY J. GRAY AND HELEN KANG	
23. Transparency of Fair Value Accounting and Tax	477
EVA EBERHARTINGER AND SOOJIN LEE	
24. Transparency of Corporate Risk Management and Performance	495
PETER MACKAY	
25. Stress Testing, Transparency, and Uncertainty in European Banking: What Impacts?	521
RYM AYADI AND WILLEM PIETER DE GROEN	
<i>Index</i>	545

LIST OF FIGURES AND TABLES

FIGURES

2.1	Shift in the transformation function	46
3.1	Conceptual framework for transparency aspects	71
3.2	Transparency trends across monetary policy frameworks	76
5.1	Number of sovereign “defaults” 1824–2004	120
5.2	Type I error for agency ratings, Z''-score, and Z-Metrics agency equivalent (AE ratings (1989–2008): one-year prediction horizon for publicly owned firms)	127
5.3	Five-year implied probabilities of default (PD) from capital market CDS spreads, January 1, 2009–March 4, 2013. Assumes 40% recovery rate (R). PD computed as $1 - e^{(-5*s/(1-R))}$.	131
5.4	Greece: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1-R))}$	134
5.5	Portugal: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1-R))}$	134
5.6	Ireland: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1-R))}$	135
5.7	Spain: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1-R))}$	135
5.8	Italy: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1-R))}$	136
6.1	Competition policy	145

9.1	Stylized returns to different stages of education and training	204
12.1	Country averages of actual risk-based capital ratios worldwide	268
12.2A	Capital ratios of the world's biggest banks prior to the bailout period. Tier 1 capital ratio	268
12.2B	Capital ratios of the world's biggest banks prior to the bailout period. Total risk-based capital ratio	269
12.2C	Capital ratios of the world's biggest banks prior to the bailout period. Common equity to total assets	270
12.2 D	Capital ratios of the world's biggest banks prior to the bailout period. Tangible equity to total assets	271
12.3	Selected G-SIBs in Europe and the United States ranked both by reported total assets and total assets when derivatives are on a gross, not net (US GAAP), basis (IFRS), 2011	273
12.4	Differences in total assets of US G-SIBs due to differences in the accounting treatment of derivatives (2011)	274
12.5	Impact of the treatment of derivatives on the leverage ratios (assets-to-equity) for the US and European G-SIBs (2011)	275
16.1	Degrees of opacity and transparency	345
16.2	Theoretical view of the relationship among transparency, legitimacy, and trust	346
16.3	Degree of legitimacy and transparent behavior	348
18.1	The onion model of BoD and TMT transparency	375
18.2	Transparency of different types of BoD and TMT characteristics: The strategic hoarding perspective	379
19.1	The association between governance transparency and social trust	404
19.2	The association between transparency and behavioral trust formation	406
19.3	The association between transparency and equity participation	407
19.4	The association between governance transparency and cost of equity	408
19.5	The association between transparency and financial architecture	408
22.1	IASB's governance structure	467
25.1	Evolution of the market-to-book ratios from 2006 to 2012	522
25.2	Cumulative average abnormal return, 2006–2013	527
25.3	Cumulative Average Abnormal Returns—Exercise announcement	532
25.4	Cumulative Average Abnormal Returns—Methodology disclosure	533
25.5	Cumulative Average Abnormal Returns—Exercise results	535

TABLES

2.1	Simplified Amendment Rules, 25 Countries/Federations	36
3.1	Trends in Monetary Policy Transparency	73
5.1	Financial Crises, Advanced Countries 1870–2010	119
5.2	Financial Health of the Corporate, Nonfinancial Sector: Selected European Countries and the United States in 2008–2012 (6/30)	128
5.3	Financial Health of the Corporate, Nonfinancial Sector: Selected European Countries and United States in 2008–2012 (6/30)	129
5.4	Weighted Average Median Five-Year (PD) for Listed Nonfinancial and Banking Firms (Europe and United States), 2010	133
5.5	Private vs. Public Firm Model PDs in 2010 and 2099	137
6.1	Combination of Perfect Market Criteria	147
6.2	Incentives to Collude According to the Degree of Information and the Type of Products	148
8.1	Firms' Disclosures of Climate Change Risks in US SEC Filings (number of firms with some disclosure of the information indicated)	185
12.1	Information on Factors Considered for Large/Interconnected Banks of Selected Countries	277
12.2	Information on Regulations for Large/Interconnected Banks of Selected Countries	278
12.A1	Selected Information on Bailout and Capital Ratios of the World's Biggest Banks	282
12.A2	Accounting Standards for Selected Countries That Are Headquarters of the World's Biggest Banks	284
15.1	Agency Relationships in a Corrupt Transaction, the Impact of Transparency, and the Limitations of Transparency for Reducing Corruption	327
18.1	Advantages and Disadvantages of BoD and TMT Transparency: Market-pull versus Strategic Hoarding Perspective	376
18.2	Corporate Governance in Switzerland, the Netherlands, and the United Kingdom	380
18.3	Transparency Patterns at European TMTs and BoDs	381
19.1	Disclosure Variables from Bushman et al. (2004) and Djankov et al. (2008) for Countries That Have Both Reported	401
21.1	Transparency and Disclosure in Relation to Key Stakeholders	438
22.1	Market Proxies of Accounting Transparency	462
22.2	Factors Associated with Accounting Transparency	463
22.3	Accounting Standards Issued by the IASB as of August 2013	468

22.4	World's Major Economies (G-20) and the Adoption of IFRS	471
24.1	Hedging Gains/Losses and Sample Firm Characteristics—Annual and Quarterly	507
24.2	Discretionary Accruals and Hedging Gains/Losses	510
24.3	Hedging Gains/Losses by Industry	511
24.4	Regression of Risk Measures on Hedging Gains/Losses	515
24.5	Performance Differences for Firms that Do or Do Not Report Hedging Gains/Losses	516
25.1	Overview Cross-border Stress Tests of European Banks, 2009–2013	529
25.2	Stress-Tested Banks Average Residuals—Exercise Announcement	532
25.3	Average Residuals of Stress-Tested Banks—Methodology Disclosure	533
25.4	Average Residuals of Stress-Tested Banks—Results Disclosure	535
25.5	CAAR Differences between Business Models	536
25.A1	Stress-Tested Banks	539

PREFACE

“TRANSPARENCY” has become a catchword in the economic-political debate in recent years. The reasons are manifold, but a series of big events and broad trends have been instrumental in bringing the role of transparency in business, economics, and politics to public attention. In the business world, for instance, a series of corporate scandals in the early 2000s (Enron, Tyco, WorldCom, Parmalat, Ahold, etc.) triggered a dramatically increased interest in corporate transparency and resulted in the invocation of new corporate governance codes, disclosure rules, or similar regulation, in many countries (e.g. the Sarbanes-Oxley Act in the US and the EU’s Transparency Directive). The series of financial crises in emerging market economies in the mid-1990s (among them the Asian crisis in 1997–98) were to many commentators consequences of opaque corporate structures, weak institutions, and resulting moral hazard problems. Finally, the outbreak of the financial crisis following the Lehman Brothers collapse put the spotlight on the non-transparency of complex financial instruments and risk-taking in large financial institutions, and clearly showed that opaqueness in the financial sector is not just a problem in emerging markets.

Parallel to these events has been a more or less universal trend toward rule-based macroeconomic stabilization policies, which has incited wide concern with the transparency of economic policy, and of the institutions that execute it. The concern has been raised both from the point of view of policy efficiency and from that of democratic accountability. The debate initially primarily targeted monetary policy conducted by politically independent central banks, but has increasingly shifted focus to the transparency of fiscal policy rules and public finances—largely due to the ongoing sovereign debt crisis in several countries.

A host of other factors has contributed to the growing interest in transparency, such as increased international integration of markets for goods and services, leading to increased price transparency both at the retail and intermediary levels and redefinitions of market structure and competition. Cross-border competition now also extends to public policy in the form of regulatory competition, “benchmarking” and establishment of “best practices” in a wide range of policy areas, often with the explicit goal that transparency in combination with “naming and shaming” will engender peer pressure toward ever more efficient and transparent policies. E.g., in the early 2000s, the EU adopted the Open Coordination Method in its Lisbon Strategy for increased competitiveness, thus building on an implicit assumption about a relationship between transparency and economic growth.

It is not immediately clear from these various but related examples what exactly transparency means, except that it has to do with openness, information, communication, etc. One thing is clear, though: The importance of the concept of transparency has not just increased in the public debate, but has also gained tremendous momentum in economic research during the last one or two decades. One way to illustrate this is to make a word search in the National Bureau of Economic Research (NBER) working papers. Such a search shows that out of approximately 90 papers featuring the word “transparency” in the abstract, about 85% were issued in 2000 or later (and none before 1993), whereas the NBER WP series has been in existence since 1973. It also shows the diversity of research areas in which transparency plays a role, with about 1/3 of the hits in monetary economics, 1/4 in international finance, 10–15% each in general macroeconomics and corporate finance, and the remainder scattered between public economics, international trade, asset pricing, and labor economics.

The increased importance of transparency in economic research and its application within a wide range of different sub-areas of economics have called for a reference work that surveys existing research on transparency, unifies the main “takes” on transparency extant in the literature within a coherent conceptual framework, and presents original research that explores the significance of transparency in different areas within the boundaries of this framework. To that purpose, we have invited prominent scholars from all over the world to contribute 25 high-quality research chapters to the current book which aims to study transparency in three main areas: in economic policy, in the institutional structures surrounding the markets, and in the corporate sector.

The interdisciplinary approach required for a proper analysis of the multidimensional transparency concept and its application makes most traditional scientific journals less well suited as an outlet for the result of such an analysis. This motivates why the results are here presented in the form of a book. The process behind the book was similar to that behind special issues in conventional refereed journals. Following presentation of the main ideas of the project along the lines now appearing in Chapter 1, a number of researcher teams were invited to contribute and to address different parts of the research question. First drafts of the chapters were discussed at a workshop held at the Trolleholm Castle in the south of Sweden in February 2013. Each contribution was refereed by two of the participating contributors to the book in addition to the editors and then discussed at a seminar during the three day meeting where the appointed referees acted as discussant. A second draft of each chapter was discussed at a workshop in Mölle in May, 2013. Also on this occasion, each contribution had two appointed discussants. The final manuscript was then delivered to us at the end of November 2013.

Our biggest gratitude now goes to all the colleagues who have contributed different chapters to the book, and participated in the Trolleholm and Mölle workshops. We are grateful for their efforts and constructive attitudes in working with their own chapters, as well as for reading and commenting on the other contributions. We would also like to thank our colleagues at the School of Economics and Management, Lund University,

The Research Institute of Industrial Economics, Stockholm, and other places to which we are affiliated for their contributions and support in various forms.

We also gratefully acknowledge the generous financial support granted by NASDAQ OMX and VINNOVA. In particular, our thanks go to Frank Hatheway and Peter Svensson who were both instrumental in providing the support for the two workshops. The financial support made it possible to bring together scholars from all over the world for productive face-to-face discussions from which the quality of the book has so greatly benefitted.

LIST OF CONTRIBUTORS

Raj Aggarwal Frank C. Sullivan Professor of International Business and Finance in the Department of Finance at The University of Akron, Akron, OH.

Edward I. Altman Max L. Heine Professor of Finance of Stern School of Business at New York University, New York, NY.

Rym Ayadi Professor at HEC Montréal and Senior Research Fellow at the Centre for European Policy Studies (CEPS), Brussels, Belgium.

James R. Barth Lowder Eminent Scholar in Finance at Auburn University, Auburn, AL.

Iain Begg Professorial Research Fellow at the European Institute of the London School of Economics, London, UK.

Leif Atle Beisland Associate Professor in the Department of Economics and Business Administration at University of Agder, Kristiansand, Norway.

Tom Berglund Professor of Applied Mathematics and the Theory of the Firm at the Department of Economics, Hanken School of Economics, Helsinki, Finland.

Thomas L. Brewer Senior Fellow, International Centre for Trade and Sustainable Development (ICTSD), Geneva, Switzerland.

Bo Carlsson Professor Emeritus of Economics at Weatherhead School of Management, Case Western Reserve University, Cleveland, OH.

Alvaro Cuervo-Cazurra Professor of International Business and Strategy in the D'Amore-McKim School of Business at Northeastern University, Boston, MA.

Willem Pieter De Groen Researcher at the Centre for European Policy Studies (CEPS), Brussels, Belgium.

Eva Eberhartinger Professor at Vienna University of Economics and Business in the Institute for Auditing, Trust and Accounting, Vienna, Austria.

Jens Forssbäck Associate Professor at Lund University School of Economics and Management and the Knut Wicksell Centre for Financial Studies, Lund, Sweden.

Richard Friberg Jacob Wallenberg Professor in the Department of Economics at Stockholm School of Economics, Stockholm, Sweden.

Dimitrios Georgakakis Research Fellow at the Research Institute for International Management at University of St. Gallen, St. Gallen, Switzerland.

Petra M. Geraats Lecturer in the Faculty of Economics at the University of Cambridge, Cambridge, UK.

Pervez N. Ghauri Professor in the Department of Management at King's College London, London, UK.

John W. Goodell Associate Professor of Finance in the Department of Finance at The University of Akron, Akron, OH.

Sidney J. Gray Professor in the Department of International Business at the University of Sydney Business School, Sydney, Australia.

Peder Greve Lecturer in International Business at Henley Business School, University of Reading, Reading, UK.

Philippe Gugler Professor, Center for Competitiveness and Chair of Economic and Social Policy at the University of Fribourg, Fribourg, Switzerland.

Amjad Hadjikhani Professor of Marketing in the Department of Business Studies at Uppsala University, Uppsala, Sweden.

Helen Kang Senior Lecturer in the Australian School of Business at University of New South Wales, Sydney, Australia.

Soojin Lee Doctoral Student in International Business Taxation at Vienna University of Economics and Business, Vienna, Austria.

Frederick Lehmann Visiting Professor at Católica-Lisbon School of Business and Economics, Lisbon, Portugal, and at Porto Business School, Porto, Portugal.

Peter MacKay Associate Professor in the Department of Finance at Hong Kong University of Science and Technology, Hong Kong.

Michael Mehling Executive Director, Center for Energy and Environmental Policy Research (CEEPR), Massachusetts Institute of Technology, Cambridge, MA.

Erik Mellander Associate Professor of Economics and Deputy Director-General at the Institute for Evaluation of Labour Market and Education Policy (IFAU), Uppsala, Sweden.

Roy Mersland Professor in the Department of Economics and Business Administration at University of Agder, Kristiansand, Norway.

Lars Oxelheim Professor at Lund University School of Economics and Management, Lund, Sweden; the Research Institute of Industrial Economics (IFN), Stockholm, Sweden and University of Agder, Kristiansand, Norway.

Cecilia Pahlberg Associate Professor in the Department of Business Studies at Uppsala University, Uppsala, Sweden.

Michael G. Plummer Eni Professor of International Economics at the School of Advanced International Studies (SAIS) the Johns Hopkins University, Bologna, Italy.

Apanard (Penny) Prabha Economist in Financial Research Group at Milken Institute, Santa Monica, CA.

Trond Randøy Professor in the Department of Economics and Business Administration at University of Agder, Kristiansand, Norway.

Raghavendra Rau Sir Evelyn de Rothschild Professor of Finance at Judge Business School at University of Cambridge, Cambridge, UK.

Herbert A. Rijken Professor of Corporate Finance in the Department of Finance in the Faculty of Economics and Business Administration at VU University Amsterdam, Amsterdam, Netherlands.

Winfried Ruigrok Professor of International Management and Dean of the Executive School of Management, Technology & Law at University of St. Gallen, St. Gallen, Switzerland.

Richard J. Sweeney Sullivan/Dean Professor of International Business and Finance at Georgetown University, Washington, DC.

Alissa Tafti Formerly, Independent International Trade Consultant. Currently, International Economist at the United States International Trade Commission, Washington, DC.

Ana Teresa Tavares-Lehmann Associate Professor of Economics at the School of Economics, University of Porto and Head of International Business at Porto Business School, Porto, Portugal.

Eskil Wadensjö Professor of Economics at the Swedish Institute for Social Research (SOFI) at Stockholm University, Stockholm, Sweden.

Clas Wihlborg Professor and Fletcher Jones Chair in International Business at the George L. Argyros School of Business and Economics at Chapman University, Orange, CA.

THE OXFORD HANDBOOK OF

**ECONOMIC AND
INSTITUTIONAL
TRANSPARENCY**

PART I

INTRODUCTION

CHAPTER 1

THE MULTIFACETED CONCEPT OF TRANSPARENCY

JENS FORSSBÆCK AND LARS OXELHEIM

1.1 INTRODUCTION

“TRANSPARENCY” has become a catchword in the economic–political debate. The term is used and overused—sometimes perhaps misused. The catch-all nature and general positive ring of the concept are no doubt important reasons for its increased popularity, but a series of events and broad trends over the last two decades have also charged the concern for transparency in business, economics, and politics with real substance.

One starting point was the series of financial crises in emerging market economies in the mid-1990s—among them the Asian financial crises in 1997–98—which were widely viewed as consequences of opaque corporate structures, weak institutions, and an insufficiency of accurate information on the true balance-sheet standing of firms as well as governments in these countries (see, e.g., Perotti and von Thadden, 2005; Hooper and Kim, 2007). But the more recent financial crisis also put the spotlight on the non-transparency of complex financial instruments and risk-taking in large financial institutions, and clearly showed that opaqueness in the financial sector is an issue not just in emerging markets (see, e.g., De Soto, 2012).

Another broad trend is the gradual change over the last decades toward more rule-based macroeconomic stabilization policies, which has incited a debate about the transparency of economic policy and the government bodies that execute it. The debate feeds on arguments raised from the point of view both of policy efficiency and of democratic accountability. It initially bore primarily on monetary policy and central banking, but in recent years the focus has increasingly shifted to the transparency of fiscal policy and public finances—not least following the sovereign debt crisis in Europe, which has, for some countries, been linked to non-transparency (or downright fraud) in government accounts. Similar concerns have been raised recently regarding some emerging markets’ disclosure of macroeconomic outcomes. A more broad-based

initiative for government policy transparency was the current US administration's launch of its *Open Government Directive* in 2009 (see, e.g., *The Economist*, 2012).

Increasingly internationalized economies during the last decades have resulted in a correspondingly increased role of multilevel, supranational governance, which in turn has raised questions about traditional intergovernmental decision processes based on the strict sovereignty of nation-states and calls for more transparency and accountability in multilateral bodies such as the International Monetary Fund (IMF) and the World Trade Organization (WTO). A short-lived surge in such calls in the early 2000s has gained renewed strength as a result of the role of, for example, the European Union (EU) and the IMF in managing the aftermath of the financial crisis, especially in the worst-hit countries (but this time with a more nationalist flavor). International organizations themselves, on the other hand, have wholeheartedly embraced transparency. The IMF's adoption of a "Code of Good Practices on Fiscal Transparency" is one example (IMF, 2007).

In the business world, a series of scandals in the early 2000s, both in the United States and in Europe (Enron, Tyco, WorldCom, Parmalat, Ahold, etc.), heightened interest in and attention to corporate governance, conflicts of interest between different stakeholder groups in the firm, and corporate social responsibility. Improved corporate transparency has been regarded as a primary remedy for such problems, and the attention has resulted in new regulation and codes of conduct in many countries, such as the Sarbanes–Oxley Act in the United States (2002), the EU's Transparency Directive (2004), Organisation for Economic Co-operation and Development (OECD) Principles of Corporate Governance (2004), and the UK Corporate Governance Code (2010). A related development is the increasing adoption worldwide of the International Financial Reporting Standards (IFRS) principles for corporate disclosure (2005), and the emphasis on information disclosure in the Basel rules for bank regulation (Basel 1-3, 1988–2011, the last accord to be implemented by 2018)—reflections of a trend toward increased convergence and transparency in, respectively, corporate financial reporting and disclosure of bank risk.

Yet another broad reason for the increased interest in transparency is related to the rapid development of information technology. Among many other things, this development has been expected to increase price transparency, thereby boosting competition and enhancing the efficiency and integration of the goods and services markets, both at the retail and at the intermediary levels.

From its use in the economic–political debate it is not always very clear what exactly transparency means, except that it has to do with openness, clarity and accessibility of information, and communication. But as the concept of transparency—or perhaps one should more fittingly talk of the "idea" of transparency, including all its promises and positive connotations—has gained increasing general popularity, it has also seeped its way into academic research in a broad range of social science disciplines.

As in everyday usage, media reporting, and the "speak" of policymakers and business leaders, transparency in social sciences can have different meanings, rationales, and implications. The purpose of this chapter is to provide an overview of the definitions

and use of the concept of transparency in economics and business research in particular. An initial caveat is warranted. The “take” on transparency in economic research rests on different, but often related, sources and research traditions—accounting, corporate finance, development economics, institutional economics, monetary economics, public economics, and more. But framing transparency in terms of basic concepts in the economics of information makes the potential application of transparency in economics practically limitless. Any problem that incorporates the idea of asymmetrically distributed information between different economic agents makes an assumption about transparency, and is potentially affected by altered assumptions about it.

Asymmetric information is at the very core of agency relationships, adverse selection problems, intermediation, signaling, the economics of trust and reputation, and so forth. All are based on the notion that rational, self-interested individuals—when equipped with information that others do not have—will make economic decisions that result in inefficiencies, market failures, or at the very least outcomes that are *different* (and typically “worse”) as compared to those in the full-information Arrow–Debreu world. We therefore cannot hope to make a comprehensive survey of all relevant literature in the area. The chapter is, rather, an attempt to provide a structure to our thinking about transparency and to discern some common denominators in the various ways it has been used so far in economic research.

The chapter is organized in the following way. In Section 1.2 we attempt to delineate the meaning(s) of transparency as used in economics and business research. The broadness of the term makes a strict and universally viable definition virtually impossible; what we go for here is instead to trace out a number of requisites that make the identification of a few main aspects of transparency possible. In Section 1.3 we discuss possible rationales for transparency. The general intuition is that transparency is “good.” But why? What are the *desiderata* that transparency is supposed to achieve (or is it an end in itself)? Section 1.4 further discusses the effects of transparency, including a brief review of empirical results in some key areas. In Section 1.5 we elaborate on the existence of “optimal” transparency, based on the general insight that transparency has costs as well as benefits, and that the net benefits may not be monotonically growing in transparency. Section 1.6 summarizes the chapter.

1.2 THE MEANING OF TRANSPARENCY

There are many possible ways to slice the concept of transparency. Corporate transparency is distinct from the transparency of government policy. Transparency about the government’s policy decisions is distinct from transparency about the processes and procedures by which these decisions are reached. There can be varying degrees of transparency between different geographical markets, at different levels of government, in terms of the extent to which prices in a particular market are informative about fundamental values or underlying demand and supply conditions, and so forth.

One way to get an initial grasp of the concept is to review a few broad, general definitions. For instance, according to the OECD, “[b]udget transparency is defined as the full disclosure of all relevant fiscal information in a timely and systematic manner” (OECD, 2002, p. 7). The WTO’s 2014 glossary defines transparency as the “degree to which trade policies and practices, and the process by which they are established, are open and predictable.” United Nations Conference on Trade and Development (UNCTAD, 2012) defines transparency as “a state of affairs in which the participants in the investment process are able to obtain sufficient information from each other in order to make informed decisions and meet obligations and commitments” (p. 7).

Some common denominators can be distinguished. Clearly, the initial state is that an agent has access to information that others do not have. Information (about a budget, a policy, a decision-making process) is then made available for observation by others. The information made available should be relevant and possible to use as a basis for decisions, and the manner in which it is made available should be systematic. Transparency is associated with openness and—at least when referring to policies or practices—predictability.

It thus seems reasonable to identify the existence of information asymmetries as a key prerequisite for a meaningful discussion of transparency. Individuals make decisions based on public information (freely available to all) and private information (available only to some). Assuming that the private information is relevant for decision making, and that some have it and some do not (but would like to have it and know others have it), the asymmetries in the distribution of information will affect decisions made and therefore economic outcomes.

The mere existence of information asymmetries is not sufficient for the discussion to completely add up, however. In addition, there has to be some mechanism for (more or less) information to be *transferred*; there has to be some scope for changes in the extent of information asymmetries. Only then is it possible to discuss the objective, or the rationale, for transparency, its benefits, possible costs, and net effects. This view of transparency also suggests that *full transparency* is the absence of information asymmetries. This does not necessarily imply perfect information—even with full transparency there can still be incomplete (public) information, but no one has the advantage of being better (privately) informed.

The notion of an information transfer taking place suggests the existence of a *sender* of information and a *receiver* of information. A particularly clear example of this type of situation is a basic signaling game, where the terminology of sender and receiver of information is frequently used. Two actors have access to different information; the sender makes a decision if, how, and what information to transfer to the receiver, who—in turn—makes a decision how to interpret the information transferred. The key concern of signaling is that of reducing information asymmetries, and the application of this basic idea since Spence’s (1973) seminal work on job market signaling is enormous (see, e.g., Riley, 2001, and Spence, 2002, for reviews of the theoretical progress in the area). In practice, however, the sender–receiver relationship is rarely this clear-cut. In a wide range of situations in which transparency is discussed, there are multiple actors,

and third-party considerations may dramatically change the cost–benefit analysis of reducing information asymmetries compared to the simplest situation with one sender and one receiver. (We give several examples in Section 1.5; a straightforward example might be the case where a firm’s disclosure of more information is beneficial by reducing information asymmetries vis-à-vis investors, but harmful by revealing competitive advantages to rival firms.)

What might the information being transferred, or signaled, be about—in general terms? Stiglitz (2000) argues that there are two particularly important types of information: information about *characteristics* (or quality) and information about *behavior* (or intent). Asymmetries with regard to these two types of information broadly correspond to two main types of problem resulting from imperfect transparency—*adverse selection* (problems of choice, given different abilities of transacting parties to observe the characteristics of the product transacted) and *moral hazard* (problems related to the action taken by a counterparty in a transaction).¹ They cover a wide range of situations in which transparency may be an issue—from the “lemons” problem in goods and services markets (Akerlof, 1970), via financial markets where similar adverse selection problems occur when there are both informed and uninformed traders/investors (de Long et al, 1990), from the job market selection problem when employers have imperfect information about applicants’ abilities (the area of application of Spence’s original 1973 signaling article), to the near-universal view of the investor–firm (owner–manager) relationship as that of principal and agent (Jensen and Meckling, 1976). Similarly, in analyses of (economic) policy, a principal–agent view is frequently adopted (e.g., Besley, 2007). In principal–agent relationships, such as that between owner and manager, employer and employee, or government official and polity, (lack of) information about quality (ability, or “type”) or intent (hidden action) is often framed in terms of information about the agent’s “effort,” but it is largely a matter of differences in terminology rather than substantive differences in meaning.

Thinking about transparency as reductions of asymmetries in information about quality and intent clearly has wide application. But it is not sufficient for a comprehensive view of transparency. Information about both quality and intent are examples of ex ante transparency. Imperfect transparency with regard to either introduces an uncertainty that affects incentives and decisions and therefore outcomes; variations in transparency may affect how efficient these outcomes are (or can be). Because imperfections in ex ante transparency introduce uncertainty, it is strongly associated with *predictability*. But there can also be imperfect transparency ex post about the actual outcomes. Applying the principal–agent view to policy analysis makes a clear example. Delegated decision making in a representative political system can be viewed as

¹ Sometimes the distinction between adverse selection and moral hazard is framed as a timing issue: adverse selection is about the ex ante choice of contracting terms when one of the contracting parties has more information; moral hazard is about the counterparty’s actions once the contract has been entered into.

a principal–agent relationship in which the electorate is able to discipline the government by the threat of removal from office. The “information transmitted” is the extent to which the public (principal) observes policy choices and processes (“effort”), but also the result (outcome) of the government’s (agent’s) decisions.² Analyses of government policy transparency often emphasize this latter type of *ex post* transparency, which is distinct from transparency in terms of information about quality or intent, because it is strongly associated with *accountability*—the notion of the principal holding the agent accountable for the consequences of his or her actions.³ This could be rephrased as a problem of contract enforcement—imperfect observability of the result diminishes the principal’s ability to sanction the agent for failure to accomplish what was agreed on.⁴

Connelly et al. (2011) argue that a key property for a signal to be efficacious is that it is “observable,” and they link observability to terms that lie close to the common, everyday understanding of transparency, such as “clarity,” “visibility,” and “absence of distortion.” Parts of the literature also emphasize concepts such as “receiver attention” (the extent to which the receiver is looking for the information, or knows what to look for) and “receiver interpretation” (processing the received information into meaningful knowledge). This emphasis on how the information is received suggests, we argue, an important distinction between transparency and mere disclosure of information in general, namely that there is a *demand-side* dimension to transparency. Transparency presumes that the information transferred is properly received and processed—that is, not just that the information is there, but also that it *gets* there.

In what way is the demand side taken into account in the common understanding of transparency? In the initial broad definitions of transparency that we reviewed at the beginning of this section, it is reflected by the invocation of various adjectives postulating that the information made available should be “relevant,” “timely,” and “sufficient [...] to make informed decisions.” The same conditions (“relevant,” “reliable,” “timely”) recur in the area of corporate transparency—particularly in codes and standards for financial reporting and disclosure (see, e.g., Chapters 17, 22, and 23, this volume).

² The observability of policy choices and decision-making processes can be rephrased into a distinction between transparency of policy *content* (information about the decisions made, the “substance” of the policy pursued) and *procedural* transparency (information about the processes whereby decisions are reached). In many situations, it may also be instructive to separate *de jure* policy transparency (information about the policies decided on) from *de facto* policy transparency (information about the degree to which these policies are actually implemented or enforced). In this volume these distinctions are made for several policy areas—see, in particular, Chapters 3, 4, and 7.

³ Welfare improvements may even rely more strongly on transparency of *outcome* because *ex ante* transparency may not be particularly effective at disciplining governments if voters do not know what the optimal policy is (see Prat, 2005).

⁴ Besides information about quality, intent, and outcome, one additional type of information requires mention: information about *scarcity*—the extent to which prices in competitive, decentralized markets convey all relevant information to achieve the efficient allocation of scarce resources. In essence, this is an outcome. In a world of perfect information and complete markets, the price is all that is required to achieve efficient resource allocations, but in the presence of information asymmetries that cause market failures, this is not the case (Greenwald and Stiglitz, 1986).

Sometimes the receiver's perspective is accounted for differently—for instance, Ghauri et al. (Chapter 16, this volume) argue that “transparency encompasses evaluation by ‘surrounding units,’” whereas Plummer and Tafti (Chapter 7, this volume) note that transparency has more effect when there is an incentive for users to act on the information. The receiver perspective is emphasized in both cases.

Another way of wording the requirement that the information transferred should be reliable is to say that the receiver must be able to *trust* the information (as noted in Chapter 24, this volume), which brings up another qualitative aspect of the information transferred: improved transparency can be understood along the lines both of transferring information that scores higher in terms of reliability, decision-relevance, and so forth, and of simply disclosing more information. In the corporate finance literature, theoretical models often allow “improved disclosure” or “improved transparency” to be interpreted as increases in either the *quantity* or the *quality* (precision) of the information, or both (see Easley and O'Hara, 2004, and Hermalin and Weisbach, 2012, for two examples). This does not mean that the distinction is unimportant—on the contrary: conceptually, it can be crucial. In Section 1.5, we review examples both of situations where the precision of the information determines the optimal quantity given of it, and where a higher quantity of information may be suboptimal simply because of information processing costs.

A natural criterion for the information transferred to be both relevant and sufficiently precise (or trustworthy) is that the receiver attaches some *value* to it. But if the information is valuable to the receiver, it may also indicate that providing the information is costly to the sender. Thus, sender and receiver may have very different views on the desirability of bridging the information gap. Indeed, taking into account the possibility of nonalignment of incentives is central not just for understanding the *effects* of the information asymmetries and conflicts of interest as such, but also for a meaningful discussion of why there is, or should be, more or less transparency.

Holmström (1979) defines a *valuable* signal as a signal that, if included in a risk-sharing contract, can make both the principal and the agent strictly better off than if the contract is based solely on outcome (payoff)—that is, a Pareto improvement. Holmström's definition refers specifically to principal–agent relationships, but is instructive in that it succinctly pinpoints the need for a clear idea of what transparency is supposed to achieve and also gives an idea of why we might see more or less transparency in different areas. We discuss the *rationale* for, as well as the *determinants* of, transparency in the next section, but first let us review what we have found so far.

In summation, then, a meaningful discussion about transparency requires the existence of information asymmetries (asymmetric distribution of private information between different economic actors), but also some mechanism for information to be transferred from actors with private information (“senders”) to those who do not have it (“receivers”). Increases in transparency correspond to reductions in information asymmetries. Information could be about quality or intent (both of which could be related to “effort”)—*ex ante* transparency—but also about outcomes—*ex post* transparency. Transparency goes beyond mere information disclosure in that it has

a demand-side dimension, which requires that the information transferred should be not just observable by the receiver, but also relevant for his or her decision making. A related qualifier for a meaningful discussion about the desirability and effects of transparency concerns the precision (or quality) of the information transferred. Transparency can be associated simply with more information, but does not have to be if this information is irrelevant or insufficiently precise. Decision-relevance and sufficient precision imply that the receiver attaches value to the information transferred, which could (and typically does) also mean that providing the information is costly to the sender.

1.3 THE RATIONALE FOR TRANSPARENCY

Discussing the *rationale* for transparency is about specifying an objective function. Beyond the positive ring of the concept and the general intuition that transparency is “good,” there has to be some sense of what transparency is supposed to achieve—what it is good *for*. Taking the broad view, we see essentially two main categories of objectives.

The first is functional, or *instrumental*. This category of objectives takes many forms, the most general of which is to increase efficiency in terms of overall welfare. Such efficiency improvements can be reached in many different ways—by increasing competition, by reducing uncertainty and transaction costs (including search and information costs), by alleviating coordination failures, and by making markets more complete. Other objectives in the instrumental category might be to improve effectiveness (e.g., of a particular policy), or just generally to attain some benefit, which—more often than not—is measurable. The objective may be concrete and specific (for instance, in corporate finance the objective is usually to maximize firm value) or broader and more vague (for instance, in the EU’s Lisbon Strategy transparency, in the form of the Open Method of Coordination, was intended to create peer pressure for policy reform with the ultimate goal of making European economies more competitive). The point is that when the rationale is instrumental, transparency does not really have a value in itself—it is simply a means to an end.

The second broad category is more *value driven* and concerns ideals such as democratic accountability or legitimacy, but also adherence to social contracts or norms within a society. It is often more applicable to the transparency of public policy than to, say, corporate transparency (especially policy areas that are less “technical” and of greater concern to the general public). We are here much closer to transparency as an end in itself—of transparency as a “right to know” (cf. Stiglitz, 1999). The instrumental/efficiency rationale is by far the most important one in economic research, however, especially when transparency is viewed as a microeconomic question of information distribution that affects resource allocation. In the information-theoretic literature, the criterion for an efficiency improvement is also strict, viz. that of *constrained Pareto efficiency* (essentially whether the decentralized market allocation can be improved on in

a Pareto sense, given the existing market imperfections—cf. Holmström's, 1979, definition of a valuable signal in the previous section). But also in more narrow or empirically oriented applications, when the objective is less clearly linked to welfare improvements in a strict microeconomic sense, the benefit that transparency is intended to achieve is typically measurable.

The boundary between instrumental (efficiency-based) and more value-driven rationales is not always strict. For instance, in political science and public economics, transparency is typically understood in broad terms and encompasses the extent to which government bodies are willing and able to provide information regarding their decision-making processes and policy choices, collection and dissemination of credible information about policy outcomes, as well as, for example, the freedom and reach of the media (see, e.g., Hollyer et al., 2011). The rationale is to ensure accountability of government, which can clearly be motivated on the basis of democratic ideals, but also on efficiency grounds insofar as accountability disciplines government officials to make better and more efficient policy decisions.

Similarly, transparency of Multinational Enterprises (MNEs) about issues and activities related to Corporate Social Responsibility (CSR) can be seen as either motivated by a true concern for principles other than those of firm value maximization, or as a way to signal conformity with the norms and values of the society with the ultimate objective of reaping positive financial payoff from doing so (or avoiding negative consequences of deviating)—a “single bottom line” masquerading as a double one.

Nor are instrumental and value-driven rationales for transparency mutually exclusive in any given situation—they can coexist. Where either could enter as outcome variables in an objective function, they could be in conflict, but need not be. For instance, both *ex ante* and *ex post* transparency may be important to create accountability and legitimacy for government policy, but transparency of government decision-making processes may also improve the public's ability to predict and respond to policy actions—thus, *ex ante* transparency (predictability) may be welfare-increasing in terms of other rationales than that of accountability/disciplining. Another example might be the rationale of transparency as a way to engender trust, which lies somewhere in between purely value-driven considerations and efficiency maximization.⁵ A relationship characterized by trust may be viewed as “morally” or socially more desirable than one characterized by distrust—a norms-based motivation for transparency; but trust can also be viewed as a means to reduce transaction costs to the extent

⁵ One particularly clear example of an area where trust matters, and transparency plays a role, is that of public procurement, the idea of which is to expend public resources as efficiently as possible by taking up offers from a range of producers and choosing the best offer. But for this process to provide the expected efficiency benefits, there needs to be trust on the part of producers in the fairness of the procedure and a belief in the integrity of the procuring public body. In other words, there has to be a minimum level of procedural transparency for the best producers to be willing to file an offer. (Incidentally, the level of transparency is a tradeoff, as excessive information provision may distort the competitive nature of the process and invite collusion—see Chapter 6, this volume.)

that *distrust* causes frictions, and is therefore efficiency-enhancing. We return to the relationship between transparency and trust later in this section.

In other policy areas, the motivation for a public policy—though in a formal sense resting on the existence of market failures—may in the public mind be related more strongly to very different considerations. One such area may be education policy. Even if the existence of positive externalities causing socially suboptimal underinvestment in education is a sufficient argument for a public education policy, the average citizen probably would not frame it like that. He or she is more likely to perceive equal opportunity for at least primary-level schooling as a basic, inalienable human right. The rationale for transparency in policies related to the public school system cannot be entirely independent of such considerations. Thus, increased transparency may or may not make sense from the point of view of making public education policy more effective at alleviating market failures, but the fact that the public perceives education as a matter of general concern may be sufficient to motivate transparency. Again, sometimes people just have a “right to know” (see Chapter 9, this volume).

The *rationales* for transparency that we have discussed are motivations for (various types of) transparency based on the perceived benefits of greater information availability and dissemination in different areas. But this is only half the story. The actual levels of observed transparency vary greatly, regardless of area and of whether comparisons are made across countries, across firms, between different government agencies, or between different markets. So what are the *determinants* of transparency?

One crucial determinant of transparency is the set of incentives facing the actors. We have already argued in Section 1.2 that sender and receiver may have different views on the desirability to reduce information asymmetries. A first question to ask is therefore whether the actor possessing the private information has incentives *against* transferring it to the informationally disadvantaged counterpart. If not—if both actors have near-identical objectives and these are better met with a greater amount of information exchange—there is little reason to suppose that transparency should be any less than near-optimal. Spence (2002) notes that “signals are not terribly complicated things in games where the parties have the same incentives, i.e., where there is a commonly understood desire to communicate accurate information to each other” (p. 434). Thus, if the sender and receiver have the same objective, the appropriate amount of voluntary transparency will tend to occur spontaneously as a mechanism to extract the mutual benefits of leveling the information playing field.

Such can typically not be assumed to be the case if private information is valuable. For instance, agency relations are commonly understood as relations in which principal and agent have *different* individual objectives, and the principal cannot easily determine if the agent takes action in line with the principal’s objective or pursues self-interested behavior (i.e., the principal lacks information about the agent’s intent). In a principal–agent relationship, the importance of incentives often boils down to the question of whether the agent can obtain private benefits from being less transparent (this is discussed in the context of banking regulation in Chapter 12, this volume).

But even when being transparent provides benefits in an absolute sense to the sender and there are no private benefits from being opaque, transparency may be limited because of the costs of information provision. As a very simple and stylized example, consider a typical signaling game setup with adverse selection. Suppose, for instance, that there are two types of firms, high- and low-quality firms, both with opportunities to engage in costly signaling. High-quality firms may benefit from signaling their quality to investors (via higher valuation and lower cost of capital), but if low-quality firms can mimic this signal (produce a “false signal”), the benefits of signaling may not outweigh the costs for a high-quality firm. Only if a high-quality firm can distinguish itself from the low-quality firms will “being transparent” pay off. Thus, the relative costs of information provision are an important determinant of (the incentives for) transparency—also where there is no value of secrecy.

The importance of incentives and relative costs, as well as expected payoffs/outcomes, in determining the level of transparency essentially suggests that the determinants and the effects of transparency are, at least partially, simultaneously determined—in short, transparency is endogenous. In the simple example given earlier, the benefits of increasing transparency are never realized because the beneficial effects of signaling are insufficient to motivate the investment in further information provision—thus, the (expected) effect “causes” the level of transparency.

Friberg (Chapter 13, this volume) addresses similar endogeneity issues in the context of transparency of prices on similar products in different geographical markets. Increased price transparency facilitates arbitrage between markets, suggesting potential welfare gains. But the producer’s choice of whether or not to make prices more transparent is not independent of the likely consequences of such arbitrage, so again, outcome and cause are co-determined. Yet another example might be corruption (see Chapter 15, this volume). The extent to which government officials are willing to provide information regarding their decision-making processes depends partly on the extent to which they extract illegitimate private benefits from *not* doing so—that is, the level of corruption; conversely, the feasible scope for corruption depends on the level of transparency.

Regulation mandating increased transparency may be motivated on welfare grounds when market failures prevent the sender from providing a socially optimal amount of information. In practice, such regulation is an extremely important determinant of the actual levels of transparency observed (one need only think of the elaborate systems of standards for corporate disclosure). But regulation that runs counter to the information provider’s incentives may also result in avoidance strategies, opportunism, or even information manipulation, thus creating additional welfare losses (see further in Section 1.5).

Not just (economic) incentives, costs/benefits, and regulation are related to transparency, but also social norms and perceptions of what’s “fair” and “right.” This has implications for (1) the *rationale* for transparency (as discussed earlier), insofar as there exist value-based arguments in favor of transparency, and values and norms vary with the social context (see, e.g., Chapter 16, this volume); (2) the *determinants*

of transparency: the sender may have certain incentives, but there may be social pressure for increased transparency—for example, public outrage after corporate scandals or corruption incidents—such that regulation mandating increased transparency is invoked whether or not this is motivated on welfare or efficiency grounds; and (3) the *effects* of transparency: transparency may affect an agent's propensity to engage in activities that increase the principal's utility even when there are no strict incentives (or even disincentives) to do so, because it's "fair," or because it is what others (are thought to) do.

For instance, Irlenbusch and Sliwka (2005) study the influence of transparency (defined as revealed effort) on reciprocity and fairness concerns in an experimental setting. They conclude that transparency does not necessarily increase average effort, but makes agents exert more similar levels of effort. This could be interpreted as tentative support—which, arguably, is the best that economic research can offer at present—for the notion that greater transparency more generally leads to greater adherence to prevailing norms and higher levels of social cohesion (see also Frey, 1998).

As we have argued in the preceding text, transparency requires *trust*—the recipient of information must believe the information received to value it and to act on it. But if transparency positively influences reciprocity, fairness, and social cohesion, then it's also possible to turn the argument around: transparency *fosters* trust.⁶ Trust is associated with beneficial economic outcomes, because *distrust* (like opacity) causes frictions and transaction costs. For instance, Aghion et al. (2010) show that distrust creates demand for high levels of government intervention in the economy, even when such intervention is corrupt and ineffective; high levels of intervention, in turn, discourage the formation of trust. Thus, they demonstrate that beliefs (trust) and institutions (regulation) coevolve. One could possibly make the leap to infer a similar coevolution between transparency and adherence to social norms (in terms of, e.g., firms not engaging in activities that impose social costs on others in the sense of Coase, 1960, civil servants not engaging in corruption, and so forth). To the extent that transparency—in a broad sense—has the capacity to shape beliefs, trust, and social cohesion, there may be considerable complementarity effects determining the level of transparency.

The difficulties posed by such complementarities (cf. the endogeneity issue raised earlier) are reflected in available empirical research. As observed by Glennerster and Shin (2008), transparency (especially policy and regulatory transparency) is often broadly associated with better institutions and good governance in general, and in empirical studies often bundled together or tested using indirect measures, causing ambiguity as to causality. Convincing attempts to disentangle what causes what are

⁶ Conversely, one can easily make anecdotal and intuitive cases for an association between lack of transparency and *distrust*. For instance, in the area of corporate transparency (the way we mostly understand it here, that is, in terms of financial reporting and disclosure) Goldman and Slezak (2006) note that "corporate scandals (e.g., Enron and WorldCom) have created a widespread perception that the financial and accounting disclosures provided in a corporate culture fixated on stock price performance cannot be trusted" (p. 604).

surprisingly few, regardless of which type of transparency is considered. For instance, Wehner and De Renzio (2013) remark that “hardly any effort has been invested in exploring the determinants of fiscal transparency” (p. 96). In their own study they use a relatively narrow measure of budget transparency, and find that it is affected primarily by free and fair elections and by political competition.

Similarly, Bushman et al. (2004) argue that there is a paucity of research on how and why corporate transparency varies between countries. In their empirical work, they study two facets of corporate transparency, *governance transparency* and *financial transparency*, and find that the former is associated primarily with higher judicial efficiency and the latter primarily with political-economy factors, such as low state ownership in the corporate sector and low risks of expropriation. Thus, their work to some extent confirms the intuition of a high degree of correlation between different types of transparency and an association between transparency and other benefits, such as efficiency and high-quality institutions. This naturally brings us to the *effects* of transparency.

1.4 THE EFFECTS OF TRANSPARENCY

There is a widespread perception that greater transparency is beneficial. For instance, the Bushman et al. (2004) paper just referenced notes that the availability of information is usually considered “a key determinant of the efficiency of resource allocation decisions and growth in an economy” (p. 208). Moreover, “transparency, in addition to improving the allocation of resources, can make governments more accountable, undermine the power of special interests, and thus lead to improved policies and institutions” (Glennerster and Shin, 2008, p. 184). This sounds compelling, but is rather imprecise. We argued earlier that the “efficiency rationale” for transparency is the most important (but not the only) one in economic research, and it is the one we focus on in the discussion of the *effects* of transparency.

It should perhaps be made clear from the onset that transparency is no panacea for inefficiency. The question of the effects of transparency—the way we have interpreted it here as essentially reductions in information asymmetries—is the reverse of the question of what problems the information asymmetries give rise to. These are many, and very varied, but possible—as we have argued—to sort into the broad categories of selection and agency problems (associated with imperfect ex ante transparency) and accountability or enforcement problems (associated with imperfect ex post transparency). Such problems give rise to market failures related to incompleteness of markets, imperfect competition, coordination failure, and transaction costs. But market failures occur for many reasons (imperfect *public* information, the nature of the good or service exchanged in the market, externalities, transaction costs, other endogenous and exogenous factors determining market structure, including, e.g., geography), some of which are associated with information asymmetries, and some of which clearly are not.

Because information asymmetries are not the only factor giving rise to market failures, increased transparency cannot be a patent solution.

Moreover, even where information asymmetries are at the heart of the issue, and a feasible mechanism for transferring information from the informed to the uninformed exists (which is not necessarily always the case), it may be excessively costly. Competing mechanisms to come to terms with the problems caused by the information asymmetries other than that of making private information public may then be available, such as taxation or subsidies, design of contracts and price schedules, incentive schemes connected to outcomes or relative outcomes (yardstick competition, benchmarking), or other monitoring or regulatory technologies. It is not given that measures to improve transparency always dominate these alternative measures, given the myriad different situations—large and small—in which information asymmetries occur.

All this said, Geraats (Chapter 3, this volume) makes a useful distinction between *incentive effects*—the way transparency affects ex ante behavior by changing the information structure—and *information effects*—the ex post consequences of making a certain piece of information available. These are closely related to the notions of ex ante and ex post transparency. Holding on to that distinction, we may argue that transparency has two overarching potential effects: to increase predictability and to strengthen accountability (or, differently put, contract enforceability).⁷ It shouldn't come as a surprise that transparency is hard to disentangle from institutional quality and good governance more generally.

How does this bear on growth, for instance (cf. the Bushman quote at the beginning of the section)? The tenet of modern, endogenous growth theory (see, e.g., Lucas, 1988; Romer, 1986, 1990) is that growth is the result of technological change driven by rational (human and/or physical capital) investment decisions by private agents who respond to economic incentives, but also institutions are widely recognized to play an important role for economic performance.⁸ In theory, the strongest argument for a role of institutions in economic growth is that institutions, though necessary for economic exchange in various forms, can exhibit varying degrees of efficiency. Less efficient institutions result in higher transaction costs, thus reducing value-added for a given level of factor inputs. Institutional improvements and innovations raise the efficiency of economic interaction between agents and therefore increase growth.

Matthews (1986) makes the analogy between institutional change and technological change as sources of growth: transaction costs and production costs are two pieces of

⁷ It should be noted that the distinction between incentive effects and information effects does not strictly correspond to that between predictability and enforceability, but cuts across these categories. Contract enforceability, for instance, or the knowledge that ex post outcomes will be made public ex post, clearly affects ex ante incentives and behavior (disciplining). Conversely, ex ante transparency (e.g., about a procedure, a regulation, a policy rule, etc.) has direct information effects by reducing transaction (search and information) costs.

⁸ For a more comprehensive discussion of growth theory as related to transparency and institutions, see Forssbäck and Oxelheim (2006). Also see Frey (1990) and North (1990).

a pie, both inescapable realities of economic activity. Innovations that decrease either type of cost for a given level of output are innovations with potential to raise the growth rate.⁹ We might add information asymmetries as an inescapable reality of economic activity, or we might view lack of transparency as a transaction cost (for instance, the pervasiveness of market failures due to lack of transparency/information asymmetries implies that prices in decentralized markets do not generally convey accurate information about scarcity, and that markets are generally at least partially segmented, which causes transaction, e.g., search, costs). The categorization is less important—the point is that insofar as improved transparency raises efficiency (especially the efficiency of investment in new technology), it has the potential to raise growth. Lack of transparency—in terms of poor predictability and accountability—is costly.

Some channels are better understood than others. One area where the effects of *corporate* transparency are theoretically straightforward, and that also provides a particularly lucid illustration of the link to economic growth, is its impact on firms' cost of capital. Information asymmetries between the firm's insiders and their outside owners and creditors give rise to agency problems and credit rationing, and information asymmetries between potential investors create adverse selection problems (uninformed investors fear trading against those with private information, which reduces the willingness to trade and causes illiquidity and financial market incompleteness). As a consequence, firms must issue equity and debt at a discount, that is, at a higher cost of capital. Increased corporate transparency reduces information asymmetries between firms and investors and/or between different potential investors, thus decreasing the cost of capital and expanding the set of positive net present value investment projects.¹⁰ Both agency and adverse selection problems in capital acquisition also make firms financially constrained, and financially constrained firms facing incomplete financial markets tend to be more risk averse (in near-complete financial markets with few constraints, on the other hand, risk-sharing works efficiently and firms have less reason to be risk averse). The consequences are diverse and potentially far-reaching, not least for investment in innovation (see Chapter 10, this volume).

⁹ While theory emphasizes the dynamic aspect of institutions, the empirical literature typically makes indirect inferences about the effects of institutional improvements through cross-sectional studies of the *level* of institutions and their association with average growth rates and/or income levels (see, e.g., Barro, 1991, 1997; Rodrik et al., 2004).

¹⁰ Theoretical results on the link between corporate transparency and the cost of capital include those of Diamond and Verrecchia (1991), and Easley and O'Hara (2004). Recent empirical studies include those of Leuz and Verrecchia (2000), who make use of shifts in the transparency regime (in the form of disclosure standards) to address the endogeneity issue; Greenstone et al. (2006), who similarly exploit a legal shift to identify the effects of mandatory disclosure; and Leuz and Schrand (2009), who approach the issue from the opposite direction, and investigate the disclosure effects of the cost-of-capital shock created by the Enron scandal. See also Healy and Palepu (2001) for a survey.

In particular, financial constraints make investment sensitive to financial variables (Hubbard, 1998), with knowledge-intensive investment being particularly sensitive (Forssbæck and Oxelheim, 2011). Higher risk aversion in firms also leads to greater sensitivity of investment activity to cyclical swings and to price and wage rigidities (see, e.g., Chevalier and Scharfstein, 1996). Greater corporate transparency not only alleviates financial constraints, but also implies more efficient risk-sharing and more risk-neutral firms, suggesting that investment in low-probability outcomes (representing potential technological breakthroughs) can be financed, whereas greater institutional transparency in the shape of increased predictability and contract enforcement implies lower uncertainty of appropriation of returns to investment in innovation/knowledge.¹¹

Exemplifying with financial market incompleteness and investment thus highlights the complexity of the interactions between different types of transparency in the determination of more aggregate economic outcomes. Information asymmetries between firms and investors affect financial market incompleteness, but so do many other types of information asymmetries. For instance, during the 1990s, a wave of literature emerged emphasizing the role of legal institutions (including, e.g., investor rights and contract enforceability, related to both the *ex ante* and the *ex post* dimensions of transparency as we have defined it) for financial development (see, e.g., La Porta et al., 1998)—clearly suggestive of the complementarity of different types of transparency and the potential knock-on effects of improving transparency in different areas.

Yet another example of how transparency affects investment is its potential effects in international capital flows, where excessive investment flows in and out of emerging markets have been explained in terms of a “coordination effect”: insufficient transparency implies that investors cannot effectively discriminate between firms and borrowers, indicating that small pieces of negative information can have disproportionate effects and cause investors to withdraw funding from an entire market. The mechanism has been used for instance to explain financial crises and speculative attacks, and to motivate the lender-of-last-resort function of the central bank (see, e.g., Rochet and Vives, 2004). Similarly, in the case of the Lehman Brothers crash in the early phases of the latest global financial crisis, insufficient transparency meant that banks could not effectively discriminate between counterparties, causing the whole interbank market to freeze up. A possible effect of greater transparency in light of this type of coordination failure would be lower susceptibility to crises.

Policy-oriented applications of growth theory directly or indirectly recognize the role of both institutions and transparency for economic growth. For instance, the World Economic Forum’s Growth Competitiveness Index (see Sala-i-Martin et al., 2013) includes among the key “pillars” of growth the quality of institutions and the

¹¹ Wurgler (2000) provides evidence of a positive association between capital allocation efficiency and firm-specific information in stock returns on the one hand and institutional transparency on the other.

stability of the macroeconomic environment, as well as goods and labor market efficiency and financial market development. Transparency thus influences productive investment, and thereby economic growth, at the level of economic policies affecting investment decisions, via the markets (including their institutional and regulatory structure) in which investments are made and funded, and down to the level of individual firms that ultimately make the investment decisions. These three levels roughly coincide with the division of this book into three parts—policy, market and institutional, and corporate transparency.

Availability of empirical research on specific effects in different areas (beyond the ones already mentioned) varies substantially. Here, we can only give some suggestive hints. Moreover, as mentioned in the previous section, empirical tests are made difficult—almost irrespective of area—by two pervasive problems: the measurement problem (the multifaceted nature of the transparency concept makes it difficult to convincingly pin down quantitatively), and the endogeneity problem (transparency is strongly correlated with institutional quality and economic performance in general, and these are likely to be codependent over time, introducing identification difficulties also cross-sectionally).

Empirical studies of aggregate effects of policy-related transparency include, for example, Hameed (2005), who develops indicators of fiscal transparency based on the IMF (2007), and finds them to be positively associated with credit ratings and greater fiscal discipline and negatively related to the level of corruption. Alt and Lassen (2006), in turn, find greater fiscal transparency to be associated with lower public debt and lower deficits. Glennerster and Shin (2008) use a narrow measure of economic policy transparency based on the accuracy and frequency of macroeconomic data released to the public (i.e., transparency of policy outcomes). They exploit an exogenous shift in the procedures for reporting macroeconomic data to the IMF to identify causality, and find that adopting the IMF's new and more transparent regime for data release results in significantly lower government borrowing costs.

Gelos and Wei (2005) studied the effects of both corporate transparency (measured as an index of perceptions of the quality of financial disclosure) and government transparency (encompassing both the predictability of macroeconomic policies and the frequency and timeliness of macroeconomic data releases) on the portfolio allocations of international emerging-market mutual funds. Their results indicate higher portfolio holdings of institutional investors in more transparent countries, as well as a higher propensity by these investors to retract investment from less transparent countries in times of crisis. Brandão-Marques et al. (2013) measure “country transparency” in several different ways, including corporate disclosure, indices of the transparency of government policies, and more indirect indicators such as perceptions of corruption. They find that emerging-market countries that are less transparent significantly and consistently react more strongly to global financial shocks than countries that are more transparent, both in terms of changes in bond spreads and stock market returns.

Broader measures of transparency have been used to study its effects on, for example, foreign direct investment (FDI) inflows (Drabek and Payne, 2001), FDI as well as

portfolio capital and bank lending inflows (Hooper and Kim, 2007), and economic growth (Williams, 2007). These studies generally support the expectation of a positive correlation of transparency with capital inflows and growth.

In summation, available empirical results appear by and large consistent with the intuition that greater transparency is associated with a host of benefits: greater transparency (policy as well as corporate) is associated with higher quality and more efficient institutions; greater corporate transparency is associated with lower capital costs, better developed financial markets, and greater capital allocation efficiency; and countries with more transparent policies and institutions have lower borrowing costs, receive more direct and portfolio investment inflows, and are more resilient to international financial shocks. In the next section, we address the question of whether more transparency is always better.

1.5 OPTIMAL TRANSPARENCY

The importance of efficiency gains as a rationale for and a hoped-for effect of transparency, as well as constrained Pareto efficiency as the standard criterion for determining whether such efficiency gains can be achieved, suggests a simple and intuitive way of thinking about *how much* transparency is motivated: simply that (welfare) benefits of greater transparency to sender and receiver of information have to outweigh the costs. Because reducing information asymmetries is generally costly, more transparency is not necessarily always better.

This section offers a few examples of research that addresses the question of “optimal transparency” from this point of view. The examples send a nuancing message about the blessings of increased transparency, and might be thought of as caveats to the general message of the previous section that greater transparency is beneficial: it is, mostly, but not unconditionally. To structure the discussion, we observe that costs may occur both on the sender/supplier side (the production and dissemination of information is costly, and revealing information may have indirect costs), and on the receiver/demand side (the processing of information is costly, and the more so the less precise the information is).

It is worth pointing out that several of the (empirical) contributions already discussed find that the benefits of transparency may be concave. For instance, in the area of corporate transparency, Leuz and Verrecchia (2000) argue that if the disclosure environment is already rich, further increases in disclosure may have little effect on firms’ cost of capital. This argument is consistent with the findings in Greenstone et al. (2006) for corporate transparency, and in Glennerster and Shin (2008) for fiscal policy transparency, among others. Similarly, Plummer and Tafti (Chapter 7, this volume) find that the available evidence suggests that developing countries (where transparency in trade policy is generally lower) have the most to gain by increasing transparency. In short, several studies confirm the intuition that the benefit to increasing transparency

is marginally decreasing. The contributions discussed here take this one step further, and suggest that the net benefit of transparency is not just a marginally decreasing positive function, but that the function may turn negative beyond some point, suggesting a possible optimum.

We start with arguments focusing on the cost to the sender of making private information public. A starting point might be the simple example briefly mentioned in Section 1.2, where the net benefit of corporate transparency is the sum of the efficiency gain of reducing information asymmetries vis-à-vis investors and the loss of revealing competitive advantages to rival firms. The idea is formalized by, for example, Admati and Pfleiderer (2000), who take as their point of departure the basic premise that lower information asymmetries between firms and investors are associated with higher firm value, lower cost of capital, and generally more efficient financial markets. But why, then, don't firms voluntarily disclose all relevant information, and why is disclosure regulation necessary? In their model, the answer is that disclosure is costly. More precisely, there are both direct costs of information production and dissemination, which is likely to increase in the precision of the information, and indirect costs in the loss of competitive advantage or bargaining power entailed in revealing strategically important information to competitors, customers, or suppliers.

Sadka (2004) provides a related example, where corporate transparency can increase economic growth by allowing competing firms to share useful information about production technologies, thus raising productivity in an entire industry. But too much transparency reduces incentives to undertake investments that improve production processes, because the competitive advantage created by the investment will be revealed and the investing firm unable to exploit it. The basic driver of the result is thus a free-rider problem similar to the one motivating protection of patents and other intellectual property rights (see, e.g., Kanwar and Evenson, 2003). Ruigrok et al. (Chapter 18, this volume) investigate the same type of tradeoff in the context of governance transparency. Firms' preferences regarding transparency about the characteristics of their boards of directors and management are determined by a tug of war between the benefits of reducing information asymmetries (e.g., signaling ability and compliance with norms and regulation) and the risk of "human capital attrition" (i.e., revealing competitive strengths or losing key talent).

These examples focus on corporate transparency, but it is worth pointing out that the basic structure of the problem goes well beyond that of optimal disclosure for firms and the potential loss of competitive advantage.¹² For instance, Gugler (Chapter 6, this volume) addresses competition policy transparency, where too much procedural

¹² Consider the insurance market, for instance, extensively studied in the adverse selection literature (e.g., Rothschild and Stiglitz, 1976; Wilson, 1977). Insurance companies would like to know as much as possible about the insured, possibly including individuals' genetic predisposition for certain diseases, but to many people, the integrity costs of divulging this type of information (assuming it is available) would be simply unacceptable, regardless of how much more efficient it could make the insurance market.

transparency may harm the efficiency of antitrust law enforcement (potential examples in other policy areas abound). The key point is that there may be a (social) value to secrecy that outweighs the benefits of transparency.

Besides direct and indirect costs to the sender, (involuntary) transparency also has incentive effects based on the value to the sender of private information. For instance, in Hermalin and Weisbach (2012), improved information disclosure by firms leads to better monitoring by owners, but may also incentivize managers to engage in costly activities intended to (falsely) signal ability and to demand higher compensation in return for the stricter monitoring. The ultimate effect may be a reduction in firm value.

A related effect is discussed by Begg (Chapter 4, this volume) in the context of fiscal policy transparency and fiscal rules. He argues that a potential adverse effect of improved monitoring based on nominal measures of transparency may be that policymakers focus on what is subject to scrutiny rather than on what is achieved, resulting in suboptimal policy outcomes. The effect has very broad potential application to monitoring and evaluation in general. The fundamental point is that increased ex ante transparency (leading to improved observability of “effort”) when the principal does not know what the appropriate behavior is to attain the best possible outcome may be harmful by encouraging the agent to “play it safe” and act according to the public belief of what is best, even though he knows it is wrong, for fear of punishment (see Prat, 2005; for an alternative view, see Fox and Van Weelden, 2012).

Yet further go models in which the sender’s incentives depend directly on the information transmitted, such as principal–agent models of the owner–manager relationship where the manager’s compensation depends on the stock price, and the stock price depends both on the manager’s effort and on the firm’s disclosure, which is controlled by the manager. In the traditional principal–agent setup, in which stock price (and therefore compensation) depends only on the manager’s effort, incentive pay based on stock price performance should align the manager’s incentives with the owner’s, but if the information contained in the firm’s disclosure also influences compensation, the manager may have incentives to misrepresent or distort the information.

Goldman and Slezak (2006) study this setup, and find that incentive pay based on stock price performance in this case may lead to resource diversion and decreased firm value. They also find that an exogenous requirement to improve disclosure can actually increase the amount of information manipulation by decreasing “internal” monitoring by the principal, suggesting that regulation to increase disclosure may not unambiguously increase de facto transparency. Their findings are related to “signal-jamming” models, in which an agent takes a costly action intended to mislead, and although the action does not actually mislead anyone, it leads to an inferior outcome.

Rather than the costs of information provision or the incentive effects for the sender, other stories about the mixed blessings of transparency focus on the quality of the information and/or the (limited) ability of the receiver to process the information. The simplest argument in this vein is just that information processing is costly—“too much” transparency may simply overwhelm receivers by information overload. This basic argument takes many forms and *nomina*—“excess baggage,” “clutter” (e.g.,

Chapter 22, this volume), the “veil of transparency” (hiding inappropriate action behind a wealth of information), and so forth—and recalls the distinction we made in Section 1.2 between the quantity and the quality of information, as well as our insistence that transparency has a receiver as well as a sender side. Drowning the receiver in information—much of which is irrelevant—cannot be considered “transparent” by these standards. But what if the information transferred by its very nature is “noisy”?

One of the areas in which the mixed effects of transparency have been most intensely debated is that of coordination games where private information is asymmetrically distributed among multiple agents and public information is imprecise. The most influential contribution is that of Morris and Shin (2002), which has given rise to a line of subsequent papers that study the dual role of public information. The first of these roles is that of purveyor of knowledge about “fundamentals,” which is of value for decisions simply by reducing uncertainty and increasing the efficiency of the decision. The second role of public information is that of a coordination device. When decisions are not taken in isolation, based on the best available information pure and simple, but are complementary to the decisions of others, then it may start paying off to try to anticipate, or imitate, the reactions of these other agents to public information announcements – that is, people start to pay attention not only to what they know, but also to what they think others might know.

Morris and Shin (2002) mostly use as example of this guessing game the central bank giving out public signals about its intentions regarding policy, to which financial markets attach “too much” weight. Another example might be the release of public firms’ financial statements: analysts must not only analyze fundamentals in the reports, but also attempt to second-guess the average reaction of other analysts to the release in order to cover their bets.

Again, public information plays a double role: both that of provider of knowledge about fundamentals and that of something to rally around, something that—though imprecise—may still have meaningful economic consequences and be optimal to take into consideration from the point of view of the individual decision maker. Boot et al. (2006) provide yet another example in the shape of financial market reactions to credit rating announcements. These convey imperfect information, but serve as “focal points” for market participants.

Increasing transparency by release of imprecise information can be beneficial by coordinating market participants’ expectations, but “it also has the potential to do ill if expectations are coordinated away from fundamentals” (Morris and Shin, 2002, p. 1523). The argument resembles the one underpinning theories of, for example, asset price bubbles by way of “herding” behavior, or “information cascades” (e.g., Banerjee, 1992; Bikhchandani et al., 1992). Each decision maker acts rationally toward the possibility that someone else may have better private information, giving the result that everybody underweights the information on fundamentals available to him- or herself. The overall outcome is inefficient, because the total body of available information is underused. These results, however, are generally relatively sensitive to the exact assumptions made. As an example, consider how Angeletos and Pavan (2004) or

Hellwig (2005) reach almost the opposite results of Morris and Shin (2002), essentially just by making a few alterations in the assumption of how complementarity between agents' actions works.

Other examples of situations in which imprecision in the information transferred or market distortions can cause transparency to reduce efficiency are given by Geraats (2002) and Albornoz et al. (2014). In the former, the holder of the private information is a public body (again, the primary application is monetary policy, but in principle, the result can be generalized), which takes policy action according to (or reveals a signal about) a variable of interest, x , whereas the private sector forms expectations about this variable. If the central bank is uncertain about x , then being transparent about this uncertainty can be welfare-reducing by increasing the volatility of the private sector's expectations about x . In other words, the uncertainty of the authorities feeds into the uncertainty of the public, making transparency cause a reduction in efficiency.

To sum up, because reducing information asymmetries is generally costly, greater transparency is not always better. Costs may appear both on the sender and on the receive side. To the sender of information, costs may be direct or indirect. When it comes to the receiver side, the precision of the information transferred proves to be of central importance—both because information processing costs are negatively related to the precision of the information and because of the increased possibilities that imprecise public information may cause coordination failures.

1.6 CONCLUSIONS ON THE MULTIFACETED CONCEPT OF TRANSPARENCY

In recent decades transparency has emerged as a proposed remedy of many economic problems—be it to avoid corporate scandals, to increase the competitiveness in sluggishly performing economies, or to prevent financial crises. There is a common belief that greater transparency is good. In this chapter we have made an effort to sort out what transparency is actually about by pin-pointing common denominators of different definitions, and also to challenge this general positive belief by acknowledging the notion of optimal transparency, that is, recognizing the concave feature of the value of transparency.

We began with the observation that the meaning of the concept of transparency varies between users and between contexts. Nonetheless, there are a few common denominators that need to be considered in all discussions about transparency. The first is the existence of an information asymmetry. In addition, there needs to be a mechanism to transfer information from the informationally advantaged to the informationally disadvantaged—that is, from “sender” to “receiver.” We addressed the character of the information content and suggested that information about quality and information

about intent are the most important generic types for ex ante transparency, and that information about outcome constitutes ex post transparency.

Transparency is often confused with mere disclosure of information. In our view, there is an important distinction in that transparency has a demand-side dimension as well. This means that the information transferred should be not only observable but also relevant to the receiver, trustworthy, and sufficiently precise, which boils down to the criterion that the receiver attaches a value to the information transferred.

We then argued that transparency has to be linked to an objective function, that is, some sense of what transparency is good *for*. Two main types of objectives were suggested. The first (and, for economic research, the main) one is functional, or instrumental—transparency as a means to an end. Efficiency is the key word. Efficiency gains are attained both through ex ante transparency, focusing on predictability, and ex post transparency, focusing on enforcement and disciplining. The second main type of objective is more “ideological” or value-driven and concerns ideals such as democratic accountability or legitimacy, but also adherence to social contracts and norms within a society. We are here much closer to transparency as an end in itself—transparency as a “right to know.”

The observation that actual levels of transparency vary greatly across policy areas, countries, markets, and companies made us ask for the determinants of transparency. We argued that the incentives facing the actors, relative costs and benefits of making information available, and (exogenous) regulations mandating a certain level of transparency are key determinants. But also social norms and perceptions of what is “fair” and “right” appear to be interacting with the actual levels of transparency observed, possibly suggesting complementarity and codependence between transparency and things such as trust and general institutional and governance quality. Such complementarities present empirical studies aimed at disentangling what causes what with considerable identification problems.

Of the different objective functions discussed for transparency we pursued the “efficiency rationale” into a discussion about the potential effects of increased transparency. Interpreting increased transparency as reductions in information asymmetries implies that its effects are the reverse of the question of what problems information asymmetries give rise to. These are of two main types: selection and agency problems, associated with imperfect ex ante transparency, and accountability or enforcement problems, associated with imperfect ex post transparency. These two types of problem are pervasive in all areas of economic research and their consequences are very diverse and include market incompleteness, imperfect competition, transaction and uncertainty costs, and coordination failures.

We suggested a variety of channels through which increased transparency, by increasing predictability (ex ante) and contract enforceability (ex post), may impact aggregate outcomes such as economic growth. A key channel is the interaction of corporate and institutional transparency in facilitating investment in innovation and knowledge. Again, complementarities between different types of transparency are central, and the policy implication is that regulators and governments have a reason to

be concerned not only with their own transparency but with corporate transparency as well.

This also means, however, that empirical evidence on the effects of transparency is marred by endogeneity problems (owing to the codependence of transparency and institutional quality and economic performance), as well as measurement problems (the transparency concept is difficult to measure quantitatively). Available studies of transparency in specific areas do, however, appear to support the general view that greater transparency is associated with a number of benefits such as—at the policy level—more efficient institutions and—at the corporate level—lower cost of capital and greater capital allocation efficiency. Studies also indicate that countries with more transparent policies and institutions have lower borrowing costs, make better public spending decisions, receive more direct and portfolio investment inflows, and are more resilient to international financial shocks.

The final question we addressed is whether more transparency is always better. The question is relevant because reducing information asymmetries is generally costly. Much of the existing research suggests that the net benefits of transparency describe a concave function. Other studies show that the marginal benefit of increased transparency may even turn negative beyond some point, suggesting a possible optimum. Costs of increased transparency occur on the sender side both as direct costs of information production and dissemination and as indirect costs in the form of, for instance, loss of competitive advantage or bargaining power from revealing additional information. Moreover, in, for example, competition policy or insurance markets there may be social value to secrecy that outweighs the benefit of transparency. In addition to direct and indirect costs to the sender there may be incentive effects based on the value of the information to the sender. Some of these, we argue, may have the ultimate effect of reducing firm value. In some cases—such as in the case of CEO compensations—the sender's incentives may depend directly on the information transmitted.

On the receiver side, there are costs of information processing that may weigh on the benefits of increased transparency, but the notion of optimal transparency is also supported by the dual role of (imprecise) public information. The first role is to disseminate knowledge about “fundamentals” in order to reduce uncertainty whereas the second role is that of a coordination device. These two roles together make people pay attention not only to what they know but also to what they think others might know, giving rise to possible coordination failures in the form, for example, of herding behavior. From a policy-implication point of view, this implies that there might be a cost of guiding the receiver too far by making noisy information public.

All in all, our chapter supports the existence of different definitions of transparency across policy areas, institutional settings, industries, and possibly also across individual firms. The bottom line of the chapter is that the meaning of “optimal transparency” will also differ across these categories. Based on this view, the rest of the book sorts out in a more detailed way the definition of transparency and the content of the idea of optimal transparency within each of these different areas.

REFERENCES

- Admati, A. R., and Pfleiderer, P. (2000). Forcing firms to talk: Disclosure regulation and externalities. *Review of Financial Studies* 13(3), 479–519.
- Aghion, P., Algan, Y., Cahuc, P., and Shleifer, A. (2010). Regulation and distrust. *Quarterly Journal of Economics* (August), 1015–1049.
- Akerlof, G. A. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 85, 488–500.
- Albornoz, F., Esteban, J., and Vanin, P. (2014). Market distortions and government transparency. *Journal of the European Economic Association* 12(1), 200–222.
- Alt, J. E., and Lassen, D. D. (2006). Fiscal transparency, political parties, and debt in OECD countries. *European Economic Review* 50, 1403–1439.
- Angeletos, G.-M., and Pavan, A. (2004). Transparency of information and coordination in economies with investment complementarities. *American Economic Review* 94(2) (Papers and Proceedings): 91–98.
- Banerjee, A. V. (1992). A simple model of herd behavior. *Quarterly Journal of Economics* 107(3): 797–817.
- Barro, R. (1991). Economic growth in a cross-section of countries.” *Quarterly Journal of Economics* 106(2): 407–443.
- Barro, R. (1997). *Determinants of Economic Growth: A Cross-Country Empirical Study*. Cambridge, MA: MIT Press.
- Besley, T. (2007). *Principled Agents? The Political Economy of Good Government*. Oxford: Oxford University Press.
- Bikhchandani, S., Hirshleifer, D., and Welch, I. (1992). A theory of fads, fashion, custom, and cultural change as informational cascades. *Journal of Political Economy* 100(5), 992–1026.
- Boot, A. W. A., Milbourn, T. T., and Schmeits, A. (2006). Credit ratings as coordination mechanisms. *Review of Financial Studies* 19, 81–118.
- Brandão-Marques, L., Gelos, G., and Melgar, N. (2013). Country transparency and the global transmission of financial shocks. IMF Working Paper No. 13/156. Washington, DC: International Monetary Fund.
- Bushman, R. M., Piotroski, J. D., and Smith, A. J. (2004). What determines corporate transparency? *Journal of Accounting Research* 42(2), 207–252.
- Chevalier, J., and Scharfstein, D. (1996). Capital-market imperfections and countercyclical markups: Theory and evidence. *American Economic Review* 86, 703–725.
- Coase, R. H. (1960). “The problem of social cost. *Journal of Law and Economics* III, 1–44.
- Connelly, B. L., Certo, S. T., Ireland, R. D., and Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management* 37(1), 39–67.
- de Long, J. B., Shleifer, A., Summers, L. H., and Waldmann, R. J. (1990). Noise trader risk in financial markets. *Journal of Political Economy* 98, 703–738.
- de Soto, H. (2012). Live, dead, and fictitious capital. Keynote address delivered at the World Bank ABCDE Conference on Accountability and Transparency for Development, May, 2012, Washington, DC.
- Diamond, P., and Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *Journal of Finance* 46(4), 1325–1359.
- Drabek, Z., and Payne, W. (2001). The impact of transparency on foreign direct investment. Staff Working Paper ERAD-99-02. Geneva, Switzerland: World Trade Organization.

- Easley, D., and O'Hara, M. (2004). Information and the cost of capital. *Journal of Finance* 59(4), 1553–1583.
- The Economist* (2012). The best disinfectant. May 26.
- Forssbæck, J., and Oxelheim, L. (2006). Transparency, capital formation, and economic growth. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, pp. 1–45. Amsterdam: Elsevier.
- Forssbæck, J., and Oxelheim, L. (2011). Corporate financial determinants of foreign direct investment. *Quarterly Review of Economics and Finance* 51(3), 269–282.
- Fox, J., and Van Weelden, R. (2012). Costly transparency. *Journal of Public Economics* 96, 142–150.
- Frey, B. S. (1990). Institutions matter: The comparative study of institutions. *European Economic Review* 34, 443–449.
- Frey, B. S. (1998). *Not Just for the Money: Economic Theory of Personal Motivation*. Cheltenham, UK: Edward Elgar.
- Gelos, G., and Wei, S.-J. (2005). Transparency and international portfolio holdings. *Journal of Finance* 60(6), 2987–3020.
- Geraats, P. (2002). Central bank transparency. *Economic Journal* 112, 532–565.
- Glennerster, R., and Shin, Y. (2008). Does transparency pay? *IMF Staff Papers* 55(1), 183–209.
- Goldman, E., and Slezak, S. L. (2006). An equilibrium model of incentive contracts in the presence of information manipulation. *Journal of Financial Economics* 80, 603–626.
- Greenstone, M., Oyer, P., and Vissing-Jorgensen, A. (2006). Mandated disclosure, stock returns, and the 1964 Securities Acts Amendments. *Quarterly Journal of Economics* 121, 399–460.
- Greenwald, B., and Stiglitz, J. E. (1986). Externalities in economies with imperfect information and incomplete markets. *Quarterly Journal of Economics* 101, 229–264.
- Hameed, F. (2005). Fiscal transparency and economic outcomes. IMF Working Paper No. WP/05/225. Washington, DC: International Monetary Fund.
- Healy, P. M., and Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31, 405–440.
- Hellwig, C. (2005). Heterogenous information and the welfare effects of public information disclosures. Working Paper (October), Economics Department, UCLA.
- Hermalin, B. E., and Weisbach, M. S. (2012). Information disclosure and corporate governance. *Journal of Finance* 67(1), 195–233.
- Hollier, J. R., Rosendorff, B. P., and Vreeland, J. R. (2011). Democracy and transparency. *Journal of Politics* 73(4), 1–15.
- Holmström, B. (1979). Moral hazard and observability. *Bell Journal of Economics* 10(1), 74–91.
- Hooper, V., and Kim, S.-J. (2007). The determinants of capital inflows: Does opacity of recipient country explain the flows? *Economic Systems* 31, 35–48.
- Hubbard, R. G. (1998). Capital-market imperfections and investment. *Journal of Economic Literature* 36, 193–225.
- IMF (2007). *Code of Good Practices on Fiscal Transparency*. Washington, DC: International Monetary Fund.
- Irlenbusch, B., and Sliwka, D. (2005). Transparency and reciprocal behavior in employment relations. *Journal of Economic Behavior and Organization* 56, 383–403.
- Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 5, 305–360.

- Kanwar, S., and Evenson, R. (2003). Does intellectual property protection spur technological change? *Oxford Economic Papers* 55(2), 235–64.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1998). Law and finance. *Journal of Political Economy* 106, 1113–1155.
- Leuz, C., and Schrand, C. (2009). Disclosure and the cost of capital: Evidence from firms' responses to the Enron shock. NBER Working Paper No. 14897. Cambridge, MA: National Bureau of Economic Research.
- Leuz, C., and Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of Accounting Research* 38, 91–124.
- Lucas, R. E. Jr. (1988). On the mechanics of economic development. *Journal of Monetary Economics* 22, 3–42.
- Matthews, R. C. O. (1986). The economics of institutions and the sources of growth. *Economic Journal* 96(384), 903–918.
- Morris, S., and Shin, H. S. (2002). Social value of public information. *American Economic Review* 92(5), 1521–1534.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge, UK: Cambridge University Press.
- OECD (2002). *OECD Best Practices for Budget Transparency*. Paris: Organisation for Economic Co-operation and Development.
- Perotti, E., and von Thadden, E.-L. (2005). Dominant investors and strategic transparency. *Journal of Law, Economics, and Organization* 21(1), 76–102.
- Prat, A. (2005). The wrong kind of transparency. *American Economic Review* 95(3), 862–877.
- Riley, J. G. (2001). Silver signals: Twenty-five years of screening and signaling. *Journal of Economic Literature* 34, 432–478.
- Rochet, J.-C., and Vives, X. (2004). Coordination failures and the lender of last resort: Was Bagehot right after all?" *Journal of the European Economic Association* 2, 1116–1147.
- Rodrik, D., Subramanian, A., and Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth* 9, 131–165.
- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy* 94(5), 1002–1037.
- Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy* 98(5), Pt. 2, S71–S102.
- Rothschild, M., and Stiglitz, J. E. (1976). Equilibrium in competitive insurance markets: An essay on the economics of imperfect information. *Quarterly Journal of Economics* 90(4), 629–649.
- Sadka, G. (2004). Financial reporting, growth, and productivity: Theory and international evidence. Working Paper. New York: Columbia University Business School.
- Sala-i-Martin, X., Bilbao-Osorio, B., Blanke, J., Drzeniek Hanouz, M., Geiger, T., and Ko, C. (2013). The Global Competitiveness Index 2013–2014: Sustaining growth, building resilience. *Global Competitiveness Report 2013–2014*. Geneva, Switzerland: World Economic Forum.
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics* 87(3), 355–374.
- Spence, M. (2002). Signaling in retrospect and the informational structure of markets. *American Economic Review* 92(3), 434–459.
- Stiglitz, J. E. (1999). On liberty, the right to know, and public discourse: The role of transparency in public life. Oxford, UK: Oxford Amnesty Lecture, January 27.

- Stiglitz, J. E. (2000). The contributions of the economics of information to twentieth century economics. *Quarterly Journal of Economics* (November), 1441–1478.
- UNCTAD (2012). Transparency. UNCTAD Series on Issues in International Investment Agreements II. Geneva, Switzerland: United Nations.
- Wehner, J., and De Renzio, P. (2013). Citizens, legislators, and executive disclosure: Political determinants of fiscal transparency. *World Development* 41, 96–108.
- Williams, A. (2007). A global index of information and political transparency. Discussion Paper No. 14.07. University of Western Australia.
- Wilson, C. (1977). A model of insurance markets with incomplete information. *Journal of Economic Theory* 16(2), 167–207.
- Wurgler, J. (2000). Financial markets and the allocation of capital. *Journal of Financial Economics* 58, 187–214.

PART II

POLICY
TRANSPARENCY

CHAPTER 2

CONSTITUTIONAL TRANSPARENCY

RICHARD J. SWEENEY

“The road to Hell is paved with good intentions.”
Proverb

“No man is a good judge in his own cause.”
John Wesley, 1775

2.1 INTRODUCTION

FOR economics, finance, and business, the most important attribute of constitutional transparency is the predictability of the guarantees that the constitution contains. For countries with written constitutions, a constitution is superior to ordinary law that the legislature makes—the constitution constrains the legislature in what it can do and the judiciary in the interpretations it can make. In the United Kingdom, however, laws that Parliament passes are part of the constitution; the legislature can change the constitution by ordinary law. How transparent are written constitutional guarantees? Or put another way, what degree of predictability do these guarantees provide? Law surveys covering criminal procedure or commercial codes can tell researchers what the current state of the law is, including constitutional guarantees, and whether the law is likely to change and in which directions. Surveys of constitutional law cover the evolution of guarantees and discuss the margins on which pressures exist for change. It is far beyond the scope of a single chapter to discuss the meaning, extent, and predictability of the constitutional guarantees of any one country as they stand, as these surveys do, let alone a range of countries. For example, free speech guarantees in any constitution always in practice come with exceptions that depend on special conditions, that evolve over time, and that have proved to be uncertain in interpretation in at least some new and different circumstances. In addition, in almost all countries, constitutional guarantees of free speech are different for private residents from businesses. It is easier, however, to deal with *changes* in constitutions: how the changes come about, how difficult it is to make changes, how large the changes can be, and the track record of how well the

changes work over time. Perhaps more important, in many countries constitutional guarantees seem unstable, and thus changes are key issues. The record of the European Union (EU) from the European Steel and Coal Community to the present is one of enormous constitutional change. Changes in the US Constitution since the Depression of the 1930s are less wide-ranging and deep but are still large, as are changes in the United Kingdom since, say, the end of the First World War in 1918.

On the one hand, the literature on constitutions is huge and even the literature on the economics of constitutions is very large (e.g., Buchanan, 1989; Brennan and Buchanan, 2000). On the other hand, the literature on changes in constitutions and their costs and benefits is sparse. Theoretical and empirical analysis is largely limited to discussions of “stability” of constitutions, in terms of which institutions tend to increase or reduce the number of constitutional changes in a country over a given period. (See Lutz, 1994, 1995; Ferejohn, 1997; and Rasch and Congleton, 2006.) Sweeney (2013) evaluates changes by analyzing the likelihood under different institutions of making constitutional changes that on net damage the country or of foregoing constitutional changes that would on net benefit the country. In the following, this chapter discusses “stability” as well as the relationships between institutions and type I and type II errors in adopting amendments.

Because constitutions change, a key question is how beneficial or harmful the changes are. Are guarantees broken but replaced with better guarantees? Whenever a constitution changes, by referenda or parliamentary votes or otherwise, those who make the changes argue that these are beneficial. This chapter takes decision makers at face value and supposes that they aim to adopt changes that have positive net social benefits and reject those that have negative net benefits. From the viewpoint of transparency as predictability, it asks how likely a country is to make a type I error of changing its constitution when the change is later seen to make the country worse off. It also asks how likely a country is to make a type II error of forgoing a change when it is later seen that the change would have made the country better off. It uses US, EU, and UK constitutional history to give preliminary evidence, but also discusses how 22 other countries make changes in their constitutions. Seven of the countries are federations, as is the European Union, and 11 of the total of 25 countries/federations require or sometimes require a second stage of referendum/ratification after legislative approval of amendments. The chapter argues that the institutions that surround changing the constitution have a major effect on the frequency of both type I and type II errors.

A key distinction is between constitutional changes arising from amendments and those from high court interpretations.¹ All countries with written constitutions change

¹ It is standard in discussing constitutions to talk of high court interpretations as changing a constitution (Murphy, 2000; Rasch and Congleton, 2006, Table 12.1). Some use a four-way classification of constitutional change. In one dimension, the changes are legal or illegal. In another, the changes are formal (changes to the text) or informal (e.g., high court interpretations); see Rasche and Congleton (2006). One may argue that the Supreme Court does not change the Constitution but merely says what it is. Legal historians of the United States, however, discuss how the Marshall Court differed from the Taney Court and the Warren Court in terms of how they molded the Constitution.

their constitutions in both ways. The following analysis of the United States suggests that Supreme Court interpretations are more likely to make type I errors than are amendments. There is a historical consensus that the amendment process generated only one major mistake, prohibition, a type I error of changing the US Constitution when the change did not improve welfare.² A wisdom-of-crowds argument suggests this result. In the United States, an amendment requires a two-thirds majority in each house of Congress plus a majority in each house of three-quarters of the states. A Supreme Court decision that can have enormous effects requires only that Congress pass a law with simple majorities and the Supreme Court decide it is constitutional by a 5–4 majority. The chapter does not do so, but researchers can examine other countries to decide whether amendments lead to a lower incidence of type I and type II errors than do high court interpretations.

All of the 25 countries/federations in Table 2.1 require passage of amendments by legislatures,³ and 11 of them require or may require a further round of approval, either by a majority of voters, or in the cases of India by more than one half of its states and the United States by three quarters of its member states. Australia and Switzerland require a majority vote in a referendum, with a majority vote in a majority of the states or cantons. This chapter briefly compares EU and UK constitutional changes to US amendments and Supreme Court interpretations; the data and the wisdom-of-crowds argument both suggest that new EU treaties and UK parliamentary changes are closer to Supreme Court changes rather than to amendments. This chapter does not do so, but researchers can extend the analysis to investigate the incidence of type I and type II errors for the United States and India versus those for countries that are not federations or do not require approval by subnational legislatures.

Among Supreme Court decisions, this chapter focuses on redistribution programs. In evaluating popular support for such redistribution programs, a key distinction is between redistribution payments and the institutions that surround the payments program. Social Security as it now exists is doomed on economic grounds. It is based on the empirically invalid assumption that there will be a substantial number of workers for each retired person whom the workers must support out of their current Social Security payments. Though this was true enough in the past, it is not true now, and will almost certainly be even less so in the future. There is widespread support in America for payments to the elderly, however, especially those described as poor or working class or

In any case, readers are asked to judge whether this chapter's approach leads to worthwhile analysis, though the words describing high court effects may rankle.

² To be sure, today's prohibitionists think it was not Prohibition that was the mistake but rather its repeal. Across many different groups—historians, lawyers, economists, Democrats, Republicans, the South and the North, the West and the East, mainstream Protestants and Roman Catholics and Jews—a large majority views Prohibition as an error.

³ The United States has an alternative path that does not require legislative approval, but this path has never been used. See the discussion that follows of how the United States can amend its Constitution.

Table 2.1 Simplified Amendment Rules, 25 Countries/Federations

Country or federation	Legislative decisions	Referendum or ratification	Comments
<i>Federations:</i>			
1. Australia (federation)	<ul style="list-style-type: none"> • Lower house 1/2 • Upper house 1/2 	Majority in referendum	<ul style="list-style-type: none"> • Constitutional amendment must secure support of majority of whole electorate and majorities in a majority of states (i.e., in four of six states).
2. Austria (federation—EU, EMU)	<ul style="list-style-type: none"> • Lower house 2/3 	(Referendum threat)	<ul style="list-style-type: none"> • Referendum if claimed by more than 1/3 of lower <i>or</i> upper house. • Separate procedure for "total revision" (referendum required).
3. Belgium (federation—EU, EMU)	<ul style="list-style-type: none"> • Pre-election • declaration of revision (federal legislature) • Post-election Lower 2/3 • Post-election Upper 2/3 		
4. Germany (federation—EU, EMU)	<ul style="list-style-type: none"> • Lower house 2/3 • Upper house 2/3 		<ul style="list-style-type: none"> • Some articles of the constitution cannot be amended (e.g., division of federation into states).
5. Switzerland (federation)	<ul style="list-style-type: none"> • Lower house 1/2 • Upper house 1/2 	Majority in referendum	<ul style="list-style-type: none"> • Majority of votes nationwide and majority support in a majority of cantons.
6. United States (federation)	<ul style="list-style-type: none"> • Either (I) • Lower house 2/3 • Upper house 2/3 or (II) • Constitutional Convention (called by 2/3 of states) 	<i>Ratification</i> by 3/4 of states	<ul style="list-style-type: none"> • Procedure II has never been used.
7. India (federations)	<ul style="list-style-type: none"> • In each house, 2/3 voting • In each house, 1/2 of total members 	<i>Ratification</i> by 1/2+ of states	<ul style="list-style-type: none"> • Ratification required in certain cases. • Supreme Court can declare an amendment unconstitutional and void.
8. European Union (federation)	<ul style="list-style-type: none"> • Unanimous agreement by heads of government 	Unanimous approval by parliaments or in referenda	<ul style="list-style-type: none"> • Ireland requires a referendum on new treaties. • Other countries may use a referendum or a parliamentary vote.
<i>Unitary States:</i>			
9. France (EU, EMU)	<ul style="list-style-type: none"> • Either (I) • Lower house 1/2 • Upper house 1/2 or (II) • Parliament 3/5 	Majority in referendum (if I is used)	<ul style="list-style-type: none"> • No referendum if the president decides to submit proposed amendment to Parliament convened in Congress (i.e., procedure II). • The republican form of government is not subject to amendment.

(Continued)

Table 2.1 (Continued)

Country or federation	Legislative decisions	Referendum or ratification	Comments
10. Greece (EU, EMU)	<ul style="list-style-type: none"> • Pre-election 3/5, twice • Post-election 1/2 		<ul style="list-style-type: none"> • The pre-election decisions should be separated by at least 1 month. • "Reversed" majority requirements are possible, i.e., absolute majorities before the election and 3/5 after. • Only selected articles are amendable.
11. Ireland (EU, EMU)	<ul style="list-style-type: none"> • Lower house 1/2 • Upper house 1/2 	Majority in referendum (Referendum threat if procedure I is used)	<ul style="list-style-type: none"> • Referendum according to procedure I (referendum: absolute majority, but less than 2/3, in second vote in the houses) if • 1/5 of members of either chamber, or • 500,000 members, or at least 5 regional councils.
12. Italy (EU, EMU)	Either (I) <ul style="list-style-type: none"> • Lower house 1/2 twice • Upper house 1/2 twice or (II) • Lower house 1/2 and 2/3 • Upper house 1/2 and 2/3 		
13. Japan	<ul style="list-style-type: none"> • Lower house 2/3 • Upper house 2/3 		
14. Netherlands (EU, EMU)	<ul style="list-style-type: none"> • Pre-election Lower 1/2 • Pre-election Upper 1/2 • Post-election Lower 2/3 • Post-election Upper 2/3 		<ul style="list-style-type: none"> • Ratification by the king is required.
15. New Zealand	<ul style="list-style-type: none"> • Majority vote 	(Majority)	<ul style="list-style-type: none"> • Confirmation in referendum expected or customary if the amendment is considered sufficiently important.
16. Portugal (EU, EMU)	<ul style="list-style-type: none"> • Parliament 2/3 		<ul style="list-style-type: none"> • Some limits on revision of substance of the constitution specified in Art. 288.
17. Spain (EU, EMU)	<ul style="list-style-type: none"> • Either (I) • Lower house 3/5 • Upper house 3/5 or (II) • Lower house 2/3 • Upper house 1/2 	(Referendum threat)	<ul style="list-style-type: none"> • Absolute majority required in the Senate according to procedure II. • Referendum if claimed by more than 1/10 of the members of either chamber. • Separate procedure for total revision (i.e., 2/3 majority in each chamber, dissolution, 2/3 majority in both chambers, and ratification by referendum).
<i>Nordic and Scandinavian:</i>			
18. Norway	(Pre-election proposal) <ul style="list-style-type: none"> • Post-election 2/3 		<ul style="list-style-type: none"> • Delay, but single decision in parliament.

(Continued)

Table 2.1 (Continued)

Country or federation	Legislative decisions	Referendum or ratification	Comments
19. Sweden (EU)	<ul style="list-style-type: none"> • Pre-election 1/2 • Post-election 1/2 	(Referendum threat)	<ul style="list-style-type: none"> • Referendum if claimed by more than 1/3 of MPs.
20. Denmark (EU)	<ul style="list-style-type: none"> • Pre-election 1/2 • Post-election 1/2 	Majority in referendum	<ul style="list-style-type: none"> • Majority, more than 40% of electorate.
21. Finland (EU, EMU)	<ul style="list-style-type: none"> • Pre-election 1/2 • Post-election 2/3 		<ul style="list-style-type: none"> • Urgency: Single decision with 5/6 majority.
22. Iceland	<ul style="list-style-type: none"> • Pre-election 1/2 • Post-election 1/2 • Consent by president 		<ul style="list-style-type: none"> • Referendum required to change the status of the Church. • Only selected articles are amendable.
<i>Baltic States:</i>			
23. Estonia (EU, EMU)	<ul style="list-style-type: none"> • First vote 1/2 • Second vote 3/5 • Selected articles only 	Majority in referendum	<ul style="list-style-type: none"> • Referendum required to amend important articles (e.g., general provisions). • 3/5 in parliament to call referendum. • Urgency: Single decision, 4/5 majority.
24. Latvia (EU)	<ul style="list-style-type: none"> • 2/3 majority <i>three times</i> • Selected articles only 	[Referendum for important articles]	<ul style="list-style-type: none"> • Referendum required to amend important articles (e.g., general provisions).
25. Lithuania (EU)	<ul style="list-style-type: none"> • First vote 2/3 • Second vote 2/3 	[Referendum for important articles]	<ul style="list-style-type: none"> • Referendum required to amend important articles (3/4 of electorate support required). • 3 months between parliament decisions. • Only selected articles are amendable.

Notes: Simple or absolute majority = 1/2; qualified majorities indicated by 3/5, 2/3, 4/5, etc. All countries/federations are members of the Organization for Economic Cooperation and Development, save India and the European Union. The notation EU indicates membership in the European Union, the notation EMU membership in the Euro. Sixteen countries are members of the European Union; 12 are members of the Euro. Denmark pegs to the Euro.

Sources: *Formal constitutions* (www.uni-wuerzburg.de/law), Taube (2001), Rasch (1995), and Rasch and Congleton (2006). This chapter adds India and the European Union and omits Luxembourg.

middle class. Its institutional structure is what dooms Social Security and the structure is much less popular. An alternative redistribution program, funded from general tax revenues rather than taxes on employment, and subject to market discipline rather the administrative state, might well have prospered. Thus, from the viewpoint of popularity of programs, Supreme Court mistakes on redistribution are likely to be in accepting

the institutions surrounding redistribution rather than redistribution itself. In general, it appears the Supreme Court makes more type I errors in changing the Constitution than does the amendment process. By comparison, it appears no harder to make constitutional changes in the European Union and the United Kingdom than through the US Supreme Court. The euro debt crisis suggests that, on welfare grounds, the European Union might adopt more rigorous institutions for constitutional changes.

The chapter is organized in the following way. Section 2.2 discusses my definition of constitutional transparency. Section 2.3 provides a short discussion on the public stock of capital. Section 2.4 defines the stability of constitutions. Effects of a surprise major change in a constitution are discussed in Section 2.5 and the role of redistribution programs in Section 2.6. Section 2.7 discusses how the effects on wealth that arise from price changes induced by the constitutional change can be hedged or diversified away. Section 2.8 emphasizes the role of institutions and type I and type II errors. In Section 2.9 discusses the “Wisdom of Crowds” arguments to contend that one set of institutions is better than another because of taking better advantage of the wisdom of crowds. Section 2.10 discusses the evolution of US federal power over the economy, Section 2.11 the EU constitution, and Section 2.12 the UK constitution. Section 2.13 concludes the chapter.

2.2 CONSTITUTIONAL TRANSPARENCY AS PREDICTABILITY

Forssbaeck and Oxelheim (2006) discuss the many meanings of transparency in economic–political debates through the early 2000s. Academic and business discussions pay substantial attention to corporate governance, conflicts of interest between different stakeholder groups in the firm, and the importance of corporate financial transparency. At the micro level, observers laud the increasing price transparency arising from the Internet and e-commerce. Discussions of macroeconomic policymaking pay substantial attention to transparency of what goals decision makers aim at and how they try to achieve their goals. How efficient are these monetary and fiscal policies? And, especially for central banks, what is the democratic accountability of policymakers? Many critics of supranational institutions such as the World Bank, the International Monetary Fund, and the World Trade Organization seize on lack of transparency as a main shortcoming. Critics also attack the European Union for lack of transparency. Oxelheim and Forssbaeck focus on the effects of transparency on economic growth, not on democratic accountability. This chapter focuses on the effects of constitutional transparency on economic decision making, including but not limited to economic growth.

Even with a focus on the effects of transparency on economic decision making, constitutional transparency has a number of meanings possibly relevant to economics, business, and finance.

Visibility: Transparency of political decisions may mean that the demos can watch decision makers at work. This is an ideal never met; sound reasons exist for doubting it is ideal in a world of humans rather than angels.⁴

Documentation: Transparency may mean that after the decisions are made, the demos can see a fairly comprehensive and valid record of the decision making. In the 18th and 19th centuries, many British and American decision makers and those close to decision makers, on various sides of issues, left voluminous diaries and private papers on how decisions occurred. Further, government had not developed the habit of cleansing the record; many archival records were clear and available, even if not open to the public for decades. This is less so now.⁵

Explicability: Transparency may mean that decision making meets some standard of reasonableness or intelligibility. Those involved in the decisions reveal their reasoning to observers in the course of the decision making or later, and in examining the arguments a reasonable, intelligent observer finds the outcome understandable on rational grounds. The observer may think that the decision makers misunderstand some empirical bases, depend in key places on questionable ideology or in subtle ways make logical errors.

Predictability: A world that is transparent in the sense of explicability is one in which political outcomes, especially constitutional outcomes, are at least partially forecastable. Constitutional guarantees of the form “shall” or “shall not” seemingly offer the strongest sort of predictability. From the US Constitution: “All legislative Powers herein granted *shall* be vested in a Congress. . .”; “The House of Representatives *shall* be composed of Members. . .” “Each house *shall* be the Judge of. . .”; “No Bill of Attainder or ex post facto Law *shall* be passed.” “No money *shall* be drawn for the Treasury, but in Consequence of Appropriations. . .”; “No state *shall* enter into any Treaty, Alliance, or Consideration. . .” “Congress *shall* make no law respecting an establishment of religion or the free exercise thereof; or *abridging* the freedom of speech, or of the press; . . .” “. . . the right of the people to keep and bear arms, *shall not* be infringed.” “. . . no Warrants *shall* issue, but upon probable cause. . .”; “Excessive bail *shall not* be required, *nor* excessive fines imposed, *nor* cruel and unusual punishments inflicted”⁶ (italics added).

⁴ Participants in the 1787 Federal Convention that drafted the US Constitution were in general agreement that secrecy of their proceedings was necessary to their success. Secrecy allowed the participants to speak frankly and to change their minds.

⁵ Because of American laws from the 1990s and 2000s, politicians must keep even e-mails; politicians then turn to phone calls and face-to-face meetings, sometimes in places where no one keeps records of meetings. Some simply violate the law by doing government business on e-mail accounts they keep secret. Virtually no decision maker now keeps a diary, lest the courts demand its production; the penalties for lying about the diary’s existence or failing to produce it are stiff.

Tacitus laments that he has to rely on what he has heard when writing his works about the early Roman Empire, rather than the substantial documentation the Roman Republic kept in its archives, which were open to the public. He argues the difference is that the state wanted to keep people in the dark under the Empire.

⁶ From the US Constitution, in order: Article I, Section 1, Section 2, Section 5 (first clause), Section 9 (third clause and clause seven), Section 10 (first clause), and Amendments 1, 2, 4, and 8.

These grants of power or prohibitions are not as absolute as they seem; what they mean in practice arises from interpretation, largely by the courts—the second way constitutions change—and the interpretations change over time.

In many countries, institutions strongly separate constitutional law from normal, statutory law. Legislatures make statutory law. In many parliamentary systems, when parliament passes a bill it thereby becomes law. In systems with some division of powers among the legislature and executive, the executive may have veto powers, either absolute or partial, and thus the bill may require executive approval or an override of an executive veto. Constitutional changes, however, may require more rigorous procedures. On the one hand, Article V of the US Constitution specifies ways of proposing constitutional amendments and ratifying them. Out of thousands of amendments discussed by the people or proposed in Congress,⁷ the people have amended the Constitution only 27 times. In the United States, after both the House and the Senate passed an amendment by a two-thirds majority in the same two-year Congress, all proposed amendments have gone to the state legislatures, of which three quarters (38) of the 50 states must approve in both houses for ratification.⁸ On the other hand, in the United Kingdom, Parliament can change the constitution simply by passing new Acts of Parliament. The UK Parliament consists of the monarch and the Houses of Lords and Commons, but in practice the House of Lords and the monarch must agree to any legislation that the Commons is determined to enact. Most constitutions are between these extremes in difficulty of amending. The United Kingdom is an extreme example of the common practice of amendment by parliament (see later), and the United States one of the many cases (11 of 25 in Table 2.1) where citizens have a voice beyond the legislature in amendments. In contrast to the parliamentary systems and the United States, Ireland's constitution requires a plebiscite for approving amendments, including new EU treaties.

A main purpose of a constitution is to guarantee to the country's citizens and residents certain rights or protections. It is sometimes unclear exactly what all these rights are and how far they extend in certain situations. This lack of clarity does not obviate the fact that some situations, indeed often many situations, the meaning of the guarantees are clear, and generally the lack works itself out over time, for example, through court decisions. One way to think about the guarantees is in terms of scenarios and the likelihood the observer can assign to various scenarios. The question of predictability arises in two types of related situations. The first is the predictability that the current constitution and current understanding and interpretations of it give under the assumption that it does not change. Of course, no constitution is perfect and thus there are pressures to correct its defects (Levinson, 1995)—and to change portions that function well but some interests do not like. Further, if a constitution were perfect as of today, likely many would see a need for change at some future time. The second

⁷ See the discussion in Section 2.8.

⁸ Note that Nebraska is unicameral.

situation is the predictability that a rational observer can assign when considering possible constitutional changes and the various scenarios for economic changes that may occur conditional on the constitutional change.

In both situations, suppose the observer wants consider the range of scenarios affecting his or her economic concerns. She wants to assign not just a likelihood to each scenarios, but also a measure of uncertainty. In some or even many cases, the observer may not be able to assign likelihood very precisely, leaving substantial uncertainty. Moreover, the observer wants to assign different degrees of importance to various scenarios and is likely to be able to do so with much more certainty than in assigning likelihood. If many trivial and small issues have likelihoods with little uncertainty attached, the observer can still view the constitution as nontransparent if just a few major areas are highly uncertain.

One further issue is important under the heading of predictability: What is the likelihood that over time a large majority of the population will agree that a constitutional change was an improvement? To be sure, proposed changes are always argued by supporters to be for the better, whether the supporters are arguing for constitutional amendments or are arguing cases before high courts. The analyst can assess the truth of these arguments by examining the history of the success of amendments and of constitutional changes that high courts impose.

2.3 PUBLIC STOCK OF CAPITAL; RULES OF THE GAME

Transparency-as-predictability is part of the public stock of capital. A modern society cannot get along without a constitution. But like highways or railroads, some countries have much superior constitutions. In many countries, a good deal of predictability consists in what government will do *for* residents (in a number of European countries, e.g., transfer payments, guarantees of food, housing, education, vacation, etc.). In some countries, an important part of predictability is what government *cannot* do to residents (the first eight amendments in the US Bill of Rights consists of protections against the federal government, e.g., freedom of speech).

A country's current population owes much of its well-being to its predecessors—the physical stock of capital, the education system, and education already provided to those working and in particular the country's institutions. Ancestors can leave stock of great value—or junk. Think of Roman roads versus District of Columbia roads, Roman aqueducts versus the DC water system. If the capital stock is good, maintain it and do not experiment with it until a valid problem arises with a valid solution. Institutional capital is as solid and important as intellectual and physical capital.

Rules of the Game: As an analogy, institutions provide the rules of the game. If the rules are good and make for a better game than other sets of rules, leave them alone. In this case, make experimentation hard; do not change the rules unless there is a strong consensus for change among those who have an interest.⁹

David Hume¹⁰ and James Madison¹¹ argued the importance of citizens' respect and support for a constitution that has endured—tradition—and were skeptical of changes because of their effect of undermining support by undermining tradition. A large majority of Benelux, French, German, and Italian residents¹² have always lived under the European Economic Community or European Community or European Union, but have never had a stable fundamental European law. Residents of countries lately admitted have little feeling of respect based on tradition. This is in the nature of the ever-evolving European Union, but is nevertheless a cost.

⁹ Comparing teams and players in different eras is one of the joys that aficionados find in baseball. For this reason, the sport's rules evolve very little over spans of decades. Fans of American football like high-scoring, competitive contests; this helps explain why there are important rules changes after almost every season.

¹⁰ David Hume (1987), *Of the First Principles of Government*:

"Nothing appears more surprising to those, who consider human affairs with a philosophical eye, than the easiness with which the many are governed by the few; and the implicit submission, with which men resign their own sentiments and passions to those of their rulers. When we enquire by what means this wonder is effected, we shall find, that, as FORCE is always on the side of the governed, the governors have nothing to support them but opinion. It is therefore, on opinion only that government is founded; and this maxim extends to the most despotic and most military governments, as well as to the most free and most popular. The soldan of EGYPT, or the emperor of ROME, might drive his harmless subjects, like brute beasts, against their sentiments and inclination. But he must, at least, have led his mamalukes, or praetorian bands, like men, by their opinion.

Opinion is of two kinds, to wit, opinion of INTEREST, and opinion of RIGHT. By opinion of interest, I chiefly understand the sense of the general advantage which is reaped from government; together with the persuasion, that the particular government, which is established, is equally advantageous with any other that could easily be settled. When this opinion prevails among the generality of a state, or among those who have the force in their hands, it gives great security to any government." (pp. 32–33).

¹¹ James Madison, No. 49, Hamilton, Madison and Jay, *The Federalist* (p. 340) argues against depriving "the government of that veneration, which time bestows on every thing, and without which perhaps the wisest and freest governments would not possess the requisite stability. If it be true that all governments rest on opinion, it is no less true that the strength of opinion in each individual, and its practical influence on his conduct, depend much on the number which he supposes to have entertained the same opinion. The reason of man, like man himself is timid and cautious, when left alone; and acquires firmness and confidence, in proportion to the number with which it is associated. When the examples, which fortify opinion, are *antient* as well as *numerous*, they are known to have a double effect. . . . [T]he most rational government will not find it a superfluous advantage to have the prejudices of the community on its side."

¹² This chapter generally refers to residents rather than citizens because in some cases those who are not citizens are important actors. Many, but not all, references in the US Constitution are to persons—including residents whether legal or not or those in transit—not just citizens.

2.4 STABILITY OF A CONSTITUTION: AMENDMENTS

Some define a stable constitution as one that does not change over time. A number of authors examine explanations for why a cross section of constitutions shows variability in the number of amendments per year (see Lutz, 1994, 1995; Ferejohn, 1997; and Rasch and Congleton, 2006). They discuss a number of different institutions that might reduce the rates at which countries amend their constitutions. For example, in Table 2.1, in Germany the lower and upper house must vote in favor with a two-thirds majority to amend. Thus, two entities—the two houses—can block amendment, and there are only two opportunities in total to block. In addition, however, Germany requires *supermajorities*. For The Netherlands, each house must vote yes by a simple majority and, after an *intervening election*, both must vote yes by a two-thirds majority and then the king must ratify the amendment. This gives a total of three entities (the two houses and the king) and five opportunities to block, plus supermajorities and a *delay*. Australia requires simple majorities in both houses plus a referendum that secures a majority of the whole electorate and a majority in a majority of states (four out of six). Thus, Australians have three opportunities to block, once in each house and the referendum, and the two houses and the voters as a whole can block, as well as any four of six of the states. One may count the entities in various ways, giving a minimum of three. Though the two houses may vote on the same day, Australia has a *delay*, perhaps to let people think things over, between those votes and the referendum. Finally, Sweden requires a simple majority in favor, an intervening election, and then another simple majority. In addition, Sweden requires a simple majority in a referendum if one-third of the members of parliament demand it; that is, Sweden's constitution contains a *referendum threat* but not requirement. In Rasch and Congleton's (2006) cross-sectional investigation of the log number of amendments per year for 19 countries (their Table 12.3), the number of entities that can block and the number of opportunities to block are significantly negatively related to the log rate. Both the referendum threat and the requirement of an intervening election are significantly negatively related to the log rate. The requirement of supermajorities shows no significant relationship.¹³

¹³ Japan and Denmark have never amended their constitutions, though Denmark has replaced its constitutions four times. India has amended its 1950 constitution with 98 amendments. Since ratifying its constitution in 1788, the United States has amended it 27 times. It might be wise to allow for country effects rather than using a single intercept.

2.5 EFFECTS OF A SURPRISE MAJOR CHANGE IN A CONSTITUTION

Consider the effects of a surprise major economic change in the constitution. The economic effects of such a change are far from transparent; it is extremely difficult to predict how, say, a new redistribution program will affect quantities and prices. In an initial general equilibrium, Sonnenschein (1972, 1973) shows that under standard assumptions on concavity, continuity, and optimization, the only comparative statics result that holds at an interior solution is Walras' Law. Intuitively, an enormous variety of results are consistent with the parametric change, and standard assumptions rule out none of them. To understand the reasons for and implications of Sonnenschein's results, consider effects in terms of Hicks's analysis of substitution and wealth effects—wealth effects are income effects in an intertemporal framework. Suppose that a redistribution program is unconstitutional by previous standards of court analysis and everyone expects the high court to overturn it. Nevertheless, the Supreme Court upholds the program.

2.5.1 Hicksian Effects on Excess Demands

A substantial majority of major political and constitutional changes in economic rules of the game are for *redistribution*. In contrast, a minority of changes aims at *economic efficiency* (e.g., freeing up labor markets¹⁴). Some have described redistribution as transferring water from one pool to another with a leaky bucket—there is always some loss. The new program itself causes parametric effects on wealth from the new regulations it institutes, taxes it raises, paperwork, etc.¹⁵ The parametric effects can be interpreted as an inward shift in society's transformation function (production possibility curve) in Figure 2.1, or from an initial basket A to B. For simplicity, however, consider an endowment economy with two goods (*ceteris paribus*, the analysis follows in the intertemporal production economy).¹⁶ In response to the parametric shifts—the assumed reduction in society's wealth, with some people better off initially and some

¹⁴ In 2012, Michigan became a right to work state. Previously, a union and a business could negotiate a contract under which every employee had to be a union member or at least pay dues; now these contracts are not allowed. In contrast, a union-supported amendment to California's constitution requires that as a minimum a particular share of the state's budget must go to public education.

¹⁵ Aside from the dW_i discussed later, the discussion omits explicit consideration of taxes, etc. These can be added at the cost of much notational clutter but little insight.

¹⁶ For the equivalence of the results in the endowment, production, and intertemporal economies, see Sweeney (1988).

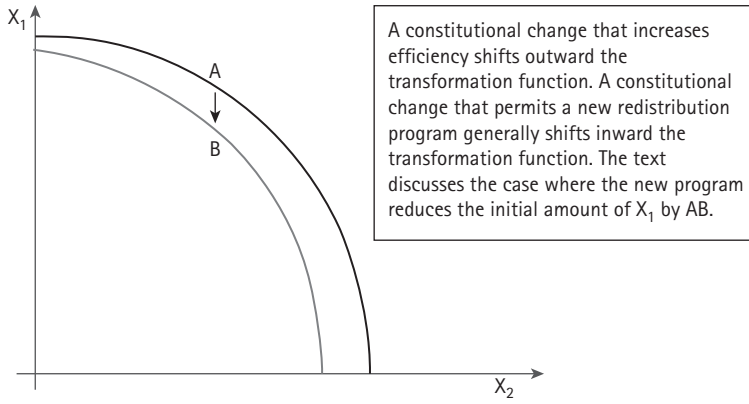


FIGURE 2.1 Shift in the transformation function.

worse—the program is likely to cause price changes by affecting excess demands in a range of markets: these price changes cause Hicksian substitution and wealth effects. The price adjustments partially mitigate adverse effects of the parametric wealth loss; put another way, the negative effects would be worse for the average individual if prices did not adjust to allow individuals to adjust their net demands. In the aggregate, these further Hicksian wealth effects through price changes are simply further distribution effects.

2.5.2 Modified Slutsky Equation

The Slutsky equation of individual i for good X_1 is

Slutsky equation, individual i , two-good world

$$dX_i^d / d\alpha = \text{sub}_i \times dP / d\alpha + we_i \times (X_i^s - X_i^d) \times dP / d\alpha \quad (2.1)$$

where

- α is a shift parameter, with $d\alpha$ representing constitutional change;
- $\text{sub}_i \times dP/d\alpha$ is i 's *substitution effect*, arising from the change in price dP , with $\text{sub}_i < 0$;
- X_i^s is i 's endowment of the good under consideration, X_i^d her gross demand, and $(X_i^s - X_i^d)$ her excess supply, $-(X_i^s - X_i^d)$ her excess demand;
- the product $we_i \times [(X_i^s - X_i^d) \times dP]$ is the Hicksian *wealth effect* arising from dP ;
- we_i is the wealth effect on i 's demand for the good of a unit increase in wealth. If $we_i > 0$, the good is a superior good; if $we_i > 0$, the 1 is normal; if $we_i < 0$, the good is inferior.

A modified version of the Slutsky equation includes the initial effect on wealth arising from the parametric change, $d\alpha$:

$$\begin{array}{c} \text{Slutsky equation, individual } i, \text{ two-good world} \end{array} \quad \begin{array}{c} \text{Parametric change in} \\ \text{wealth} \times \text{effect} \end{array}$$

$$dX_i^d / d\alpha = \text{sub}_i \times dP / d\alpha + we_i \times \left[(X_i^s - X_i^d) \times dP / d\alpha + dW_i / d\alpha \right] \quad (2.2)$$

where

- $dW_i/d\alpha$ is the shift in i 's budget constraint from the parametric change in the endowment or transformation function. The total change is $dW < 0$, but for some consumers, $dW_i > 0$, $dW/d\alpha = \sum_{i=1}^N dW_i/d\alpha < 0$. Equation (2.3) shows the aggregate modified Slutsky equation found by summing Eq. (2.2) over the N individuals. In the aggregate

$$\begin{array}{c} \text{Summed Slutsky equations with two goods} \end{array} \quad \begin{array}{c} \text{Parametric changes in} \\ \text{wealth} \times \text{effects} \end{array}$$

$$dX_1^d / d\alpha = \left(\sum_{i=1}^N \text{sub}_{1,i} \right) dP_1 \alpha / d\alpha + \sum_{i=1}^N \left[we_i \times (X_{1,i}^s - X_{1,i}^d) \right] dP_1 / d\alpha + \sum_{i=1}^N [we_i \times dW_i / d\alpha] \quad (2.3)$$

where

- $(X_i^s - X_i^d) \times dP$ is the *effect on wealth* for i caused by dP , where $(X_i^s - X_i^d) > / < 0$ as i is a net supplier or demander of X_i ;
- In the aggregate $\text{sub} = (\sum_{i=1}^N \text{sub}_i) < 0$ from $\text{sub}_i < 0$ for all i ;
- In addition, $\sum_{i=1}^N (X_i^s - X_i^d) = 0$ in initial equilibrium and thus $\sum_{i=1}^N we_i \times (X_i^s - X_i^d) dP/d\alpha$ is a distribution effect depending on differences in we_i across the individuals i ;

This distribution effect is equal to a covariance term, $\text{cov}[we_i, (X_i^s - X_i^d)]$, times $dP/d\alpha$

For illustration, suppose the parametric change is a decrease in the aggregate amount of X_1 in the exchange economy. Starting at the initial equilibrium $(X_1^d - X_1^s) = [X_1^d(P; \alpha) - X_1^s(P; \alpha)] = 0$ and differentiating yields

$$(\partial X_1^d / \partial \alpha - \partial X_1^s / \partial \alpha) + (\partial X_1^d / \partial P - \partial X_1^s / \partial P) \times dP / d\alpha = 0,$$

giving

$$dP / d\alpha = (\partial X_1^s / d\alpha - \partial X_1^d / d\alpha) / (\partial X_1^d / \partial P - \partial X_1^s / \partial P) > 0,$$

if $(dX_1^s/d\alpha - \partial X_1^d/\partial\alpha) < 0$ and $(\partial X_1^d/\partial P - \partial X_1^s/\partial P) < 0$. The initial reduction in X_1^s is likely larger than the reduction in X_1^d arising from the initial dW but need not be.

Again the effect of an increase in P on excess demand for X_1 , $(\partial X_1^d / \partial P - \partial X_1^s / \partial P)$, is likely negative but need not be.

2.5.3 Results of Static Analysis with Price Adjustment

The total effect through induced price changes is thus (1) a negative effect on aggregate X_1^d through substitution effects, (2) a *distribution* effect through the wealth effects from price changes, where the overall *effect on wealth* of the price change $[\sum_{i=1}^N (X_{1,i}^s - X_{1,i}^d) dP_1]$ is zero at the initial equilibrium. (3) The aggregate *effect on wealth* (dW) from the redistribution program is negative, but distribution effects may lead to an aggregate *wealth effect* of either sign, $\sum_{i=1}^N [we_i \times dW_i] > / < 0$.

The substitution effects lead to adjustments that partially mitigate the harm of the surprise constitutional change that reduces social wealth. But note that the changes in prices make the effects of hard to forecast, as is obvious when expanding the analysis to include $M + 1$ goods:

$$\begin{aligned}
 dX_1^d / d\alpha = & \left(\sum_{i=1}^N \text{sub}_{1,i} \right) dP_1 / d\alpha + \sum_{i=1}^N [we_i \times (X_{1,i}^s - X_{1,i}^d)] dP_1 / d\alpha + \sum_{i=1}^N [we_i \times dW_i / d\alpha] \\
 & \text{Summed Slutsky equations with two goods} \qquad \qquad \qquad \text{Parametric changes} \\
 & \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \text{in wealth} \times \text{effects} \\
 & + \left\{ \left(\sum_{i=1}^N \text{sub}_{1,i} \right) dP_2 / d\alpha + \cdots + \left(\sum_{i=1}^N \text{sub}_{M,i} \right) dP_M / d\alpha \right\} \\
 & \qquad \qquad \qquad \text{Substitution effects from other goods' price changes} \\
 & + \left\{ \sum_{i=1}^N [we_i \times (X_{2,i}^s - X_{2,i}^d)] dP_2 / d\alpha + \cdots + \sum_{i=1}^N [we_i \times (X_{M,i}^s - X_{M,i}^d)] dP_M / d\alpha \right\} \\
 & \qquad \qquad \qquad \text{Wealth effects from other goods' price changes.}
 \end{aligned}$$

The matrix of substitution effects is symmetric and negative definite. The terms $\sum_{i=1}^N [we_i \times (X_{j,i}^s - X_{j,i}^d)] = \text{cov}[we_i \times (X_{j,i}^s - X_{j,i}^d)]$ can be signed if (1) the analyst has detailed knowledge of the pattern of we_i relative to $(X_{j,i}^s - X_{j,i}^d)$, (2) or $we_i = we$ for all i so $\text{cov}[we_i \times (X_{j,i}^s - X_{j,i}^d)] = 0.0$.

2.5.4 Dynamic Adjustment

The preceding static analysis neglects the adjustment of capital stocks to the new regulations, and so forth. On the one hand, such adjustment is costly. On the other hand, the ability to adjust mitigates to some extent the costs of the constitutional change. There are also further effects from a constitutional change. As opposed to a technological disturbance (new techniques or products) or a natural disturbance (earthquake), a constitutional change is likely to require rewriting much law to make it conform to the

new status quo; this can be quite expensive and confusing and may lead to much litigation. Moreover, a disturbance to one institution makes related institutions suboptimal. The country must either limp along with this suboptimality or go through the costs of altering these institutions. All of these issues reduce the predictability and hence transparency of the economic effects of constitutional changes.

2.6 THE ADMINISTRATIVE STATE AND SOCIAL WELFARE

Most often, new redistribution programs contain provisions explicitly designed to prevent prices from adjusting fully to clear markets; instead they use administrative actions to allocate rationed goods. Because prices do not adjust to equilibrate goods markets, the optimality conditions that price must equal marginal cost does not hold, and social welfare is lower than otherwise in a Pareto-optimal sense. Further, such programs typically intervene in factor markets. An example is deep state regulation of medical markets in which administrators ration goods through quantitative controls but also act to limit income of various medical providers of goods and services. In general, such intervention in factor markets further shifts inward the transformation function.

2.6.1 Redistribution versus the Administrative State

In judging a redistribution program, the observer must judge both the costs and benefits of redistribution and the costs of the particular institutions used to carry out the redistribution. For example, the government might want to redistribute income to the elderly, as Social Security does in the United States. Such redistribution can be done in many ways. The actual Social Security program is only one method. With hindsight of almost 80 years, a majority would likely judge that income redistribution to the elderly, the ostensible goal of Social Security, has been a social success. But a majority might also judge that the Social Security mechanism itself has been a failure—after all, a Social Security crisis, ever more severe, is inevitable. Social Security has very particular institutions. Social Security finances itself by collecting a 7.5% on tax on wages from the employee and another 7.5% from the employer. The Social Security Administration pays out some of these funds to the elderly and uses the rest to buy federal government bonds. Thus, the system is “pay as you go” rather than a true insurance system, though it was and is sold to the public as insurance and everyone must join the social insurance system. It was this system that the Supreme Court controversially decided was constitutional. How much a worker receives depends on

his average wages and how many years he works; both variables, however, reach a point where a higher salary or a longer work record costs the worker in taxes but adds nothing to future payments received. When the excess of the amount paid into the system over disbursements is negative, the federal government must pay the difference out of general revenues. The coming crisis is precisely that the net income will soon become negative and increasingly larger in absolute value. Because the United States has a large national debt and a substantial deficit, the country can ill afford to make up the growing shortfall out of general tax revenue. Cutting payments, however, or making people work longer is difficult for politicians precisely because people believe the promised payments are the results of insurance they paid for and are entitled to.

Rather than the Social Security system, Congress might have adopted other, obviously constitutional, systems to provide for the elderly. It might have adopted a much less invasive and administratively less complex and expensive program such as the Earned Income Tax Credit (EITC) used to redistribute income to the “working poor,” especially those with children. Recipients simply apply for payments as part of filing their income tax returns. In this case, the government would pay for benefits to the elderly out of general tax revenues. Means testing, as with the EITC, would be easy to apply. The payments and their costs would be transparent. The financial problems the current Social Security system now faces would instead show up as part of the government’s general deficit and debt problems. Cutbacks, if any, in payments to the elderly would be part of the general fiscal problem of how to adjust spending and taxation in the face of excess debt and deficits.

2.7 DIVERSIFICATION AND HEDGING

The decline in wealth from a parametric constitutional change is obviously a realization of systematic risk—the system must bear the risk and suffer the realization. The effects on wealth that arise from price changes induced by the constitutional change sum to zero and hence in principle can be hedged or diversified away. Such hedging or diversification requires that markets are in effect complete for the subset or prices considered. Closely related, the effects across the economy are so complex that an individual is at a loss to know what and how much to hedge. How will dP_j/d , dP_h/d be related? What is the likely value of $(X_{j,i}^s - X_{j,i}^d)$ when the change occurs? What will be the pattern of the dW_i ? Moreover, the transaction costs of hedging across a wide range of possible constitutional changes, which may occur over a long time horizon, seem daunting. Finally, in the case where government intervenes administratively to prevent goods and factor markets from clearing, it is unclear what hedging contracts would be written on—the unobservable lost

income of say medical providers? The unobservable excess waiting time in markets that do not clear?¹⁷ Unobservable excess deaths?

2.8 INSTITUTIONS AND TYPE I–TYPE II ERRORS

The temptation is always present to think some constitutional changes would improve the country's institutional capital stock. Constitutional changes, however, always falsify some predictions of no change: Is the change so beneficial that it is worth the loss from falsifying predictions, the loss in value of the capital stock acquired on the basis of them, or the costs of entanglements from contracts signed on the basis of them, and so forth?¹⁸

Of course, if a country has a bad set of rules, the urge to change is hard to resist. But in urging changes, enthusiasts sometimes overlook or neglect type I and type II errors—a lack of humility is common to elites, especially those with self-interest at work. Suppose the null hypothesis is that the status quo is better than the change proposed. Type I error: make the change. The change may be to override some words in the constitution, such as the 13th Amendment of the US Constitution that outlawed slavery, overriding phrases containing euphemisms for slavery and fugitive slave laws. Or, the change may simply add to the constitution, for example, the 18th Amendment that imposed prohibition. An example: most informed people looking back think prohibition was a mistake—a type I error. Of course, there still exist groups working to reimpose prohibition; a segment of the population will deny prohibition was a type I error. Another example: the European Monetary Union from the Maastricht Treaty has been on balance a failure so far—ask a random Greek or Spaniard—and may cause much greater further damage. Keeping the euro for some or all countries may be cost effective at this point, but if Europe had known then what it knows now. . .

The *alternative* hypothesis is that, relative to the status quo, the proposed set of changes is beneficial on balance. Type II error: do *not* change the status quo when the alternative hypothesis of improvement is true. Congress has sent 33 amendments to the states to consider. The states have failed to ratify six, giving a set that might contain type

¹⁷ In medical markets, there may be an increase in excess deaths. In any case, there is certainly likely to be distribution effects, some dying early who would not have, some dying later. How is this hedged or insured against?

¹⁸ The change in the constitution may not be a surprise but rather an outcome that people foresaw for several years. This complicates the analysis and reduces adjustment costs, but the analysis is largely unchanged.

II errors. Two amendments—the Equal Rights Amendment¹⁹ (35 states ratified, but 5 rescinded and none rejected) and the District of Columbia Voting Rights Amendment (16 ratified)²⁰—ran out of time and are now dead.²¹ Four amendments without time restrictions remain—Apportionment for Congress Amendment²² (sent to states in 1789, 11 states ratified, 1 rejected), the Titles of Nobility Amendment²³ (1810, 12–3), Corwin Amendment²⁴ (1861, 3–0), Child Labor Amendment²⁵ (1924, 28–12; last state ratified in 1937).²⁶

Of these six amendments, only the rejection of the ERA might be viewed as a type II error. The case is unclear, however. Of the 35 states that initially ratified, five rescinded. Nevertheless, nine states have taken up the amendment since time ran out, and there is a movement to ratify the amendment by sufficient states to give the required 38, get Congress to extend the deadline, and hope the courts agree with this extralegal procedure.²⁷ If failure of the ERA is taken as a type II error, then one of six of the failed amendments was rejected in error.²⁸

¹⁹ Article—Section 1. Equality of rights under the law shall not be denied or abridged by the United States or by any State on account of sex.

²⁰ Article—Section 1. For purposes of representation in the Congress, election of the President and Vice President, and article V of this Constitution, the District constituting the seat of government of the United States shall be treated as though it were a State.

²¹ Starting with the 18th amendment, in some but not all proposed amendments Congress inserted clauses requiring ratification within a fixed time (seven years, in practice). The 18th, 20th, 21st, and 22nd Amendments, and the failed Equal Rights and DC Voting Rights Amendments, specified seven years. (Congress later voted to give the ERA an additional three years, to no effect.)

²² The amendment specified how to increase the number of seats in the House and how many people a member represented. It is wholly out of date.

²³ The amendment stripped citizenship from anyone who accepted a foreign title of nobility. It might apply to honorary knighthoods or even the use of the title “Esquire.” The last action on it was Rhode Island’s rejection in 1814.

²⁴ This amendment (1861) arose during the “Secession Winter” and was an attempt to reassure the South that the federal government could not interfere with slavery where it existed (last action in 1862).

²⁵ This amendment was designed to remove any constitutional doubts about the federal government’s authority to make laws regulating child labor. That issue is no longer in doubt.

²⁶ Constitutional specifications on structure of government can sometimes make policy more predictable, in part by making it harder to change constitutional constraints. It is a commonplace that in the United States, divided government is the major constitutional defense for preventing suboptimal laws. What is overlooked is that these same devices also prevent passage of laws that may require a constitutional decision that suboptimally expands/restricts government power. Divided government is biased against making changes and thus biased against type I errors. Note that a set of institutions implies an for making type I errors and also power for rejecting the null when it is false. A change from one set of institutions to another may make α smaller (and thus type I errors less likely) and at the same time increase power. Thus, one cannot assume that because the amendment process has a smaller than the Supreme Court ($\alpha_{Am} < \alpha_{SC}$) it necessarily has less power than the Supreme Court process.

²⁷ This recitation of facts is perhaps biased toward viewing the rejection of ERA as a type II error. In opposition, there is no sizeable and impassioned group pushing for the amendment, as there was for other social amendments such as women voting, prohibition, and the repeal of prohibition.

²⁸ A much larger sample is the more than 13,000 amendments Congressmen have proposed since 1789 that have not been approved by Congress and sent to the states. All those beneficial on net are by definition type II errors. Yet, on casual examination it is straightforward that many states and residents would find many proposals unacceptable. Perhaps the proposal whose rejection jumps out

In deciding on any proposed change to a constitution a rational decision maker considers type I and type II errors. For any chosen probability of a type I error, she wants to maximize the power of institutions to reject the null of no change in favor of the alternative of accepting the proposed constitutional change. The institutions run the gamut from essentially no difference between ordinary laws and changes in fundamental law, as in the United Kingdom, to multistage processes for proposing changes and ratifying them, as in the United States, Australia, or India, where states must ratify amendments passed by the legislature, or Sweden where the legislature must pass the bill twice, with an intermediate election and perhaps a referendum thereafter (see Table 2.1).

Some of the institutions for amending constitutions are reminiscent of the thoughts of David Hume in designing an ideal commonwealth. Hume proposed using indirect elections to filter representatives to find those with appropriate qualities for their roles. He suggested dividing Great Britain and Ireland into 100 counties, with 100 parishes in each. Once a year, those eligible to vote were to gather and elect one *county representative* from each parish, giving 10,000 county representatives. The 100 representatives in a county were to meet and select from their number ten *county magistrates* and one *senator*. This yields 10,000 county representatives, 1100 county magistrates, and 100 senators. The 10,000 county representatives meet in their particular counties, and possess the whole legislative power of the commonwealth; the greater number of counties deciding the question; in case of ties, the senate has the casting vote. The senators collectively act as the executive; they propose and debate legislation in the first place. The proposed legislation then goes to the legislature, in most cases whether the senate approves the legislation or not. The representatives also act as justices of the peace (with powers that British justices of the peace during Hume's time).²⁹ In a key passage, from this chapter's point of view, Hume (1987, pp. 516–523) writes:

as a possible type II error is the series proposals of Balanced Budget Amendments. Many economists favored these proposals—but many others as strongly opposed them.

See “Measures Proposed to Amend the Constitution.” *Statistics & Lists*, United States Senate. At a rate of more than 200 per year, the number of proposed amendments exceeded 13,000 at the end of 2012.

²⁹ Hume (1987, pp. 516–523) writes:

Let the senators meet in the capital, and be endowed with the whole executive power of the commonwealth; the power of peace and war. . . . Let the county representatives meet in their particular counties, and possess the whole legislative power of the commonwealth; the greater number of counties deciding the question; and where these are equal, let the senate have the casting vote. . . . Every new law must first be debated in the senate; and though rejected by it, if ten senators insist and protest, it must be sent down to the counties. . . . Because it would be troublesome to assemble all the county representatives for every trivial law, that may be requisite, the senate have their choice of sending down the law either to the county magistrates or county representatives. The magistrates, though the law be referred to them, may, if they please, call the representatives, and submit the affair to their determination. . . . [T]hough the determination be, by the senate, referred to the magistrates, if five representatives of the county order the magistrates to assemble the whole court of representatives, and submit the affair to their determination, they must obey. . . . The representatives have all the authority of the BRITISH justices of peace in trials, commitments, &c. The magistrates have

A large assembly of 1000, for instance, to represent the people, if allowed to debate, would fall into disorder. If not allowed to debate, the senate [i.e., executive] has a negative upon them, and the worst kind of negative, that before resolution.

Here therefore is an inconvenience, which no government has yet fully remedied, but which is the easiest to be remedied in the world. If the people debate, all is confusion: If they do not debate, they can only resolve; and then the senate carves for them. Divide the people into many separate bodies; and then they may debate with safety, and every inconvenience seems to be prevented.

Note that Hume's discussion and Madison's related discussion shed light on how the number of state representatives relates to the number of representatives the states have at the federal level. Each state has more representatives in its legislature than in total at the federal level, giving a closer relationship to voters at the state level.^{30,31} In EU countries with municipal, county or provincial governments, the qualitative relationship is similar. The hope in both the US and the EU is that governments closer to the people do a better job in enacting and executing laws suitable to the people.

the appointment of all the officers of the revenue in each county. All causes with regard to the revenue are carried ultimately by appeal before the magistrates. They pass the accompts of all the officers; but must have their own accompts examined and passed at the end of the year by the representatives. . . .

Ten thousand, even though they were not annually elected, are a basis large enough for any free government. . . .

All free governments must consist of two councils, a lesser and greater; or, in other words, of a senate and people. The people, as H[arrington] observes, would want wisdom, without the senate: The senate, without the people, would want honesty.

³⁰ As the number of federal legislators from a state rises, the ratio of state to federal representatives tends to decline—see California. (Note that California is in the peculiar position of having fewer state senators than it does members of the House of Representatives.)

³¹ Madison writes (*Federalist*, pp. 373–374):

[T]he ratio between the representatives and the people, ought not to be the same where the latter are very numerous, as where they are very few. . . . Sixty or seventy men may be more properly trusted with a given degree of power than six or seven. But it does not follow, that six or seven hundred would be proportionally a better depository. . . . The truth is, that in all cases a certain number at least seems to be necessary to secure the benefits of free consultation and discussion, and to guard against too easy a combination for improper purposes: As on the other hand, the number ought at most to be kept within a certain limit, in order to avoid the confusion and intemperance of a multitude.

He further writes (*Federalist*, pp. 395–396):

[I]n all legislative assemblies, the greater the number composing them may be, the fewer will be the men who will in fact direct their proceedings. In the first place, the more numerous any assembly may be, of whatever characters composed, the greater is known to be the ascendancy of passion over reason. In the next place, the larger the number, the greater will be the proportion of members of limited information and of weak capacities.

Wills (2001) discusses Hume's major influence on Madison.

	State reps. ^a	State sens.	State total	Federal reps. ^b	Federal sens. ^c	Federal total	State reps./ federal reps
Alabama	105	35	140	7	2	9	15.56
California	80	40	120	53	2	55	1.51
Colorado	65	35	100	7	2	9	9.29
Connecticut	151	36	187	5	2	7	30.20
Missouri	163	34	197	9	2	11	18.11
Texas	150	31	181	32	2	34	4.69
Wyoming	60	30	90	1	2	3	30.00

^aState representatives are those who sit in the lower, larger house; senators in the smaller, upper house. Federal representatives are members of the House of Representatives, senators members of the US Senate. Each state has two US senators and a minimum of one US representative, and hence a minimum of three federal representatives in total. Nebraska has a unicameral legislature.

^bThe House of Representatives has 435 members, allocated across states by population, save that each state has a minimum of one representative.

^cThe US Senate has 100 members, two per state. The vice president of the United States serves as president of the senate and has a casting vote.

Hume's (1987) "county" scheme is also reminiscent of the four possible ways in which the United States may adopt amendments to the Constitution.³² Some data (for later reference, the table also includes information on how the EU or UK constitutions can change):

↓ Amendments generated/ Amendments ratified ^a →	Three-fourths of states' legislatures vote to ratify amendments by simple majorities	Conventions in three-fourths of states vote to ratify amendments by simple majorities
House and Senate each approve proposed amendments by a two-thirds vote	1	2
On application of two-thirds of states, Congress must call a convention to generate amendments	3	4
European Union—Unanimous vote by 27 member-state governments to approve new treaty United Kingdom—Majority Vote in House of Commons	Unanimous vote by 27 member states to ratify new treaty, parliaments or referenda	

^a Congress decides which mode of ratification the states must use.

³² See Article V of the Constitution. Amendments can be sent to the states for ratification in two ways. Two-thirds of both the House and Senate may pass an amendment, or on the request of

Congress, not a convention, has been the source of all amendments. Elites are frightened by a “runaway” amending convention and thus Congress is highly likely to propose whatever amendments have widespread support to avoid a convention. For all amendments sent to the states for ratification, Congress specified that legislatures must ratify them, not conventions. This two-stage procedure explains why amendments that fail tend to have what many perceive as grave flaws.

2.8.1 Changing the European Union Constitution

In outline, the European Union appears somewhat similar to Hume’s scheme, but this appearance is misleading. The European Commission and working groups develop new treaties. Heads of government meet, perhaps more than once, to thrash out and agree on final drafts of treaties. The treaties then go to national parliaments for ratification, though occasionally countries hold referenda. Essentially, all countries ratify these treaties or close versions. A key reason for this success is that the heads of government who sign the treaties all lead parliamentary coalitions. At the time they are willing to sign, it is almost certain that they can ram the treaty through to parliamentary ratification. If one leader is afraid to sign, other leaders may grant her a change or an opt-out that allows passage. Despite the complications of detail, much the same group of elites who run governments and the Commission decide both on the treaties and on ratification, quite unlike the US procedure.

2.8.2 Supreme Court Changes in the US Constitution

Beyond formal amendment, the Constitution changes in another way, through Supreme Court interpretations of the Constitution’s meaning. The steps are these. First, Congress must pass a law with some unique aspects that *may* be unconstitutional—decision makers do not “know” about its constitutionality until it is tested in court. Passing the law requires at a minimum 218 votes (of 435) in the House and 51 votes (of 100 or 101) in the Senate.³³ Second, the Court agrees to hear a case that will decide the constitutionality of a major aspect of the law. Third, five out of nine votes of the Supreme Court justices decide on the law’s constitutionality. At both stages, many fewer people are involved in this procedure

two-thirds of the states ($34: 50 \times 2/3 = 33.333$) Congress will call a convention to propose amendments. In either case, the amendments become part of the constitution if three quarters ($38: 50 \times 3/4 = 37.50$) of state legislatures ratify the amendments or conventions in three quarters of the states ratify them (Congress decides which approach is used for a given proposed amendment). All amendments sent to the states arose from Congressional legislation, and in no case have states called conventions for either proposing or ratifying amendments.

³³ These figures assume that 435 representatives and 100 senators vote. In fact, all that is required is a simple majority of those voting. If the Senate has a tie vote, the vice president, acting in his role as president of the senate, has the casting vote.

than that for amendments, and the spread in knowledge, interests, and backgrounds is substantially less.

2.9 THE WISDOM OF CROWDS³⁴

Many times authors appeal to “Wisdom of Crowds” arguments to contend that one set of institutions is better than another because of taking better advantage of the wisdom of crowds. Under some conditions, there is much to be said for such arguments, but the conditions are stringent. First, the crowd must contain a majority of people who know something if not everything about the question to be considered. Combining total ignorance gives total ignorance. Second, the information that different members of the crowd have must show some lack of correlation. If the information is identical, polling N individuals is no better than polling one. An appendix formulates these conditions in a formal manner.

2.9.1 Whips

Parliaments tend to have strong whip systems. When the leadership of the parties in the ruling coalition agrees on a position on an EU treaty, either in the treaty’s preparation or when it is close-to-ready for head-of-government approval, it is difficult and costly for a minister or backbencher in the coalition to rebel. In countries using party lists rebels run the risk of being left off the list or placed so low as to have little chance of serving. Rebellions sometimes occur, of course, but in practice leaders negotiating EU treaties judge the likelihood and likely success of such rebellions. If needed for domestic purposes, the government coalition can within reason extract concessions or opt-outs from other national leaders. Related, small member-countries know that if they are difficult, over time others will ask them to leave. Large member-countries know they run the risk of being “side-lined.” When heads of government accept a treaty, it is close to certain that the parliamentary coalitions they lead will ratify the treaty. This is quite different from the situation in the United States, where the whip is often unsuccessful; important bills fail rather than face failure. Furthermore, in the US Congress, a single party seldom has the two-thirds majority required to pass a constitutional amendment if opposition parties oppose.

³⁴ A popular introduction to wisdom-of-crowds arguments is Surowiecki (2004). The logic of successfully using the wisdom of crowds is the same as that behind prediction markets and political markets; see Snowberg, Wolfers, and Zitzewitz (2007); Wolfers and Zitzewitz (2004); Plott (2000); and Plott and Sunder (1988).

One way of evaluating procedures for changing a constitution is to ask how well they uses the wisdom of crowds. The preceding argument suggests that, in avoiding type I and type II errors, the US amendments are superior to the US Supreme Court, EU, and UK processes for changing constitutions.³⁵ Prudent use of the wisdom of crowds can increase constitutional transparency. An interesting research question is how well systems such as that of Sweden, which requires a positive vote, an election, and then another positive vote (Table 2.1), compare to the US system and Indian systems, where legislative passage must be followed by ratification by states, or to the Australian and Swiss systems, where passage must be followed by approval by referendum in a majority of states or cantons.

2.10 EVOLUTION OF US FEDERAL POWER OVER THE ECONOMY

In industrialized countries, central government involvement in the economy is substantially deeper and wider now than in say 1875. How did these changes come about? For reasons of space, this section focuses on the United States. Federal government power over the economy in 2013 represents a huge evolution since say the 1920s, before the Great Depression. Largely this evolution depended on new and expansive Supreme Court interpretations of the Constitution's Commerce Clause, the Necessary and Proper Clause, the General Welfare Clause, the 14th amendment's Equal Protection Clause, and the 5th and 14th Amendments' Due Process Clauses.³⁶

Closely related, in 1938 the Supreme Court decided that federal courts would use three degrees of scrutiny to determine the constitutionality of federal and state laws and would use the least stringent on economic issues.³⁷ *Strict scrutiny* is the most

³⁵ Note that this is a *ceteris paribus* argument, not a prediction about the superiority of US amendments versus EU treaties or UK laws.

³⁶ For the Commerce Clause and the Necessary and Proper Clause, see preceding notes.

"Article 1, Section 8: The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay Debts and provide for the common Defense and general Welfare of the United States; . . ."

Amendment XIV. (Ratified July 9, 1868.) Section 1. . . ; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws."

Amendment V. (Ratified December 15, 1791.) "No person shall be. . . ; nor be deprived life, liberty, or property, without due process of law; . . ." For an interpretation of how the Court used these clauses, see Amar, (2012). For the writing and meaning of the Constitution and Bill of Rights, see Amar (2005, 1998).

³⁷ The Supreme Court raised the issue of "levels of judicial scrutiny" in footnote 4 of its *United States v. Carolene Products Co.* (1938) decision, one of several decisions on the constitutionality of New Deal legislation.

stringent standard for weighing the government's interest against a constitutional right or principle. Federal courts use strict scrutiny when the government infringes a fundamental constitutional right, or uses a suspect classification (principally race but in some cases national origin). The Bill of Rights lists specifically enumerated rights, which the Court then takes as fundamental. The Court has added unenumerated rights to the set of fundamental rights when it has detected them as somehow "implied" by the Constitution—penumbras, emanations, including but not limited to rights: to intra- and interstate travel; and to privacy including the right to abortion.^{38,39,40} Under strict scrutiny, the government's law or policy must (1) involve a *compelling governmental interest*. This phrase generally means necessary or crucial, rather than merely government preference. In addition, (2) the government must *narrowly tailor* its law or policy to achieve its end. Finally, (3) the government must choose the *least restrictive means* to achieve its ends—the government must not overlook a less restrictive way to achieve its ends.⁴¹

2.10.1 Rational Basis Review

Rational basis review applies to cases with equal protection (14th Amendment) or due process questions (5th and 14th Amendments) that do not involve a suspect class or a fundamental right. The law or policy under consideration must be rationally related to a legitimate government interest. To be rational, the relation cannot be an obvious non sequitur or logical contradiction or simply a garble of words. But the government's true interest does not have to be legitimate if the Court can *imagine or hypothesize* a legitimate interest. Further, the "rational basis" may be a view that is inconsistent with virtually all empirical evidence. The law may be foolish or directly opposite in effect to the government's stated or implied intention. Justice John Paul Stevens claimed that Justice Thurgood Marshall said on many occasions: "The Constitution does not prohibit legislatures from enacting stupid laws." The law or regulation must be in an area

³⁸ Also included are the rights to marry, procreate, and use contraception, and the right for related people to live together.

³⁹ If the government denies a right to everyone, the court considers it as a question of substantive due process. If the government denies a right to some but not all, it is a question of equal protection. (The 14th Amendment protects both.)

⁴⁰ Under the 14th Amendment, the Court decided that many of these fundamental rights, but not quite all, are binding on state as well as federal laws. This insight initially came to the Court in regard to the First Amendment, in 1925, and the Court has had further such insights through 2010 (persons' rights over guns under the Second Amendment in the 2008 *District of Columbia v. Heller*, and in the 2010 *McDonald v. Chicago*).

⁴¹ Intermediate scrutiny: The law or policy must further an *important* government interest, in a way *substantially related* to that interest.

where the Constitution grants the federal government power—the Commerce Clause is most frequently used.⁴²

2.10.2 The Constitutional Revolution of 1937

In *West Coast Hotel v. Parrish* (1937), the Court abandoned previous Courts' emphasis on "freedom of contract." Previously, the Court was quite skeptical of government regulations that imposed on property rights, particularly the "right to contract." The right to *freedom of contract* (and the closely related *economic liberty*) was considered to be fundamental, and thus restrictions on that right were subject to strict scrutiny. Shortly after this decision, the Court formally adopted the rational basis review for economic cases.^{43,44} For economic purposes, the Constitution has become substantially less transparent.

2.11 THE EU CONSTITUTION OFFERS MIXED PROTECTIONS TO THE BUSINESS DECISION MAKER

On the one hand, a key EU goal has been to promote further economic integration. The European Union has had successes and failures in meeting this goal and has been

⁴² In the *ObamaCare* case, the government argued that the program was constitutional under the Commerce Clause, but if not, it was valid under the Tax Power Clause. Four justices argued that the program was not constitutional under either clause. Four other justices argued that the program was constitutional under both clauses. Chief Justice Roberts argued the program was constitutional under the Tax Power Clause but not the Commerce Clause. The Tax Power Clause says: "Section 8. The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises. . ."

⁴³ The era when the constitutional right to contract was recognized and important is sometimes called the *Lochner* Era because it is epitomized for some by the *Lochner* case (1905—struck down New York law that limited working hours). Other important Supreme Court cases were *Allgeyer v. Louisiana* (1897—struck down Louisiana legislation that forbade non-Louisiana corporations from doing business there), *Coppage v. Kansas* (1915—struck down Kansas law forbidding yellow dog contracts), *Hammer v. Dagenhart* (1918—struck down federal regulations dealing with child labor), *Duplex Printing Press Co. v. Deering* (1921—decided federal antitrust legislation could be used against labor unions), *Bailey v. Drexel Furniture Co.* (1922—struck down federal tax on goods in interstate commerce that used child labor), *United States v. Butler* (1936—decided that congressional taxing power did not justify the New Deal's Agricultural Adjustment Act). The *Lochner* decision and the *Lochner* Era are still controversial. See Bernstein (2011), Philips (2001), Cushman (1998), Gillman (1993), and Bork (1990).

⁴⁴ Though the Supreme Court rapidly retreated on defense of persons' rights over property, judging most laws and policies affecting people's rights over property under rational basis review, the Court offered increasingly strong defenses of civil liberties and political rights.

much more successful in goods than in service markets. On the other hand, many EU regulations do not promote efficiency—size regulations on vegetables and flowers, for example. The clear consensus among many groups is that the successes dominate: On net the European Union and its predecessor institutions have importantly freed European economies and increased their efficiency, thus shifting out the transformation function.

The EU Constitution offers few and weak guarantees to economic decision makers, and in this sense is not very transparent. Whatever economic guarantees one reads into the E.U. Constitution, their durability and stability is highly doubtful. Take an example. The Maastricht Treaty included a constitutional guarantee that the European Central Bank could not buy member states' government bonds. As with all elements in EU treaties, later treaties could change that guarantee. When it became expeditious in the course of the euro crises, EU elites urged the member states to agree on the change. And the member states agreed. It was long understood that what France and Germany jointly wanted, the European Union and its predecessor organizations almost always had to agree to. Over at least the 2000s, it became increasingly clearer that Germany is the senior partner in the duo; indeed, Germany can largely get what it wants in EU policy if it wants it badly enough, and can stop whatever it does not want. On major matters, only a veto can stop the duo or even a determined Germany by itself. Many actions are now not subject to a veto. Further, the group of countries deeply committed to the European Union is willing to threaten with expulsion countries that use the veto, even countries as economically powerful as the United Kingdom.

2.11.1 A Lesson from Maastricht and the Euro Crises?

One can make the case that the European Monetary Union (EMU) has on net been a disaster. Certainly it is widely blamed for the disasters in Greece, Ireland, Portugal, Spain, and Cyprus and the threats that hang over Italy, Belgium, and other countries, even France. It may be a generation or more before the countries in deep trouble return to a normal rate of unemployment and economic threats will continue to hang over all but the strongest EMU members for perhaps a decade. No doubt the euro contributed benefits before it blew up, by reducing transaction costs and through other micro channels. The certainty it offered about exchange rates was a mask, however, that hid growing pressures threatening macro stability. Sadly, the elites who pushed for and signed the Maastricht Treaty knew that the disaster that *has* happened *might* happen, but decided to take the chance *and* to hide from EU citizens the size and nature of the risk.

The framers of the Maastricht Treaty understood that a successful monetary union required one of three conditions precisely because the sort of things that have happened are likely sooner or later to occur. First, the European Union might have become a transfer or fiscal union for EMU members at the time it became a monetary union. The transfer union could have bailed out Greece and the others without having to get permission from Germany and other strong states that ultimately serve as

guarantors.⁴⁵ Second, EMU members might have strongly agreed *not* to bail out any members that fell into trouble. To the extent such an agreement was credible, lenders would have shown a good deal more discretion than they did, perhaps avoiding the crises or at least preventing them from dragging on as they have. Instead, the elites did neither, thus ensuring that crises would be long drawn out. Third, central EU agencies might have exercised such surveillance and control as to prevent EMU members from putting themselves in the situations that led to disaster when world financial markets crashed. Even now, however, EMU countries in deep trouble bridle strongly when outsiders impose conditions. The political will was not there for adopting a surveillance-and-control solution.

Maastricht aimed at economic and monetary union. “Europe in ‘92” was to integrate member-country markets for goods and services, and to set up a common currency for those members who were allowed to adopt it. The case for the first was strong and well known, and the consensus among many groups is that this part improved EU economies. Few doubted the economic case for integrating goods and services markets—political will was the issue. The case for monetary union was much weaker. Of course it would eliminate exchange rate fluctuations among EMU member states, but EMU members were far from candidates for an optimum currency area (OCA). Labor mobility was low and as the crises showed, prices and wages were not very flexible even under severe conditions of unemployment.

Five EMU member states are in crisis (Greece, Ireland, Portugal, Spain, and Cyprus) and a number of others live in fear of what may befall them because the European Union elites reached too far. The EU Constitution offers very little protection from further changes that may lead to further crises.

In formal terms, the EU process for amendments appears similar to the two-stage process of US, Indian, or Australian or Swiss amendment. The EU heads of government agree on a new treaty, after much debate by lower level ministers, the EU Commission, and the EU Parliament—a bit like the to-and-fro in the two houses of the US Congress. Then, the treaty goes to the 27 member states for ratification—a bit like amendments going to the 50 US states for ratification. If the heads of government sign the treaty, however, there is very little chance their parliaments will reject it—heads of government, after all, will not sign if they think they cannot deliver their parliaments.

2.12 CONSTITUTIONAL PROTECTIONS IN THE UNITED KINGDOM

The UK constitution is a body of statute law, customs, and court decisions. Parliament is, however, supreme. It can at any time it desires pass a law that overrides and changes

⁴⁵ To be sure, the member states might have gotten themselves in such deep troubles that the resources of a transfer union would have been inadequate, with the union then collapsing.

any current element of the constitution. There is no constitutional constraint on what Parliament can do. With a sufficiently large majority to account for party-line defectors, a UK government can pass whatever it wants. In this sense, the United Kingdom's constitutional changes are less predictable than those in most other democratic countries and hence less transparent.⁴⁶ The most effective defense against unwise constitutional changes in the United Kingdom is popular disapproval and the political fear it generates in government. If the populace is sufficiently disaffected, the party structure and backbenchers may fear to go forward, but there is no guarantee that public opinion will be strong enough to prevent very ill-advised constitutional changes. Of course, the law may be repealed, but this becomes harder over time as the law becomes institutionalized. Only European law can in some cases trump UK law. The Conservatives under John Major got an opt-out from the social chapter in the Maastricht Treaty, but Labor adopted the chapter shortly after Tony Blair's first win, a big one (418 seats of 650). The United Kingdom is now obligated for whatever the European Court of Human Rights decides the treaty requires.

In addition, the EU Constitution has a supremacy clause. If a UK law conflicts with an EU law, then the EU law wins provided it is constitutional. The Court of Justice decides between the two laws to the extent that it is the one that judges whether the EU law is constitutional. Further, the Court of Justice can expand EU power in the same way as the US Supreme Court, by detecting new rights or powers in the Constitution.

2.13 CONCLUSION ON CONSTITUTIONAL TRANSPARENCY

The most important meaning of constitutional transparency for business, economics, and finance is predictability. *Ceteris paribus*, predictability is good for decision makers. Of course, a particular aspect of a constitution may be suboptimal to such an extent that one of a range of changes would improve welfare. In the decision to change the constitution or not, two errors are possible. If the constitution is better left unchanged when all costs are considered, the decision maker can make a type I error by rejecting the current status and accepting the proposed change. Or the decision maker may make a type II error by sticking with the status quo when the change would be welfare improving. The decision maker optimally wants to accept the possibility of errors of both types rather than go to the extreme of never adopting changes or always adopting changes. Consideration of the probability of a type I error that society is willing to accept is beyond this chapter. Still, any decision maker prefers institutions that, for a given probability of type I errors, have maximum power of avoiding type II errors.

⁴⁶ See earlier for discussion of other meanings of transparency.

The countries in Table 2.1 can change their constitutions through formal amendment processes or through high court interpretations. The preceding discussion illustrates the differing type I–type II issues under the two processes of change by focusing on the United States. The US amendment process favors amendments that have widespread support across the country. Of the 33 amendments Congress has sent to the states, the states have ratified 27 of them, usually within a relatively short time period. The six failed amendments were either unwise or split the country strongly. Only one amendment that was approved, Prohibition, was so misguided that Congress and the states repealed it. Only the income tax amendment generates a substantial amount of opposition, and there is currently little organized opposition. This suggests that the amendment institutions lead to few type I errors (changing when unwise), but avoids type II errors when there is strong, widespread support. Only one failed amendment, the Equal Rights Amendment, is arguably an example of a type II error.

Major changes through the US Supreme Court, in contrast, are often widely opposed by a substantial part of the population, even a majority. Many state legislatures denounce the more controversial Court decisions, and few observers think that as amendments the controversial changes would have succeeded. The Court's popularity is not high by comparison to the military,⁴⁷ though it is by comparison to Congress and other unpopular institutions or groups, for example, journalists. This reasoning suggests that the Supreme Court is more likely to make type I errors and less likely to make type II errors than the amendment process. It is extremely hard to overturn or reverse a Supreme Court decision that grants the federal government more power. Usually an amendment or a Court decision to reverse itself is required; it is difficult to pass an amendment in a split country⁴⁸ and the Court is loath to reverse itself.

APPENDIX

THE WISDOM OF CROWDS

Consider a simple model of aggregating information. There are M pieces of information I_j , $j = 1, M$, on which the value V of a decision depends. Each has equal weight in the value. With the coefficient $\gamma_j = 1$ for each for convenience, the value is

$$V = \sum_{j=1}^M I_j$$

⁴⁷ Rasmussen [http://www.rasmussenreports.com/public_content/politics/mood_of_america/supreme_court_update] reported in December 2012, half a year after the ObamaCare decision, that 33% of the sample gave the Court a positive rating and 20% rated its performance as poor.

⁴⁸ A seeming exception is the 11th Amendment (1795): The country was deeply split over foreign policy and also domestic policy, but the amendment was so widely popular that it was easily ratified.

There are L groups, with L set equal to M for convenience, where the K members of group j have insight about the piece of information I_j and each member's insight is $I_j + u_{j,k}$. Let $E u_{j,k} = 0$ and $E u_{j,k} u_{j+i,k+h} = 0$ for $i, h \neq 0$. Then, the equally weighted average gives an estimated I_j of \hat{I}_j , with expectation

$$E \hat{I}_j = E (I / K) \left[\sum_{k=1}^K I_j + u_{j,k} \right] = I_j + (1 / K) \sum_{k=1}^K E u_{j,k} = I_j;$$

with constant $\sigma_{j,k}^2 = \sigma^2$, the standard deviation of $\hat{I}_t = E (1/K) [\sum_{k=1}^K I_j + u_{j,k}]$ is $\sigma K^{-1/2}$. Then,

$$E \hat{V} = \sum_{j=1}^L I_j = V,$$

and the standard deviation of \hat{V} is $\sigma_V = \sigma (KL)^{-1/2}$. Supposing the decision is to accept or reject the amendment as $\hat{V} > 0$ or $\hat{V} \leq 0$, the polity is more likely to make the correct decision the larger are K and L . At some point, however, increases in K that reduce σ_V just offset the increases in noise and thus σ_V caused by larger groups, giving an interior minimum σ_V^* at $K = K^*$.⁴⁹

Of course, this model does not deal directly with amendments versus Supreme Court interpretations. Nevertheless, it suggests the benefits of including diverse people in each group,⁵⁰ to reduce $E u_{j,k} u_{j+i,k+h}$ for $i, h \neq 0$, and of having multiple groups, so that $L \gg 1$. Intuitively, taking account of the wisdom of crowds increases the transparency of decisions assigning value.

REFERENCES

- Amar, A. R. (2012). *America's Unwritten Constitution. The Precedents and Principles We Live By*. New York: Basic Books.
- Amar, A. R. (2005). *America's Constitution. A Biography*. New York: Random House.
- Amar, A. R. (1998). *The Bill of Rights. Creation and Reconstruction*. New Haven, CT: Yale University Press.
- Bernstein, D. E. (2011). *Rehabilitating Lochner: Defending Individual Rights against Progressive Reform*. Chicago: University of Chicago Press.
- Bork, R. H. (1990). *The Tempting of America: The Political Seduction of the Law*. New York: Touchstone Books.

⁴⁹ Clearly a House of 5000 members would have even more major organizational problems relative to the current 435 members. An increase in the number of states does not cause similar problems. See Hume and Madison extended quotations in the preceding footnotes.

⁵⁰ Some data: Sweden has 349 Members of Parliament (unicameral); the United Kingdom, 650 MPs, 760 peers; France, 577 Members of the National Assembly, 348 senators; Italy, 630 Assembly members, 315 senators (+ senators for life); Estonia, 101 MPs (unicameral); the United States, 435 members of the House, 100 senators.

- Brennan, G., and Buchanan, J. M. (2000). *The Reason of Rules: Constitutional Political Economy*, Vol. 10: *The Collected Works of James M. Buchanan*, Indianapolis, IN: Liberty Fund.
- Buchanan, J. M. (1989). *Explorations into Constitutional Economics*. College Station, TX: Texas A&M University Press.
- Congleton, R., and Swedenborg, B., Eds. (2006). *Democratic Constitutional Design and Public Policy: Analysis and Evidence*. Cambridge, MA: The MIT Press.
- Cushman, B. (1998). *Rethinking the New Deal Court: The Structure of a Constitutional Revolution*, paperback ed. New York: Oxford University Press.
- Ferejohn, J. (1997). The politics of imperfection: The amendment of constitutions. *Law and Social Inquiry* 22, 501–531.
- Forssbaeck, J., and Oxelheim, L. (2006). Transparency, capital formation and economic growth. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, pp. 1–45. Oxford: Elsevier.
- Gillman, H. (1993). *The Constitution Besieged: The Rise and Demise of Lochner Era Police Powers Jurisprudence*. New ed. Durham, NC: Duke University Press.
- Hamilton, A., Madison, J. and Jay, J. (1961). *The Federalist*, ed. Jacob E. Cooke. Middletown, CT: Wesleyan University Press.
- Hume, D. (1987). *Essays Moral, Political, and Literary*. Rev. ed., ed. Eugene F. Miller, pp. 516–523. Indianapolis, IN: Liberty Fund.
- Levinson, S., Ed. (1995). *Responding to Imperfection. The Theory and Practice of Constitutional Amendment*. Princeton, NJ: Princeton University Press.
- Lutz, D. S. (1994). Toward a theory of constitutional amendment. *American Political Science Review* 88, 355–370.
- Lutz, D. S. (1995). Toward a theory of constitutional amendment. In *Responding to Imperfection. The Theory and Practice of Constitutional Amendment*, ed. S. Levinson, pp. 237–274. Princeton, NJ: Princeton University Press.
- Murphy, W. (2000). Constitutional interpretation as constitutional creation. *The 1999–2000 Harry Eckstein Lecture*. Center for the Study of Democracy, University of California at Irvine. <http://www.escholarship.org/uc/item/85o266jm>
- Philips, M. J. (2001). *The Lochner Court, Myth and Reality: Substantive Due Process from the 1890s to the 1930s*. Westport, CT: Praeger.
- Plott, C. R. (2000). Markets as information gathering tools. *Southern Economic Journal* 67(1), 2–15.
- Plott, C., and Sunder, S. (1988). Rational expectations and the aggregation of diverse information in laboratory security markets. *Econometrica* 56, 1085–1118.
- Rasch, B. E. (1995). Parliamentary voting procedures. In *Parliaments and Majority Rule in Western Europe*, ed. H. Döring, pp. 488–527. Frankfurt/New York: Campus/St. Martin's Press.
- Rasch, B. E., and Congleton, R. D. (2006). Stability and constitutional amendment procedures. In *Democratic Constitutional Design and Public Policy: Analysis and Evidence*, eds. R. D. Congleton and B. Swedenborg, pp. 319–342. Cambridge, MA: MIT Press.
- Rasmussen Report (2012). http://www.rasmussenreports.com/public_content/politics/mood_of_america/supreme_court_update
- Snowberg, E., Wolfers, J., and Zitzewitz, E. (2007). Partisan impacts on the economy: Evidence from prediction markets and close elections. *Quarterly Journal of Economics* 122. May, 807–829.

- Sonnenschein, H. (1972). Market excess demand functions. *Econometrica* 40, 549–563.
- Sonnenschein, H. (1973). The utility hypothesis and market demand theory. *Economic Inquiry* 11, 404–410.
- Statistics & Lists*. United States Senate. http://www.senate.gov/pagelayout/reference/three_column_table/measures_proposed_to_amend_constitution.htm
- Surowiecki, J. (2004). *The Wisdom of Crowds*. New York: Doubleday.
- Sweeney, R. J. (1988). *Wealth Effects and Monetary Theory*. New York: Blackwell.
- Sweeney, R. J. (2013). Constitutional transparency and constitutional changes. Working Paper, Georgetown University, Washington, DC.
- Taube, C. (2001). *Constitutionalism in Estonia, Latvia and Lithuania: A Study in Comparative Constitutional Law*. Uppsala: Iustus.
- Wills, G. (2001). *Explaining America: The Federalist*. New York: Penguin Books.
- Wolfers, J., and Zitzewitz, E. (2004). Prediction markets as decision support systems. *Journal of Economic Perspectives* 18(2), 107–126.

CHAPTER 3

MONETARY POLICY TRANSPARENCY

PETRA M. GERAATS

3.1 INTRODUCTION

MONETARY policymaking has undergone a dramatic transformation during the last 25 years. Central banks used to be known for their secrecy, leaving people to guess their intentions. But nowadays most central banks announce their objectives with quantitative targets and publish numerical macroeconomic forecasts. They have also become much more open about their policy decisions and several even give explicit guidance about upcoming policy moves. Transparency has become a key feature of monetary policymaking. Surveys show that central banks consider transparency to be very important.¹ This is partly because many central banks have become independent, which has been accompanied by formal accountability requirements. But foremost, central banks have adopted transparency to make monetary policy more effective.

This rise in monetary policy transparency has happened in two phases. The first wave toward greater openness occurred during the 1990s, when central banks became more explicit about their monetary policy objectives and started publishing regular monetary policy reports that present macroeconomic forecasts and analyze macroeconomic developments. This was most notable for central banks adopting inflation targeting as their monetary policy strategy. The Bank of England was a leading example in terms of macroeconomic transparency. The second wave toward greater disclosure happened during the 2000s, when transparency became more widespread and a vanguard of central banks pursued further openness through forward guidance on their

¹ In a survey of 94 central banks by Fry et al. (2000), 74% of central banks considered transparency a “vital” or “very important” component of their monetary policy framework. Blinder (2000) finds in a survey of 88 central bankers that they consider transparency a very important factor to establish or maintain credibility.

policy settings, which is currently the frontier. A prominent example of the latter is the Swedish Riksbank.

This chapter provides an overview of the various ways in which central banks throughout the world have become more transparent about their monetary policymaking. It uses the conceptual framework of Geraats (2002) to distinguish several aspects of transparency and two types of effects of information disclosure. The main focus of the chapter is a review of theory and evidence related to the two most notable ways in which monetary policy has become more transparent. First, the publication of macroeconomic forecasts and analysis, which has made it easier for the public to infer the central bank's intentions from its monetary policy actions and outcomes, thereby allowing greater accountability. Second, the current frontier in monetary policy transparency, the disclosure of forward guidance about policy actions. This allows the private sector to align its expectations with those of the central bank, which enhances the effectiveness of monetary policy. In both cases, central bank communications provide an important policy tool to influence private sector expectations and improve macroeconomic outcomes.

There are several other surveys on monetary policy transparency that cover theory, practice, and empirical evidence to various extents. Geraats (2002), Hahn (2002), and Carpenter (2004) focus on the (early) theoretical literature. Geraats (2006, 2009) documents information disclosure practices and trends throughout the world. Blinder et al. (2008) concentrate on the empirical literature on the financial market effects of central bank communications, whereas Van Der Cruijsen and Eijffinger (2010) provide an overview of many theoretical and empirical contributions on the macroeconomic effects of monetary policy transparency. The present chapter provides an up-to-date overview of transparency practices and trends, and from the large transparency literature it distills the main theoretical arguments and empirical evidence that are relevant to understanding the key developments.

The remainder of this chapter is organized as follows. Section 3.2 presents a conceptual framework for transparency. Empirical measures, practices, and trends in monetary policy transparency are reviewed in Section 3.3. Theory regarding macroeconomic transparency is covered in Section 3.4. Forward guidance about policy settings is extensively discussed in Section 3.5. Relevant empirical evidence is considered in Section 3.6. To conclude, Section 3.7 summarizes the main insights.

3.2 CONCEPTUAL FRAMEWORK

An economic definition of transparency is the absence of asymmetric information. Thus, monetary policy transparency refers to the extent to which information relevant to monetary policymaking is publicly known. In the case of perfect transparency, all agents are equally well informed.

Complete openness by disclosing all data, documents, and meeting transcripts is not sufficient for transparency, however, in the presence of frictions in information

processing. So central banks use carefully crafted communications (such as policy announcements and monetary policy reports) to transmit relevant information and achieve greater transparency. But these communications may not be received or correctly understood by everyone because of frictions in information transmission.² As a result, perfect transparency is an ideal that is practically impossible to achieve, though it is still a useful benchmark.

From a theoretical point of view, there is a powerful argument in favor of transparency. According to the first fundamental welfare theorem, in a world with asymmetric information but no other market imperfections, moving to perfect transparency is welfare improving as it leads to the first-best outcome. In the real world, however, there are many market imperfections, so an increase in transparency may not be beneficial. The effects are likely to depend on the particular circumstances and the specific information that is disclosed. Nevertheless, in general transparency has two types of effects, which Geraats (2002) has labeled information and incentive effects.

Information effects are the ex post consequences of disclosing a particular piece of information. These could be beneficial, such as a reduction in uncertainty. But there could also be negative repercussions as economic agents update their expectations in response to the information, which could lead to higher economic volatility.

Incentive effects are the ex ante structural changes in economic behavior due to the different information structure. For instance, a central bank that is going to publish its macroeconomic forecasts is likely to put greater effort in its forecasting, which results in better monetary policymaking. But the private sector may focus too much on the published forecasts and underweight its own signals.

Morris and Shin (2002) have presented an influential theoretical argument against transparency based on a negative incentive effect. Assuming economic agents have a motive to coordinate their actions, they put disproportionate weight on public information compared to their private signals. So, public disclosure of relatively noisy information (e.g., early estimates of statistics or unreliable forecasts) could induce greater economic volatility. In addition, the stronger reliance on public communications has the negative side effect that it reduces the informativeness of market expectations (Morris and Shin, 2005). Furthermore, public disclosures could crowd out private sector efforts to acquire information and thereby potentially worsen private sector forecasts (Tong, 2007; Kool et al., 2011). This provides a cautionary tale that transparency need not be beneficial, especially if the disclosed information is noisy.

The effects of transparency are also likely to depend on what kind of information is released, so it is useful to discern several aspects of transparency. Geraats (2002) distinguishes five aspects relevant to policymaking: political, economic, procedural, policy, and operational transparency, which are illustrated in Figure 3.1.

² For a discussion of transparency in terms of openness, clarity, and common understanding, see Winkler (2002).

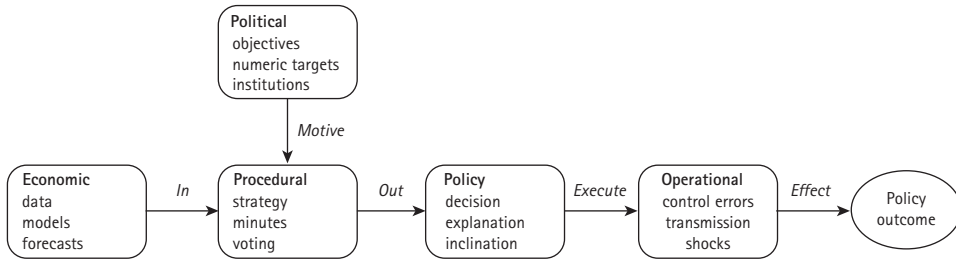


FIGURE 3.1 Conceptual framework for transparency aspects.

Copyright © 2002, John Wiley & Sons

Source: Geraats, P. M. (2002), Central Bank Transparency. *The Economic Journal*, 112: F532–F565.

Political transparency refers to clarity about the policy objectives and institutional framework (e.g., through an explicit inflation target and central bank independence). *Economic transparency* focuses on the economic information used for the policy decision (such as macroeconomic forecasts and policy models). *Procedural transparency* provides openness about the way policy decisions are taken (by publishing a monetary policy strategy, minutes, and voting records of policy meetings). *Policy transparency* involves the communication of the policy stance (including the policy decision, policy explanations, and inclinations with respect to future policy actions). *Operational transparency* concerns the implementation of the policy actions (such as control errors in operating instruments and disturbances in policy transmission).

Clearly, transparency is a multifaceted concept, which has sparked a rich theoretical literature, but also complicates empirical measurement.

3.3 TRANSPARENCY MEASURES AND TRENDS

This section first discusses empirical measures of monetary policy transparency. This is followed by a review of current information disclosure practices and trends for central banks throughout the world.

3.3.1 Empirical Measures

Central banks differ considerably in the extent to which they are transparent in various respects. Researchers have tried to measure this in several ways.

One approach is to evaluate public understanding of monetary policymaking. Van Der Cruysen et al. (2010) used the DNB Household Survey in the Netherlands to test how well the Dutch public understands the monetary policy objectives of the European Central Bank (ECB), which revealed considerable ignorance and misunderstanding, indicating

limited (political) transparency. Although such a survey has the potential to directly detect imperfect information about monetary policymaking, it would be cumbersome to consistently measure monetary policy transparency across countries in this way.

Another approach is to assess publicly available information relevant to monetary policymaking. In the absence of frictions in information transmission and processing, this would measure the degree of monetary policy transparency. One could attempt to evaluate the quality of central bank publications. Fracasso et al. (2003) graded the inflation reports of 20 inflation targeters and ranked the United Kingdom, New Zealand and Brazil highest in terms of transparency. But a more popular option is to examine whether particular types of information pertinent to monetary policymaking are publicly disclosed.

There are several transparency measures based on information disclosure practices. Fry et al. (2000) provide a valuable dataset using a survey of 94 central banks conducted in 1998. They assigned top marks to Norway, Sweden and the United Kingdom for forward-looking analysis (mostly economic transparency), while Japan and the United States scored highest on explaining policy decisions (procedural and policy transparency). Overall, their measure of monetary policy explanations indicates that Sweden and the United States are the most transparent, closely followed by the United Kingdom and then New Zealand.

Eijffinger and Geraats (2006) construct a systematic index of monetary policy transparency that distinguishes political, economic, procedural, policy, and operational transparency. Their dataset documents information disclosures for nine major central banks from 1998 to 2002, revealing a rise in transparency. According to their index, the United Kingdom was the most transparent in 1998, closely followed by Canada and New Zealand, but by 2002 it had been overtaken by both New Zealand and Sweden.

Crowe and Meade (2008) present an alternative transparency index that also captures political, economic, procedural, policy, and operational aspects. They used the Fry et al. (2000) dataset from 1998, supplemented by data collected for 37 central banks in 2006, and find a significant increase in economic and policy transparency for advanced economies.

The most extensive dataset on monetary policy transparency is by Dincer and Eichengreen (2014), who compiled the Eijffinger–Geraats index for 120 central banks from 1998 to 2010. They find that the increase in central bank disclosure has not been confined to advanced economies, which are on average the most transparent, with Sweden and New Zealand ranking highest in 2010; developing countries and most notably emerging markets have also become much more transparent, though the latter less so since 2007. All in all, there has been a substantial rise in monetary policy transparency throughout the world.

3.3.2 Practices and Trends

Following Geraats (2009), the Dincer and Eichengreen (2014) dataset can be used to further analyze information disclosure practices and trends. Table 3.1 shows to what

Table 3.1 Trends in Monetary Policy Transparency

Frequency of information disclosure (in percent)	1998	2004	2010	Change
Political transparency				
• Monetary policy objectives	90.8	95.0	96.6	5.8
with prioritization	36.7	45.8	46.6	9.9
• Quantified objective	44.2	60.8	66.4	22.2
• Explicit instrument independence	34.2	49.2	53.4	19.2
Economic transparency				
• Numerical macroeconomic forecasts	14.2	46.7	54.3	40.1
quarterly, medium term for inflation and output	3.3	11.7	19.8	16.5
• Macroeconomic policy model	5.0	15.0	24.1	19.1
Procedural transparency				
• Monetary policy strategy	50.0	65.0	73.3	23.3
• Minutes	5.0	9.2	16.4	11.4
• Voting records	4.2	6.7	10.3	6.1
Policy transparency				
• Policy adjustment	15.0	40.0	46.6	31.6
• Policy explanation	12.5	32.5	43.1	30.6
• Policy inclination	0.0	2.5	4.3	4.3
Operational transparency				
• Control errors operating target	9.2	20.8	22.4	13.2
• Transmission disturbances	15.8	42.5	47.4	31.6
• Evaluation monetary policy outcomes	33.3	61.7	61.2	27.9
Sample size	120	120	116	

Notes: Information disclosure deduced from Eijffinger–Geraats transparency index scores in Dincer and Eichengreen (2014) data set. Change from 1998 to 2010 in percent point. Sample size declined as Cyprus, Malta, Slovakia, and Slovenia joined euro area.

extent various types of information relevant to monetary policymaking were disclosed in 1998, 2004, and 2010, listed by transparency aspect.

Regarding political transparency, although a formal statement of monetary policy objectives is nearly universal, fewer than half of central banks provide an explicit prioritization or primary objective. Quantification of objectives has significantly increased from fewer than one-half of central banks in 1998 to about two-thirds in 2010, most prominently in the form of an explicit inflation target, which was pioneered by New Zealand in 1989. The presence of explicit instrument independence has spread from around one-third to one-half of central banks, although actual independence from political interference appears to be more common, as a large majority of central banks in the Fry et al. (2000) survey reported enjoying independence without significant qualifications.

The Fry et al. (2000) survey also showed that about two-thirds of central banks regularly published forward-looking analysis in 1998, although often only qualitative assessments. The Dincer and Eichengreen (2014) dataset reveals a remarkable improvement in the degree of economic transparency, with a much greater focus on quantitative

analysis. The publication of numerical macroeconomic forecasts expanded remarkably from 14% of central banks in 1998 to 54% in 2010. Although initially few central banks released their medium-term forecasts for both inflation and output at quarterly frequency, this rose to one-fifth of central banks in 2010. The publication of the macroeconomic policy model used by the central bank jumped to nearly a quarter of central banks. The Bank of England has been a leading example in economic transparency, especially the colorful “fan charts” it introduced in the mid-1990s to show its projected path for inflation and output growth, with confidence bands illustrating the underlying uncertainty.

Concerning procedural transparency, the use of an explicit monetary policy strategy (such as inflation targeting) expanded from one-half to nearly three-fourths of central banks. But revealing information about monetary policy deliberations through the timely publication of minutes (which are generally non-verbatim and non-attributed) or voting records (whether individual or non-attributed) is much less common, although it has significantly increased. In this respect, a very high degree of openness is provided by the Swedish Riksbank, which promptly reveals individual voting records through attributed reservations in the policy announcements, and publishes minutes of its policy meetings after two weeks, with a detailed, attributed account of the discussion (since mid-2007).

Policy transparency, in the form of a prompt announcement and explanation of policy adjustments, has greatly increased from around 15% to 45% of central banks, although it is less common to provide a policy explanation when policy settings are not adjusted (which frequently happens because the monetary policy instrument is usually adjusted only in discrete steps, such as 25 basis points for policy rates). Some central banks also reveal an explicit policy inclination that indicates the likely direction, timing, or pace of upcoming policy moves. For example, the US Federal Reserve has actively used forward guidance in its policy statements since 1999, initially using code words and phrases, such as the “balance of risks” toward “heightened inflation pressures” or “economic weakness” (from 2000 to early 2003), maintaining “policy accommodation” for a “considerable period” and subsequently removing it at a “measured” pace (from mid-2003 to 2005), and keeping the policy rate near zero for an “extended period” (from early 2009 to mid-2011). This has been followed by more detailed, quantitative forward guidance about the timing of tightening policy (since mid-2011), first by specifying a calendar date, then by setting a threshold for the unemployment rate (late 2012), and foremost by publishing its projected policy path (since early 2012).

There have also been notable increases in operational transparency. Openness about control errors in the operating target (which could be sizeable, especially for monetary aggregates) has increased from less than one-tenth to more than one-fifth of central banks. Information about unanticipated disturbances affecting monetary policy transmission, often through an analysis of short-term macroeconomic developments in monetary policy reports, has expanded from around 15% to 45% of central banks. A review of past forecast errors provides further information about unanticipated transmission shocks, although few central banks are forthcoming in this respect.

Evaluation of monetary policy outcomes has risen from one-third to almost two-thirds of central banks, although the quality of it varies.³ The Swedish Riksbank stands out for publishing an elaborate “account of monetary policy” once a year, including a rigorous analysis of its (forecast) performance.

Table 3.1 reveals that the increase in information disclosure has not been uniform throughout the 1998–2010 period. It was (often considerably) larger during 1998–2004 than 2004–2010, except for the publication of minutes and voting records, which picked up speed in the second half of the sample period.⁴

The large increase in transparency during the first half of the sample is driven mainly by the advance of inflation targeting in emerging economies.⁵ However, transparency has risen for other monetary frameworks as well. This is illustrated in Figure 3.2, which shows the average of the Eijffinger–Geraats index (which ranges from 0 to 15) from 1998 to 2010, across all central banks and for inflation targeting, monetary targeting, exchange rate targeting, and other frameworks, using the International Monetary Fund (IMF) classification of *de facto* monetary policy frameworks for 2008 and the Dincer and Eichengreen (2014) transparency dataset.⁶

Figure 3.2 shows that inflation targeters are the most transparent and have experienced the greatest increase (of almost 25%) in the Eijffinger–Geraats transparency index from 1998 to 2010. Monetary targeters, exchange rate targeters and others are considerably less transparent, but they have also experienced a notable increase. Clearly, the rise in monetary policy transparency has been a world-wide phenomenon across monetary policy frameworks.

Nevertheless, central banks differ considerably in the way in which they have become more transparent. For instance, inflation targeters tend to put strong emphasis on improving economic transparency, whereas monetary targeters consider operational transparency more important. Further evidence of significant differences in information disclosure across monetary policy frameworks is provided by Geraats (2009).

To sum up, although monetary policy frameworks differ significantly in their information disclosure practices, they have all experienced a substantial rise in transparency. Overall, the largest increases have been in economic and policy transparency. It should be noted that the disclosure of information by central banks generally goes well

³ An independent evaluation is useful, like the annual Norges Bank Watch report in Norway.

⁴ This pattern still holds if the four (relatively transparent) eurozone entrants are excluded from the entire sample. But the apparent slight decline in the evaluation of monetary policy outcomes from 2004 to 2010 then disappears and becomes a slight increase.

⁵ This includes Brazil, Colombia, Czech Republic, Hungary, Mexico, Peru, Philippines, Poland, South Africa, South Korea, Thailand, and Turkey.

⁶ From the sample of 120 central banks, the IMF categorized 32 as inflation targeters (mostly advanced and emerging economies), 12 as monetary targeters (typically developing countries), 64 as exchange rate targeters (including many very small open economies), and 7 as “other” (including India, Japan, and the United States). No IMF classification is available for the remaining 5 (Bermuda, Cayman Islands, Cuba, Curaçao, Macao) or for more recent years.

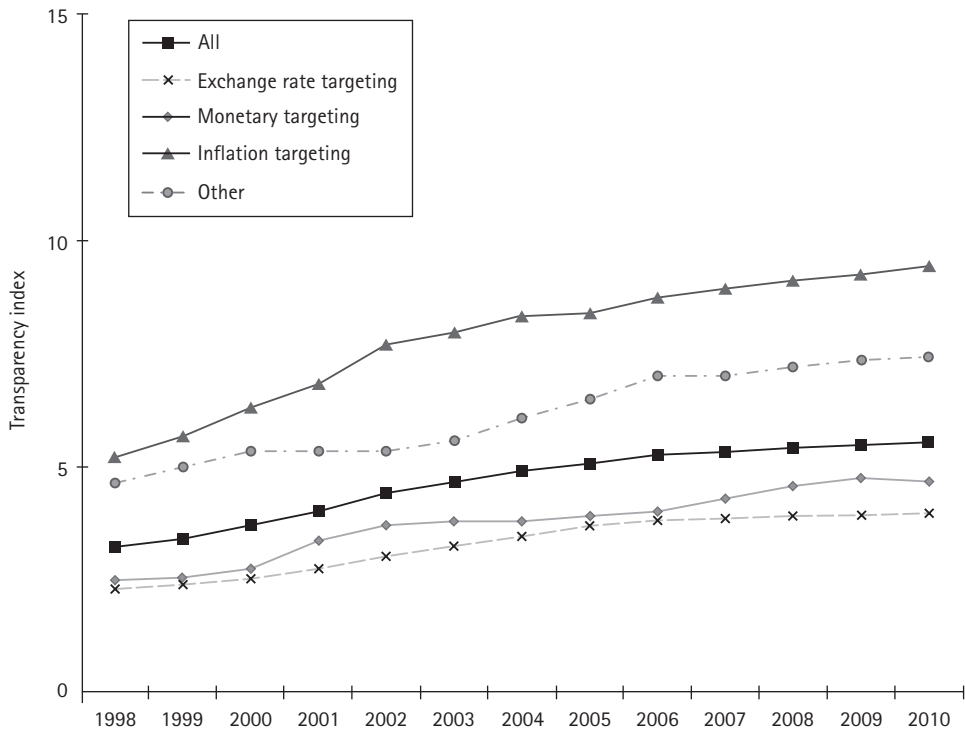


FIGURE 3.2 Transparency trends across monetary policy frameworks.

Note: Average Eijffinger–Geraats transparency index across 120 central banks using Dincer and Eichengreen (2014) data and IMF de facto classification of monetary policy frameworks for 2008. Sample size declined as four joined the Eurozone. Classification missing for five.

beyond formal accountability requirements, which suggests that central banks have adopted transparency because of its perceived benefits.

3.4 MACROECONOMIC TRANSPARENCY

To understand better the effects of transparency about the macroeconomic environment, it is useful to consider a stylized model.⁷ Suppose the central bank maximizes the expected value of the objective function

$$W = -\frac{1}{2}\alpha(\pi - \pi^*)^2 - \frac{1}{2}(1 - \alpha)(y - \bar{y})^2 \quad (3.1)$$

⁷ Although the model assumes a closed economy, many of its insights apply more generally.

where π denotes inflation, y aggregate output, π^* the central bank's inflation target, \bar{y} the natural rate of output, and α the relative weight on inflation stabilization, with $\alpha \in (0, 1)$. The economy is described by an expectations-augmented Phillips equation:

$$\pi = \pi^e + (y - \bar{y}) + s \quad (3.2)$$

where π^e denotes private sector inflation expectations, \bar{y} the natural rate of output, and s an aggregate supply shock. In addition, there is an aggregate demand equation:

$$y = \bar{y} - (r - \bar{r}) + d \quad (3.3)$$

where r denotes the real interest rate, which (for the moment) is assumed to be the central bank's policy instrument; \bar{r} the natural real interest rate, and d is an aggregate demand shock. Suppose for simplicity that the central bank has perfect information, whereas the private sector initially faces opacity and does not observe the central bank's inflation target π^* or the macroeconomic shocks s and d . Then, the optimal policy rate under discretion equals

$$r = \bar{r} + \alpha(\pi^e - \pi^*) + \alpha s + d \quad (3.4)$$

As a result, the policy rate reflects both the central bank's inflation intentions π^* as well as the macroeconomic shocks s and d that it anticipates. The corresponding outcome for inflation is

$$\pi = \pi^e + \alpha(\pi^* - \pi^e) + (1 - \alpha)s \quad (3.5)$$

This shows that the policy outcome also reflects the central bank's intention π^* and the supply shock s it anticipates. In addition, if the central bank does not enjoy perfect foresight, the inflation outcome is also affected by unanticipated shocks to aggregate demand and supply.

Note that presuming private sector expectations are rational, the (credible) announcement of the inflation target π^* would align private sector inflation expectations with the inflation target: $\pi^e = \pi^*$. This makes it easier to achieve the inflation target, leading to a beneficial information effect, as shown by Geraats (2007a) in a more general model with imperfect common knowledge.

Greater transparency about macroeconomic shocks has several effects. First of all, it reduces private sector uncertainty. In particular, if the central bank publishes its inflation forecast (a prominent form of economic transparency), then the private sector will benefit from lower forecast errors ($\pi^e = \pi$), constituting a positive information effect.

If the central bank discloses the (anticipated) aggregate supply shock s before the private sector has formed its expectations, however, then the adjustment of inflation expectations π^e leads to greater inflation volatility. In that case, (3.5) implies $\pi^e = \pi = \pi^* + [(1 - \alpha) / \alpha]s$, so $\text{Var}[\pi] = [(1 - \alpha)^2 / \alpha^2] \sigma_s^2$ under economic transparency, compared to $\text{Var}[\pi] = (1 - \alpha)^2 \sigma_s^2$ under opacity, where $\sigma_s^2 = \text{Var}[s]$ denotes the

variance of the (anticipated) supply shock s . The higher inflation volatility amounts to a negative information effect of economic transparency, as first shown by Cukierman (2001) and Gersbach (2003).

The publication of macroeconomic forecasts also gives rise to incentive effects. If the central bank provides its forecasts for both inflation π and output y , then the private sector can identify the aggregate demand and supply shocks d and s anticipated by the central bank (from (3.2) and (3.3)), which allows the private sector to infer the central bank's inflation intentions π^* from its policy action r (using (3.4)).⁸ Note that this presumes that economic transparency extends to the macroeconomic model (including \bar{y} and \bar{r}) used by the central bank for its forecasts and policy actions, which shows the relevance of publishing the policy model.⁹

Because economic transparency allows the public to figure out the central bank's policy intentions from its policy actions, a central bank pursuing inflationary policy would quickly be exposed, leading to higher inflation expectations π^e , which is detrimental to the central bank as it worsens the inflation–output tradeoff. Thus, an inflationary central bank is penalized under economic transparency, which exerts discipline on the central bank and provides a positive incentive effect. Geraats (2005) shows in a dynamic model that this reduces the infamous inflation bias. In fact, when the updating of inflation expectations is incorporated into the monetary policy transmission process, economic transparency could even completely eliminate the inflation bias (Geraats, 2001).

Furthermore, the monetary policy rate r essentially serves two purposes: it provides a (noisy) signal of the central bank's policy intentions π^* , and it is used to stabilize macroeconomic shocks s and d (as shown by (3.4)). Under economic opacity, an adjustment of the policy rate in response to a macroeconomic shock (e.g., reducing rates for a negative demand shock) could be confused with a change in policy intentions and affect inflation expectations (increasing them in this case). So the central bank optimally decides to mitigate macroeconomic stabilization and no longer fully offsets anticipated aggregate demand shocks, to prevent upsetting inflation expectations. In contrast, with economic transparency the central bank effectively has an additional tool through the communication of its forecasts, which gives it the flexibility to engage in macroeconomic stabilization while maintaining stable inflation expectations. This beneficial incentive effect was first formalized by Geraats (2000) and further analyzed by Geraats (2013) and Walsh (2007).

Economic transparency is also important because it enables real-time accountability. Monetary policy actions generally affect policy outcomes only after long and

⁸ In an open economy, a forecast for the exchange rate would be needed as well. The Czech central bank has published a fan chart of its forecast of the nominal exchange rate (against the euro) since 2009, in addition to its fan charts for inflation and output growth.

⁹ To address this issue, the output gap ($y - \bar{y}$) could be used instead. The central bank of Norway introduced a fan chart of its output gap forecast in 2005.

variable lags in monetary policy transmission, which means that holding central bankers accountable *ex post* requires a delay of a few years to check whether they have achieved their policy objectives. But economic transparency allows the public to infer the central bank's intentions from its policy actions, which makes it possible to hold central bankers accountable for their actions in real time and verify whether their monetary policy decisions are consistent with their stated objectives.¹⁰

When the central bank has an explicit inflation target, its inflation forecasts are useful not only for reducing uncertainty about the policy outcome, but also for explaining its policy action. In special circumstances, the central bank's inflation forecast can even serve as a sufficient statistic for its policy rate decision (Svensson, 1997). More generally, under inflation targeting the inflation forecast could be considered as an intermediate target that indicates whether policy is on track. Furthermore, because inflation can only be controlled imperfectly after a long transmission lag (often about two years), communication of medium-term macroeconomic forecasts is vital to understanding policy rate actions. This helps to explain why economic transparency is so prevalent among inflation targeters.

Operational transparency also requires openness about macroeconomic information, but instead of releasing anticipated shocks (e.g., through forecasts) that help to explain policy actions, it involves the communication of unanticipated disturbances (e.g., through forecast errors) that help to account for policy outcomes. When the central bank has perfect information, the outcomes for inflation π and output y reveal the central bank's policy intention π^* to the public (using (3.2) and (3.5)). In practice, however, the central bank is unable to fully anticipate all macroeconomic shocks, so the policy outcomes are a noisy signal of the central bank's intentions. But when the central bank identifies unanticipated shocks, the public is still able to figure out the central bank's intentions from macroeconomic outcomes.

Thus, any attempt to pursue inflationary policy would be exposed *ex post* under operational transparency. The private sector would then increase its inflation expectations, which worsens the inflation–output tradeoff of the central bank. Hence, operational transparency gives rise to a positive incentive effect that could reduce the inflation bias, as shown by Faust and Svensson (2001).

But the disclosure of control errors or unanticipated transmission shocks could also have detrimental effects. In particular, if the central bank reveals supply shocks s that it did not anticipate when setting policy and the public incorporates these into its inflation expectations π^e so that it affects the inflation outcome π , then this gives rise to higher inflation volatility. Thus, operational transparency (especially *ex ante*, before the policy outcome has been realized) could give rise to a negative information effect by harming the stabilization of supply shocks, as shown by Jensen (2002).

¹⁰ Real-time accountability could be undesirable if the central bank lacks independence and is subject to government interference, in which case economic opacity may be used to fend off political pressures (Geraats, 2007b).

It should be noted, however, that harmful information effects of supply shocks require that these shocks are persistent or disclosed before people form their inflation expectations. In practice, supply shocks tend to be transitory and hard to anticipate, which suggests that these negative information effects of macroeconomic transparency may be moot.

Operational transparency is important for ex post accountability, because it explains why policy actions may not have had their intended consequences. This is particularly useful in a world in which macroeconomic uncertainty is rife or the monetary transmission mechanism is prone to disturbances. This may explain why monetary targeters tend to put relatively more emphasis on operational transparency; it helps them cope with their imperfect control of monetary aggregates. In addition, because monetary targeters are predominantly developing countries, they may face challenges implementing transparency (such as providing numerical macroeconomic forecasts), which helps to account for their relative opacity.

Note that the model in this section has assumed that the central bank conducts monetary policy under discretion. In practice, however, central banks may lack discretion, in particular when they maintain an exchange rate peg. In that case, the information effects still hold, but the beneficial incentive effects no longer apply. This could explain why exchange rate targeters tend to be more opaque.

To summarize, transparency about macroeconomic information generates a beneficial information effect as it reduces private sector uncertainty about the economy. Furthermore, economic transparency and operational transparency both allow the private sector to understand the central bank's inflationary intentions better, so they help to anchor long-run inflation expectations. Economic transparency helps the public to infer the central bank's intentions from its policy actions, enabling ex ante accountability, whereas operational transparency allows inference based on policy outcomes, facilitating ex post accountability. As a result, providing macroeconomic transparency is useful for central banks to maintain low inflation and stable inflation expectations. This helps to explain why it has become such an important feature of monetary policymaking.

3.5 FORWARD POLICY GUIDANCE

Most central banks nowadays promptly announce any adjustments in their policy settings. However, this provides an incomplete description of the monetary policy stance. First, the monetary policy instrument is typically adjusted only in discrete steps (such as 25 basis points for the policy rate). This means that central banks often decide not to adjust their policy settings. For instance, they may judge that macroeconomic developments point to a rise in the policy rate of 10 basis points, but that moving by an entire step is not (yet) warranted, so they decide not to change the policy rate. Simply announcing the policy decision thus hides the actual policy inclination toward

increasing the rate. As a result, providing information about the policy inclination is an important part of policy transparency.

The policy inclination may be revealed through voting records (if they are released). For example, dissents in favor of raising the policy rate indicate a bias toward tightening and could foreshadow an upcoming rate hike. But, such dissents may also be due to persistent heterogeneity in policy preferences and reflect the presence of inflation-averse “hawks.” In addition, if the vote was unanimous (e.g., not to change the policy rate), then it could still be the case that central bankers had a policy inclination (e.g., toward tightening, as earlier). Thus, voting records need not be a good indicator of the likely direction of upcoming policy moves.

The minutes of the policy deliberations could provide better clues about the policy inclination. In particular, the minutes could reveal which policy options were discussed. For instance, if the discussion focused on whether to change the policy rate by 0 or +25 basis points, then this indicates a policy inclination toward tightening. But the minutes are only available after a considerable delay (if at all), so they cannot provide a prompt signal of the policy inclination.

As a result, the publication of minutes and/or voting records is not a substitute for providing an explicit policy inclination. Releasing a policy announcement with a qualitative indication of the likely direction of the next policy move would contribute to policy transparency, although a full description of the monetary policy stance requires quantitative information about the projected path of the policy instrument.

To understand why the monetary policy stance is inherently forward-looking, it is useful to go back to the stylized model in Section 3.4. It was assumed that the central bank directly controls the real interest rate r that drives aggregate demand. However, in reality the policy rate is a very short term (nominal) interest rate that on its own has little impact, but influences the longer term real interest rate that matters for aggregate demand. In particular, assuming the expectations theory of the term structure, the longer term rate r is determined by expected future policy rates:

$$r_t = \frac{1}{T} \sum_{s=0}^{T-1} \rho_{t+s|t}^e \quad (3.6)$$

where $\rho_{t+s|t}^e$ denotes the (real) policy rate in period $t+s$ expected in period t , and T is the term of the real interest rate r_t (in terms of the term of the policy rate, which may be overnight).¹¹ This equation implies that what matters for the macroeconomic outcome of monetary policy is not so much the current policy rate ρ_t , which has only a negligible direct effect on r_t , but the expected path of future policy rates $\rho_{t+s|t}^e$. One cannot make macroeconomic projections based on a particular policy rate ρ_t without making an assumption about expected future policy rates, because r_t is

¹¹ This presumes that prices are sticky in the short run so that the central bank is effectively able to control the short-term real interest rate.

determined by both as shown by (3.6). In particular, if the interest rate r_t relevant for aggregate demand is, say, a three-year rate, then the expectation of policy rates over a three-year horizon is needed. Moreover, it is simply impossible to determine the optimal monetary policy setting without specifying the projected path of the policy rate. For instance, the effect of a cut in the policy rate depends critically on how long it is anticipated to last. As a result, the projected policy path is an integral part of the monetary policy stance.

This result holds even more strongly in the New Keynesian model which features a forward-looking Phillips curve and IS equation.¹² The New Keynesian Phillips curve is given by

$$\pi_t = \beta E_t[\pi_{t+1}] + \kappa \tilde{y}_t \quad (3.7)$$

where $\tilde{y}_t \equiv y_t - \bar{y}_t$ denotes the output gap, and β and κ are constant, positive parameters (the former equal to the consumer's intertemporal discount factor, with $0 < \beta < 1$). The dynamic, optimizing IS equation is described by

$$\tilde{y}_t = E_t[\tilde{y}_{t+1}] - \gamma \tilde{r}_t \quad (3.8)$$

where $\tilde{r}_t \equiv r_t - \bar{r}_t$ and γ is a constant, positive parameter (which is the intertemporal elasticity of substitution and equal to the inverse of the coefficient of relative risk aversion). Forward substitution of (3.8) yields

$$\tilde{y}_t = -\gamma \sum_{k=0}^{\infty} E_t[\tilde{r}_{t+k}]$$

Thus, not just the current real interest rate (gap) \tilde{r}_t but the entire path of expected real interest rates drives aggregate demand. As a result, the projected policy path over an infinite horizon would be required to specify fully the monetary policy stance in the New Keynesian model.

Though the future policy rate is inherently unknown, the private sector still forms expectations of it—in fact, the effect of monetary policy vitally depends on them. Monetary policymakers could use private sector expectations of the policy path (e.g., based on surveys, or derived from the yield curve or swaps) to decide on the policy rate. When policy decisions are not fully anticipated, however, it is not appropriate to condition on current private sector expectations, because they will be updated, potentially changing the entire expected interest rate path. Although one could try to model how the private sector is likely to adjust its expectations, it would be challenging to correctly predict how the private sector will respond to policy surprises. Alternatively, the adjustment of private sector expectations could be considered as an unknown

¹² For a derivation and discussion of the New Keynesian model, see Galí (2008).

expectational shock or effectively a control error. In particular, (3.6) could be rewritten as $r_t = (1/T) \rho_t + v_t$, where $v_t \equiv (1/T) \sum_{s=1}^{T-1} \rho_{t+s|t}^e$ is an expectational disturbance. This indicates that the central bank has imperfect control over the economically relevant interest rate r_t due to changes in private sector expectations.

This gives rise to an interesting opportunity. Instead of passively taking private sector expectations as given and considering expectational adjustments as control errors, the central bank could actively attempt to influence expectations through its communications and thereby improve monetary control. The central bank could engage in the “management of expectations” (Woodford, 2005) by disclosing information about its projected policy path. Thus, forward policy guidance provides an additional policy tool to enhance the effectiveness of monetary policy.

Most central banks give at least some general guidance by publishing their monetary policy strategy, which broadly describes how policy tends to respond (e.g., for inflation targeting, adjusting the policy rate upward/downward if the medium-term forecast for inflation is above/below the inflation target). The central bank’s macroeconomic projections (e.g., for inflation) then provide an indication of policy prospects. Economic and operational transparency also helps the private sector to learn the monetary policy response over time using policy actions and outcomes. The release of voting records, besides indicating a policy bias, makes this learning process more efficient as the degree of unanimity of the vote can be used to weigh the observations.¹³ Publication of the minutes of the policy meeting discloses further detail about the considerations of policymakers, for instance by identifying which economic and financial variables are considered particularly important for the policy decision. Speeches by central bankers could provide additional background. Such general guidance contributes to understanding the monetary policy reaction, but it often leaves considerable uncertainty.

To improve the predictability of policy decisions and the management of expectations, central banks could give specific forward guidance about the likely timing, direction, size, and/or pace of upcoming policy moves. This may be communicated in the minutes or central bankers’ speeches, although it is most notably issued in a statement accompanying the policy decision.

Forward guidance could be confined to qualitative assessments conveyed by code words or particular phrases (like the Federal Reserve’s “measured” pace and “extended period,” or the ECB’s use of “strong vigilance”).¹⁴ Such code-word communication can be very flexible but has the drawback that its precise meaning may not be (immediately) clear, impeding its effectiveness.

¹³ When individual voting records are disclosed, they could also be used to infer central bankers’ possibly heterogeneous preferences, as modeled by Weber (2010). This has the additional advantage of improving accountability, as it allows the government to reappoint only those with desirable preferences, which could induce central bankers to act accordingly (Gersbach and Hahn, 2004).

¹⁴ The latter signals an imminent rate hike (see Geraats et al., 2008, box 6).

Greater transparency is achieved by providing quantitative guidance on how future policy is likely to be adjusted depending on (1) time or (2) economic conditions. A simple form of time-dependent forward guidance gives a date until which policy is likely to be maintained. For example, facing market expectations of a rate cut the Reserve Bank of New Zealand wrote in its policy statement of March 9, 2006 that “we do not expect to be in a position to ease policy this year”; and the Bank of Canada announced on April 21, 2009 to expect its policy rate to remain at 0.25% “until the end of the second quarter of 2010.” Such calendar-based guidance provides clarity, although a fixed date reduces flexibility, so it may be desirable to adjust the date as circumstances change.¹⁵ It has been argued that the latter could be counterproductive (Woodford, 2012). In particular, extending the duration of ultra-low policy rates may be interpreted as bad news about macroeconomic prospects (rather than a more expansionary monetary policy stance) and therefore further depress economic activity instead of stimulating it, constituting a negative information effect. The problem is that time-dependent guidance provides a noisy signal that reflects both policy preferences and anticipated macroeconomic shocks. But if the central bank reveals its views about the latter (e.g., by publishing its macroeconomic forecasts), confusion can be prevented.

Instead of a fixed date, forward guidance could stipulate specific economic conditions for a policy adjustment using a quantitative threshold. A few central banks have adopted such state-contingent guidance based on a threshold for inflation (Japan) or the unemployment rate (United States and United Kingdom). For instance, to stem deflationary expectations the Bank of Japan announced in its monetary policy statement of March 19, 2001 that its new “quantitative easing” policy would continue until the consumer price index (CPI, excluding perishables) increases by at least 0%.¹⁶ The Federal Reserve indicated in its policy statement of December 12, 2012 that it expected to keep the policy rate close to zero at least as long as the unemployment rate remains above 6.5%.¹⁷

State-contingent forward guidance generates flexibility as its policy settings move in line with the state of the economy (e.g., effectively extending the horizon for low policy rates when economic conditions deteriorate). In fact, it could act as an automatic stabilizer as the adjustment of market rates generates more/less stimulus when private sector prospects worsen/improve. On the other hand, its dependence on future economic conditions makes the timing of policy moves more uncertain under state-contingent guidance, which reduces its effect on longer term interest rates. Different views about

¹⁵ The Federal Reserve’s forward guidance of August 9, 2011 indicating an “exceptionally low” policy rate “at least through mid 2013” was twice modified to extend the minimum horizon to “late 2014” in January 2012 and to “mid 2015” in September 2012.

¹⁶ In addition, the Bank of Japan’s policy statement of April 4, 2013 announced that its new policy of “quantitative and qualitative monetary easing” will continue “as long as it is necessary” to achieve its “price stability target” of 2% CPI inflation.

¹⁷ The Bank of England’s forward guidance announced on August 7, 2013 is similar but features an unemployment rate threshold of 7%.

economic prospects could also make it less effective. For example, the Bank of England believed that its unemployment rate threshold of 7% would be reached in three years, but if the private sector expects it to be hit much earlier, then the state-dependent guidance leads to a higher level of medium-term interest rates than intended, making it less stimulatory. Furthermore, the choice of the threshold in state-contingent guidance could be problematic. In particular, if the threshold for the unemployment rate is (unwittingly) set below the natural rate of unemployment, then the forward guidance will fuel inflation. This could be overcome by including escape clauses. For example, the Federal Reserve's threshold guidance is conditional on medium-term inflation projections being below 2.5% and long-term inflation expectations remaining well-anchored.¹⁸

The most sophisticated form of forward guidance used by central banks is to publish the projected policy path. This provides a comprehensive time-dependent description of the monetary policy stance, specifying the likely timing, direction, size, and pace of future policy actions. The Reserve Bank of New Zealand has published its projected interest rate path since 1997.¹⁹ It has been followed by Norway (since 2005), Sweden (since 2007), Iceland (2007–2008), the Czech Republic (since 2008), and the United States (since 2012).²⁰ The projected policy path is generally presented in a fan chart that illustrates the underlying uncertainty. The policy projections are based on specific assumptions about economic developments that may be explicitly stated. This conditionality could be further clarified using scenario analysis that shows how the policy path would be affected by particular plausible circumstances (such as higher wage demands), thereby providing some state-contingent guidance as well. An excellent example is the Swedish Riksbank, which has published its projected policy path in combination with scenario analysis since 2007.

Another way to clarify how monetary policy is likely to respond is to reveal how the projected policy path is chosen. The central bank of Norway has gone furthest in this respect by identifying its criteria and even formalizing them in the form of a loss function (similar to (3.1) but with two additional terms pertaining to the interest rate). However, it stresses that the “loss function [. . .] must be regarded as a simplified representation of the more extensive assessments behind interest rate decisions.”²¹ Although disclosing the loss function may be enlightening to economists, it is unlikely to be very

¹⁸ The Bank of England's forward guidance is subject to three “knockouts” pertaining to maintaining not only price stability (similar to the Fed), but also financial stability.

¹⁹ It also provided its projected path for the Monetary Conditions Index (MCI) while the MCI was used as its policy instrument until 1999.

²⁰ Norway, Sweden, (Iceland), and the United States release(d) the projected path of their policy rate, but New Zealand and the Czech Republic the path of a closely related three-month rate. Iceland stopped publishing its policy path during its acute financial crisis.

²¹ Norges Bank Monetary Policy Report 2/2010, p. 23. See also Norges Bank Monetary Policy Report 1/2012, Box “Response pattern of monetary policy and criteria for an appropriate interest rate path” (pp. 15–16).

illuminating to the general public, doing little to reduce their uncertainty about future interest rates.

A potential alternative would be to directly divulge the monetary policy reaction by specifying how policy settings respond to economic conditions (like (3.4)). That would provide a comprehensive form of state-dependent forward guidance. In practice, however, monetary policy decisions depend on so many different (often unforeseen) factors and finely balanced judgments, that it is virtually impossible to fully describe them. Even if a central bank actually managed to formulate the monetary policy reaction function, its state-contingency would still leave the public uncertain about the likely time path of the policy instrument, reducing its effectiveness. So it would be useful to complement the state-contingent guidance by projections of the policy path.

To summarize this discussion of different forms of forward guidance, time-dependent policy guidance has the advantage of directly providing information about the future policy path, which makes it easier for the central bank to manage expectations, whereas state-contingent forward guidance has the benefit of offering greater flexibility. As a result, it would be desirable to give forward guidance that combines state-contingent and time-dependent features. In particular, time-dependent policy guidance is enhanced by adding some state-contingency (e.g., through escape clauses or scenario analysis). Similarly, state-contingent forward guidance benefits from being supplemented by the projected policy path.

In general, forward guidance is useful because it reduces uncertainty about upcoming policy decisions and allows the central bank to influence expectations of the policy rate in line with its intentions. Thus, the central bank has better control over longer term interest rates (based on (3.6)), which makes monetary policy more effective. Forward guidance also provides a signal of the inflationary preferences of the central bank, which facilitates the alignment of inflation expectations as well. These information effects, which have been modeled by Rudebusch and Williams (2008), generally improve macroeconomic performance.

If the central bank has noisy information about economic shocks, however, then publication of its interest rate forecast could lead private sector expectations astray and be welfare reducing. This detrimental information effect is illustrated in the model by Gosselin et al. (2008), who find that releasing the central bank's interest rate forecast is welfare improving if its information is sufficiently precise compared to the private sector.

Although the central bank's forward guidance may be noisy, it is generally still informative so it allows the private sector to improve its forecasts. This reduction in private sector uncertainty stemming from transparency is likely to lower risk premia, which cuts the cost of capital, thereby stimulating investment and growth, as argued by Begg (2006). This beneficial information effect could be formalized by assuming that, instead of the expectations theory of the term structure in (3.6), the interest rate r_t is determined

by both expected future rates $\rho_{t+s|t}^e$ and a term premium θ_t that reflects interest rate and liquidity risks:

$$r_t = \frac{1}{T} \sum_{s=0}^{T-1} \rho_{t+s|t}^e + \theta_t \quad (3.9)$$

Forward guidance about the policy rate makes future interest rates less uncertain, reducing the risk premium θ_t . In the case of unconventional monetary policy such as “quantitative easing,” forward guidance could have a similar effect on θ_t by lowering liquidity premia.

Furthermore, in the New Keynesian model forward guidance facilitates the implementation of optimal monetary policy, which involves commitment to a history-dependent, state-contingent policy path (e.g., Woodford, 2005). The key role of commitment is to affect private sector expectations about future inflation and output, which have a powerful effect on current inflation and output in the New Keynesian model described by (3.7) and (3.8). Communications about future policy allow the central bank to have a similar effect and improve the effectiveness of monetary policy. For instance, forward guidance to keep the nominal interest rate low for longer raises expected future inflation and output, thereby increasing current inflation and output in the New Keynesian model. Even if the nominal interest rate i_t is at its lower bound, the rise in expected future inflation provides further stimulus by reducing the real interest rate r_t , using the Fisher parity

$$i_t = r_t + E_t[\pi_{t+1}] \quad (3.10)$$

Thus, forward guidance gives central banks an additional policy tool that could overcome the lower-bound constraint on the nominal interest rate (as discussed by Bernanke et al., 2004, and Woodford, 2005, 2012).

Likewise, the publication of interest rate projections could have a beneficial effect on private sector expectations during more usual times. Gersbach and Hahn (2011) show that it is welfare improving for the central bank to announce interest rate projections in a New Keynesian model with supply shocks, provided it is costly for the central bank to deviate from these projections. The latter gives the central bank an incentive to set the interest rate close to its projections, which has a similar beneficial effect on expectations as commitment.

Publishing the projected policy path could also help to overcome a time-inconsistency problem associated with commonly used monetary policy strategies that aim to achieve the policy objective (e.g., inflation target) by the end of a particular policy horizon (e.g., two years). Since the central bank’s policy horizon moves along as time passes (e.g., always two years ahead), policy is adjusted over time (even in the absence of further shocks) and the target reached too slowly.²² This time-inconsistency issue can be

²² If the policy horizon is two years and an adverse shock pushes inflation above its target in year t , then policy is tightened to reach the target in year $t+2$. But in the next year $t+1$, policy is adjusted

overcome by following the (initial, optimal) projected policy path and only deviating from it in response to new information (just like optimal policy in the New Keynesian model). Announcement of the projected policy path is likely to induce the central bank to do so as discrepancies would demand explanation, thereby preventing persistent deviations from target and making medium-term inflation expectations more stable.

An important issue is whether the central bank should commit to its forward guidance. A credible commitment allows the central bank to improve its control over longer term (nominal) interest rates. For instance, by credibly committing to keeping the policy rate near zero for the next three years, the central bank could steer the three-year nominal interest rate close to zero (assuming (3.6)), thereby making the monetary stimulus more effective. However, this comes at the cost of losing flexibility to respond to unforeseen circumstances arising in the future. Although this is particularly problematic for time-dependent forward guidance,²³ even state-contingent guidance with its built-in flexibility cannot overcome the immutable nature of a commitment as it is practicably impossible to take into account all possible contingencies. Furthermore, central banks face considerable uncertainty not only about (the type of) future shocks (e.g., the 9/11 attacks or Lehman Brothers collapse), but also about the (possibly changing) structure of the economy. Thus, commitment to policy guidance inevitably leads to a credibility–flexibility tradeoff, with greater credibility enhancing the effectiveness of current policy, but the lack of flexibility limiting future monetary policy.²⁴

In practice, forward guidance usually refrains from making an unconditional commitment. An exception is the Bank of Japan, which made explicit, state-contingent “policy duration” commitments without qualifications in 1999 and 2001.²⁵ To maintain future flexibility, forward guidance tends to be formulated using verbal qualifiers (such as “likely”) or explicit caveats (like the Fed’s conditions on inflation forecasts and expectations in its unemployment threshold guidance). A good example is the explicit “conditional commitment” announced by the Bank of Canada on April 21, 2009 that “conditional on the outlook for inflation,” its policy rate “can be expected” to remain at 0.25% “until the end of the second quarter of 2010”; this conditional commitment

to achieve the target in year $t + 3$ instead, contrary to the central bank’s intentions in year t . See Bjørnland et al. (2004, chapter 3) for a further discussion.

²³ In fact, committing to a fixed level or time path of the nominal interest rate (\bar{r}) is actually destabilizing. For instance, an inflationary shock that raises inflation expectations π^e reduces the real interest rate $r = \bar{r} - \pi^e$, leading to even higher inflation.

²⁴ For a discussion of “Odyssean” policy guidance that publicly commits the central bank versus “Delphic” forward guidance that merely provides a forecast, see Campbell et al. (2012).

²⁵ The Bank of Japan announced in its monetary policy statement of September 21, 1999 that it is “explicitly committed to continue [its zero interest rate] policy until deflationary concerns subside.” In addition, the minutes of its monetary policy meeting of March 19, 2001 explicitly refer to the “policy duration commitment” (to continue “quantitative easing”) in its 0% inflation threshold guidance. Although the Bank of Japan has also explicitly committed to pursue “quantitative and qualitative monetary easing” in its 2% inflation threshold guidance of April 4, 2013, it added the qualification to “make adjustments as appropriate.”

was removed on April 20, 2010 and the policy rate was actually raised on June 1, 2010. Similarly, presenting the projected policy path in a fan chart clearly shows that it is a forecast, not a promise. However, forward guidance with such qualifications or escape clauses may be harder to understand and increases uncertainty about future policy settings, making it less effective at influencing private sector expectations.

Nevertheless, forward guidance generally entails some kind of commitment, not to follow specific policy settings come what may, but to explain deviations. Although central banks that publish their policy rate projections routinely deviate from them, this is always accompanied by an explanation. The change could be in line with previous scenario analysis or due to unanticipated developments. The central bank of Norway provides the most rigorous account of changes in its projected policy path by formally decomposing them into different types of shocks.²⁶ As a result, central banks maintain flexibility in their policy settings and forward guidance is foremost a commitment to transparency.

To summarize, guidance about the future policy path is important to achieve transparency of monetary policy. Time-dependent policy guidance allows the central bank to directly shape interest rate expectations, while state-contingent guidance offers greater flexibility to respond to changing economic circumstances. Forward guidance generally reduces uncertainty and allows the private sector to align its interest rate and inflation expectations with the central bank's intentions, making monetary policy more effective. The lower uncertainty could reduce risk premia, stimulating investment and growth. It also facilitates the implementation of optimal monetary policy in the New Keynesian model.

Forward guidance essentially gives the central bank an additional monetary policy tool to manage expectations, so it is not surprising that it has become more popular since the financial crisis in 2008–2009. With policy rates close to zero, central bank communications still provide a powerful monetary policy instrument.

3.6 EMPIRICAL EVIDENCE

There is empirical support for the theoretical findings discussed in Sections 3.4 and 3.5. First of all, an explicit and credible inflation target indeed helps to anchor long-run inflation expectations, as shown by Gürkaynak et al. (2010). Similarly, Van Der Cruijsen and Demertzis (2007) find that greater overall transparency leads to more stable private sector inflation expectations and less inflation persistence.

Using the Fry et al. (2000) survey data, Chortareas et al. (2002) find that average inflation is significantly decreasing in the extent to which central banks publish forward-looking

²⁶ Published in its Monetary Policy Reports since October 2007 (e.g., “Changes in the projections since Monetary Policy Report 2/13,” Norges Bank Monetary Policy Report 3/13, pp. 22–23).

analysis and forecasts, controlling for institutional and macroeconomic characteristics (e.g., central bank independence, GDP per capita, openness). But this does not hold for countries with an exchange rate peg, which is consistent with the theory behind beneficial incentive effects. Chortareas et al. (2003) show that higher macroeconomic transparency also reduces the “sacrifice ratio” (i.e., the output cost of disinflation).

Geraats et al. (2006) find that increases in transparency, taken from the Eijffinger and Geraats (2006) dataset, are often followed by significantly lower (short- or long-term) nominal interest rates, controlling for macroeconomic conditions, suggesting greater flexibility and reputation.

Dincer and Eichengreen (2014) use their own extensive panel dataset to first find determinants of transparency (which include GDP per capita, financial depth, openness, and governance indicators), and then estimate the effects of monetary policy transparency using governance indicators as instruments to take into account endogeneity. They show that greater transparency tends to significantly reduce inflation variability and also lower the level of inflation.

There are also interesting empirical findings related to the effectiveness of forward guidance. Most notably, there is strong evidence from financial market reactions that central bank communications are informative about interest rate prospects.

Assessing the contribution of policy statements is complicated by the fact that they are usually released together with the policy decision. To disentangle their effects, Gürkaynak et al. (2005) use high-frequency data on interest rate futures to decompose the effect of US monetary policy decisions into two independent factors, the current policy rate and the future path of policy. The latter appears strongly associated with Federal Reserve statements accompanying the policy announcement, and has a significant effect on medium- to long-term US Treasury yields. In fact, it has much greater explanatory power for longer-term yields than the current policy action, thus establishing the importance of the future policy path.²⁷

Using a similar factor decomposition based on high-frequency financial data, Bernanke et al. (2004) find that the factor capturing the policy path over a one-year horizon is significantly affected by surprises in Federal Reserve statements, whether they pertain to the state of the economy or directly to the likely path of the policy rate. They estimate that a surprisingly “hawkish” statement about the policy path increases five-year US Treasury yields by about 10 basis points.

The effect of policy statements can be directly identified for the European Central Bank, because its statements are made at a press conference held 45 minutes after the policy announcement. Using high-frequency data of short-term forward rates, Brand et al. (2010) find that the ECB’s statements provide news about the future policy path, which has a significant effect on interest rates across the euro area yield curve. Their

²⁷ Campbell et al. (2012) find that the path factor also significantly affects long-term corporate bond yields and continued to be important during the recent financial crisis.

results indicate that news stemming from the statements matters much more for medium- to longer term yields than news from the policy decision, which shows the importance of communications as an additional policy tool.

To identify what type of information is particularly relevant, Ehrmann and Fratzscher (2009) analyze minute-by-minute market reactions to the ECB's press conferences. They find that short-term interest rate futures respond most strongly to statements about inflation and the policy rate discussion (such as the policy options considered and the degree of unanimity about the decision).

The minutes of monetary policy meetings also generate significant intraday effects on financial markets, including on short- and long-term interest rate futures for the Bank of England (Reeves and Sawicki, 2007), and on medium- to long-term interest rates, equity prices and exchange rates for the Federal Reserve (Rosa, 2013). There is also a significant intraday effect on short-term interest rate futures for the Bank of England's Inflation Report (Reeves and Sawicki, 2007).

Communications by individual monetary policymakers (e.g., speeches) also have the ability to move financial markets. For instance, for the Bank of England, European Central Bank, and Federal Reserve, Ehrmann and Fratzscher (2007a) find that statements by individual policymakers about the economic outlook and the monetary policy inclination have a significant effect on market rates and equity prices in a direction that is in line with the statements' content. The frequency of such communications and the market responses to them tend to increase prior to adjustments in the policy rate (Ehrmann and Fratzscher, 2007b). This suggests that policymakers effectively use intermeeting communications to signal upcoming policy moves.

There are further empirical findings that central bank communications could make monetary policy decisions more predictable. For instance, voting records are informative about upcoming policy adjustments (e.g., Gerlach-Kristen, 2004; Horváth et al., 2012). The same holds for the minutes of policy meetings (e.g., Apel et al., 2012). And countries that publish higher-quality inflation reports experience smaller financial market reactions to monetary policy decisions, indicating better predictability (Fracasso et al., 2003).

To establish whether transparency makes interest rates more predictable it is important to take into account economic conditions. Focusing on the United States, Swanson (2006) shows that controlling for macroeconomic shocks, short-run private sector forecasts of short-term interest rates have become more accurate and less uncertain or dispersed, while forecasts of inflation and output growth have not improved. He also finds a significant decline in financial market uncertainty about short-term interest rates on monetary policy meeting days, but only since 1994, when the Federal Reserve started to announce and explain adjustments to its policy rate. This strongly suggests that the improvement in forecast performance for short-term interest rates is attributable to greater Federal Reserve transparency.

Moreover, there is interesting evidence on beneficial effects of specific forward policy guidance. The Federal Reserve's qualitative forward guidance between 1999 and 2004 (e.g., "balance of risks") is analyzed by Ehrmann and Fratzscher (2007c), who

show that it reduced market uncertainty about short-term interest rates on monetary policy meeting days. Market interest rates also adjusted less during the intermeeting period, which appears to be due to smaller reactions to intermeeting communications by individual policymakers. Although they find no change in the predictability of monetary policy decisions (compared to 1994–1999), financial markets anticipate policy actions earlier with policy guidance. This indicates that the qualitative forward guidance by the Federal Reserve has made the implementation of monetary policy more efficient.

Central bank communications could also greatly facilitate the operational implementation of monetary policy, which is usually conducted through open market operations. Guthrie and Wright (2000) analyzed how the Reserve Bank of New Zealand largely used announcements (“open mouth operations”) to achieve its desired level of monetary conditions. They found significant effects on interest rates and exchange rates in the direction signaled by the announcements.

Forward guidance (whether qualitative or quantitative) significantly increases the predictability of monetary policy decisions, as shown by Ferrero and Secchi (2009). Their results are based on a regression analysis of the reaction of one-month interest rates on monetary policy meeting days (controlling for adjustments in the policy rate, market volatility, and country fixed effects), using 1999 to mid-2007 data for the euro area, New Zealand, Norway, Sweden, and the United States.

Moessner and Nelson (2008) examine whether quantitative policy guidance affects market expectations, focusing on the publication of interest rate projections by the Reserve Bank of New Zealand (RBNZ). They find that surprises in RBNZ interest rate projections have a significant effect on market expectations, as measured by interest rate futures prices for a horizon of two to six quarters ahead. Furthermore, also analyzing (qualitative) policy guidance by the Federal Reserve and European Central Bank, Moessner and Nelson (2008) find no sign that financial markets overreact to forward guidance or do not understand its conditionality.

Assessing the effect of forward guidance often suffers from the presence of confounding factors. So it is useful to consider cases in which there was a sudden communications change without any adjustment or surprise in policy settings. For instance, on January 28, 2004 the Federal Reserve modified its qualitative forward guidance from maintaining policy accommodation “for a considerable period” to being “patient” in removing it. This change of phrase seemed to have a strong effect on market sentiments, with US Treasury yields ranging from one to ten years rising by more than 10 basis points (Swanson and Williams, 2013), illustrating that qualitative forward guidance can be a potent tool.

Another interesting example is the switch by the Federal Reserve from its qualitative “extended period” guidance to its quantitative, date-based “mid-2013” guidance on August 9, 2011. This appeared to have a powerful effect on private sector expectations, increasing the expected duration of a very low policy rate from four quarters to at least seven quarters (according to the Blue Chip survey of forecasters), and reducing the two-year US Treasury yield by about 10 basis points and the five- and ten-year yields by

over 20 basis points (Swanson and Williams, 2013).²⁸ This suggests that forward guidance can be much more effective when it is quantified.

Unconventional monetary policy measures such as “quantitative easing” are typically announced in advance.²⁹ Gagnon et al. (2011) found large declines in longer term interest rates on the days the Federal Reserve made announcements about large-scale asset purchase programs during the 2008–2009 financial crisis. They showed that the decrease in ten-year US Treasury yields could mostly be attributed to a drop in the term premium rather than lower market expectations of future policy rates. Joyce et al. (2011) similarly found that announcements by the Bank of England regarding quantitative easing starting early 2009 were followed by substantial declines in medium- to long-term UK government bond yields that were mostly due to lower term premia. In both cases, announcing the measures made them effective even before any assets had been purchased. To reduce risk premia stemming from fears of a euro area break-up during the euro area sovereign debt crisis of 2010–2012, the European Central Bank announced on September 6, 2012 its “outright monetary transactions” program of potentially unlimited sterilized purchases of euro area sovereign debt. The announcement has proved so successful at reducing yields that the ECB has not needed to make any purchases to date (as of mid 2014). This illustrates the power of central bank communications.

3.7 CONCLUSION

This chapter has provided a survey of monetary policy transparency. It has shown that central banks throughout the world are increasingly disclosing information relevant to their monetary policymaking. The increase has been particularly strong for macroeconomic and policy transparency.

The disclosure of information generally reduces private sector uncertainty and makes monetary policy more predictable.

Transparency about macroeconomic developments, most prominently through the publication of macroeconomic projections, allows the public to infer the central bank’s inflationary intentions from its monetary policy actions and outcomes. This acts as a discipline device for the central bank, while it also yields greater flexibility to pursue macroeconomic stabilization.

²⁸ Swanson and Williams (2013) also find that the probability of very low rates derived from interest rate options rose substantially. In addition, they show that the sensitivity of one-year and two-year US Treasury yields to macroeconomic news dropped to around zero, with similar results for eurodollar futures.

²⁹ In contrast, central banks are often secretive about foreign exchange interventions, although exchange rate communications (“oral interventions”) appear effective (Fratzscher, 2008).

Forward guidance about policy settings, most notably through the release of the projected policy path, allows the central bank to influence interest rate expectations and have greater control over longer term interest rates.

In general, central bank communications provide a powerful monetary policy tool that could be utilized to align private sector expectations of inflation and the policy rate with the central bank's intentions. Thus, transparency acts like a policy instrument to manage expectations and thereby improve the effectiveness of monetary policy.

Empirical evidence suggests that greater transparency of monetary policy has indeed made long-term inflation expectations better anchored and monetary policy decisions more predictable, while it has also improved macroeconomic outcomes. All in all, monetary policy transparency largely appears to have been beneficial.

ACKNOWLEDGEMENTS

I thank Barry Eichengreen and Nergiz Dincer for sharing their extensive transparency dataset.

REFERENCES

- Apel, M., and Grimaldi, M. B. (2012). The information content of central bank minutes. Sveriges Riksbank Working Paper No. 261.
- Begg, I. (2006). Economic policy and institutional transparency: The ECB. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, pp. 47–69. Oxford: Elsevier.
- Bernanke, B. S., Reinhart, V. R., and Sack, B. P. (2004). Monetary policy alternatives at the zero bound: An empirical assessment. *Brookings Papers on Economic Activity* 2, 1–78.
- Bjørnland, H. C., Ekeli, T., Geraats, P. M., and Leitemo, K. (2004). Norges Bank Watch 2004: An independent review of monetary policymaking in Norway. Norges Bank Watch Report No. 5. Oslo: Centre for Monetary Economics (CME), BI Norwegian School of Management.
- Blinder, A. S. (2000). Central-bank credibility: Why do we care? How do we build it?, *American Economic Review* 90(5), 1421–1431.
- Blinder, A. S., Ehrmann, M., Fratzscher, M., De Haan, J., and Jansen, D.-J. (2008). Central bank communication and monetary policy: A survey of theory and evidence. *Journal of Economic Literature* 46(4), 910–945.
- Brand, C., Buncic, D., and Turunen, J. (2010). The impact of ECB monetary policy decisions and communication on the yield curve. *Journal of the European Economic Association* 8(6), 1266–1298.
- Campbell, J. R., Evans, C. L., Fisher, J. D. M., and Justiniano, A. (2012). Macroeconomic effects of Federal Reserve forward guidance. *Brookings Papers on Economic Activity* 2012, 1–54.
- Carpenter, S. B. (2004). Transparency and monetary policy: What does the academic literature tell policymakers? Federal Reserve Board Finance and Economics Discussion Series 2004-35.

- Chortareas, G., Stasavage, D., and Sterne, G. (2002). Does it pay to be transparent? International evidence from central bank forecasts. *Federal Reserve Bank of St. Louis Review* 84(4), 99–117.
- Chortareas, G., Stasavage, D., and Sterne, G. (2003). Does monetary policy transparency reduce disinflation costs? *The Manchester School* 71(5), 521–540.
- Crowe, C. and Meade, E. E. (2008). Central bank independence and transparency: Evolution and effectiveness. *European Journal of Political Economy* 24(4), 763–777.
- Cukierman, A. (2001). Accountability, credibility, transparency and stabilization policy in the eurosystem. In *The Impact of EMU on Europe and the Developing Countries*, ed. C. Wyplosz, pp. 40–75. Oxford: Oxford University Press.
- Dincer, N. N., and Eichengreen, B. (2014). Central bank transparency and independence: Updates and new measures. *International Journal of Central Banking* 10(1), 189–253.
- Ehrmann, M., and Fratzscher, M. (2007a). Communication and decision-making by central bank committees: Different strategies, same effectiveness? *Journal of Money, Credit and Banking* 39(2–3), 509–541.
- Ehrmann, M., and Fratzscher, M. (2007b). The timing of central bank communication. *European Journal of Political Economy* 23(1), 124–145.
- Ehrmann, M., and Fratzscher, M. (2007c). Transparency, disclosure, and the Federal Reserve. *International Journal of Central Banking* 3(1), 179–225.
- Ehrmann, M., and Fratzscher, M. (2009). Explaining monetary policy in press conferences. *International Journal of Central Banking* 5(2), 41–84.
- Eijffinger, S. C., and Geraats, P. M. (2006). How transparent are central banks? *European Journal of Political Economy* 22(1), 1–21.
- Faust, J., and Svensson, L. E. (2001). Transparency and credibility: Monetary policy with unobservable goals. *International Economic Review* 42(2), 369–397.
- Ferrero, G., and Secchi, A. (2009). The announcement of monetary policy intentions. Banca d'Italia Working Paper No. 720.
- Fracasso, A., Genberg, H., and Wyplosz, C. (2003). *How Do Central Banks Write? An Evaluation of Inflation Targeting Central Banks*, Special Report 2 of *Geneva Reports on the World Economy*. Geneva, Switzerland: Centre for Economic Policy Research.
- Fratzscher, M. (2008). Oral interventions versus actual interventions in FX markets an event-study approach. *Economic Journal* 118(530), 1079–1106.
- Fry, M., Julius, D., Mahadeva, L., Roger, S., and Sterne, G. (2000). Key issues in the choice of monetary policy framework. In *Monetary Policy Frameworks in a Global Context*, eds. L. Mahadeva and G. Sterne, pp. 1–216. London: Routledge.
- Gagnon, J., Raskin, M., Remache, J., and Sack, B. (2011). The financial market effects of the Federal Reserve's large-scale asset purchases. *International Journal of Central Banking* 7, 3–43.
- Gali, J. (2008). *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework*. Princeton, NJ: Princeton University Press.
- Geraats, P., Giavazzi, F., and Wyplosz, C. (2008). Transparency and governance. Monitoring the European Central Bank 6. Geneva: Centre for Economic Policy Research.
- Geraats, P. M. (2000). Why adopt transparency? The publication of central bank forecasts. CEPR Discussion Paper No. 2582.
- Geraats, P. M. (2001). Precommitment, transparency and monetary policy. Bundesbank Discussion Paper No. 12/01.
- Geraats, P. M. (2002). Central bank transparency. *Economic Journal* 112(483), F532–F565.
- Geraats, P. M. (2005). Transparency and reputation: The publication of central bank forecasts. *Topics in Macroeconomics* 5(1.1), 1–26.

- Geraats, P. M. (2006). Transparency of monetary policy: Theory and practice, *CESifo Economic Studies* 52(1), 111–152.
- Geraats, P. M. (2007a). The mystique of central bank speak. *International Journal of Central Banking* 3(1), 37–80.
- Geraats, P. M. (2007b). Political pressures and monetary mystique. CESifo Working Paper No. 1999.
- Geraats, P. M. (2009). Trends in monetary policy transparency. *International Finance* 12(2), 235–268.
- Geraats, P. M. (2013). Transparency, flexibility, and macroeconomic stabilization. In *Central Bank Communication, Decision Making, and Governance: Issues, Challenges, and Case Studies*, eds. P. L. Siklos and J.-E. Sturm, pp. 49–81. Cambridge, MA: MIT Press.
- Geraats, P. M., Eijffinger, S. C., and Van Der Cruijsen, C. A. (2006). Does central bank transparency reduce interest rates? CEPR Discussion Paper No. 5526.
- Gerlach-Kristen, P. (2004). Is the MPC's voting record informative about future UK monetary policy? *Scandinavian Journal of Economics* 106(2), 299–313.
- Gersbach, H. (2003). On the negative social value of central banks' knowledge transparency. *Economics of Governance* 4(2), 91–102.
- Gersbach, H., and Hahn, V. (2004). Voting transparency, conflicting interests, and the appointment of central bankers. *Economics and Politics* 16(3), 321–345.
- Gersbach, H., and Hahn, V. (2011). Monetary policy inclinations. *Journal of Money, Credit and Banking* 43(8), 1707–1717.
- Gosselin, P., Lotz, A., and Wyplosz, C. (2008). The expected interest rate path: Alignment of expectations vs. creative opacity. *International Journal of Central Banking* 4(3), 145–185.
- Gürkaynak, R. S., Levin, A., and Swanson, E. (2010). Does inflation targeting anchor long-run inflation expectations? Evidence from the U.S., UK, and Sweden. *Journal of the European Economic Association* 8(6), 1208–1242.
- Gürkaynak, R. S., Sack, B., and Swanson, E. T. (2005). Do actions speak louder than words? The response of asset prices to monetary policy actions and statements. *International Journal of Central Banking* 1(1), 55–93.
- Guthrie, G., and Wright, J. (2000). Open mouth operations. *Journal of Monetary Economics* 46(2), 489–516.
- Hahn, V. (2002). Transparency in monetary policy: A survey. *ifo Studien* 28(3), 429–255.
- Horváth, R., Šmídková, K., and Zápál, J. (2012). Central banks' voting records and future policy. *International Journal of Central Banking* 8(4), 1–19.
- Jensen, H. (2002). Optimal degrees of transparency in monetary policymaking. *Scandinavian Journal of Economics* 104(3), 399–422.
- Joyce, M. A. S., Lasasoa, A., Stevens, I., and Tong, M. (2011). The financial market impact of quantitative easing in the United Kingdom. *International Journal of Central Banking* 7(3), 113–161.
- Kool, C., Middelburg, M., and Rosenkranz, S. (2011). Central bank transparency and the crowding out of private information in financial markets. *Journal of Money, Credit and Banking* 43(4), 765–774.
- Moessler, R., and Nelson, W. R. (2008). International Journal of Central Banking. *Central Bank Policy Rate Guidance and Financial Market Functioning* 4(4), 193–226.
- Morris, S., and Shin, H. S. (2002). Social value of public information, *American Economic Review* 92(5), 1521–1534.
- Morris, S., and Shin, H. S. (2005). Central bank transparency and the signal value of prices, *Brookings Papers on Economic Activity* 2005(2), 1–43.

- Reeves, R., and Sawicki, M. (2007). Do financial markets react to Bank of England communication? *European Journal of Political Economy* 23(1), 207–227.
- Rosa, C. (2013). The financial market effect of FOMC minutes. *Federal Reserve Bank of New York Economic Policy Review*, 19(2), 67–81.
- Rudebusch, G. D., and Williams, J. C. (2008). Revealing the secrets of the temple: The value of publishing central bank interest rate projections. In *Asset Prices and Monetary Policy*, ed. J. Y. Campbell, pp. 247–284. Chicago: University of Chicago Press.
- Svensson, L. E. (1997). Inflation forecast targeting: Implementing and monitoring inflation targets. *European Economic Review* 41(6), 1111–1146.
- Swanson, E. T. (2006). Have increases in federal reserve transparency improved private sector interest rate forecasts? *Journal of Money, Credit, and Banking* 38(3), 791–819.
- Swanson, E. T., and Williams, J. C. (2013). Measuring the effect of the zero lower bound on medium- and longer-term interest rates. Federal Reserve Bank of San Francisco Working Paper No. 2012-02.
- Tong, H. (2007). Disclosure standards and market efficiency: Evidence from analysts' forecasts. *Journal of International Economics* 72(1), 222–241.
- Van Der Cruysen, C., and Demertzis, M. (2007). The impact of central bank transparency on inflation expectations. *European Journal of Political Economy* 23(1), 51–66.
- Van Der Cruysen, C., and Eijffinger, S. C. W. (2010). The economic impact of central bank transparency: A survey. In *Challenges in Central Banking: The Current Institutional Environment and Forces Affecting Monetary Policy*, eds. P. L., Siklos, M. T. Bohl, and M. E. Wohar, pp. 261–319. Cambridge, UK: Cambridge University Press.
- Van Der Cruysen, C., Jansen, D.-J., and De Haan, J. (2010). How much does the public know about the ECB's monetary policy? Evidence from a survey of Dutch households. ECB Working Paper No. 1265.
- Walsh, C. E. (2007). Optimal economic transparency. *International Journal of Central Banking* 3(1), 5–36.
- Weber, A. (2010). Communication, decision making, and the optimal degree of transparency of monetary policy committees. *International Journal of Central Banking* 6(3), 1–49.
- Winkler, B. (2002). Which kind of transparency? On the need for effective communication in monetary policy-making. *ifo Studien* 48(3), 401–427.
- Woodford, M. (2005). Central bank communication and policy effectiveness. In *The Greenspan Era: Lessons for the Future*. Federal Reserve Bank of Kansas City Economic Symposium, Federal Reserve Bank of Kansas City, pp. 399–474.
- Woodford, M. (2012). Methods of policy accommodation at the interest-rate lower bound. In *The Changing Policy Landscape*, Economic Symposium Conference Proceedings, Federal Reserve Bank of Kansas City, pp. 185–288.

CHAPTER 4

FISCAL POLICY TRANSPARENCY

IAIN BEGG

4.1 INTRODUCTION

THE economic crisis, both in Europe and in the United States, has led to intense scrutiny of fiscal policy and exposed a litany of problems about how it is conducted and monitored. In recent years, the flashpoints have included the sovereign debt problems affecting several euro area countries, together with battles between the branches of government in Washington, DC over the debt ceiling and avoiding the “fiscal cliff.” However, concerns about fiscal policy are nothing new and there have been frequent disputes between governments and international financial institutions and organizations about the macroeconomic and budgetary orientations of national policies. Many an International Monetary Fund (IMF) program, whether in emerging market economies or low-income countries, has imposed stern conditions about improving the honesty and presentation of public accounts.

Citizens, too, have become increasingly suspicious of governments that act rashly, fail to confront budgetary realities, or exhibit “Leviathan” tendencies to boost the public sector for their own selfish or even corrupt reasons, rather than to raise the welfare of citizens. Responses to these anxieties about how governments behave in relation to fiscal policy have included resort to rules that constrain discretion (see, e.g., von Hagen, 2002), the establishment of fiscal councils with varying degrees of independence from government (Calmfors and Wren-Lewis, 2011) and efforts to enhance transparency. Although de Renzio and Masud (2011) recall that openness of public accounts was advocated by Aristotle, it was in the aftermath of the Asian crisis of the late 1990s that fiscal transparency was identified as a necessary attribute of good governance. The IMF (2001, 2007) and the Organisation for Economic Co-operation and Development (OECD) (2001) initially set out a series of desirable practices, and the IMF called on governments to adopt and report on standards and codes. As a recent study by Khagram et al. (2012, p. 47) concludes, supporters of fiscal transparency “now enjoy

favorable winds from the proliferation of transparency norms, the policies of international organizations, and domestic pressures for openness.”

Heald (2003) identifies the general context of concern about fiscal sustainability as an important reason for interest in transparency. In the European Union (EU), mechanisms for the oversight of national policy were established and have now been considerably strengthened as part of the reforms prompted by the crises of 2008–2013. The International Budget Partnership is a nongovernmental organization (NGO) that has sought to champion better governance of fiscal policy and has carried out surveys of transparency, with the aim of encouraging its spread. Another NGO, the Global Initiative for Fiscal Transparency, has published a call for much greater fiscal transparency, reflecting the fact that “fiscal policies—taxing, borrowing, spending, investing, and managing public resources—have critical impacts on economic, social, and environmental outcomes in all countries at all levels of development” (GIFT, 2012, p. 1).

The aim of this chapter is to present an overview of fiscal transparency as an increasingly important instrument of governance. Section 4.2 explores the rationale for transparency, showing that it derives partly from the desire to hold government to account and to legitimate the actions of the agents entrusted with public money. In parallel, there are economic efficiency concerns, especially about the perceived deficit bias in policymaking. Some of the economic efficiency arguments can be related to public choice theory, but the need for policy coordination is also germane, while there is a growing literature linking greater transparency to better fiscal outcomes (see, e.g., Alt and Lassen, 2006; de Renzio and Masud, 2011). Section 4.3 reviews practices in different contexts and why they have been adopted, including how transparency fits into the wider framework for the governance of fiscal policy, then appraises different approaches to fiscal transparency. Section 4.4 completes this chapter by providing concluding comments and suggestions for the evolution of research on fiscal transparency.

4.2 THE RATIONALE FOR FISCAL TRANSPARENCY

There is a widespread assumption that transparency is a “good thing,” although as Heald (2012, p. 31) notes, “its effects are more ambiguous than is suggested by contemporary portrayal.” He identifies a number of overlapping goals of transparency which include forestalling corruption, enhancing the efficiency of public spending and rendering public authorities more accountable. As in monetary policy transparency, there can be tensions between information disclosure to explain policy—the need to know—and the advantages of a degree of confidentiality. In monetary policy, the ability to surprise is valued by central banks, because if policy is completely predictable, then a weapon is lost. Equally, surprises that are too big or too frequent can accentuate

economically inefficient uncertainty. Heald also stresses that the nature of transparency matters and that an ill-conceived approach could be counterproductive.

An obvious question to pose is whether transparency in fiscal policy—not least because it is one of the two main instruments of macroeconomic management—can be defined and interpreted in the same way as in other policy domains. In the second macroeconomic domain, monetary policy, there are two main concerns. The first, given the considerable independence that has become the norm for central banks as agents for the conduct of monetary policy, is to convince their principals—usually governments, given the widespread independence granted to central banks, but possibly also citizens—that the correct policies have been implemented. Communication has, however, become an important instrument of monetary policy, reaching its apogee in Mario Draghi's July 2012 speech promising whatever it takes, and therefore provides a second argument for transparency. In regulatory policy, transparency is about explaining the reasons behind what may seem intrusive interventions, but also concerns impact assessment and the efficacy of interventions.

Fiscal policy transparency, by contrast, is primarily seen as being much more about the democratic legitimacy of the choices made, as well as probity in spending, because unlike more technical policy areas, it is at the heart of the relationship between government and the governed. It covers a range of expectations of, obligations on and actions of governments. Yet there are also complementary aims that derive from the search for “better” fiscal policy. In particular, there is a close connection between fiscal rules and fiscal transparency for the obvious reason that without sufficient information, adherence to rules (whether self-imposed by public authorities or laid down in legal frameworks) is easily obfuscated.

4.2.1 Definitions

A concise definition of fiscal transparency offered by the IMF (2012, p. 4) is “the clarity, reliability, frequency, timeliness, and relevance of public fiscal reporting and the openness to the public of the government’s fiscal policy-making process,” while an earlier, more extensive definition from Kopits and Craig (1998, p. 1) is that fiscal transparency encompasses:

... openness toward the public at large about government structure and functions, fiscal policy intentions, public sector accounts, and projections. It involves ready access to reliable, comprehensive, timely, understandable, and internationally comparable information on government activities—whether undertaken inside or outside the government sector—so that the electorate and financial markets can accurately assess the government’s financial position and the true costs and benefits of government activities, including their present and future economic and social implications.

Alt and Lassen (2006, p. 531) maintain that transparency makes it easier to relate outcomes to the actions of particular decision makers. An interpretation they propose is

that “fiscal transparency allows voters, interest groups, and competing political parties to observe—or infer with better precision—causes and consequences of a government’s fiscal policy, either directly or through the media. The ability of observers, and ultimately voters, to separate politicians’ opportunistic policy choices from ones with other motivations (whether social welfare or random) depends crucially on the nature of voters’ decision-making process and the information available to them.”

The growing resort to fiscal rules is a response to the deficit bias of politicians, aiming to “tie their hands.” An often-cited definition by Kopits and Symansky (1998, p. 2) of a fiscal rule is that it is “a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance, such as the government budget deficit, borrowing, debt, or a major component thereof,” a definition that Hemming and Kell (2001) consider to be quite narrow because it appears to exclude rules over time and procedural rules. Kopits (2001) cites a number of doubts about fiscal rules, notably that they remove discretion from government in a policy domain in which it is often useful and that governments can, in any case, be credible without formal rules. He nevertheless argues that the conjunction of rules and transparency can be expected to result in better conduct of fiscal policy.

There is common ground with monetary policy in the need to show that the decisions taken are well conceived, but the factors to take into account are very different. Moreover, tensions between objectives abound in fiscal policy and have a broader reach than in monetary policy, which can more readily be depicted as an essentially technical arena, in contrast to the distributive politics that characterize fiscal policy. The political dimension can become even greater where external pressures (such as IMF conditionality) or a supranational rule collide with domestic imperatives, because of fiscal policy spillovers, complicating the relationships between tiers of governance. In a construction such as the Economic and Monetary Union (EMU) in the European Union the transparency of fiscal policy is not just a concern within a member state, but also for partner countries. It follows that the audience for transparency is not just internal to the country, but may also be abroad, but it breaks down if it is ineffective. For example, the EU’s Stability and Growth Pact (SGP) has been one of the most widely scrutinized (and often criticized) of fiscal rules, yet as Alt et al. (2012) show, it was unable to prevent frequent misrepresentation of the true position of member states’ fiscal positions. Some even argue that it was misconceived from the outset (Buiter, 2006).

4.2.2 Conceptual Bases for Fiscal Transparency

As in any area of public policy, there is something of a presumption that disclosure of information to the different stakeholders affected by fiscal policy is intrinsically valuable. Transparency goes hand-in-hand with greater accountability and is central to the legitimization of policymaking. However, though such democratic sentiments alone might be sufficient to warrant more openness in fiscal policy, there are also technical reasons and justifications rooted in political economy analyses. The core of the issue is

information asymmetries between the authorities responsible for fiscal policy and citizens and businesses subject to it. This leads to a dual economic efficiency challenge of ensuring, first, that the right incentives are in place to deter policymakers from acting opportunistically; and, second, that competent decision makers are selected. While the stock answer is to rely on elections to solve these problems, Besley (2007, p. 99) points out in his work on the underlying political economy “that many of the assumptions of the political agency approach limit the incentive contracts that can be offered in apparently arbitrary ways.”

A number of strands of thinking from economics, public administration, and political economy bear on the case for fiscal transparency. They include

- Time inconsistency and its implications for fiscal discipline
- Pro-cyclicality in fiscal policy
- Public choice
- Legitimacy and accountability considerations in a principal–agent (PA) framework
- Spillovers across jurisdictions, especially in multilevel systems

The presumed deficit bias in fiscal policy is at the heart of the transparency debate. Governments tend to be responsive to market pressures, voters and media comment, all three of which depend in part on what governments reveal and how it is presented. A deficit bias over the short term is logical, because the politicians responsible for it are likely to be out of office by the time it matters, so that it can make sense to bribe electorates with tax cuts and increased public consumption. Indeed, the notion of a political business cycle is essentially about the manipulation of fiscal policy for political advantage, even though a number of recent contributions suggest that voters are not as easily duped as might be imagined (for an overview, see Eslava, 2011). Expressions such as “when we look at the books” betray a reluctance on the side of aspirant parties to reveal their fiscal plans, while also testifying to the expectation that the figures somehow obscure the truth.

But the incentives for politicians to obscure the true picture (Milesi-Ferretti, 2004) are often considerable, especially when sound fiscal management becomes an election issue. The “sudden” revelation in late 2009 of the scale of the Greek deficit is the most egregious example, but there are many others (see also Koen and van den Noord, 2005), many of which have involved deliberate efforts by the authorities to use gimmicks to facilitate compliance with rules. A big challenge for fiscal transparency is how to deal with decentralized fiscal systems, notably as part of macroeconomic discipline. In some cases, the adoption of balanced budget rules offers a solution and there is an extensive literature on the optimal forms of intergovernmental transfers.

There are many possible explanations for why governments succumb to deficit bias, many of which point to the advantages that both politicians and citizens see in shifting the burden to the future. The tricks that governments use to disguise deficits are many and have been extensively documented (Alesina and Perotti, 1995; Eslava, 2011).

Governments often overestimate the likely gains from reform measures or the underlying buoyancy of tax revenues, distort baselines or reinterpret rules to flatter current plans, or simply do not report honestly the extent of future commitments. Future pension obligations, in particular, are an acknowledged but often hidden example of the last of these. In addition, the IMF (2012) suggests that even the more open, advanced economies are prone to over-optimism about their true fiscal position, leading them to underestimate risks, especially in a period of recession. Heald (2012) identifies a number of forms of what he calls surrogates for public expenditure. For example, shifting commitments off the public balance sheet to disguise a worsening of debt ratios or coercing private agents to co-finance are means by which the true position of public finances can be flattered. The challenge for transparency is to arrive at means of dealing with these surrogates in a systematic manner, because they may simply not show up in conventional reporting.

A further key question examined by Khagram et al. (2012) is what triggers transformations of fiscal regimes to enhance transparency, participation by actors outside the executive and mechanisms of accountability. They identify four categories:

- A shift from authoritarian government is associated with increased transparency, but drawing on case study evidence from a number of emerging market economies, Khagram et al. observe that the outcome depends on the extent of political competition and the presence of reform-minded politicians and technocrats. In other words, democracy alone is not sufficient.
- The aftermath of crisis can be conducive to greater openness when actors outside the executive (notably legislatures) see an opportunity, particularly if there is a parallel need to persuade markets. Crisis can also be the occasion to intensify controls over subnational governments.
- Scandals that lead to a loss of trust in the executive or help to bring in reform-minded governments often lead to greater disclosure.
- External pressures, whether in the form of direct pressure from donors or lending bodies, as well as the development of norms often contribute to increases in transparency.

4.2.3 Theories Behind Fiscal Transparency

Formal models of fiscal transparency often employ principal–agent frameworks to analyze the relationship between political decision makers and voters. They focus on matters such as the degree to which transparency facilitates the screening of politicians by electorates making it harder for bad incumbents to remain in office, or disciplines decision makers (Besley, 2007) by providing information against which their performance can be appraised. Besley shows that more information is not always welfare improving and that the screening and disciplining functions can have opposite effects

on welfare. Prat (2005) points to a variety of potential objections to greater transparency in a PA analysis, such as the possible disclosure of information intended for the principal to third parties, a reduced alignment of incentives between agent and principal, and effects on the tradeoff between the disciplining and screening functions.

A standard theoretical prediction is that higher taxes increase the probability of turnover of incumbents. But Besley shows that, in some circumstances, more transparency may lead incumbents to be fiscally less disciplined, while raising the probability that a bad incumbent will be reelected. Heald (2012) argues that the agents (typically the policymakers) also use transparency to monitor what the principals are doing. He describes this as the vertical dimension of transparency, but complements this with what he calls a horizontal dimension, again two-way, in which those “outside” can look inside the glass to see what is being done, while those “inside” look outside to see its effects. Such ability to see what an organization is doing lies at the heart of many of the transparency impositions on the private sector in relation to accounting standards, audit requirements, curbs on insider trading, and so on.

Heald goes on to posit distinctions between different components of transparency. What he calls “events” refers to how inputs are translated into measurable outputs and, in due course, societal outcomes, but there may also be an interest in the procedures and operational practices adopted by fiscal authorities. To interpret Heald, this suggests a difference between “what” is done and “how” it is done, with scrutiny of operational practices likely to be more intrusive. Two further distinctions suggested by Heald are, first, between nominal and effective transparency, and second between retrospective and real-time transparency. If governments are only scrutinized *ex post*, they will find it easier to avoid being held to account. There may also be a distinction between what is nominally being exposed and the reality that underlies it, suggesting that there is a risk of superficiality or of perversion of the principle, equivalent to spin-doctoring.

Transparency is also germane to fiscal policy spillovers, complicating the relationships between tiers of governance. In a construction such as EMU, the transparency of fiscal policy is not just a concern within a member state, but also for partner countries. It follows that the audience for transparency is not just internal to the country, but may also be abroad.

Among the advantages claimed for greater fiscal transparency are not just the better fiscal sustainability demonstrated by Alt and Lassen (2006) and lower borrowing costs (Glennester and Shin, 2008), but also a lower incidence of corruption or misuse of public funds. Transparency is also likely to reduce rent-seeking behavior (Besley, 2007). However, transparency can lead to other sorts of perverse outcomes. Even if the motivations of politicians are beyond reproach, targets or rules that lead them to prefer spending or tax options that meet these tests, rather than achieving a wider welfare objective, will have suboptimal outcomes. But a budget designed to meet an ill-conceived set of criteria can also be pernicious.

As Alt and Lowry (2010, 400) show empirically, adverse effects diminish where there is a high level of transparency. They find that “voters may dislike higher taxes, but

the models and results make clear that providing better access to information about the underlying policy decisions can alter voter reactions to those political choices.” A possible interpretation is that if voters are able to understand why taxes are being increased, they are more likely to be sympathetic to the reasons. The same is likely to be true of markets when they have to assess sovereign debt risk. Even though governments may be able to disguise a deteriorating fiscal position, possibly for longer than seems plausible (witness Greece in the run up to the crisis that erupted in 2009), the backlash from a lack of transparency is likely to be greater.

4.2.4 The Political Economy of Fiscal Policy

The literature on the political economy of fiscal deficits identifies a plethora of processes, which have in common that there is heterogeneity in preferences between decision makers, voters, and different groups of taxpayers and recipients of public expenditure. Early contributions postulated the phenomenon of fiscal illusion arising when governments could use discretionary fiscal relaxation to bribe electorates to keep them in power, with the negative macroeconomic consequences being felt only after the election. More recent contributions suggest that voters may be concerned more about the direct impact on them, preferring decisions from which they benefit, and thus be less inclined to fret about the macroeconomic consequences. However, as Eslava (2011, p. 649) points out, policymakers can only engage in opportunistic behavior of this sort if voters have incomplete information about the costs of the programs or only some voters are able to assess the costs accurately (see also Shi and Svensson, 2006). Eslava argues that “the opportunistic behaviour of politicians depends on how transparent the budget is: less transparency (or more ‘unobservability’) leads to larger opportunistic deficits.” She infers that deficits should be expected to be larger and more likely during election periods when transparency is lacking. The evidence she cites (for example, Brender and Drazen, 2010) is far from uniform, suggesting a more complex story, although a common thread is that when there is better monitoring, voters become more likely to punish politicians who run deficits.

Fiscal deficits as a collective action problem can occur where a well-organized interest group is able to capture decision makers. It is argued by Rose and Smith (2011) that transparency could aggravate this problem if the interest group is able to identify what the government proposes, but the wider taxpayer is not able to counter this process. It is, however, something of a leap to conclude from this finding that fiscal policy transparency should be limited. Moreover, common-pool problems can arise if governments come under pressure to show that they are meeting a particular rule. If, for example, worthwhile public investment is cut to achieve a fiscal target, this form of transparency of fiscal policy could be counterproductive (Krogstrup and Wyplosz, 2010). The solution, plainly, is to avoid overly simple targets and to be transparent not just about the aggregate but about the composition of public spending, yet an obvious worry is that too much information obscures the clarity of the rules.

Where transparency is weak (with the result that it is hard for voters to monitor them effectively), incumbent governments “may actually end up generating deficits in an attempt to convince voters that they are competent providers of public goods” (Eslava, 2011, p. 665). She also concludes that where transparency is effective it is typically where other budget institutions (including the presence of well-conceived rules and a centralized budget process) are strong, implying that transparency has to be situated in a broader context to be able to discipline fiscal policy. Yet as discussed by Hallerberg et al. (2009), delegation to a strong finance minister appears to work better in many circumstances than what they call a contracts approach, but it is unclear what role provision of information plays in their conceptualization of governance.

4.3 GOVERNANCE AND PRACTICE

In the governance of fiscal policy, crucial questions are who is expected to benefit from increased fiscal transparency and what these beneficiaries expect to do with the information obtained. A standard answer is elections as the means by which fiscal decision makers are held to account: if voters are kept in the dark about how politicians have conducted budgetary policy, voters will be less able to make informed choices. Expenditure data are inevitably complex making transparency more than just a matter of data availability and, as Alt and Lowry (2010) stress—citing Przeworski (2003)—transparency is not the same as the availability of information. Often, in fiscal policy, the documentation is extensive and the debates wide-ranging, but the critical question is what pieces of information are useful and for which actors. Embedding transparency in legislation is a means of ensuring that it is robust, but can also be a means of obfuscation if the resulting fiscal code is so detailed that it is impenetrable to scrutiny by all bar experts on the subject.

The relative novelty of fiscal transparency as a tool of governance is emphasized by Bastida and Benito (2007), who carried out an analysis of the extent to which countries followed the best practices recommended by the OECD. They found that only a third of the 41 countries they examined met more than 60% of the recommendations. They suggest that some of the more surprising better performers may have been influenced by IMF programs that required greater transparency as a condition for support. There is also, however, a push from rethinking of the relationship between the state and the governed. Early initiatives included the adoption of the 1994 Fiscal Responsibility Act in New Zealand,¹ which sought both to impose rules on the achievement of an operating surplus and to specify reporting requirements.

¹ New Zealand also led the way in establishing inflation targeting and transparency in monetary policy.

4.3.1 Fiscal Rules and Transparency

The relationship between fiscal rules and transparency is central but also complicated. Transparency is often tacked on rather than being an integral part of the policy design. The motivations for transparency will often have to be set against other imperatives in the conduct of any policy, and especially one as sensitive to citizens as fiscal policy. Equity, for example, may be easier to achieve in practice, if some of the channels of redistribution are obscured. It is important, too, not to be beguiled by league table or indices that provide nominal measures of transparency and what is really happening (Heald, 2012), because governments may then be inclined to concentrate on what is subject to scrutiny rather than on what is achieved. The problem is compounded where self-reporting occurs.

Reflecting on whether fiscal rules can be effective, Bernanke (2010, p. 11) argues that transparency is vital for several reasons. He notes, in particular, the importance of facilitating fiscal sustainability through adherence to rules by “shining a light on the problem and the range of feasible solutions.” He views transparent fiscal rules as a means of limiting collective action problems because, by highlighting the size of the pie, it may become “easier to negotiate outcomes in which everyone accepts a little bit less.” Bernanke also stresses the role of good watchdogs, both official (such as the Congressional Budget Office; by extension, his advice would apply to other forms of fiscal council) and think-tanks that look at budget issues.

Bernanke makes the important point (which might be considered obvious, but is often overlooked) that fiscal rules should concentrate on variables that the fiscal authority can directly control. Because the state of the economy affects tax yields and induces higher spending, it can be hard to predict short-term outcomes. Oddly, perhaps, Bernanke does not refer to markets and a general observation is that transparency in relation to markets rarely features in these debates. Information on the objectives and strategies of fiscal policy, including some of the tensions that have to be reconciled, can lead to more open and informed decision making, especially through new media. Tax policy may be especially salient in this regard.

The paradox is that there is casual evidence that market analysts devote substantial effort to monitoring and projecting fiscal policy, a point reinforced by the findings from work by, especially, IMF economists (e.g., Glennerster and Shin, 2008, and others cited in IMF, 2012, p. 5, footnote 2). In disciplining governments, as many governments found during the euro crisis, markets can have a direct and, often, immediate effect, but as even the most cursory examination of sovereign spreads shows, markets can be capricious and prone to overreaction. Kopits (2001) notes that fiscal policy rules are linked, especially in emerging markets, to establishing credibility with financial markets. Benefits include better market perceptions leading to lower financing costs for government debt, as might be expected where a lack of information fuels suspicion of hidden deficits. Khagram et al. (2012) explain that there are two way pressures on governments to enhance fiscal transparency, emanating from the need to persuade potential lenders, investors, or donors (in the case of foreign aid) that “they are worthy,” while in

parallel, the counterparties will become increasingly demanding if there is insufficient transparency. This process is likely to become self-fulfilling as more countries adopt broader approaches to disclosure of information.

An investigation by Bergman et al. (2013) of whether market pressure can be an effective substitute for fiscal rules finds, however, that the former are insufficient and can, at best be a complement to fiscal rules. One of the explanations they offer is that while markets are reasonably good at interpreting bad news, they exhibit an asymmetry in not pricing in good news. They do not explicitly examine whether transparency could improve market signaling, but they note that poor implementation of fiscal rules can negate their impact. An inference that can be drawn from their results is that governments need not only to espouse rules, but also to communicate them effectively to markets.

4.3.2 How Much Transparency?

As in other policy domains, the optimum degree of fiscal transparency is hard to identify. Keeping information hidden can be a deliberate ploy by governments to maintain opaqueness, but may be motivated by respect of confidentiality (Heald, 2003, 2012). Too many obligations to disclose information may, too, impose transactions costs and result in excessive politicking around decisions. While a relationship can be envisaged in which some transparency improves the effectiveness of fiscal policy, but more intrusive surveillance causes efficiency to decline, Heald notes that there are those who argue that there can never be too much transparency. Equally, on the revenue side, a degree of secrecy may be needed in implementing changes to avoid economic agents anticipating (and thus seeking to avoid) new arrangements. This is akin to the notion in monetary policy that, because it can occasionally be useful to surprise economic actors, total transparency about intentions has to be avoided.

Practices employed in disclosing information on budgetary choices are critical. Leaks in advance of the presentation of a budget (sometimes only to favored journalists in the hope that they will sense a scoop and be more inclined to use the information in a way that suits the government), suggestions that are floated but never seriously considered and releasing information only gradually or partially are standard tricks governments use to massage public opinion. Governments may, in addition, seek to reward their own voters, and be more prone to do so in more partisan political systems. An issue in this regard is that politicians may be in a position to set the degree of transparency.

For example, Gavazza and Lizzeri (2011) observe that, despite their importance in the US system, “earmarks” (spending that is preassigned to particular projects, often as the price exacted by individual members of Congress for supporting a spending bill—often referred to as the pork barrel) are not included in the text of legislation and may be found only in committee documents. To capture this process, Gavazza and Lizzeri construct a model in which the ability of the incumbent politician to fool the median

voter is critical. Their model suggests that not all transparency is welfare enhancing because of the counterintuitive property that more transparency increases wasteful expenditure. The reason, in their words, “is that wastefulness constrains equilibrium spending” (p. 343). They also examine the case where the politician sets out deliberately to fool the voters by disguising the public accounts and find, less surprisingly, that where this occurs, wasteful spending is more likely.²

4.3.3 How Can Fiscal Transparency Be Improved?

Although the economic crisis has highlighted public debt and deficit difficulties in many countries, underlying weaknesses in fiscal positions are far from a new phenomenon.

Efforts by the IMF and the OECD to enhance the quality of fiscal policymaking have resulted in a range of initiatives and the articulation of principles governing, *inter alia*:

- Annual budgets and reports on their preparation and execution
- Medium-term and longer term fiscal sustainability assessments
- The credibility of assumptions about revenue flows
- On and off balance sheet items and the contingent liabilities, among which are state-owned enterprises
- Control of expenditure and probity of processes
- Scrutiny by audit bodies, parliaments, or other agencies
- Data collection

Examination of this list shows that fiscal transparency is more complex and nuanced than transparency in other policy areas, but also has elements that could conflict with one another or give rise to compromises. Enhanced transparency in one domain could be at the expense of greater obfuscation in another. Timing is critical because reports or sources of information that are available early enough to shape policy implementation have a different impact from those that are used only to hold the policymakers to account *ex post*.

4.3.4 Experience

Despite the pressures from international organizations to enhance transparency and the finding that it leads to better outcomes in terms of fiscal sustainability, the evidence available suggests that “the state of budget transparency around the world is

² As happened in Hungary in the mid-2000s and in Greece prior to the sovereign debt crisis of 2009.

poor” (De Renzio and Masud, 2011, p. 611). Citing a survey conducted under the auspices of the International Budget Partnership (IBP, 2010) which has established an Open Budget Index (OBI), they note that there have been some improvements—dramatic in some cases—over the years that the biennial survey has been conducted. However, the overall verdict is that in the great majority of countries the information disclosed on budgets is slender. Although the IMF (2012, p. 6) finds that “the last decade and a half has seen substantial efforts to improve fiscal transparency,” it also identifies continuing shortcomings. The Asian crisis of the late 1990s stimulated a range of developments and there are already indications that the sovereign debt crisis in Europe will have a similar effect. Major areas of progress on fiscal transparency comprise:

- Standard-setting and the development of codes of practice
- Strengthened monitoring by international bodies
- National initiatives

National characteristics found to be associated with a low score on the OBI include authoritarian governments, low income, dependence on foreign aid or on revenue from hydrocarbons, and location in Africa or the Middle East. However, arguing against the idea of what they call a “transparency trap,” De Renzio and Masud (2011) point to several countries that achieve much better scores, despite sharing a number of these characteristics. Their key message is that governments subjected to pressure, whether from local stakeholders, external agencies, or shifts in national politics, can achieve rapid progress in fiscal transparency. In particular, free and fair elections, help to promote fiscal transparency (Wehner and de Renzio, 2013). A case can also be made that a low score on the OBI index can motivate governments to act, pointing to the more general proposition about transparency that better monitoring can itself have an impact on the underlying behavior.

The index of transparency constructed by Alt and Lassen (2006) is based on four sets of factors: audit of fiscal policy; clear and consistent presentation of documents; use of language with unequivocal meaning; and justification for decisions. It comprises 11 items drawn mainly from responses to an OECD questionnaire. Commenting on their key finding that electoral cycles in fiscal policy are more likely in the absence of transparency, Alt and Lassen (2006, p. 546) offer the explanation that “the political budget cycle is where you can’t see it.”

The IMF (2012) notes that there are not only gaps and inconsistencies in the approaches adopted to fiscal transparency, but also that commitments to standards have not been matched by implementation. Moreover, the IMF finds that its own monitoring of fiscal transparency has waned. Part of the difficulty is that even where rules and commitments are strong, there can be problems with the quality of the information generated and the identification of coming problems.

GIFT (2012) sets out 10 principles that it argues should be applied to improve information on, and the governance of, fiscal policy—see Box 4.1.

Box 4.1 Ten Principles for Improved Transparency of Fiscal Policy

1. Information should be freely available to citizens and other stakeholders.
2. Governments should publish fiscal objectives and information on progress toward achieving them.
3. The integrity of information on fiscal activities, performance, and risks should be assured.
4. Governments should communicate their plans and expected outcomes.
5. All government transactions should have a legal basis and be subject to independent review.
6. The delimitation of government should be unambiguous and the links with the private sector be clear and open.
7. Fiscal responsibilities should be clearly assigned within branches of government and between tiers of government.
8. Legislatures should have the authority to raise revenue and determine expenditures.
9. Auditing of public finances should be carried out by a body wholly independent of government.
10. Citizens should be able to participate in debate on the design and implementation of fiscal policies.

Source: GIFT (2012).

4.4 CONCLUSIONS AND RESEARCH ORIENTATIONS

Fiscal transparency has made great strides over the last decade and is coming to be accepted as a necessary component of governance. In contrast to monetary policy, where there has been an extensive academic and practitioner debate about the virtues and modalities of transparency, its role in fiscal policy is less developed and it is harder to identify a consensus about the best approaches. Yet there is also growing pressure on governments to come up with much better frameworks for the governance of fiscal policy.

There are many open questions about the directions for fiscal transparency. Multiannual fiscal frameworks are useful in providing a degree of certainty, but are open to the criticism that they make it easier for governments to “kick the can down the road” by promising to deliver change in a later period. However, Hemming and Kell (2001) argue that multiannual programs will lead to a political cost in shifting tax or spending, or in resorting to window dressing to justify short-term fiscal indiscipline.

There are several aspects of it that invite further reflection, three of which merit particular attention. First, there is some ambiguity about who the audience is. Nearly all the academic literature is concerned with, broadly, the relationship between citizens/voters and the politicians/practitioners who decide on fiscal policy, implying a narrative of principals holding agents to account. As some of the literature on gimmicks hints, however, the consumers of information may also be markets concerned to price debt appropriately, the Greek crisis of 2009–2010 being a prime example of how misleading information can lead to damaging volatility.

A second, related issue is what role transparency plays in the policy process. In monetary policy, communication complements the use of the interest rate and the resort to the sorts of unconventional measures that have proliferated in response to the great recession of the 2007–2013 period. Forward guidance is only the latest of a series of such initiatives designed to manage market expectations, balancing certainty with the retention of the monetary authority's need to retain some capacity to surprise (Begg, 2006). It is less clear either whether fiscal transparency can play a similar role or how it might do so. Yet the increasing resort to fiscal rules or medium-term expenditure frameworks suggests that the trend is to constrain political discretion on budgetary policy far more than in the past and to curb electorally motivated spending.

The third issue, which arises in all policy domains, is how much transparency is optimal and what it is intended to achieve. Fiscal policy is politically more sensitive than many other areas of policy which are often considered, rightly or wrongly,³ to be more technical in their conduct and impact. Budget documents are often vast, detailed, and, at least in the mature OECD economies, exhaustive in what they contain. But that is not the same (as many authors have commented) as providing a convincing narrative about what the policy is about. The provision of information should facilitate understanding of the reasons for particular policy choices, enable users of the information to judge whether the policies have been implemented well and allow assessment of what could or should be done better. But transparency is not a substitute for appropriate decision-making procedures; instead, it is an aid to them. According to Heald (2012, p. 47), “transparency cannot provide answers to profound ideological and practical questions concerning the scope of the state as measured by the size of public expenditure relative to the economy. But effective transparency about public expenditure can improve the evidence base on which informed views may be founded.”

In the debate about recasting fiscal policy, transparency is, arguably, one of the less contested areas for reform, eliciting much less opposition than the growing resort to binding fiscal rules, but it is also one that seems to be a low priority. For example, referring to the activities of the Swedish fiscal policy council, Calmfors and Wren-Lewis (2011) observe that:

...somewhat surprisingly, the FPC has so far had only a small impact in the politically less controversial areas of improving the transparency of policy. Although the

³ Monetary policy can be seen in this way, even though decisions on interest rates can have pronounced distributive consequences.

council has repeatedly requested the government to provide more reporting of total government net worth (and not only financial net worth) and more information on investment and the capital stock in the government sector, there have been only small improvements.

A possible explanation is that while governments do not explicitly object to transparency and certainly do not want to be portrayed as having something to hide, the fact that it is not an issue that excites political passions allows them quietly to resist pressures for change.

Because fiscal policy has goals that are both political and functional, it can be argued that transparency has to meet more exacting and diverse demands than in other, more technical policy domains. Heald (2012) asserts that fiscal transparency should respect a number of principles. He argues, first, that for effective rather than nominal transparency, the release of information should be disciplined and that selective leaking or spinning of data should be avoided. Second, he advocates complete coverage, but with differing presentations to fulfil the needs of those interested only in an overview as opposed to those who seek great detail. His third principle is that transparency should be a two-way relationship between—in the case of fiscal transparency—the government and potential users of the information revealed. He adds as further principles the importance of independent scrutiny from outside the legislature, whether by a variant on a fiscal council or by independent research institutes or think-tanks, as well as an effective audit capacity answering to the legislature.

Although the evidence reveals that growing numbers of government are taking steps to enhance fiscal transparency and to embed it in reformed fiscal policy frameworks, there is by no means a consensus on what forms it should take, its underlying goals, or how it should evolve. It is an area ripe for further research into topics such as how disclosure of information can act as an instrument of policy or the optimal level of transparency, and, in this regard, can learn from the implementation of transparency in other domains. Equally, by drawing attention to the distributive consequences of policy decisions or the “right to know,” fiscal transparency has potential lessons for other policy domains.

REFERENCES

-
- Alt, J. E., and Lassen, D. D. (2006). Fiscal transparency, political parties, and debt in OECD countries. *European Economic Review* 50(6), 1403–1439.
- Alt, J. E., Lassen, D. D., and Wehner, J. (2012). Moral hazard in an economic union: Politics, economics and fiscal gimmickry in Europe, Paper prepared for the 2012 annual meeting of the American Political Science Association, 30th August to 2nd September 2012, New Orleans.
- Alt, J. E., and Lowry R. C. (2010). Transparency and accountability: Empirical results for US States. *Journal of Theoretical Politics* 22, 379–406.

- Bastida, F., and Benito, B. (2007). Central government budget practices and transparency: An international comparison. *Public Administration* 85(3), 667–716.
- Begg, I. (2006). Economic policy and institutional transparency: The ECB. In *Transparency Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, pp. 47–69. Oxford: Elsevier.
- Bergman, M., Hutchison, M. M., and Hougaard-Jensen, S. E. (2013). Do sound public finances require fiscal rules, or is market pressure enough? *European Economy Economic Papers* No. 489.
- Bernanke, B. (2010). Fiscal sustainability and fiscal rules, speech at the annual meeting of the Rhode Island Public Expenditure Council, Providence RI, October 4, 2010.
- Besley, T. (2007). *Principled Agents? The Political Economy of Good Government*. Oxford: Oxford University Press.
- Brender, A., and Drazen, A. (2008). How do budget deficits and economic growth affect reelection prospects? Evidence from a large panel of countries. *American Economic Review* 98(5), 2203–2200.
- Buiter, W. H. (2006). The ‘sense and nonsense of Maastricht’ revisited: What we have learnt about stabilization in EMU. *Journal of Common Market Studies* 44(4), 687–710.
- Calmfors, L., and Wren-Lewis, S. (2011). Fiscal Councils. *Economic Policy* October 2011, 649–695.
- De Renzio, P., and Masud, H. (2011). Measuring and promoting budget transparency: The open budget index as a research and advocacy tool. *Governance* 24(3), 607–616.
- Eslava, M. (2011). The political economy of fiscal deficits: A survey. *Journal of Economic Surveys* 25, 645–673.
- Gavazza, A., and Lizzeri, A. (2011). Transparency and manipulation of public accounts. *Journal of Public Economic Theory* 13(3), 327–349.
- Glennerster, R., and Shin, Y. (2008). Does transparency pay? *IMF Staff Papers* 55(1), 183–209.
- Global Initiative for Fiscal Transparency [GIFT]. (2012). High-level principles on fiscal transparency, participation and accountability. Available online at: <http://fiscaltransparency.net/2012/11/high-level-principles-on-fiscal-transparency/>.
- Hallerberg, M., Strauch, R., and von Hagen, J. (2009). *Fiscal Governance in Europe*. Cambridge, UK: Cambridge University Press.
- Heald, D. (2003). Fiscal transparency: Concepts, measurements and UK practice. *Public Administration* 81(4), 723–759.
- Heald, D. (2012). Why is transparency about public expenditure so elusive? *International Review of Administrative Sciences* 78, 30–49.
- Hemming, R., and Kell, M. (2001). Promoting fiscal responsibility: Transparency, rules and independent fiscal authorities. In Proceedings of Banca d’Italia workshop on Fiscal Rules, Perugia, February, 1–3, 2001.
- IMF (2001). *Government Finance Statistics Manual*, 2001. Washington, DC: International Monetary Fund.
- IMF (2007). *Manual on Fiscal Transparency*. Washington, DC: International Monetary Fund.
- IMF (2012). *Fiscal Transparency, Accountability and Risk*. Washington, DC: International Monetary Fund.
- Khagram, S., de Renzio, P., and Fung, A. (2012). Overview and Synthesis: The political economy of fiscal transparency, participation, and accountability around the world. In *Open Budgets: The Political Economy of Transparency, Participation, and Accountability*, eds. S.

- Khagram, P. de Renzio, and A. Fung, pp. 1–50. Washington DC: Brookings Institution Press.
- Koen, V., and Van den Noord, P. (2005). Fiscal gimmickry in Europe: One-off measures and creative accounting. OECD Economics Department Working Paper No. 417, Paris: Organisation for Economic Co-operation and Development.
- Kopits, G., and Craig, J. (1998). Transparency in government operations. *IMF Occasional Paper* No. 158.
- Kopits, G., and Symansky, S. (1998). Fiscal policy rules. *IMF Occasional Paper* No. 162.
- Krogstrup, S., and Wyplosz, C. (2010). A common pool theory of supranational deficit ceilings. *European Economic Review* 54(2), 269–278.
- Milesi-Ferretti, G. M. (2004). Good, bad or ugly? On the effects of fiscal rules with creative accounting. *Journal of Public Economics* 88, 377–394.
- OECD (2001). OECD best practices for budget transparency, Paris: OECD.
- Prat, A. (2005). The wrong kind of transparency. *American Economic Review* 95(3), 862–877.
- Shi, M., and Svensson, J. (2006). Political budget cycles: Do they differ across countries and why? *Journal of Public Economics* 90, 1367–1789.
- Von Hagen, J. (2002). Fiscal rules, fiscal institutions and fiscal performance. *The Economic and Social Review* 33(3), 263–284.
- Von Hagen J. (2008). Political economy of fiscal institutions. In *The Oxford Handbook of Political Economy*, eds. B. Weingast and D. Wittman, pp. 464–478. Oxford: Oxford University Press.
- Wehner, J., and de Renzio, P. (2013). Citizens, legislators, and executive disclosure: The political determinants of fiscal transparency. *World Development* 41, 96–108.

CHAPTER 5

TRANSPARENT AND UNIQUE SOVEREIGN DEFAULT RISK ASSESSMENT

EDWARD I. ALTMAN AND HERBERT A. RIJKEN

5.1 INTRODUCTION

DURING the past five years, bank executives, government officials, and many others have been sharply criticized for failing to anticipate the global financial crisis. The speed and depth of the market declines shocked the public. And no one seemed more surprised than the credit rating agencies that assess the default risk of sovereign governments as well as corporate issuers operating within their borders.

Although the developed world had suffered numerous recessions in the past 150 years, this most recent international crisis raised grave doubts about the ability of major banks and even sovereign governments to honor their obligations. Several large financial institutions in the United States and Europe required massive state assistance to remain solvent, and venerable banks like Lehman Brothers even went bankrupt. The cost to the United States and other sovereign governments of rescuing financial institutions believed to pose “systemic” risk was so great as to result in a dramatic increase in their own borrowings as well as an overhaul of the regulatory and legal framework in many of the world’s most important economies.

The general public in the United States and Europe found these events particularly troubling because they had assumed that elected officials and regulators were well informed about financial risks and capable of limiting serious threats to their investments, savings, and pensions. High-ranking officials, central bankers, financial regulators, ratings agencies, and senior bank executives all seemed to fail to sense the looming financial danger.

This failure seemed even more puzzling because it occurred years after the widespread adoption of advanced risk management tools. Banks and portfolio managers

had long been using quantitative risk management tools such as Value at Risk (VaR) and, in many countries, the new Basel II guidelines were either already in place totally or in a transition state. And they should also have benefited from the additional information about credit risk made publicly available by the new market for credit default swaps (CDSs).

But, as financial market observers have pointed out, VaR calculations are no more reliable than the assumptions underlying them. Although such assumptions tend to be informed by statistical histories, critical variables such as price volatilities and correlations are far from constant and thus difficult to capture in a model. The market prices of options—or of CDS contracts, which have options “embedded” within them—can provide useful market estimates of volatility and risk. And economists have found that CDS prices on certain kinds of debt securities increase substantially before financial crises become full-blown. But because there is so little time between the sharp increase in CDS prices and the subsequent crisis, policymakers and financial managers typically have little opportunity to change course.¹

Most popular tools for assessing sovereign risk are effectively forms of “top-down” analysis. For example, in evaluating specific sovereigns, most academic and professional analysts use macroeconomic indicators such as gross domestic product (GDP) growth, national debt-to-GDP ratios, and trade and budget deficits as gauges of a country’s economic strength and well-being. But, as the recent euro debt crisis has made clear, such “macro” approaches, while useful in some settings and circumstances, have clear limitations and lacked the necessary transparency and early warning attributes to be truly useful in limiting the impact of sovereign crises.

In this chapter, we expand on our new method for assessing sovereign risk, a type of “bottom-up” approach that focuses on the financial condition, profitability, and solvency of an economy’s private sector. The assumption underlying this approach is that the fundamental source of national wealth, and of the financial health of sovereigns, is the economic output and productivity of their companies. To the extent we are correct, such an approach could provide financial professionals and policymakers with a more effective means of anticipating financial trouble with enhanced transparency, thereby enabling them to understand the sources of problems before they become unmanageable.

In the pages that follow, we introduce Z-Metrics™ as a practical and effective tool for estimating sovereign risk. Developed in collaboration with the Risk Metrics Group, now a subsidiary of MSCI, Inc., Z-Metrics is a logical extension of the Altman Z-Score technique that was introduced in 1968 and has since achieved considerable scholarly and commercial success. Of course, no method is infallible, or represents the best fit

¹ On April 27, 2010, Standard & Poor’s Ratings Services lowered its long- and short-term credit ratings on the Hellenic Republic (Greece) to non-investment grade BB+; and on June 14, 2010, Moody’s downgraded Greece debt to Ba1 from A2 (4 notches), while Spain was still Aaa and Portugal was A1. Both of the latter were recently downgraded. S&P gave similar ratings.

for all circumstances. But by focusing on the financial health of private enterprises in different countries, our system promises at the very least to provide a valuable complement to, or reality check on, standard “macro” approaches, as well as a transparent measure that public officials and regulators can observe and consider.

But before we delve into the details of Z-Metrics, we start by briefly reviewing the record of financial crises to provide some historical perspective. Next, we attempt to summarize the main findings of the extensive academic and practitioner literature on sovereign risk, particularly those studies designed to test the predictability of sovereign defaults and crises.

With that as background, we then present our new Z-Metrics system for estimating the probability of default for individual (nonfinancial) companies and show how that system might have been used to anticipate many developments during the current European Union (EU) debt crisis. In so doing, we make use of the most recent (2008–2012) publicly available corporate data for 10 European countries, both to illustrate our model’s promise for assessing sovereign risk and to identify the scope of reforms that troubled governments must consider not only to qualify for bailouts and subsidies from other countries and international bodies, but also to stimulate growth in their economies.

More specifically, we examine the effectiveness of calculating the median and 75th percentile company five-year probability of default of the sovereign’s nonfinancial corporate sector, both as an absolute measure of corporate risk vulnerability and as a relative health index comparison among a number of European sovereigns, and including the United States as well. Our analysis shows that this health index, measured at periods prior to the explicit recognition of the crisis by market professionals, not only gave a distinct early warning of impending sovereign default in most cases, but also provided a sensible hierarchy of relative sovereign risk. We also show that, during the current European crisis, our measures not only compared favorably to standard sovereign risk measures, notably credit ratings, but performed well even when compared to the implied default rates built into market pricing indicators such as CDS spreads (while avoiding the well-known volatility of the latter). Indeed, our 75th percentile measure clearly showed that countries such as Greece, Portugal, Spain, and Italy were in much worse shape in 2008 and 2009 than the implied probabilities of default from the closely watched CDS market indicated, and that only in 2010 did the CDS market raise more concern than our firm fundamental approach. Interestingly, both measures seem to be converging in late 2012.

Our aim here is not to present a “beauty contest” of different methods for assessing sovereign risk in which one method emerges as the clear winner. What we are suggesting is that a novel, bottom-up approach that emphasizes the financial condition and profitability of a nation’s private sector, including banks as well as nonfinancial firms, can be effectively combined with standard analytical techniques and market pricing to better understand and predict sovereign health. Our analysis has one clear implication for policymakers: that the reforms now being contemplated should be designed, as far as possible, to preserve the efficiency and value of a nation’s private enterprises,

especially as austerity measures become less and less popular with important electorates, like Italy in 2013.

What's more, our firm default measure will be applied to listed companies in each of our European and USA samples and, as such, the results are clearly transparent using models that are now certainly available to most Central Banks and professional analysts, although these models may not be exactly the one we use—"Z-Metrics."

5.2 MODERN HISTORY SOVEREIGN CRISES

When thinking about the most recent financial crisis, it is important to keep in mind how common sovereign debt crises have been during the last 150 years—and how frequently such debacles have afflicted developed economies as well as emerging market countries. Table 5.1 shows a partial list of financial crises (identified by the first year of the crisis) that have occurred in "advanced" countries. Overall, Latin America seems to have had more recent bond and loan defaults than any other region of the world (as can be seen in Figure 5.1). But if we had included a number of now developed Asian countries among the "advanced" countries, the period 1997–1999 period would be much more prominent.

Table 5.1 Financial Crises, Advanced Countries 1870–2010

Crisis events (first year)								
Austria	1893,	1989						
Brazil	1898,	1902,	1914,	1931,	1939			
Canada	1873,	1906,	1923,	1983				
Czechoslovakia	1870,	1910,	1931,	2008				
China	1921,	1939						
Denmark		1877,	1885,	1902,	1907,	1921,	1931,	1987
Germany		1880,	1891,	1901,	1931,	2008		
Great Britain	1890,	1974,	1984,	1991,	2007			
Greece	1870,	1894,	1932,	2009				
Italy	1887,	1891,	1907,	1931,	1930,	1935,	1990	
Japan	1942							
Netherlands		1897,	1921,	1939				
Norway		1899,	1921,	1931,	1988			
Russia	1918,	1998						
Spain	1920,	1924,	1931,	1978,	2008			
Sweden		1876,	1897,	1907,	1922,	1931,	1991	
United States	1873,	1884,	1893,	1907,	1929,	1984,	2008	

Source: IMF Global Financial Stability Report (2010), Reinhart and Rogoff (2010), and various other sources, such as S&P's economic reports.

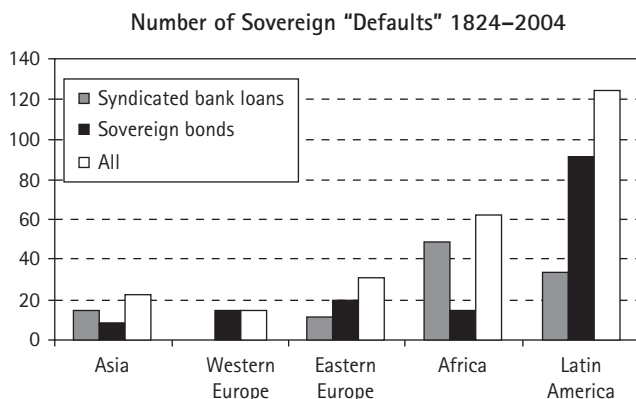


FIGURE 5.1 Number of sovereign "defaults" 1824–2004.

Source: Compilation by Ingo Walter, NYU Stern School of Business.

The clear lesson from Table 5.1 and Figure 5.1 is that sovereign economic conditions appear to spiral out of control with almost predictable regularity and then require massive debt restructurings and/or bailouts accompanied by painful austerity programs. Recent examples include several Latin American countries in the 1980s, Southeast Asian nations in the late 1990s, Russia in 1998, and Argentina in 2000. In most of those cases, major problems originating in individual countries not only imposed hardships on their own people and markets, but also had major financial consequences well beyond their borders. We are seeing such effects now as financial problems in Greece and other southern European countries not only affect their neighbors, but also threaten the very existence of the European Union.

Such financial crises have generally come as a surprise to most people, including even those specialists charged with rating the default risk of sovereigns and the enterprises operating in these suddenly threatened nations. For example, it was not long ago that Greek debt was investment grade, and Spain was rated Aaa as recently as June 2010.² And this pattern has been seen many times before. To cite just one more case, South Korea was viewed in 1996 as an "Asian Tiger" with a decade-long record of remarkable growth and an AA- rating. Within a year however, the country was downgraded to BB-, a "junk" rating, and the country's government avoided default only through a

² One excellent primer on sovereign risk is Babel's (1996) study, which includes an excellent annotated bibliography by S. Bertozzi on external debt capacity that describes many of these studies. Babel lists 69 potentially helpful explanatory factors for assessing sovereign risk, all dealing with either economic, financial, political, or social variables. Except for the political and social variables, all others are macroeconomic data and this has been the standard until the last few years. Other work worth citing include two practitioner reports—Chambers (1997) and Beers et al. (2002)—and two academic studies—Smith and Walter (2003) and Frenkel et al. (2004). Full citations of all studies can be found in References section at the end of the chapter.

\$50 billion bailout by the IMF. And it was not just the rating agencies that were fooled; most of the economists at the brokerage houses also failed to see the problems looming in Korea.

5.3 WHAT DO WE KNOW ABOUT PREDICTING SOVEREIGN DEFAULTS?

There is a large and growing body of studies on the default probability of sovereigns, by practitioners as well as academics.³ A large number of studies, starting with Frank and Cline's 1971 classic, have attempted to predict sovereign defaults or rescheduling using statistical classification and predicting methods such as discriminant analysis as well as similar econometric techniques.⁴ And in a more recent development, some credit analysts have begun using the "contingent claim" approach to measure, analyze, and manage sovereign risk based on Robert Merton's classic "structural" approach (1974). But because of its heavy reliance on market indicators, this approach to predicting sovereign risk and credit spreads has the drawback of producing large—and potentially self-fulfilling—swings in assessed risk that are attributable solely to market volatility.

A number of recent studies have sought to identify global or regional common risk factors that largely determine the level of sovereign risk in the world, or in a region such as Europe. Some studies have shown that changes in both the risk factor of individual sovereigns and in a common time-varying global factor affect the market's repricing of sovereign risk.⁵ Other studies, however, suggest that sovereign credit spreads are more related to global aggregate market indexes, including US stock and high-yield bond market indexes, and global capital flows than to their own local economic measures.⁶ Such evidence has been used to justify an approach to quantifying sovereign risk that uses the local stock market index as a proxy for the equity value of the country.⁷ Finally, several very recent papers focus on the importance of macro variables such as debt service relative to tax receipts and the volatility of trade deficits in explaining sovereign risk premiums and spreads.⁸

³ Including Grinols (1976), Sargen (1977), Feder and Just (1977), Feder, Just and Ross (1981), Cline (1983), Schmidt (1984), and Morgan (1986).

⁴ Gray et al. (2006, 2007).

⁵ See Baek et al. (2005). Gerlach et al. (2010) observe that aggregate risk factors drive banking and sovereign market risk spreads in the Euro area; and in a related finding, Sgherri and Zoli (2009) suggest that Euro area sovereign risk premium differentials tend to move together over time and are driven mainly by a common time-varying factor.

⁶ See Longstaff et al. (2007).

⁷ See Oshino and Saruwatari (2005).

⁸ These include Haugh et al.'s (2009) discussion of debt service relative to tax receipts in the Euro area; Hilscher and Nobusch (2010) emphasis on the volatility of terms of trade; and Segoviano et al.'s (2010) analysis of debt sustainability and the management of a sovereign's balance sheet.

In addition to these studies, a handful of researchers have taken a somewhat different “bottom-up” approach by emphasizing the health of the private sectors supporting the sovereigns. For example, a 1998 World Bank study of the 1997 East Asian crisis⁹ used the average Z-Score of listed (nonfinancial) companies to assess the “financial fragility” of eight Asian countries and, for comparison purposes, three developed countries and Latin America. Surprising many observers, the average Z-Score for South Korea at the end of 1996 suggested that it was the most financially vulnerable Asian country, followed by Thailand, Japan, and Indonesia. As noted earlier, Korea’s sovereign bond rating in 1996 was AA- (S&P). But within a year, Korea’s rating dropped to BB-; and if not for the IMF bailout of \$50 billion, the sovereign would almost certainly have defaulted on its external, non-local currency debt. A traditional macroeconomic measure such as GDP growth would not have predicted such trouble since, at the end of 1996, South Korea had been growing at double-digit rates for nearly a decade.¹⁰

5.4 TRANSPARENCY IN SOVEREIGN RATINGS FROM CREDIT RATING AGENCIES

A major source of sovereign default risk information are sovereign ratings from Standard&Poor’s, Moody’s, and Fitch. A number of studies have attempted to evaluate the effectiveness of published credit ratings in predicting defaults and expected losses, with most concluding that sovereign ratings, especially in emerging markets, provide

⁹ See Pomerleano (1998), which is based on a longer article by the author (1997). Taking a somewhat similar approach, many policymakers and theorists have recently focused on the so-called “shadow banking system.” For example, Gennaioli et al. (2010) argued that the financial strength of governments depends on private financial markets and its ability to attract foreign capital. They concluded that strong financial institutions not only attract more capital but their presence also helps encourage their governments to repay their debt.

Chambers of S&P (1997) also mentions the idea of a “bottom-up” approach but not to the assessment of sovereign risk, but to a corporate issuer located in a particular country. He advocates first an evaluation of an issuer’s underlying creditworthiness to arrive at its credit rating and then considers the economic, business, and social environment in which the entity operates. These latter factors, such as the size and growth and the volatility of the economy, exchange rates, inflation, regulatory environment, taxation, infrastructure, and labor market conditions are factored in on top of the micro variables to arrive at a final rating of the issuer.

¹⁰ Afterwards, the World Bank and other economists such as Paul Krugman concluded that that crony capitalism and the associated implicit public guarantees for politically influential enterprises coupled with poor banking regulation were responsible for the crisis. The excesses of corporate leverage and permissive banking were addressed successfully in the case of Korea and its economy was effectively restructured after the bailout.

an improved understanding of country risks for investment analytics.¹¹ Nevertheless, the recent EU debt crisis would appear to contradict such findings by taking place at a time when all the rating agencies and, it would seem, all available models for estimating sovereign risk indicated that Greece and Spain—and others now recognized as high-risk countries—were still classified as investment grade.¹² The recent sovereign rating downgrades in Europe have intensified the debate on the quality and transparency of sovereign ratings.

One of the reasons of the rather low perceived informational quality of agency ratings is the agencies' through-the-cycle methodology. Several surveys, conducted in the United States, reveal that most investors believe that rating agencies are too slow in adjusting their ratings to changes in the creditworthiness (see, e.g., Ellis, 1998; Baker and Mansi, 2001). At the same time investors prefer some degree of rating stability to avoid frequently rebalancing of their portfolio's, even when the underlying default risk fundamentals justify doing that. Apparently, investors want both stable and timely ratings, which are two conflicting objectives. It is a dilemma for investors. Moody's tries to find a compromise: "Moody's analysts attempt to balance the market's need for timely updates on issuer risk profiles, with its conflicting expectation for stable ratings" (Cantor, 2001, 172). This dilemma is very likely to hold for sovereign ratings as well.

Although sovereign ratings from Standard&Poor's, Moody's, and Fitch are under debate, investors still rely heavily on these ratings. Yields on government bonds and sovereign CDS pricing respond strongly to changes in sovereign ratings. It seems that sovereign ratings fulfill the need for certification rather than the need for accurate point-in-time default risk information. Ratings are primarily used as portfolio eligibility standards set by regulators, fund trustees, or boards of directors¹³. If required, superior default risk information is obtained from a combination with various other sources on sovereign credit risk.

¹¹ For example, Remolona et al. (2008) reach this conclusion after using sovereign credit ratings and historical default rates provided by rating agencies to construct a measure of ratings implied expected loss.

¹² To be fair, Standard&Poor's in a *Reuter's* article dated January 14, 2009 warned Greece, Spain, and Ireland that their ratings could be downgraded further as economic conditions deteriorated. At that time, Greece was rated A1 by Moody's and A- by Standard&Poor's. Interestingly, it was almost a full year later on December 22, 2009 that Greece was actually downgraded by Moody's to A2 (still highly rated), followed by further downgrades on April 23, 2010 (to A3) and finally to "junk" status (Ba1) on June 14, 2010. As noted earlier, Standard&Poor's downgraded Greece to "junk" status about three months earlier.

¹³ Because of legal and contractual restrictions most institutional investors are only allowed to invest in companies rated by an agency with a NRSRO status (NRSRO = National Recognized Statistical Rating Organization). To have access to the capital market companies are forced to have ratings from NRSRO agencies. By the end of 2013 10 agencies have this status from the SEC. Even though the legal basis of the NRSRO status is only found in the United States, a NRSRO rating is a necessary condition for large international companies to have sufficient access to the international capital market.

To support the certification function of their ratings, Moody's and Standard&Poor's stabilize their ratings to a great extent, by their through-the cycle methodology. This affects the timeliness and accuracy of ratings significantly (see Altman and Rijken, 2004). However, to serve as a reference in the market some level of rating stability is preferred, even if this sacrifices information quality¹⁴. Superior default risk information is not necessary to support the certification function. For certification purposes, ratings need to be widely accepted and the market should face high switching costs when moving to other, smaller new entrants in the rating industry. The existence of high switching costs is demonstrated by the seemingly untouchable market position of Standard&Poor's, Moody's, and Fitch, regardless the firm criticism on their sovereign ratings.¹⁵

Even with their strong market position, rating agencies cannot afford to have a continuous debate on the information quality of their ratings. Especially by issuing sovereign ratings, rating agencies enter the political arena. Recent downgrades for European sovereigns were heavily criticized by government officials, policymakers, and politicians. These downgrades are perceived to be unaccounted for, not well timed, and most of all, lacking transparency.

Compared to corporate default risk, an accurate estimation of sovereign default risk is far more difficult due to the low comparability of different countries, the relative low number of countries in the statistical analysis, and a lack of clear well defined sovereign default events. Although almost all of the studies cited in the preceding text have been fairly optimistic about the ability of their concepts to provide early warnings of major financial problems, their findings have either been ignored or have proven ineffective in forecasting most economic and financial crises.

Given this complexity and given the large amount of relevant sovereign default risk information accessible to anyone in the public domain, numerous debatable issues can be raised easily by anyone on the correctness of sovereign ratings. A detailed disclosure by rating agencies on their sovereign analysis and sovereign rating methodology will undoubtedly offer a lot more clues for the public. This will make rating agencies vulnerable when accounting for their sovereign ratings. Even

¹⁴ An additional advantage of rating stability is to prevent procyclicality effects. This applies especially to sovereign ratings.

¹⁵ This might explain why efforts of policy makers to foster competition in the credit rating industry have not been successful so far. To allow for more competition in the rating industry the US Congress approved the Credit Rating Agency Reform Act in September 2006. This act introduces a new system of voluntary registration, so any rating agency which can show a good track record—subject to objective criteria—can obtain a NRSRO designation. To what extent this Act will change the rating industry depends on use of ratings by investors. If ratings are used in the first place to provide superior information, new entrants with superior information or information with added value should have more success. If investors use ratings primarily for certification—to check whether portfolio's meet the portfolio eligibility standards set by regulators, fund trustees, or boards of directors—investors have little to no incentive to switch to new entrants.

if sovereign ratings reflect correctly the “average” opinion, a heavy debate will cause doubts, which will lower the acceptance level of sovereign ratings and that in turn might harm the certification function of sovereign ratings. On the other hand, the current level of transparency on rating methodology will not be accepted in the long run. So rating agencies face a challenge in finding an optimal transparency to maximize the acceptance of their sovereign ratings by investors and legislators. A well-functioning global government bond market needs a sufficient level of transparency and a sufficient level of consensus on the sovereign default risk assessments. A lower level of transparency will lead to a higher risk premium and higher cost of capital for governments and lower economic growth (see also Oxelheim and Forssbaeck, 2006). Kiff et al. (2012) confirm that sovereign ratings have impact on the funding of sovereign issuers.

Pressured by the legislator or not, Standard&Poor’s and Moody’s have recently updated their rating methodology on sovereign ratings. Both seem to follow a top-down approach¹⁶. Standard&Poor’s (2012) assesses five key areas: political, economic, external, fiscal, and monetary areas.¹⁷ Details on how these areas are assessed and summarized in scores are not provided by Standard & Poor’s. In generic terms, Standard&Poor’s describes how these five scores are translated into a single sovereign rating. Moody’s (2013) has a similar sovereign rating methodology, which is also disclosed without too many details¹⁸.

As outlined previously, Standard&Poor’s and Moody’s have no strong incentives to be very transparent in their rating methodology. Just like researchers and practitioners, rating agencies might also be in a process to improve their sovereign default risk assessments. Despite all these efforts, it is questionable whether a rather simple and transparent assessment framework exists given the mentioned complexity in modeling sovereign default risk. The lack of consensus in sovereign default risk assessment underscores the need to further explore various approaches. In this chapter the bottom-up approach is tested for its informational value and its ability to add transparency to already available sources of sovereign risk information.

¹⁶ For an overview and detailed comparison between sovereign rating methodology for Standard&Poor’s, Moody’s, and Fitch see IMF (2010).

¹⁷ In the Standard&Poor’s sovereign rating methodology five key areas are scored: (1) Institutional effectiveness and political risks are reflected in a political score. (2) Economic structure and growth prospects are reflected in an economic score. (3) External liquidity and international investment position are reflected in an external score. (4) Fiscal performance and flexibility, as well as debt burden, are reflected in a fiscal score. (5) Monetary flexibility is reflected in a monetary score.

¹⁸ Key factors in the Moody’s sovereign rating methodology are economic strength (growth dynamics, scale of the economy, wealth), institutional strength (governance, quality of institutions, and policy predictability), fiscal strength (debt analysis, ability to deploy resources to face current and expected liabilities), and susceptibility to event risk (risk of sudden credit deterioration).

5.5 THE Z-METRICS™ APPROACH

In 2009, we partnered with RiskMetrics Group with the aim, at least initially, of creating a new and better way of assessing the credit risk of *companies*. The result was our new Z-Metrics approach.¹⁹ This methodology might be called a new generation of the original Z-Score model of 1968. Our objective was to develop up-to-date credit scoring and probability of default metrics for both large and small, public and private, enterprises on a global basis.

In building our models, we used multivariate logistic regressions and data from a large sample of both public and private US and Canadian nonfinancial sector companies during the 20-year period 1989–2008. We analyzed more than 50 fundamental financial statement variables, including measures (with trends as well as point estimates) of solvency, leverage, size, profitability, interest coverage, liquidity, asset quality, investment, dividend payout, and financing results. In addition to such operating (or “fundamental”) variables, we also included equity market price and return variables and their patterns of volatility. Such market variables have typically been used in the “structural distance-to-default measures” that are at the core of the KMV model²⁰ now owned by Moody’s.

In addition to these firm-specific, or micro, variables, we also tested a number of macroeconomic variables that are often used to estimate sovereign default probabilities, including GDP growth, unemployment, credit spreads, and inflation. Because most companies have a higher probability of default during periods of economic stress—for example, at the end of 2008—we wanted to use such macro variables to capture the heightened or lower probabilities associated with general economic conditions.

The final model, which consists of 13 fundamental, market value, and macroeconomic variables, is used to produce a credit score for each public company. (And as discussed later, although our primary emphasis was on applying Z-Metrics to publicly traded companies, we also created a private firm model by using data from public companies and replacing market value with book value of equity.)

The next step was to use a logit specification of the model (described in the Appendix) that we used to convert the credit scores into probabilities of default (PDs) over both one-year and five-year horizons. The one-year model is based on data from financial statements and market data approximately one year prior to the credit event, and the five-year model includes up to five annual financial statements prior to the event.

To test the predictive power of the model and the resulting PDs, we segregated all the companies in our sample into “cohorts” according to whether they experience “credit

¹⁹ For more details, see Altman, et al. (2010). “The Z-Metrics” Methodology for Estimating Company Credit Ratings and Default Risk Probabilities,” RiskMetrics Group (now MSCI), available from <http://msci.com/Z-Metrics>.

²⁰ Developed by KMV, 1999 and adapted for sovereigns by Gray, Merton, and Bodie in 2007.

events” that include either formal default or bankruptcy (whichever comes first). All companies that experienced a credit event within either one year or five years were assigned to the “distressed” or “credit event” group (with all others assigned to the non-distressed group).

Our test results show considerable success in predicting defaults across the entire credit spectrum from the lowest to the highest default risk categories. Where possible, we compared our output with that of publicly available credit ratings and existing models. The so-called “accuracy ratio” measures how well our model predicts which companies do or do not go bankrupt on the basis of data available before bankruptcy. The objective can be framed in two ways: (1) maximizing correct predictions of defaulting and non-defaulting companies (which statisticians refer to as type I accuracy) and (2) minimizing wrong predictions (type II accuracy).

As can be seen in Figure 5.2, our results, which include tests on actual defaults during the period 1989–2009, show much higher type I accuracy levels for the Z-Metrics model than for either the bond rating agencies or established models (including an older version of Z-scores). At the same time, our tests show equivalent type II accuracies at all cutoff levels of scores.

Perhaps the most reliable test of credit scoring models is how well they predict critical events based on samples of companies that were not used to build the model, particularly if the events took place after the period during which the model was built (after 2008, in this case). With that in mind, we tested the model against actual bankruptcies occurring in 2009, or what we refer to as our “out-of-sample” data. As with the full test sample results shown in Figure 5.2, our Z-Metrics results for the “out of sample”

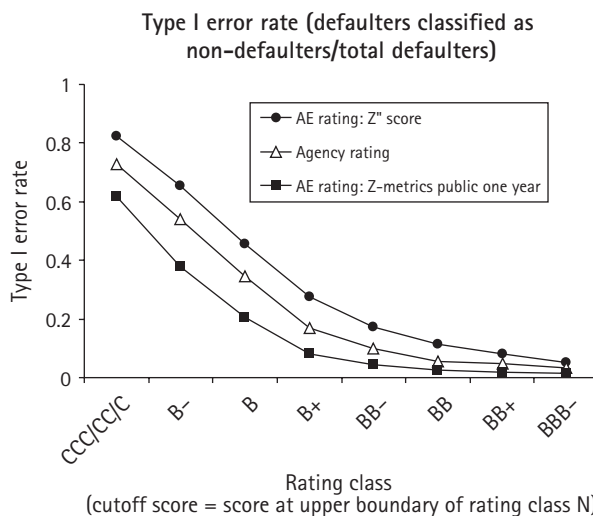


FIGURE 5.2 Type I error for agency ratings, Z"-score, and Z-Metrics agency equivalent (AE ratings (1989–2008): one-year prediction horizon for publicly owned firms).

bankruptcies of 2009 outperformed the agency ratings and the 1968 Z-score and 1995 Z"-score models using both one-year and five-year horizons.

5.6 A "BOTTOM-UP" APPROACH FOR SOVEREIGN RISK ASSESSMENT

Having established the predictive power of our updated Z-score methodology, our next step was to use that model (which, again, was created using large publicly traded US companies) to evaluate the default risk of European companies. And after assuring ourselves that the model was transferable in that sense, we then attempted to assess the overall creditworthiness of sovereign governments by aggregating our Z-Metrics default probabilities for individual companies and then estimating both a median default probability and credit rating for different countries.

In conducting this experiment, we examined 10 key European countries over the time periods, end of 2008–2011 and as of Q3 in 2012 in Table 5.2 for the 50th percentile (median) and 75th percentile (Table 5.3). People clearly recognized the crisis and concern for the viability of the European Union in June 2010, when Greece's debt was

Table 5.2 Financial Health of the Corporate, Nonfinancial Sector: Selected European Countries and the United States in 2008–2012 (6/30)

Z-Metrics PD estimates: Five-year public model						
Country	Listed companies (2011)	Median PD				
		6/30/12 (%)	Y/E 2011 (%)	Y/E 2010 (%)	Y/E 2009 (%)	Y/E 2008 (%)
Sweden	167	2.7	2.7	2.6	3.1	6.7
United Kingdom	553	2.8	4.6	3.7	4.5	7.3
Ireland	28	3.1	3.0	1.8	3.0	7.9
Netherlands	85	3.5	3.1	2.5	2.7	5.0
United States	2235	3.6	4.8	3.8	3.3	4.5
Germany	398	3.8	4.6	3.9	4.5	7.6
France	377	5.3	6.6	4.0	4.6	7.2
Spain	91	8.5	10.6	7.1	5.9	8.6
Italy	178	11.6	11.9	7.7	7.7	11.3
Portugal	36	12.5	15.1	9.9	8.2	16.6
Greece	112	28.3	26.7	18.7	11.9	16.7

Sources: RiskMetrics Group (MSCI), Markit, Compustat.

Table 5.3 Financial Health of the Corporate, Nonfinancial Sector: Selected European Countries and United States in 2008–2012 (6/30)

Z-Metrics PD estimates: Five-year public model						
75th Percentile PD						
Country	Listed companies (2011)	6/30/12 (%)	Y/E 2011 (%)	Y/E 2010 (%)	Y/E 2009 (%)	Y/E 2008 (%)
Sweden	167	6.3	9.6	6.8	8.0	13.5
United Kingdom	553	6.3	9.7	5.7	9.3	16.6
Netherlands	85	7.0	8.7	5.7	6.7	15.7
Ireland	28	7.3	6.3	8.6	11.0	27.5
Germany	398	10.8	11.2	9.7	11.9	22.2
France	377	11.0	14.8	8.5	10.3	19.2
United States	2235	11.2	11.7	8.0	11.5	19.5
Spain	91	25.0	20.1	13.2	12.7	18.4
Italy	178	25.4	26.4	14.1	18.1	27.1
Portugal	36	32.3	24.9	20.1	12.3	26.6
Greece	112	47.0	50.5	40.1	27.6	31.0

Sources: RiskMetrics Group (MSCI), Markit, Compustat.

downgraded to noninvestment grade and both Spain and Portugal were also downgraded. Credit markets, particularly CDS markets, had already recognized the Greek and Irish problems before June 2010. Market prices during the first half of 2010 reflected high implied probabilities of default for Greece and Ireland, but were considerably less pessimistic in 2008 and 2009. By contrast, as can be seen in Tables 5.2 and 5.3, which shows our Z-Metric median PD estimates over both periods, our PD estimates were uniformly higher (more risky) in 2008 and 2009 than early in 2010, even if the world was more focused on Europe's problems in the latter year. In this sense, our Z metrics PD might be viewed as providing a leading indicator of possible distress. It should be noted that the statistics in Tables 5.2 and 5.3 report only on the nonfinancial private sector, while those in Table 5.4 include results from our banking credit risk model, as well, but only for 2010. We will return to our Combined Nonfinancial and Financial sector results at a later point.

Our nonfinancial private sector PDs for the median company (Table 5.2) and the 75th percentile company (Table 5.3) showed that countries such as Greece, Portugal, and, to some extent, Spain and Italy, had private sector risk profiles considerably worse than the other European countries, and the United States, as early as 2008, and certainly at the end of 2009. Indeed, most countries had extremely risky profiles during the great financial crisis at the end of 2008, but many improved after we emerged from this crisis in

2009—but not Greece and Portugal. At the same time, we will show (Figure 5.3) that the primary capital market indicator of sovereign default probabilities, the CDS market, was not concerned at all with countries such as Greece, Portugal, Spain, and Italy in 2008 and 2009, and only showed higher implied PDs in 2010, long after our approach gave unmistakable signals of the chasm between the so-called PIIGS countries and the rest of Europe.

The median nonfinancial, industrial sector PDs at the end of 2009 had Greece as the worst (11.9%), followed by Portugal (8.2%), Italy (7.7%), and Spain (5.9%). Then came Germany and France (both about 4.5%), with Ireland (3.0%) the Netherlands (2.7%), and Sweden (3.1%) showing the least risky profiles in 2009. The United States also had a relatively low risk private sector profile, with a median PD of 3.3%.

For the most part, these results are consistent with how traditional analysts now rank sovereign risks. Nevertheless, there were a few surprises. The United Kingdom had a fairly healthy private sector, and Germany and France were perhaps not as healthy as one might have thought. The United Kingdom's relatively strong showing might have resulted from the fact that our risk measure at this time did not include financial sector firms, which comprised about 35% of the market values of listed UK corporates and were in poor financial condition. And several very large, healthy multinational entities in the UK index might have skewed results a bit. The CDS/five-year market's assessment of UK risk was harsher than that of our Z-Metrics index in 2010, with the median of the daily CDS spreads during the first four months implying a 6.5% probability of default, about double our Z-Metrics median level. Greece also had a much higher CDS implied PD at 24.1%, as compared to 11.9% for Z-Metrics. (And, of course, our choice of the *median* Z-Metrics PD is arbitrary, implying as it does that fully 50% of the listed companies have PDs higher than 11.9%.)

We also observed that several countries had relatively high standard deviations of Z-Metrics PDs, indicating a longer tail of very risky companies. These countries included Ireland, Greece, and, surprisingly, Germany, based on 2009 and 2010 data. So, although almost everyone considers Germany to be the benchmark-low risk country in Europe (e.g., its five-year CDS spread was just 2.67% in 2010, even lower than the Netherlands (2.83%), we are more cautious based on our broad measure of private sector corporate health.

Table 5.3 shows the same pattern of our nonfinancial private sector results; only we utilize the 75th percentile measure instead of the median. To be clear, the 75th percentile PDs indicate that 25% of the firms had a five-year PD of at least the indicated percentile and represent the highest risk quartile for each country. We feel that this percentile still includes a substantial proportion of the corporate sector and is perhaps a clearer indicator of a country's private sector vulnerability to financial distress. We will show the time series from 2008 to 2012 of this indicator compared to CDS spread implied PDs, shortly.

Note that Greece's 75th percentile firm went from a PD of 27.6% in 2009 to almost 50% in 2012, Portugal also deteriorated from 12.3% in 2009 to 32.3% in 2012, and Italy and Spain's 75th percentile plummeted to about 25% in 2012 (Q3). While all countries

in Europe show considerably higher 75th percentile PDs than their median levels, no other country approaches the “Big Four” of the most risky nations, especially as of our latest reading in 2012 (6/30). As we will now observe, the continued deterioration of countries like Italy and Spain in 2012 are in contrast to improved market indicators, for example, CDS spreads, for all of PIIGS countries in the second half of 2012.

5.7 CDS IMPLIED PDs

Figure 5.3 shows the CDS implied PDs for the “Big Five” European high-risk countries, the so-called PIIGS, from the start of 2009 to March 2013, including the period after the European Union’s comprehensive rescue plan was first announced (July 21, 2011) for Greece and a contingent plan for other countries. Note that though the PDs, based on CDS spreads and assuming a 40% recovery rate, all came down from their highs in 2011, they again spiked upward in late 2011 and really were elevated until the European Central Bank (ECB) announced in July 2012 that it would do whatever would be necessary to bolster the prices of the sovereign bonds of the most vulnerable European countries, including the relatively large southern countries such as Spain and Italy.

It is true that the CDS implied PDs are impacted by the expected recovery rate after default. As indicated in Figure 5.3, a 40% recovery is assumed for all countries and over

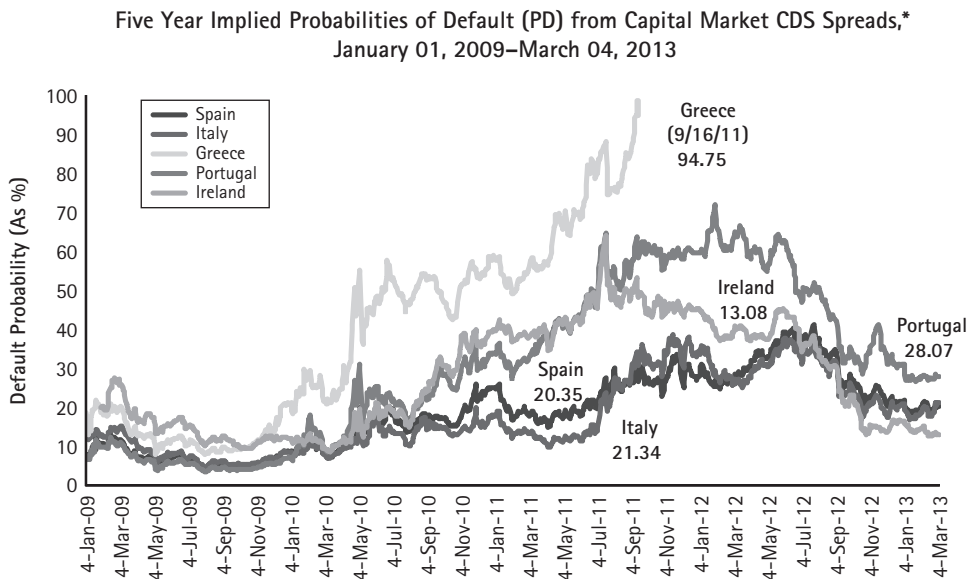


FIGURE 5.3 Five-year implied probabilities of default (PD) from capital market CDS spreads, January 1, 2009–March 4, 2013. Assumes 40% recovery rate (R). PD computed as $1 - e^{(-5^s/(1 - R))}$.

Sources: Bloomberg and NYU Salomon Center.

the entire sample period. To the extent that the market's assessment of a sovereign's recovery rate changes over time, then the implied PD will also change. Except in the case of Greece, prior to its default in 2012, we have no clear impression that the expected recovery rate, and therefore its Loss Given Default, have changed. Indeed, note that our time series on Greek default probabilities ends when the expected recovery rate was clearly below 40% in late 2011.

5.8 BANK PDs AS A SUPPLEMENT TO OUR ANALYSIS

No private sector analysis would be complete, especially in its relevance to sovereign health assessment, without a thorough and comprehensive treatment of the financial sector. Our private sector treatment is complicated, however, by the relative lack of success of banking early warning systems, as painfully demonstrated by the systems failures amongst global banks, as well as smaller bank failures, during and after the global financial crisis of 2008–2009. We are now working on a new approach to bank insolvency predictions but this model is not available at this point in time. A further complication is the lack of publicly held banks in many of the European countries of late, including such seemingly healthy sovereigns, such as the Netherlands (with just two publicly owned, not state-owned, entities). As noted previously, we are working on a model which, we hope, will deal with these two issues.

Table 5.4 does attempt to illustrate how we plan to include a Banking PD model with our nonfinancial PD model, discussed earlier. We propose to utilize a weighted average PD model of these two sectors to assess the overall PD and relative ranking of various sovereigns. The weightings, however, can be tricky because it is not clear what should be the basis for the relative importance of the Nonfinancial versus Financial sectors. Even in countries where the banking sector was or is the primary reason for a nation's financial and economic problems, for example, Ireland or Spain, the weighting based on a seemingly critical variable, such as the market value of the firm, may be problematic if the country is dominated by a few very large banks (like Spain) with still a relatively low aggregate market value, or whereby banks have very few listed entities, such as the Netherlands, Sweden, and Portugal. What would be helpful is a model that could include privately held, including state-owned banks, as well as publicly owned banks—a solution we are still working on.

To return to Table 5.4, we do attempt to quantify and rank the median PD level for our 12-country sample as of year-end 2010 for the Combined Nonfinancial and Financial sectors. The results are not surprising in that Greece, Portugal, Ireland, Italy, and Spain still show the most problematic private sector PDs and rankings. We will have more to say about the Irish case, which had the unusual situation of a very healthy nonfinancial sector PD (ranked third) but its woeful banking sector (ranked last) completely overwhelmed what seemingly was a positive private sector indicator. As noted previously,

Table 5.4 Weighted Average Median Five-Year (PD) for Listed Nonfinancial^a and Banking Firms^b (Europe and United States), 2010

Country	Nonfinancial firms		Banking firms		Weighted average (%)	Rank	CDS spread PD (%)	Rank
	PD (%)	Weight	PD (%)	Weight				
Netherlands	2.5	0.977	11.1	0.023	2.70	1	2.03	1
Sweden	2.6	0.984	17.3	0.016	2.84	2	2.25	2
U.K.	3.7	0.977	15.5	0.023	3.97	3	4.73	6
Germany	3.9	0.983	13.1	0.017	4.06	4	2.50	3
France	4.0	0.986	14.0	0.014	4.14	5	4.51	5
United States	3.8	0.837	13.8	0.163	5.43	6	3.79	4
Spain	7.1	0.948	10.9	0.052	7.30	7	25.27	8
Italy	7.7	0.906	20.0	0.094	8.86	8	18.02	7
Portugal	9.9	0.971	12.1	0.029	9.96	9	34.05	9
Greece	18.7	0.921	30.1	0.079	19.60	10	59.14	10

^aBased on the Z-Metrics probability model.

^bBased on Altman–Rijken Model (preliminary).

we will revisit, in a subsequent paper, the banking sector PD estimation when we are more confident about the accuracy and robustness of our prediction model.

Note also that the weighted-average PD model's rankings are very similar to the rankings based on the CDS implied PDs (last column in Table 5.4). The main discrepancy is that of the UK, which ranked sixth based on its CDS PD compared to third based on our weighted-average PD. Italy's CDS PD's ranking was two rankings better (7) based on its CDS implied PD compared to our weighted-average PD (8).

5.9 COMPARING PRIVATE SECTOR FUNDAMENTAL PDs WITH CDS MARKET IMPLIED PDs

Now that we have defined and empirically measured our new approach toward assessing sovereign PDs—a type of “bottom-up” approach—we can compare our measure with market implied estimates. Figures 5.4 to 5.8 show the time series of the 75th percentile five-year PD from our Z-Metrics model compared to the five-year implied PD from CDS spreads over the period 2008–2012. In all cases, our 75th percentile PD was greater (worse) for all five PIIGS countries from the start of the time series at year-end 2008 until about mid-2010 when the CDS market's PD assessment first overtook our estimate. It was that point in 2010 that investors realized that not only countries such as Greece and Portugal were exceptionally risky, but the very survival of the Eurozone

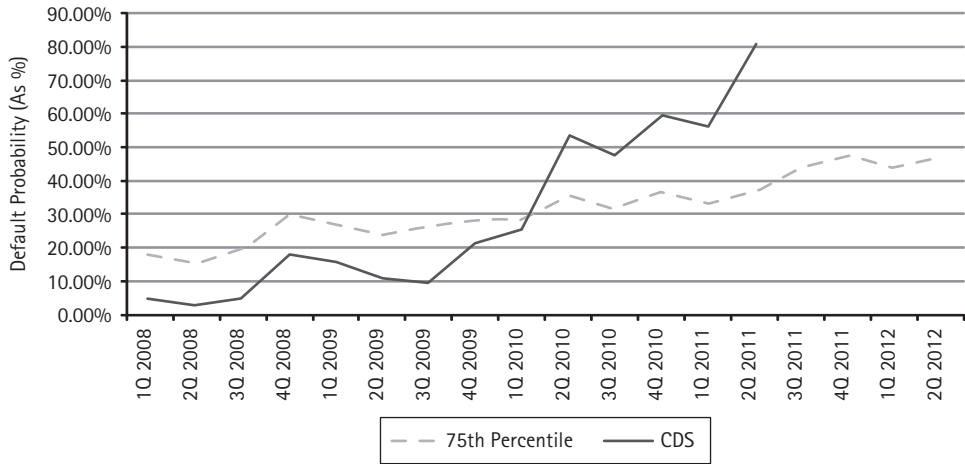


FIGURE 5.4 Greece: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1 - R))}$.

Source: Bloomberg.

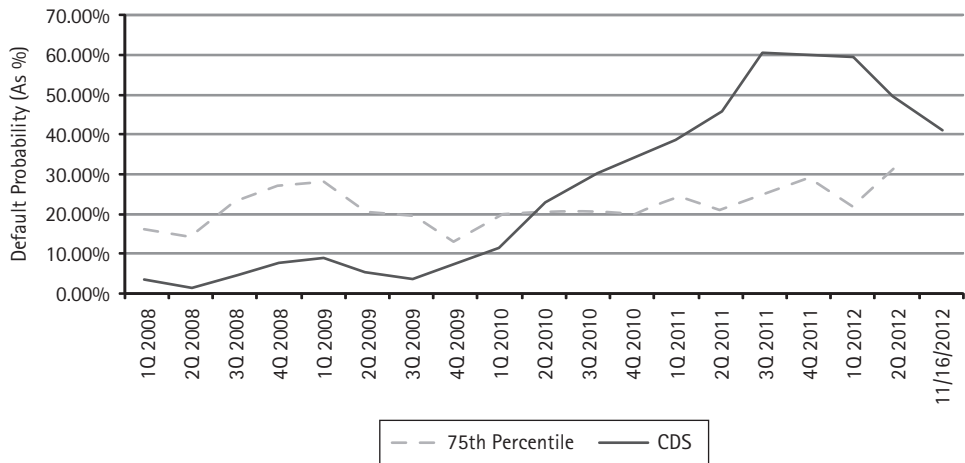


FIGURE 5.5 Portugal: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1 - R))}$.

Source: Bloomberg.

was in jeopardy of falling apart. Our PD estimates showed extreme concern much earlier because our measures are not impacted by the likelihood, or not, of a political bailout by the stronger Eurozone countries, and especially by pronouncements by the ECB.

Note that the CDS estimates of sovereign defaults rose to as high as the mid-30% level for crucial countries such as Spain and Italy in mid-2012 and fell to the high teens only after the ECB announced it would do whatever was necessary to reduce the cost of debt of the most vulnerable southern European countries, for example, Spain and Italy, by

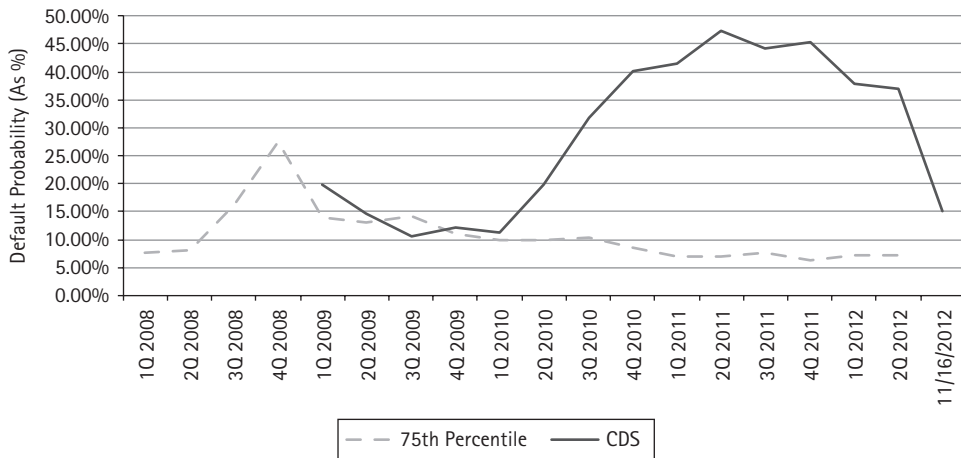


FIGURE 5.6 Ireland: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1 - R))}$.

Source: Bloomberg.

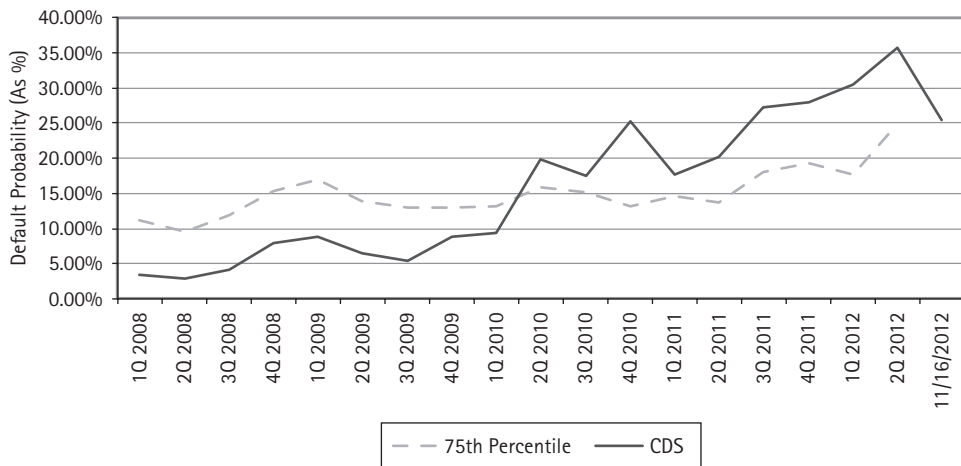


FIGURE 5.7 Spain: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1 - R))}$.

intervening directly into the secondary market and purchasing their sovereign bonds. This statement calmed the market starting in summer 2012 and this new confidence has lasted until early 2013—the time that we are writing this chapter. Note, however, that our fundamental firm PDs have continued to increase in 2012, through the third quarter (the last date of our analysis), for four of the five most vulnerable countries, with the notable exception of Ireland.

The Irish case is quite interesting in that our PD measure has been considerably strong over the period 2008–2012, despite its obvious financial struggles, primarily due

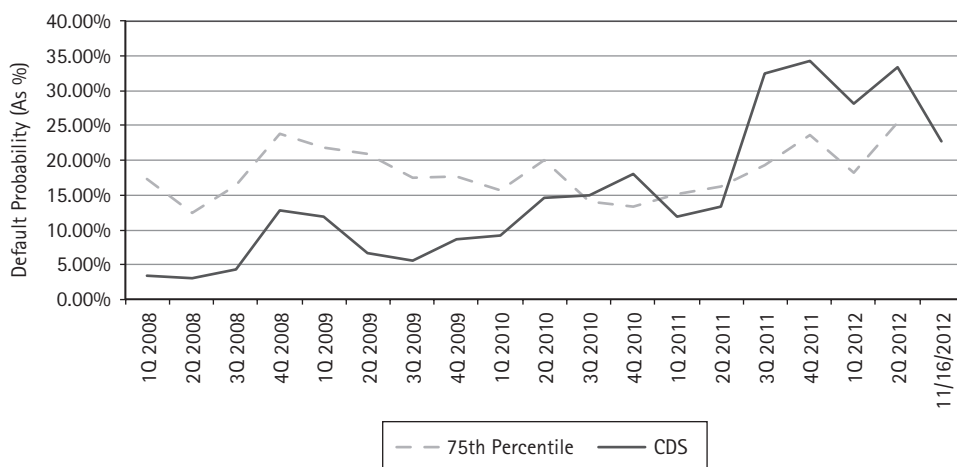


FIGURE 5.8 Italy: Five-year implied probabilities of default (PD) from sovereign CDS spreads vs. 75th percentile corporate PD, 2008–2012 (11/16). Assuming a 40% recovery rate (R); based on the median CDS spread (s). CDS implied PD computed as $1 - e^{(-5*s/(1 - R))}$.

Source: Bloomberg.

to its insolvent banking sector. Interestingly, our Irish forecast seems to have been prophetic in that the prices of their sovereign bonds have rebounded positively in 2012 and their CDS implied PDs have improved dramatically in 2012.

5.10 COMPARING PD RESULTS BASED ON PRIVATELY OWNED VERSUS PUBLICLY OWNED FIRM MODELS

As shown in Tables 5.2 and 5.3, the improvement (reduction) in Z-Metrics PDs for most countries in 2010—a period in which most EU sovereigns appeared to be getting riskier—looks attributable in large part to the stock market increases in almost all countries. But to the extent such increases could conceal a deterioration of a sovereign's credit condition, some credit analysts might prefer to have PD estimates that do not make use of stock market data.

With this in mind, we applied our private firm Z-Metrics model to evaluate the same nine European countries and the United States. The private and public firm models are the same except for the substitution of equity book values (and volatility of book values) for market values. This adjustment is expected to remove the capital market influence from our credit risk measure.

Table 5.5 summarizes the results of our public versus private firm Z-Metrics models comparative PD (delta) results for 2010 and 2009. For 8 of the 10 countries,

Table 5.5 Private vs. Public Firm Model PDs in 2010 and 2009

Country	No. listed Companies		Public-Firm Z-Metrics Model (%)				Private-Firm Z-Metrics Model (%)	
	2010	2009	PDs		Delta ^a	2010	PDs	
			2010	2009			2009	Delta ^a
Netherlands	61	60	3.33	5.62	-2.29	5.25	6.00	-0.75
U.K.	442	433	3.62%	5.75%	-2.13%	6.48%	5.97%	+0.49%
U.S.A.	2226	2171	3.93	6.97	-3.04	4.28	4.80	-0.52
France	297	294	5.51	7.22	-1.71	7.33	7.19	+0.14
Germany	289	286	5.54	7.34	-1.80	6.29	7.56	-1.27
Spain	82	78	6.44	7.39	-0.95	8.06	9.32	-1.26
Ireland	28	26	6.45	7.46	-1.01	6.31	6.36	-0.05
Italy	155	154	7.99	10.51	-2.52	8.14	9.07	-0.89
Portugal	30	30	9.36	12.07	-2.71	8.73	9.62	-0.89
Greece	79	77	10.60	11.57	-0.97	11.03	13.93	-2.90
Average	6.28	8.19	-1.91	7.19	7.98	-0.79		

^aNegative sign means improved credit risk.

Sources: Table 5.2 and Riskmetrics (MSCI).

use of the private firm model showed smaller reductions in PDs when moving from 2009 to 2010 than use of the public model. Whereas the overall average improvement in PDs for the public firm model was a drop of 1.91 percentage points, the drop was 0.79% for our private firm model. These results are largely the effect of the positive stock market performance in late 2009 and into 2010. But improvements in general macro conditions, along with their effects on traditional corporate performance measures, also helped improve (reduce) the PDs. Moreover, in two of these eight countries—the United Kingdom and France—not only did the public firm model show an improved (lower) PD, but the private firm model's PD actually got worse (increased) in 2010 (as indicated by the positive delta in the last column of Table 5.5).

5.11 CORRELATION OF SOVEREIGN PDs: RECENT EVIDENCE ON Z-METRICS VERSUS IMPLIED CDS PDs

As a final test of the predictive power of our approach, we compared our Z-Metrics five-year median PDs for our sample of nine European countries (both on a contemporary basis and for 2009) with the PDs implied by CDS spreads in 2010. The contemporary PD correlation during the first third of 2010 was remarkably high, with an R^2 of 0.82. This was a period when it was becoming quite evident that certain European

countries were in serious financial trouble and the likelihood of default was not trivial. But if we go back to the first half of 2009, the correlation drops to an R^2 of 0.36 (although it would be considerably higher, at 0.62, if we excluded the case of Ireland). Ireland's CDS implied PD was considerably higher in 2009 than 2010 (17.0% vs. 12.0%), while the Z-Metrics PD was relatively stable in the two years (7.5% and 6.5% respectively). In 2010, whether we calculate the correlation with or without Ireland, the results are essentially the same (0.82 and 0.83).

Given the predictive success of Z-metrics in the tests already described, we were curious to find out whether it could be used to predict capital market (i.e., CDS) prices. So, we regressed our public firm model's 2008 Z-Metrics median, nonfinancial sector PDs against implied CDS PDs one year later in 2009. Admittedly, this sample was quite small (10 countries) and the analysis is for only a single time-series comparison (2008 vs. 2009). Nevertheless, these two years spanned a crucial and highly visible sovereign debt crisis, whereas the PDs implied by prior years' Z-Metrics and CDS showed remarkably little volatility.

The correlation between our Z-Metrics PDs and those implied by CDS one year later proved to be remarkably strong, with an r of 0.69 and R^2 of 0.48. In sum, the corporate health index for our European countries (plus the United States) in 2008 explained roughly half of the variation in the CDS results one year later.

A potential shortcoming of our approach is that we are limited in our private sector corporate health assessments to data from listed, publicly held firms. This is especially true for relatively small countries like Ireland (with just 28 listed companies), Portugal (with 30), Greece (79), the Netherlands (61), and Spain (82). Since the private, non-listed segment is much larger in all of the countries, we are not clearly assessing the health of the vast majority of its firms and our sovereign health index measure is incomplete.

But if the size of the listed firm population is clearly a limitation in our calculations, there does not seem to be a systematic bias in our results. To be sure, the very small listings in Ireland, Portugal, and Greece appear heavily correlated with their high PDs, but the country with the lowest PD (the Netherlands) also has a very small listed population. Another potentially important factor is that the listed population in countries like the United Kingdom and the Netherlands is represented quite heavily by multinational corporations that derive most of their income from outside their borders.

5.12 CONCLUSION ON THE TRANSPARENCY OF SOVEREIGN DEFAULT RISK ASSESSMENT

As the price for bailing out distressed sovereigns, today's foreign creditors, especially the stronger European nations, are demanding a heavy dose of austerity.

Several governments, including those of Greece, Ireland, Spain, Portugal, Italy, and the United Kingdom, have already enacted some painful measures. Others, such as France and Hungary, have either resisted austerity measures or faced significant social unrest when austerity measures have been proposed. These measures typically involve substantial cuts in cash benefits paid to public workers, increases in retirement age, and other reduced infrastructure costs, as well as increased taxes for companies and individuals. The objective is to reduce deficits relative to GDP and enhance the sovereigns' ability to repay their foreign debt and balance their budgets.

While recognizing the necessity of requiring difficult changes for governments to qualify for bailouts and subsidies, we caution that such measures should be designed to inflict as little damage as possible on the health and productivity of the private enterprises that ultimately fund the sovereign. The goal should be to enable all private enterprises with clear positive going concern values to pay their bills, expand (or at least maintain) their workforces, and return value to their shareholders and creditors (while those businesses that show no promise of ever making a profit should be either restructured or liquidated). For this reason, raising taxes and imposing other burdens on corporate entities is likely to weaken the long-run financial condition of sovereigns.

Austerity programs have other unintended consequences and in one recent high profile case, Italy in 2013, resulted in a change in government. Electors voted out the technocrat government led by Mario Monti, and gave large popular support to heretofore unknown political parties which attacked reforms. Some of these austerity reforms were important and necessary, yet hugely unpopular with Italian voters, despite their embrace by the most powerful European governments, particularly in northern Europe.

To better estimate sovereigns' risk of default, we propose that traditional measures of macroeconomic performance be combined with more modern techniques, such as the contingent claims analysis pioneered by Robert Merton and the bottom-up approach presented in these pages. Along with the intuitive appeal of such an approach and our encouraging empirical results, the probabilities of sovereign default provided by aggregating our transparent PD estimates across a national economy can be seen, at the very least, as a useful complement to existing methods and market indicators—one that is, again, totally transparent and not subject to government manipulation of publicly released statistics. Using our approach, the credit and regulatory communities could track the performance of publicly held companies and the economies in which they reside—and by making some adjustments, analyze unlisted entities as well. And if sovereigns were also willing to provide independently audited statistics to the public on a regular basis, so much the better for the transparency.

APPENDIX

LOGIT MODEL ESTIMATION OF DEFAULT PROBABILITIES

We estimated our credit scoring model based on a standard logit-regression functional for whereby:

$$CS_{i,t} = \alpha + \sum B_j X_{i,t} + \varepsilon_{i,t} \quad (1)$$

$CS_{i,t}$ = Z-Metrics credit score of company i at time t

B_j = variable parameters (or weights)

$X_{i,t}$ = set of fundamental, market based and macroeconomic variables for firm i quarter observations

$\varepsilon_{i,t}$ = error terms (assumed to be identically and independently distributed)

$CS_{i,t}$ is transformed into a probability of default by $PD_{i,t} = \frac{1}{1 + \exp(CS_{i,t})}$

- We compare Z-Metrics results with issuer ratings. To ensure a fair comparison, credit scores are converted to agency equivalent (AE) ratings by ranking credit scores and by matching exactly the actual agency rating distribution with the AE rating distribution at any point in time.
- We also compare our Z-Metrics results to the well established Altman Z"-score (1995) model.²¹

²¹ Altman's original Z-score model (1968) is well known to practitioners and scholars alike. It was built, however, more than 40 years ago and is primarily applicable to publicly held manufacturing firms. A more generally applicable Z"-score variation was popularized later (Altman et al., 1995) as a means to assess the default risk of non-manufacturers as well as manufacturers, and was first applied to emerging market credits. Both models are discussed in Altman and Hotchkiss (2006) and will be compared in several tests to our new Z-Metrics model. Further, the Altman Z-score models do not translate easily into a probability of default rating system, as does the Z-Metrics system. Of course, entities that do not have access to the newer Z-Metrics system can still use the classic Z-score frameworks, although accuracy levels will not be as high and firm PDs not as readily available.

ACKNOWLEDGMENTS

The authors thank Brenda Kuehne of the NYU Salomon Center for her research assistance; Lourdes Tanglao for her assistance in putting together the manuscript; and the workshops at NYU Stern, LSE, VU University Amsterdam, SAIF (Shanghai), Peking University (Beijing), and Macquarie University (Sydney) for valuable comments.

REFERENCES

- Abassi, B., and Taffler, R. J. (1982). Country risk: A model of economic performance related to debt servicing capacity. Working Paper 36, City University Business School, London.
- Altman, E. I. (1968). Financial ratios discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance* 23(4), 189–209.
- Altman, E. I. (2011). Italy: The hero or villain of the euro: Insight. *Financial Times*, June 21.
- Altman, E. I., and Hotchkiss, E. (2006). *Corporate Financial Distress and Bankruptcy*, 3rd ed. Hoboken, NJ: John Wiley & Sons.
- Altman, E. I., and Rijken, H. A. (2004). How rating agencies achieve rating stability. *Journal of Banking & Finance* 28, 2679–2714.
- Altman, E. I., Rijken H. A., and Mina J. (2010, June). *The Z-Metrics™ Methodology for Estimating Company Credit Ratings and Default Risk Probabilities*. New York: RiskMetrics Group.
- Babbel, D. F. (1996). Insuring sovereign debt against default. World Bank Discussion Papers No. 328.
- Baek, I., Bandopadhyaya, A., and Du, C. (2005). Determinants of market-assessed sovereign risk: Economic fundamentals or market risk appetite? *Journal of International Money and Finance* 24(4), 533–548.
- Baker, H. K., and Mansi, S. A. (2002). Assessing credit agencies by bond issuers and institutional investors. *Journal of Business Finance & Accounting* 29(9-10), 1367–1398.
- Beers, D., Cavanaugh, M., and Takahira, O. (2002, April). *Sovereign Credit Ratings: A Primer*. New York: Standard & Poor's Corp.
- Bertozi, S. (1996). An annotated bibliography on external debt capacity. In *Insuring Sovereign Debt Against Default*, ed. D. F. Babbel. World Bank Discussion Papers No. 328.
- Cantor, R. (2001). Moody's investor services response to the consultative paper issued by the Basel Committee on Bank Supervision—A new capital adequacy framework. *Journal of Banking & Finance* 25(1), 171–185.
- Caouette, J., Altman, E., Narayanan, P., and Nimmo, R. (2008). *Managing Credit Risk*, 2nd ed. New York: John Wiley & Sons.
- Chambers, W. J. (1997). Understanding sovereign risk. *Credit Week*, Standard & Poor's January 1.
- Cline, W. (1983, June). A logit model of debt restructuring, 1963–1982. Working Paper, Institute for International Economics.
- Ellis D. (1998). Different sides of the same story: Investors' and issuers' views of rating agencies. *The Journal of Fixed Income* 7(4), 35–45.
- ESMA. (2013). Credit Rating Agencies, sovereign ratings investigation of ESMA's assessment of governance, conflicts of interest, resourcing adequacy and confidentiality controls. Report, ESMA/2013/1775.

- Feder, G., and Just, R. E. (1977). A study of debt servicing capacity applying logit analysis. *Journal of Development Economics* 4(1), 25–38.
- Feder, G., Just, R. E., and Ross, K. (1981). Projecting debt capacity of developing countries. *Journal of Financial & Qualitative Analysis* 16(5), 651–669.
- Flynn, D. (2009). S&P cuts Greek debt rating as global crisis bites. *Reuters*, January 14.
- Forssbaeck, J., and Oxelheim, L. (2006). Transparency, capital formation and economic growth. In *Corporate and Institutional Transparency for economic growth in Europe*, ed. L. Oxelheim, pp. 1–45. Oxford: Elsevier.
- Frank, C. R., and Cline, W. R. (1971). Measurement of debt servicing capacity: An application of discriminant analysis. *Journal of International Economics* 1, 327–344.
- Frenkel, M., Karmann, A. and Scholtens, B., Eds. (2004). *Sovereign Risk and Financial Crises*, pp. xii, 258. Heidelberg and New York: Springer Science+Business Media,
- Gennaioli, N., Martin, A., and Rossi, S. (2010, July). Sovereign default, domestic banks and financial institutions. Working Paper, Imperial College, London.
- Gerlach, S., Schultz, A., and Wolff, G. (2010). Banking and sovereign risk in the euro area. Deutsche Bundesbank, Research Centre, Discussion Paper Series 1: *Economic Studies*: 2010.
- Gray, D. F., Merton, R., and Bodie, Z. (2006, October). A new framework for analyzing and managing macrofinancial risk of an economy. IMF Working Paper.
- Gray, D. F., Merton, R., and Bodie, Z. (2007). Contingent claims approach to measuring and managing sovereign credit risk. *Journal of Investment Management* 5(4), 5–28.
- Grinols, E. (1976). *International Debt Rescheduling and Discrimination Using Financial Variables*. Washington, DC: US Treasury Department.
- Haugh, D., Ollivaud, P., and Turner, D. (2009). What drives sovereign risk premiums? An analysis of recent evidence from the euro areas. Working Paper No. 718. Paris: Economics Department, Organisation for Economic Co-operation and Development.
- Hilscher, J., and Nosbusch, Y. (2010). Determinants of sovereign risk: Macroeconomic fundamentals and the pricing of sovereign debt. *Review of Finance* 14(2), 235–262.
- IMF. (2010a). *Global Financial Stability Report*. Washington, DC: International Monetary Fund.
- IMF. (2010b, October). The uses and abuses of sovereign credit ratings. *Global Financial Stability Report*, Chapter 3, Washington, DC: International Monetary Fund.
- Kiff, J., Nowak, S., and Schumacher, L. (2012). Are ratings agencies powerful? An investigation into the impact and accuracy of sovereign ratings. IMF Working Paper 12/23.
- KMV Corporation (1999). *Modeling Default Risk*. San Francisco, CA: KMV Corporation, R. Crosbie.
- Krugman, P. (1989). Financing vs. forgiving a debt overhang: Some analytical notes. *Journal of International Business Studies* 17, 1–26.
- Longstaff, F., Pan, J., Pedersen, L., and Singleton, K. (2007). How sovereign is sovereign credit risk? National Bureau of Economic Research, Inc. NBER Working Paper 13658.
- Merton, R. C. (1974). On the pricing of corporate debt: The risk structure of interest rates. *Journal of Finance* 29, 449.
- Moody's Investors Service. (2013, September). *Rating methodology for sovereign bond ratings*. Moody's Special Ratings Group Report.
- Neziri, H. (2009). Can credit default swaps predict financial crises? *Journal of Applied Economic Sciences* IV(1/7), 7–19.
- Oshiro, N., and Saruwatari, Y. (2005). Quantification of sovereign risk: Using the information in equity market prices. *Emerging Markets Review* 6(4), 346–362.

- Pomerleano, M. (1998, October). Corporate finance lessons from the East Asian crisis. Viewpoint, The World Bank Group, Note No. 155.
- Pomerleano, M. (1998). The East-Asia Crisis and corporate finance—The untold micro study. Policy Research Working Paper Series, Washington, DC: The World Bank.
- Reinhart, M., and Rogoff, K. (2010). *This Time Is Different*. Princeton, NJ: Princeton University Press.
- Remolona, E. Scatigna, M., and Wu, E. (2008). A ratings-based approach to measuring sovereign risk. *International Journal of Finance and Economics* 13(1), 26–39.
- Sargen, H. (1977). Economics indicators and country risk appraisal, Federal Reserve Bank of San Francisco. *Economic Review* Fall, 17.
- Schmidt, R. (1984). Early warning of debt rescheduling. *Journal of Banking and Finance* 8, 121–138.
- Segoviano, B., Miguel, A., Caceres, C., and Guzzo, V. (2010). Sovereign spreads: Global risk aversion, contagion or fundamentals? IMF Working Paper 10/120, 29.
- Sgherri, S., and Zoli, E. (2009). Euro area sovereign risk during the crisis. IMF Working Papers 09/222.
- Smith, R., and Walter, I. (2003). *Global Banking*. London: Oxford University Press.
- Standard&Poor's (2012). How we rate sovereigns. www.standardandpoors.com/ratingsdirect.

CHAPTER 6

TRANSPARENCY AND COMPETITION POLICY IN AN IMPERFECTLY COMPETITIVE WORLD

PHILIPPE GUGLER

6.1 INTRODUCTION

COMPETITION policy is an important component of governments' economic and social policy. It determines the structure of the markets, the rules of the game governing most markets, and it has an important impact on the competitiveness of the national industries (Deiss and Gugler, 2012, pp. 135–138). Competition policy, “(.) refers to a set of measures and instruments used by governments that determine the overall conditions of competition that are likely to be met in specific markets” (Cook, 2001, p. 11). Competition policy comprises the regulatory framework governing competition in specific markets as well as the antitrust policy—usually called “competition law” in Europe—that controls the behavior of firms, including their concentration operations (mergers and acquisitions) (Figure 6.1). This chapter focuses on the main aspects of competition policy relevant to address its links with transparency issues. Competition policy is a “horizontal” policy covering all economic activities as well as many important issues tackled in other policies. The interactions among competition policy and other policies regarding, for example, intellectual property rights, innovation, or environment are not addressed in this chapter, which concentrates the analysis solely on the competition policy issues.

Transparency is at the core of competition policy. First, the level of transparency in a specific market affects the conditions of competition and may influence the behavior of economic agents. Lack of transparency is considered as a market failure that may be addressed through specific regulations. For example, imperfect information occurring in the insurance industry—illustrated by the “market for lemons” (Akerlof, 1970)—may lead to the implementation of obligatory insurance schemes to avoid a disappearance of the market. Second, the activities of antitrust authorities and regulators

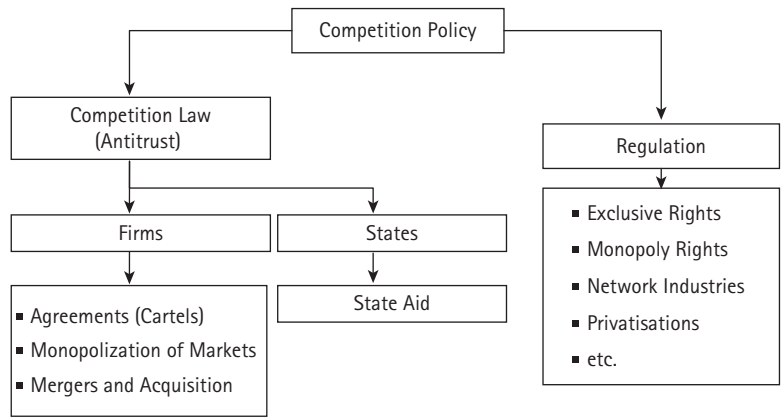


FIGURE 6.1 Competition policy.

Source: Deiss and Gugler, 2012, p. 90.

are facing asymmetric information owing to the lack of transparency regarding firms’ behavior and market features. Third, firms under investigation as well as all economic agents affected by a specific antitrust case may also suffer from asymmetric information regarding the authorities’ enforcement activities and decisions. Thus, the “principal–agent” problem is multidirectional (Laffont et al., 2001).

Many competition issues can be modeled theoretically as games of incomplete information. For example, this chapter addresses the cooperative and noncooperative games between firms as well as the noncooperative games between competition and regulation agencies on the one side, and firms under asymmetric information on the other (Pénard and Souam, 2002, p. 210).

The remaining of this chapter comprises five sections. In Section 6.2 I explore the main scenario occurring in markets according to the microeconomic assumptions of perfectly competitive markets. Section 6.3 analyzes the link between market transparency and collusion. Section 6.4 scrutinizes the role of asymmetric information in cases of monopolization of markets, whereas Section 6.5 focuses on the case of concentration operations (mergers and acquisitions). Section 6.6 is dedicated to the role of market transparency in regulation of network industries. Finally, Section 6.7 analyzes the asymmetric information issues occurring in the field of competition policy enforcement at the national and at the international level.

6.2 POINT OF DEPARTURE: THE PERFECT COMPETITION MODEL

The competition policy benchmark is based on the model of perfect competition. Perfect competition relies on several assumptions such as perfect information, a large

number of sellers (due primarily to decreasing returns on investment), a large number of consumers, homogeneous products, and no barriers to entry or exit (Browning and Zupan, 2006, pp. 238–239).

In a perfectly competitive market sellers are price takers and do not have any market power because the price is fixed by market forces. The competitive price reflects the marginal cost. “The ability of a firm (or group of firms) to raise and maintain price above the level that would prevail under competition is referred to as market or monopoly power” (OECD, 1993, p. 57; see also OECD, 2006, p. 2). In most cases, the higher the markup (difference between price and marginal cost) the more the firm may benefit from market power.

Most if not all markets are imperfect (Blair and Kaserman, 2009, p. 218). The market failures are explained by the fact that the assumptions of the perfect competition model, as well as other parameters resulting from these assumptions, are not met. The main market failures occurring in real markets are due to externalities, public goods, increasing return on investment, and imperfect information (Mankiw and Taylor, 2011). In real cases, some perfect competition conditions are met whereas others are not. Numerous different cases may be contemplated. Table 6.1a considers in one dimension the perfect information criterion, and in the other the group of other perfect competition parameters.

Quadrant I illustrates the model of perfect competition assuming that social welfare is maximized because prices (called competitive prices) are equal to marginal cost (allocative efficiency). We have to admit that this scenario is not observed in real markets. Quadrant IV refers to the case occurring in most markets. According to the type of market failure, authorities may apply specific regulations whose design and application may face complex issues to resolve owing to the imperfect information assumption.

Quadrant III represents the interesting case of “perfect competition less perfect information” which has been developed, for example, by Stiglitz (Stiglitz, 1979; OECD, 2001, p. 22). Important changes may affect the markets (Stiglitz, 1979; see also OECD, 2001, pp. 22ff). According to Stiglitz, “if all individuals have positive search costs (no matter how small), there never exists a competitive market equilibrium with uniform prices for homogeneous commodities” (Stiglitz, 1979, p. 340). Nevertheless, if we consider that equilibrium may exist, the prices charged would be higher than the competitive price even in case of small search costs because firms will benefit from some market power owing to the imperfect information (Stiglitz, 1979, p. 339). In the case of market equilibrium, firms may also adopt price discrimination, charging the highest price to consumers facing the highest search costs (Stiglitz, 1979, p. 340). Finally, Stiglitz considers that the demand curve could be kinked because the consumers may be divided into two groups: those who are looking for the lowest price and those who are looking for the nearest shop. Each group’s demand may have a different price elasticity reflecting a different reaction when some shops are increasing or decreasing their prices (Stiglitz, 1979, p. 343). This result shows that imperfect information may reduce social surplus or at least consumer surplus even though the other parameters of the perfect competition model are met. As indicated by the Organisation for Economic Co-operation and Development (OECD), in the case of “perfect competition and less

Table 6.1 Combination of Perfect Market Criteria

a)

		All other criteria of Perfect Competition Model	
		Perfect	Imperfect
Information	Perfect	I	II
	Imperfect	III	IV

b)

		Decreasing returns on investment	
		Yes	No
Information	Perfect	I	II
	Imperfect	III	IV

perfect information”, “a sufficiently significant increase in price transparency could result in markets emerging where there were none before, or at least none having equilibrium prices. In some situations it could also produce lower prices and reduce the incidence of price discrimination. With pure competition, increased price transparency is generally good for at least the buyers with the highest search costs, but may not necessarily increase economic efficiency” (OECD, 2001, p. 23).

Quadrant II is particularly interesting if we assume that perfect information is associated with other market imperfections such as, for example, the presence of increased return on investment (economies of scale). This last case corresponds to quadrant II of Table 6.1b that concentrates on the combination of two important parameters for competition policy: information and return on investment. First, it is important to consider the effects of imperfect information because, as indicated by Stiglitz, “[i]t has long been recognized that imperfect information would result in firms having some degree of monopoly power” (Stiglitz, 1979, p. 339). Second, it is relevant to scrutinize if perfect information is the best option to protect social welfare and in particular consumers’ welfare in all kinds of market structures determined according to the level of returns on investment (large number of firms, limited number of firms in oligopolistic markets, monopoly market, etc.). This question is tackled in the following section.

6.3 MARKET TRANSPARENCY

AND COLLUSION

Market transparency is usually considered a prerequisite to get the highest possible consumer surplus (Møllgaard and Overgaard, 2001, p. 2). Consumers are able

to compare the prices of products and to buy the cheapest ones. Transparency also decreases the search costs of potential products. Transparency provides technical information about the characteristics of the products. Information regarding product features is usually considered an important tool to protect consumers. As far as price information is concerned, a more cautious approach is necessary (Møllgaard and Overgaard, 2001, p. 3). In perfect competition markets, or at least in highly competitive markets, price transparency is an important pro-competitive tool in most cases (quadrants I of Table 6.1a and b). Consumers are able to bargain and to get the better deal. However, if price transparency occurs in markets where a limited number of producers are competing, such as in oligopolistic markets (a market failure), collusion among these producers may appear depending on the market structure features (low or high barriers to entry; homogeneous products or differentiated products, etc.) (quadrant II of Table 6.1b). The combination of two perfect competition criteria, perfect information, and product homogeneity results in serious incentives to collude in oligopolistic markets (Table 6.2).

As underlined by the OECD, “[u]nder certain conditions, increased price transparency can significantly increase the probabilities of conscious parallelism and anti-competitive co-ordination” (OECD, 2001, p. 9). Explicit or tacit collusion is more likely to occur in oligopolistic markets characterized by homogeneous products (insurance and banking services, vitamins, cements, air transports, etc.). As price is one—if not the only one—of the major competing parameters, it is easier to agree on its level. However, collusion mechanisms are complex and may lead to cartels only under specific circumstances. According to game theory, players are more likely to collude if they are facing an indefinite repeated game (frequent interactions between the firms that do not know if and when the interactions will end) and if they assign a sufficient value to future payoffs gained as a result of the collusion (Axelrod, 1980, 1981).

Players may agree to collude if the cartel is sustainable, that means if they get some insurance that the other players will not cheat (e.g., by setting their prices below the agreed on price to attract more customers). This condition implies market transparency, in particular price transparency, in price cartel cases in order to detect any defecting behavior (OECD, 2006, p. 8). If players are aware that any cheating will be detected immediately, they will be more confident to collude (European Commission, 2004, para 50, p. 10). According to the European Commission, “[t]he speed with which

		Types of products	
		Homogeneous	Differentiated
Information	Perfect	+++	+
	Imperfect	+	---
+: incentives to collude.			

deterrent mechanisms can be implemented is related to the issue of transparency. If firms are only able to observe their competitors' actions after a substantial delay, then retaliation will be similarly delayed and this may influence whether it is sufficient to deter deviation" (European Commission, 2004, para 53, p. 11). In such types of situation, price transparency is a prerequisite to form a sustainable cartel. Therefore, price transparency in oligopolistic markets provides significant incentives to collude and therefore plays against consumers' welfare (OECD, 2001, pp. 25–31).

As underlined by Besanko and Spulber, "in the terminology of information economics, moral hazard problems arise if a cartel's price-fixing activities are not observable, while adverse selection problems can occur if a cartel's characteristics (e.g., production costs) are privately known to the cartel" (Besanko and Spulber, 1989, p. 408). The detection of a cartel and the identification of evidence regarding the cartel members' behavior is one of the most crucial concerns in antitrust policy. Price transparency in a market does not imply that antitrust authorities will be able to detect a cartel. Detection of a cartel is not an easy task. Price transparency may occur only within the market "insiders" group and not necessarily for "outsiders" (Jenny et al., 2011). For example, members of an industry regularly exchange data regarding the prices but do not disclose these data to others. As stated by the OECD, "[o]ne can make three general observations about the impact of asymmetric increases in price transparency:

- a. activities enhancing transparency only among businesses are more worrisome than transparency enhancement among businesses and their clients;
- b. measures by firms or associations to restrict the availability of price information to consumers, while presumably leaving price transparency among sellers unchanged, raise important dangers for competition; and
- c. measures extending to consumers transparency, which already exist among businesses, should generally be pro-competitive." (OECD, 2001, p. 10).

The concern expressed under (a) is a tricky issue in antitrust economics. As underlined by Posner, "information is a two-edged sword: it is necessary if the competitive process is to work properly; but it can also facilitate collusion" (Posner, 2001, p. 160). Competitors may be tempted to exchange information in response to imperfect information in a market. In some circumstances exchange of information among rivals may be a prelude to or a tool of collusive behavior (Whish, 2001, pp. 441–442). Exchange of information among competitors may be considered as "‘facilitating practices’, that is to say practices that make it easier for firms to achieve the benefits of tacit coordination. The most obvious of these is the exchange of information which increases the transparency of the market and so make parallel behaviour easier" (Whish, 2001, p. 469). The type of information exchange is also important to consider in this respect. Exchanges of information about prices and quantities are more likely to facilitate collusion than general information regarding demand specificities (Motta, 2004, pp. 151–152).

Anticompetitive effects of price information have to be assessed according to the other features of market structure, in particular if the case occurs in an oligopolistic

market and not in a market with numerous sellers (quadrant II of Table 6.1b) (Posner 2001, pp. 86 and 168). Furthermore, if the case occurs in an oligopolistic market with homogeneous products (to consider also quadrant I of Table 6.2), information exchange among competitors—while increasing transparency—may more likely facilitate collusive behavior. Many examples based on European Commission decisions in cartel cases illustrate this mechanism (Roques, 2009).¹

The existence of a unique price in a market does not necessarily mean that it is the result of a cartel. In Bertrand-type competition, the market price may be a competitive price² even though collusion seems to be easier to achieve in a Bertrand oligopoly than in a Cournot oligopoly with homogeneous products (Suetens and Potters, 2007, p. 71). In such cases, the antitrust authorities have to scrutinize if the sole price is the result of an intense competition or of a collusive outcome. Cartel members may also construct sophisticated collusion schemes avoiding to apply the same price. For example, they may agree to fix different prices and to organize a compensation mechanism for those cartel members who agree to charge lower prices (prices that are still in most cases far higher than the production costs).

As far as submission markets are concerned, in particular in case of public procurement, producers may agree in advance about the firm that will get the deal. Another firm will get the deal next time and so on. Therefore, they agree to propose a price far higher than the price of the designated winner who will get the contract. Of course the winner's price will generate a high markup (difference between the price and production costs). Transparency is the core issue in public procurement: "An obvious way to ensure that authorities in charge of public procurements award contracts solely on merit is to require that the detail of competing bids be published. This would make it considerably easier for aggrieved parties to detect and bring complaints against unfair or corrupt practices. Unfortunately, it also facilitates detecting cheating on bid rigging arrangements" (OECD, 2001, p. 12). In that case, collusion is facilitated. Because government members and civil servants are not specialists in many industries subject to public procurement (construction of buildings, construction of infrastructures such as bridges and tunnels, purchase of sophisticated high-tech equipment, etc.), firms may take advantage of the information asymmetry to organize cartel schemes. It is very difficult to identify such cartels. In the rare cases when cartels are identified this occurs

¹ Several recent cartel cases in the EU highlight the role of exchange of information among cartel members (Gobet, 2012). For example, in the "Prestressing Steel" cartel case (COMP/38.344), the EC identified a high transparency of the market facilitating collusion (European Commission, 2010b, pp. 207 and 216). The EC also identified the fact that cartel members exchanged information on sales to increase transparency and therefore the sustainability of the cartel (European Commission, 2010b, p. 99). In the cartel case "Bathroom Fittings and Fixtures" (COMP/39.092), the European Commission discovered that the firms were exchanging business information while fixing prices and rebates (European Commission, 2011, p. 12). The "Animal Feed Phosphate" cartel case (COMP/38866) was also based on exchange of information among cartel members (COMP/38866, 2010, p. 28).

² In oligopolistic models with homogeneous goods, Bertrand competition may lead firms to apply the competitive price (price equal to marginal costs).

ex post. To prevent such behavior some authorities have adopted rules indicating that cartel members would be excluded from any public procurement in the future.

Thus, the detection of cartels is very difficult because the antitrust authorities are facing a lack of transparency regarding the real market conditions, firms' production costs, and so forth. As in any antitrust case, citizens and enterprises may provide information to the antitrust agencies either through formal complaints or through simple information (European Commission, 2011, p. 6). Nevertheless, these kinds of "external" information do not provide any proofs of an infringement in most cases. Antitrust authorities need to apply sophisticated tools to overcome this lack of transparency. Economic theory may provide some useful insights. As noted by Schinkel, "Monitoring markets for behavioral patterns indicative of collusion can help target further inspections of companies that display suspicious behavior. An emerging literature develops such 'live forensics' methods to systematically screen markets for antitrust violations, in particular, cartels. Practitioners as well as academic economists contribute to the development of sophisticated antitrust screens. They typically apply a combination of two types of indicators of cartel likelihood: structural and behavioral indicators" (Schinkel, 2007, p. 8).

One of the major instruments adopted in many jurisdictions over the last few years are the so-called "leniency programs." These programs are based on the prisoner's dilemma. They grant immunity to the first cartel member who contacts the antitrust authority and reveals the existence of the cartel. Leniency programs are the most effective way to overcome the problems of lack of transparency and of course to get the evidence allowing the authorities to prove the existence of the cartel (DOJ, 2004).

Finally, antitrust authorities do not have enough resources to analyze any potential cartels they may suspect. This point raises the topic of the "optimal antitrust policy" whose aim is to concentrate the resources on the cases with the greatest harm potential. Some authors have developed this issue. For example, Pénard and Sovam present a model "to determine the optimal antitrust policy against price-fixing when competition authorities imperfectly observe firm's behavior" (Pénard and Sovam, 2002, p. 209).

As showed in this section, transparency in a specific market is a complex issue for competition policy as far as risks of collusion are concerned. In markets characterized by a small number of firms, price transparency may lead to explicit or tacit collusion. Second, despite the general economic thoughts on this issue, a case-by-case approach is necessary because collusion may arise or not arise depending on the markets specificities. As mentioned by the OECD, "[t]he competitive risks of increased price transparency, under certain market conditions, have not always been sufficiently appreciated by government policy makers. There have been instances where government mandated increases in price transparency seemed to have produced higher rather than lower prices, probably because they facilitated anti-competitive co-ordination among sellers. But in other cases some government sponsored increased price transparency may have led to enhanced price competition. The difference in outcomes reflects the importance of market conditions in determining the impact of changes in price transparency" (OECD, 2001, p. 9).

6.4 MARKET TRANSPARENCY AND MONOPOLIZATION OF MARKETS

Monopolization of a market is called “abuse of dominant position” in many jurisdictions such as in Europe. The analysis of this behavior is based on the identification of two important market facts. First, the antitrust authorities have to clarify if the firm enjoys a dominant position. If the answer is affirmative, the second step is to identify if a specific behavior of this firm is considered as an abuse of dominant position. From an economic point of view, a dominant position is defined as “a position of economic strength enjoyed by undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers” (European Commission, Case 27/76 *United Brands Company and United Brands Continental BV v. Commission* [1978] ECR 207, para 65). A firm enjoying a dominant position is in no way a price taker. The spectrum of potential scenarios is depicted in the right column of Table 6.1a and b.

The definition of a dominant position as expressed in the preceding text raises two important issues: first, the dominance of one specific firm and, second, the dominance of a group of firms. This latter case is called collective dominance (OECD, 2006, p. 2). Here again, because market conditions are not fully transparent, the analysis has to be based on market tests related to economic theory.

Price transparency issues may also play an important role in a specific kind of monopolization of market: predatory pricing. Predatory pricing strategy implies that a dominant firm fixes prices under the production costs to push competitors out of the market and to deter any new entrants. Once the dominant firm is alone in the market, it enjoys a monopoly position and therefore the firm raises its prices and recovers the loss induced during the predatory phase. Injured competitors may inform the antitrust authorities who will scrutinize the case. However, in markets with lack of transparency, competitors may not identify that their loss of market share is due to a predatory pricing strategy of a specific firm. The success of a firm may be based on its own merits (best product closely adapted to customers’ needs with a low production cost). Once the potential predatory pricing strategy is on the table of the antitrust authorities, the main task is to prove that the prices applied are lower than the production costs and are the result of a deliberate strategy to kick competitors out of the market and to deter any new entry. The authorities will need different information such as the cost structure of the dominant firm to state if the price level was under the average variable costs (in this case, the firm cannot justify its strategy because it would have been less costly not to produce anything) or between the average total costs and average variables costs. In this latter case the authorities will have to prove that the dominant firm had a real intention to monopolize the market because it may be justified to stay in the market as long as the variable costs and a share of the fixed costs are covered by the price (Arreda and Turner, 1975; Combe, 2002, p. 70). Estimations of production costs are quite difficult

because the antitrust authorities depend partly on the information disclosed by the firm under investigation.

Perfect or imperfect information has been taken as an important parameter to assess the relevance of any predatory pricing strategy in markets. According to the Chicago School, predatory pricing is more theoretical than real (Posner, 2001, p. 210). The conditions to be able to apply a successful predatory strategy are quite rare. Posner highlights the fact that potential competitors may enter the market once the predator is enjoying his monopoly position by increasing the prices. If barriers to entry and exit the market are low, a potential competitor may apply a “hit and run” strategy (Posner, 2001, p. 210). The entry of new competitors will push the prices down. Therefore, in markets with low barriers to entry and to exit, a predatory pricing strategy is unlikely to occur, in particular in perfect information situations (Posner, 2001, p. 212). We may argue that predatory pricing may be a rational strategy when transparency is low. On the one hand, it is difficult for potential competitors to assess if it would be profitable to enter the market once the predator has achieved a monopoly position. On the other hand, the predator may estimate that the antitrust authorities will not be able to discover and to prove that his pricing strategy is a predatory one.

Antitrust authorities are facing lack of transparency in another important type of abuse of a dominant position: access conditions (such as access price) to an essential facility owned by one operator enjoying a dominant position. Most utility industries are in fact network industries. The network induces a natural monopoly in many cases. It is therefore not efficient to duplicate the network. This part of the industry is linked with one or several competitive segments that allow the existence of several firms competing with each other (see Section 6.5). However, these latter need to have a fair access to the network to be able to compete in the industry. In most cases, the owner of the network is also competing in the competitive segments of the market and may be tempted to block the access to its network, to charge very high access prices to its competitors, and/or to attach other kinds of unfair conditions to the access to its network. Because the network owner benefits from a dominant position on the network, this type of behavior would be qualified as an abuse of a dominant position. The main task of the antitrust authorities is on one hand to identify the level of the price that covers the investment and the operational costs of the network owner and on the other hand to guarantee equal conditions to all competitors. Owing to lack of information regarding cost structures of the essential facility antitrust authorities and/or sector regulators face important difficulties to assess whether or not the access prices and access conditions set by the network owner reflect the real conditions in the industry.

6.5 MARKET TRANSPARENCY AND MERGER REVIEW

Market transparency may play a significant role in merger and acquisition strategies of firms (here after called “mergers”). Mergers may allow firms to get access to

information retained by other firms. This may be the case for horizontal mergers as well for vertical and conglomerate ones. For example, horizontal mergers may be motivated by the prospect of access to technological knowledge of a potential partner. As far as vertical mergers are concerned, they may be a response to the high transaction costs with upward or downward business partners caused by information asymmetry (Carlton and Perloff, 1994, p. 504). These transaction costs may encourage firms to adopt a vertical integration strategy. If a vertical integration strategy is not feasible, firms may conclude vertical agreements. These agreements may prevent disclosure of information in some cases as well as exchange of information in others. These exchanges of information may raise antitrust concerns. The Leegin case (Peeperkorn, 2008, p. 60) as well as the Pioneer Europe case (Prieto, 2008, p. 8) are famous examples of firms using exchange of information within vertical agreements to impede competition.

Market transparency is also a crucial parameter in merger reviews of antitrust authorities. Mergers considered as “important” according to the annual sales or market shares of the parties involved need to get an approval from the jurisdictions where the merger may affect competition. In these cases, the antitrust authorities are informed about the merger projects prior to their concrete realization. Once a merger is notified to the antitrust authorities, a review process analyzes the effects of the proposed merger. In horizontal merger cases, the review covers issues related to two types of effects (European Commission, 2004, para 22, p. 7): the merger may lead to a substantial increase of market power that may affect competition, or it may modify the market structure in such a way that the remaining firms in the market will coordinate their behavior and create a collective dominance.

The review of the noncoordinated effects (unilateral effects) is based on the analysis of the merger’s potential impact on allocative efficiency (will the new firm raise the price and therefore reduce consumer surplus?), on productive efficiency (will the new firm be able to decrease its production costs because of economies of scale and of scope?) as well as on dynamic efficiency (will the new firm be able to invest more in R&D and therefore get more innovation or will the new firm block innovation?). This kind of review is facing many challenges owing to lack of information regarding the potential effects of the merger on production costs, on demand (assessment of price elasticity of demand), and so forth. Williamson proposed a very simple model whose aim is to compare the merger’s effects on allocative inefficiency (reduction of social welfare due to the increase of price) and on productive efficiency (reduction of the merger firm’s production costs due to economies of scale and scope) (Viscusi et al., 2005, pp. 210–214). However, this model is quite limited as it is difficult to apply in real cases owing to lack of information regarding demand elasticity, cost structures of the merged firm, and so forth.

As far as coordinated effects are concerned, “[a] merger is said to have coordinated effects, if it improves the possibilities of oligopolistic firm to coordinate tacitly. In other words, the merger improves the possibility of reaching a particular form of coordinated behavior (a “focal point”) and/or it improves the possibility of enforcing a certain coordinated behavior through conditional strategies such as those outlined above” (Albaek

et al., 2010, p. 5). This second step of the review examines if, in case of allowance of the merger, the post-merger market conditions will be favorable to future collusion between the merged firm and the other competitors in the market creating a so-called “collective dominance” or “oligopolistic dominance.” The analysis is a pure prospective study that requires the use of economic tools to scrutinize the general conditions of the market, the characteristics of the supply side and of the demand side. Among those criteria, transparency of the market is an important parameter to assess whether or not collusion may appear in the future (Whish, 2001, p. 463). The main market considerations explained in the preceding text regarding collusion are at work (see Section 6.1). Market transparency is one of the major conditions to create collective dominance. For example, in the Airtour case (mergers inducing the British tour operator and supplier of package holidays Airtour and the British tour operator First Choice), the European Commission challenged the merger because it concluded that this merger might lead to an oligopolistic dominance in the “United Kingdom short-haul foreign package holiday market” (European Commission, 2002). However, this decision was overturned by the Court of First Instance (CFI), which considered that the market was insufficiently transparent to induce any collusion among the major players (CFI, 2002, para 62, p. 2613).

The European Commission’s guidelines of horizontal mergers mention the parameters to consider in the study of market transparency (European Commission, 2004 cited by Albaek et al., 2010, p. 7). This document states that “Publicly available key information, exchange of information through trade associations, or information received through cross-share-holdings or participation in joint ventures may also help firms reach terms of coordination. The more complex the market situation is, the more transparency or communication is likely to be needed to reach a common understanding on the terms of coordination” (European Commission, 2004, para 47, p. 10). Coordinated behaviors are unlikely to happen if markets are imperfectly transparent. Though assessing the risk that a merger may lead to oligopolistic dominance, it is therefore crucial to estimate the level of transparency. However, transparency is difficult to measure (Buccirossi, 2008, p. 116).

6.6 MARKET TRANSPARENCY AND REGULATION OF NETWORK INDUSTRIES

Competition policy—based on regulation (*ex ante*) as well as on antitrust measures (*ex post*)³—is particularly important in the case of industries characterized by

³ Antitrust policy is considered as an *ex post* task of the authorities except in the case of mergers and acquisitions where the antitrust agency is notified about the concentration project prior to its execution, which can take place only once the agency has given its consent.

a “non-competitive component” combined to one or several “competitive components.” Referring to Table 6.1b, we are considering the case of strong economies of scale leading to a natural monopoly (second column of the figure). Real cases regarding natural monopolies take place in situations of imperfect information (quadrant IV of Table 6.1b). Here imperfect information occurs at several levels: between agents in the industry as well between agents and authorities (regulator, ministry, antitrust institution).

The main industries characterized by competitive components as well as by non-competitive components are the network industries such as in the sectors of telecommunication, energy, and transportation. The cost structure of the network is usually subadditive (natural monopoly) whereas activities using the network may allow the presence of several competitors. It is therefore quite difficult to put in place the optimal regulation covering the noncompetitive component (natural monopoly of the network) with the other competitive activities located upward and downward the network (Gönenc et al., 2001, p. 27; OECD, 2006, p. 10).

As far as the noncompetitive segment is concerned, the first issue is to decide who will run the natural monopoly. In most cases, the historical incumbent, who often benefited from a monopoly right covering the noncompetitive segments as well as the competitive segments in the past, owns the network. The authorities may decide to keep the undertaking in place but may also challenge its position and may organize a bid to decide who will get the position. This selection process may also occur in the competitive segments of the industry, for example, when the number of agents has to be limited for technical reasons (e.g., mobile services operators). The authorities are facing the challenge to choose the most efficient operator(s) in a context of lack of transparency regarding the real capabilities of the candidates. Usually, the authorities organize auctions or beauty contests to try to resolve the problem. Because most essential facilities (network) have capacity constraints, the second step is to determine how many competitors will be allowed to use it and then which candidates will be accepted by the authorities. Here again, owing to asymmetric information, authorities have to organize beauty contests or auctions to try to get information regarding the capabilities of the candidates. These mechanisms are aimed at achieving an “optimal transparency” that may allow the regulators to take the most efficient decisions.

Once the choice regarding who will operate as a natural monopoly is made (in cases when the authorities are in charge of allocating the capacities), the second important competition policy issue refers to access and conditions of access to the network (non-competitive segment) for the agents active in the competitive segments of the industry (e.g., several railways companies using the network of the incumbent firm or several telephone providers using the fixed network of the incumbent firm). The point is particularly important when the owner of the network is also competing in the competitive segment. The network owner’s temptation is to impede access to its network or to impose unfair conditions (pricing, quality of the network components offered) for the competitors. Regulation provisions tend to settle clear rules on this matter. If the natural monopoly incumbent does not respect those rules, the antitrust authorities

may also open an investigation for abuse of a dominant position (monopolization of market) (see Section 6.4). However, imperfect information increases the difficulties to assess the situation, for example, to prove that the interconnection prices are too high.

Regarding the recurrent issue of monopoly pricing, the economic literature recommends “incentive regulations” that may resolve some problems due to the lack of transparency: “This is because, regardless of the form of price regulation, asymmetric information inevitably leads to regulators being poorly informed relative to those they regulate and provides incentives for gaming behavior on the part of regulated firms” (Gönenc et al., 2001, p. 31). In the case of industries where some segments are noncompetitive whereas others are competitive, the interconnection prices (access price to the network) are crucial for the overall functioning of the market. The authorities have to find the right algorithm avoiding too high prices, which would provide a competitive advantage to the incumbent and deter entry in the market of efficient firms, as well as too low prices, which would have negative effects on the ability of the incumbent firm to invest in the quality and sustainability of the network and that would allow the entrance in the market of inefficient firms (Gönenc et al., 2001, p. 32). The main pricing mechanisms based on incentive methods are the “yardstick competition method” (the regulator compares the regulated firm’s performances with those of other firms that serve as benchmarks) and the “price-cap regulation” which pushes firms to reveal its costs (Gönenc et al., 2001, p. 30).

Despite the *ex ante* rules adopted to promote fair and equal market access in network industries, numerous cases show that *ex post* interventions from the antitrust authorities may be necessary to prevent unfair access conditions imposed by an incumbent firm that is monopolizing the market (abuse of dominant position) by taking advantage of imperfect information. In most cases, antitrust authorities have to prove that the access conditions imposed by the monopoly do not reflect its costs and discriminate the competitors. In these cases, the authorities are facing difficult questions to determine the real cost structure of the network’s owner. Lack of transparency is again at work.

6.7 MARKET TRANSPARENCY AND COMPETITION POLICY ENFORCEMENT PROCEDURES

Transparency relating to competition policy enforcement is also an important issue to consider because most decisions and rules directly affect the functioning of the markets and therefore the freedom to do business. While enforcing competition laws and rules, the authorities are facing imperfect information that affects their analysis of the definition of the market, of the assessment of the market parameters (market shares, firms’ cost structures, etc.), the identification of anticompetitive behavior, the acquisition of

evidence of infringements, and so forth (Besanko and Spulber, 1989, pp. 408; Schinkel and Tuinstra, 2002, p. 4). This may lead to imperfect antitrust enforcement as “there is a real possibility that authorities may occasionally err, missing the true violations of competition law or finding firms liable that have indeed done nothing but good competition” (Schinkel and Tuinstra, 2002, p. 1). Under asymmetric information, economic agents may try to capture the regulators (Gönenc et al., 2001, p. 15).

This section tackles the other side of the coin in considering the asymmetric information affecting firms under investigation as well as any other economic agents directly or indirectly affected by a competition case. As noted by the OECD, “[i]t is widely recognized that in order to ensure citizens’ confidence and belief in a fair legal system and in those applying the law, it is important that procedures regulating the relationship between the public sector and citizens are, and are generally perceived as, fair and transparent” (OECD, 2012, p. 23).

Many jurisdictions have adopted internal rules and procedures regarding the enforcement of the antitrust law. For example, the European Commission has a clear framework covering the investigation of cartels and abuse of dominant position as well as mergers (see, e.g., European Commission, 2004). The transparency of the procedures is also considered an important tool to help antitrust agencies to collect information. As noted by Spratling from the Antitrust Division of the Department of Justice (DOJ) in the United States, “[o]ver the last several years, the Division has had unprecedented success in terms of cracking international cartels, securing the conviction of the major conspirators, and obtaining record-breaking fines. A critical component to this success has been our ability to obtain the cooperation of some companies and individuals against their fellow cartel members. This cooperation from offenders, in turn, has been dependent upon our readiness to provide transparency throughout our anti-cartel enforcement program” (Spratling, 1999, p. 1). These guidelines tend to decrease the level of uncertainty regarding the antitrust enforcement criteria.

Three main issues based on the “life cycle” of an antitrust procedure are the following (OECD, 2012):

- Transparency regarding the provisions of the laws, regulations, and guidelines
- Transparency regarding the investigation processes
- Transparency regarding the disclosure of the results

6.7.1 Laws, Regulation, and Guidelines

The enforcement of competition policy depends on specific laws and other official publications. It is required that the content of these rules is as clear as possible. As stated by the OECD (2012, p. 10), “[. . .] stakeholders should have available to them information relating to the laws and policies governing the agencies’ activities, as well as internal rules and procedures that the agencies follow.” In many cases, the considerations underlying the decisions cannot be stated in legal text. Some provisions foresee “per

se rules” that indicate and clarify what is forbidden and what is allowed. But in many cases, the “rule of reason” applies because each case has to be scrutinized according to its specificities that cannot be stated *ex ante* in law. Some jurisdictions publish guidelines regarding the policy applied in specific cases and/or for specific sectors (e.g., European Commission Guidelines regarding merger reviews or specific vertical agreements in the automobile sector).

6.7.2 Investigation Processes

Information regarding the investigation processes may relate either to the firms under investigation and/or to other economic agents and citizens (McAfee, 2008 p. 3). A three-step approach may be recommended.

The first step covers market screening activities as well as secret inquiries. For example, if the authorities are informed about a potential anticompetitive behavior, they may first try to scrutinize the market to assess whether or not the accusation is credible. This first phase is in general secret for several reasons. First, firms may destroy any proof of their infringement if they are aware that the antitrust authorities are observing their behavior and looking for evidence that they may have violated the antitrust law. As Grimes notes, “[w]hen prosecutors are investigating potential criminal misconduct, confidentiality may be needed to prevent the investigation target, or to lessen the risk that a potential defendant will flee the jurisdiction” (Grimes, 2003, p. 948). Second, secrecy may also protect the firms under allegation *vis-à-vis* the public to avoid affecting their reputation in case they are innocent. The adage “there is no smoke without fire” may cause important damage to innocent firms. In some cases, it may be advisable to contact the firms under accusation to inform them about the allegations raised against them and to give them the opportunity to provide their own interpretation of the case. Such a two-sided information process may help the authorities to decide whether or not to open an investigation.

During the second step, firms under investigation are officially informed about the (informal or formal) procedure that has been initiated. As indicated by the OECD, “Once subjects have been informed of the allegations against them, many agencies offer the parties under investigation an opportunity to examine the case file and the evidence contained within it, subject to confidentiality concerns. In many jurisdictions, competition authorities have an obligation to act fairly in the collection and disclosure of relevant evidence, including exculpatory evidence. A right to access the evidence used to support the allegations against them ensures that parties to an antitrust proceeding have full knowledge of the case and details concerning the alleged violations against them, allowing them to substantially respond before a decision is taken” (OECD, 2012, p. 25).

Once the investigation process has started, meetings and dialogues between the authorities and the firms under investigation are an important step to decrease the asymmetry of information for both sides. On the one hand, each side needs to get as much

information as possible from the other side and on the other hand, each side may have an advantage or even the duty to hide some information. For example, the identity of the plaintiffs has to be kept secret in most cases. The law may obligate firms to disclose information but firms may also have many means to hide some information or to provide distorted information. This investigation phase may be understood as a strategic game.

6.7.3 Disclosure of the Results

The announcement of the final decision in a third step is also subject to cautious rules because these decisions are publicly released in many countries. The publication of the final decision has to provide detailed information about the case and about the decision criteria. Disclosure of the authorities' analysis is important to guarantee their credibility and also to minimize discretionary decisions. However, it is crucial not to disclose any confidential information that may harm the firms under investigation and/or any third parties involved. It is particularly the case in merger reviews (Gelfand and Calsyn, 2005). Grimes notes: "Agency intransigence in the face of demands for more disclosure can be well-grounded. If transparency is excessive, misplaced, or poorly implemented, it can do more harm than good" (Grimes, 2003, p. 948).

Most debates and discussions regarding which kind of information should be provided by the authorities show that it is very difficult to establish the optimal level of transparency because the maximal level of transparency may harm the efficiency of the enforcement of antitrust laws.

To sum up, we observe that the enforcement of competition policy along the life cycle of the procedure starting with simple observation of the market or with the check of allegations put forward by a third party and ending with a final decision faces tremendous challenges as far as transparency is concerned. Asymmetric information occurs at several levels, between several agents and institutions. The flow or the lack of flow of information are multidirectional: economic agents vis-à-vis other economic agents, competition agency vis-à-vis economic agents, economic agents vis-à-vis competition agency, regulators vis-à-vis competition agency, competition agency vis-à-vis regulator, and competition agency of country A vis-à-vis competition agency of country B.

While we are focusing on public antitrust enforcement in this section, we must not forget the asymmetry of information affecting private antitrust enforcement (through civil courts that are in general not specialized in antitrust issues) as both enforcements may present some differences in the way information is treated (McAfee et al., 2008, cited in Bourjade et al., 2009, p. 380).

6.7.4 International Competition Policy

Transparency of competition policy is considered an important driver of an efficient international trade system. For example, the US International Competition Policy

Advisory Committee issued three main recommendations to the US government in 2000, one of them being: "Increased transparency and accountability of government actions, including those of the U.S. government as well as other jurisdictions, and a more nearly shared view by such authorities of what constitutes best practices in the field of competition policy and its enforcement" (International Competition Policy Advisory Committee, 2000).

Many firms are doing business in several jurisdictions and therefore their activities are subject to different antitrust laws and policies (Melamed, 1998). The transparency concerns raised above at the national level are multiplied by the fact that firms are facing different laws and practices. This concern is particularly important in merger review procedures. As indicated by the European Commission, "the continued growth in internationalization of business activities, and the increasing number of jurisdictions which have adopted merger laws, correspondingly increase the number of mergers that are subject to review under merger laws in more than one jurisdiction" (cited in OECD, 2005). Because different jurisdictions may apply different rules and different practices and criteria, firms are facing important information asymmetry problems. In the Boeing/McDonnell-Douglas case, the European Commission was reluctant to give the green light to the proposed merger. After talks at the highest political level between the European Commission and the United States, the European Commission allowed this merger but subject to numerous conditions. In the case General Electric/Honewell, a merger allowed by the US authorities, the European Commission finally decided to forbid it.

As a result of the uncertainty and unpredictability exemplified by these cases, the business community calls for a convergence of the practices applied by different jurisdictions as well as for greater transparency. However, the business associations advocate an *optimal* international transparency framework on competition policy rather than a *maximal* transparency regime. For example, as far as multijurisdiction mergers are concerned, the International Chamber of Commerce (ICC) and the Business and Industry Advisory Committee (BIAC) "welcome the Report's emphasis on the necessity for increased transparency and "appropriate safeguards to protect the privacy and fairness interests of private parties" when competition authorities cooperate with each other" (ICC and BIAC, 2000, p. 3) As underlined previously, business secrets need to be protected to a certain point. The ICC and BIAC mention clearly that "any information designated by a company to be confidential should be classified as such" (2000, p. 5).

Of course, the definition of "optimal transparency" seems to be differently understood by the business associations and the antitrust authorities. For example, antitrust authorities consider that exchange of information among themselves is necessary to conduct efficient merger review and antitrust procedures. Firms try to hinder any development in this direction citing a "lack of transparency of the cooperation process," in particular in merger reviews (Jenny, 2002, pp. 16–17). It is obvious that antitrust authorities are suffering from a lack of information when the firms under scrutiny are located outside their jurisdiction. According to the conventions of international law,

national authorities are not authorized to investigate in other jurisdictions. In many countries, national authorities are not authorized to exchange information with other national antitrust authorities unless an international agreement explicitly foresees this exchange of information. Some firms are “playing” with these important loopholes. It is particularly the case in countries where antitrust law is inexistent or very weak (Jenny, 2002).

6.8 CONCLUSION ON TRANSPARENCY OF COMPETITION POLICY

Transparency is one of the core issues in competition policy. Information asymmetries occur at several levels as indicated in this chapter:

- at the level of firms that compete within the same relevant market
- at the level of firms located upwards or downwards on the value chain
- at the level of producers/sellers and consumers
- at the level of firms and antitrust/regulation authorities

The transparency issues arising at these different levels are not mutually exclusive. Therefore, very complex situations may occur and their analysis has to be done on case-by-case basis. Real competition is based on perfect information. Any lack of transparency may induce behaviors and policies that reduce competition and therefore affect economic efficiency as well as social welfare. However, maximal transparency is not necessarily the best option when markets are imperfect.

The chapter has shown that a high level of transparency may in fact be detrimental to some categories of economic agents. For example, in oligopolistic markets, a high level of price transparency may encourage firms to collude. Or, as far as antitrust procedures are concerned, authorities may not disclose information to protect the interest of some economic agents being the plaintiffs in some cases and the firms under investigation in other cases. This raises the issue of “optimal transparency.” In both cases, optimal transparency seems to be a more efficient alternative than “maximal transparency.” Regarding antitrust procedures, it is up to the authorities to find the right level of transparency and therefore to apply an “optimal transparency” regime. In the case of price transparency occurring in oligopolistic markets, the *marge de manoeuvre* of the authorities is more limited. On the one hand, they may adopt a severe regime impeding or punishing any attempts to increase transparency among competitors through information exchange. However, on the other hand, some industries are more transparent than others and cannot be artificially regulated in such a way as to reduce transparency. Any attempt to reduce transparency could generate negative side effects that may cause more damage than benefit to the society.

REFERENCES

- Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and market mechanism. *Quarterly Journal of Economics*, 488–500.
- Albaek, S., Mollgaard, P., and Overgaard, P. B. (2010). Transparency and coordinated effects in European merger control. *Journal of Competition Law and Economics*, 1–13.
- Arreda, P., and Turner, D. (1975). Predatory pricing and related price practices under section 2 of the Sherman Act. *Harvard Law Review* 88, 697–733.
- Axelrod, R. (1980). More effective choice in the prisoner's dilemma. *Journal of Conflict Resolution* 3, 279–403.
- Axelrod, R. (1981). The emergence of cooperation among egoists. *American Political Science Review* 75, 306–318.
- Besanko, D., and Spulber, D. (1989). Antitrust enforcement under asymmetric information. *Economic Journal* 99, 408–425.
- Blair, R. D., and Kaserman, D. L. (2009). *Antitrust Economics*, 2nd ed. Oxford: Oxford University Press.
- Bourjade, S., Rey, P., and Seabright, P. (2009). Private antitrust enforcement in the presence of pre-trial bargaining. *Journal of Industrial Economics* LVII(3), 373–409.
- Browning, E. K., and Zupan, M. A. (2006). *Microeconomics: Theory and Applications*, 9th ed. Hoboken, NJ: John Wiley & Sons.
- Buccirossi, P. (2008). *Handbook of Antitrust Economics*. Cambridge, MA: MIT Press.
- Carlton, D. W., and Perloff, J. M. (1994). *Modern Industrial Organization*. New York: HarperCollins.
- CFI. (2002). *Judgment of 06.06.2002—Case T-342/99 Judgment of the Court of First Instance*. <http://curia.europa.eu/juris/liste.jsf?language=en&num=T-342/99>.
- Combe, E. (2002). *La politique de la concurrence*. Paris: La Découverte, Repères.
- Cook, P. (2001). *Competition and Its Regulation: Key Issues*. Centre on Regulation and Competition, University of Manchester.
- Deiss, J., and Gugler, Ph. (2012). *Politique économique et sociale*. Brussels: de Boeck.
- DOJ. (2004). *Leniency for Individuals*. <http://www.justice.gov/atr/public/guidelines/0092.pdf>.
- European Commission. (1978). *Case 27/76 United Brands Company and United Brands Continental BV v. Commission*. ECR 207, par 65.
- European Commission. (2002). *Case T-342/99, Airtours plc v. Commission*, ECR II-2585, paragraph 62, and *Case T-193/02*.
- European Commission. (2004). Guidelines on the assessment of horizontal merger under the Council Regulation of the control of concentrations between undertakings. *Official Journal* C31, 05.02.2004, pp. 5–18. http://europa.eu/legislation_summaries/competition/firms/l26107_en.htm
- European Commission. (2010a). Nonconfidential version of the commission decision of 20 July 2010 relating to a proceeding under Article 101 of the Treaty on the Functioning of the European Union and Article 53 of the EEA Agreement, Case COMP/38866—Animal Feed Phosphates. http://ec.europa.eu/competition/antitrust/cases/dec_docs/38866/38866_1676_3.pdf.
- European Commission. (2010b). C(2010) 4387 final, Commission Decision of 30.06.2010 relating to a proceeding under Article 101 of the Treaty on the Functioning of the European Union and Article 53 of the EEA Agreement (COMP/38344—Prestressing Steel). http://ec.europa.eu/competition/antitrust/cases/dec_docs/38344/38344_5856_3.pdf

- European Commission. (2011a). Summary of Commission Decision of 23 June 2010 relating to a proceeding under Article 101 of the TFEU and Article 53 of the EEA Agreement (Case COMP/39.092—Bathroom fittings and fixtures) (notified under document C(2010) 4185). *Official Journal* C 348, 29/11/2011 P. 0012-0017. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:348:FULL:EN:PDF>.
- European Commission. (2011b). Best Practices for the submission of economic evidence and data collection in cases concerning the application of articles 101 and 102 TFEU and in merger cases. European Commission DG Competition (2011/C 308/06).
- Gelfand, D. I., and Calsyn, J. (2005, January). *Transparency in Antitrust Merger Review: A Modest Proposal for More*. The Antitrust Source. <http://www.antitrustsource.com>.
- Gobet, M. (2012). *La transparence et l'échange d'informations dans le cadre de la concurrence dans l'Union Européenne*. Travail de Séminaire, Université de Fribourg.
- Gönenc, R., Maher, M., and Nicoletti, G. (2001). The implementation and the effects of regulatory reform: Past experience and current issues. OECD Economics Studies No. 32(1).
- ICC and BIAC. (2000). Comments on the Report of the US international Competition Advisory Committee (ICPAC). Policy Statement, Doc 225/554, June 2000, http://www.biac.org/statements/comp/00-06-ICC-BIAC_comments_on_ICPAC_report.pdf.
- International Competition Policy Advisory Committee. (2000). Report to the Attorney General and the Assistant Attorney General for Antitrust, February 28, 2000. <http://www.justice.gov/atricpac/forward.pdf>.
- Jenny, F. (2002). International cooperation on competition: Myth, reality and perspectives. Conference Paper presented at the University of Minnesota Law School Conference on Global Antitrust Law and Policy.
- Jenny, F., Flochel, L., and Ninane, F. (2011). Analyse économique des échanges d'informations. *Concurrences* No. 2.
- Grimes, W. S. (2003). Transparency in federal antitrust enforcement. *Buffalo Law Review* 51(4), 937–993.
- Laffont, J.-J., and Martimort, D. (2001). The theory of incentives I: The principal-agent model. <http://219.219.191.244:1980/upload/chanjing/20081113173553049.pdf>.
- Mankiw, N. G., and Taylor, M. P. (2011). *Economics*, 2nd ed. Hampshire, UK: South-Western.
- McAfee, R. P., Mialon, H. M., and Mialon, S. H. (2008). Private v. public antitrust enforcement: A strategic analysis. *Journal of Public Economics* 92, 1863–1875.
- Melamed, D. (1998). Antitrust enforcement in a global economy. Conference Paper presented at the 25th Annual Conference on Antitrust Law and Policy, New York.
- Møllgaard, H. P., and Overgaard, P. B. (2001). Market transparency and competition policy. *CIE Discussion Papers* 2001-03. University of Copenhagen, Department of Economics, Centre for Industrial Economics.
- Motta, M. (2004). *Competition Policy: Theory and Practice*. Cambridge, UK: Cambridge University Press.
- OECD. (1993). Glossary of Industrial Organisation Economics and Competition Law. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2001). Price Transparency, Round Table. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2005). Recommendation of the council on merger review. Competition Law and Policy. Paris: Organisation for Economic Co-operation and Development. <http://www.oecd.org/competition/mergers/40537528.pdf>.

- OECD. (2006a). Roundtable Discussion on Techniques and Evidentiary Issues in Providing Dominance/Monopoly Power, contribution of the European Commission. Working Party No. 3 on Co-operation and Enforcement, DAF/COMP/WP3/WD(2006)30, 7 June 2006. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2006b). Report on structural separation. *OECD Journal of Competition Law and Policy*, 8(2), 7–65.
- OECD. (2012). *Procedural Fairness and Transparency: Key Points*. Paris: Competition Committee, Organisation for Economic Co-operation and Development.
- Pénard, Th., and Souam, S. (2002). *Collusion et politique de la concurrence en information asymétrique*. Analyse d'Économie et de Statistique No. 66, pp. 210–233.
- Peeperkorn, L. (2008). Round table III: The law and economics of resale price maintenance: A comparative study. 59–65.
- Posner, R. A. (2001). *Antitrust Law*, 2nd ed. Chicago: University of Chicago Press.
- Prieto, C. (2008). Restrictions verticales: Les écueils dans la qualification de relations verticales et d'accords. *Concurrences* No. 4, pp. 5–16.
- Roques, Ch. (2009). L'échange d'informations en droit communautaire de la concurrence: Degré d'incertitude et jeu répété. *Revue des Droits de la Concurrence* No. 3-2009, pp. 1–9.
- Schinkel, M. P. (2007). Forensic economics in competition law enforcement. *Journal of Competition Law and Economics* 4(1), 1–30.
- Schinkel, M. P., and Tuinstra, J. (2002). *Imperfect Antitrust Enforcement*. University of Amsterdam.
- Spratling, G. R. (1999). Transparency in enforcement maximizes cooperation from antitrust offenders. Conference Paper presented at Fordham Corporate Law Institute, 26th Annual Conference on International Antitrust Law and Policy, Fordham University School of Law, New York.
- Stiglitz, J. E. (1979). Equilibrium in product markets with imperfect information. *American Economic Review* 69(2), 339–345.
- Suetens, S., and Potters, J. (2007). Bertrand colludes more than Cournot. *Experimental Economics*, 10, 71–77.
- Viscusi, W. K., Harrington, J. E., and Vernon, J. M. (2005). *Economics of Regulation and Antitrust*. Cambridge, MA: The MIT Press.
- Whish, R. (2001). *Competition Law*, 4th ed. Butterworths.

CHAPTER 7

TRANSPARENCY IN INTERNATIONAL TRADE POLICY*

MICHAEL G. PLUMMER AND ALISSA TAFTI

7.1 INTRODUCTION

THE general topic of “transparency” has become an increasingly important area in the international trade literature. From multilateral rules under the auspices of the World Trade Organization (WTO) to regional and bilateral free-trade agreements (FTAs), the need to have open and transparent rules in the conduct of international trade and the implementation of trade policy has been emphasized by a wide-variety of trade-related institutions, from international organizations such as the Organisation for Economic Co-operation and Development (OECD) and the World Bank to nongovernmental organizations (NGOs) such as ActionAid International and Consumers International. The study of this area is relatively new—while general references to transparency can certainly be found in the postwar agreements that constitute the core of the existing international trade architecture, it has been a subject of greater interest to lawyers than to economists.

In part, this dearth in the economic literature is no doubt due to the difficulty in defining transparency in international trade policy. Indeed, even today there is no common definition as to what exactly is meant by transparency in either the theoretical or the empirical trade literature tackling this complex topic. The General Agreement on Tariffs and Trade (GATT)/WTO understands the idea of transparency to be one of notification and easy access to information on trade policies (“policy transparency” in this chapter), whereas recent empirical literature tries to operationalize

*This chapter represents the opinions and research of individual authors. It is not meant to represent in any way the views of the U.S. International Trade Commission or any of its individual Commissioners.

transparency by translating its effects on trade costs (“regulatory transparency”). The WTO Glossary defines it as the “degree to which trade policies and practices, and the process by which they are established, are open and predictable.”¹ OECD (2012) breaks down this definition into three distinct components: (1) “Publication” (right to know); (2) “Monitoring and Surveillance” (policy clarity, peer review, third party adjudication); and (3) “Reporting and Engagement” (internal and external transparency for governments and their citizens, NGOs, and so forth).

The underlying legal rules regarding transparency in international trade at the multilateral level are found in Article X of GATT 1947, which provides the foundation for language on transparency in the WTO and WTO-nested agreements (such as FTAs), even though the term transparency is not used explicitly in the GATT. Article X requires that “laws, regulations, judicial decisions and administrative rulings of general application” instigated by a member dealing with,

the classification or the valuation of products for customs purposes, or to rates of duty, taxes or other charges, or to requirements, restrictions or prohibitions on imports or exports or on the transfer of payments therefor, or affecting their sale, distribution, transportation, insurance, warehousing inspection, exhibition, processing, mixing or other use,

should be published promptly. The exact time frame over which this information would be made available is not specified. The article underscores that any changes in trade-related restrictions, and similar measures must be published officially before being implemented. However, this advance notice again does not include a time frame. Article X issues are among the most-cited articles in WTO disputes.

There are a number of definitions applied in the literature to the notion of “transparency,” with both superficial and substantive distinctions. For example, in ITC (2010), three separate meanings of trade transparency are delineated. First, transparency requires that any changes in trade-related laws and policies be promptly advertised and easy to access, for example, via the publication of—and easy access to—relevant documents. The second set regards the degree to which the general objectives of a treaty are supported by the provisions inherent in the treaty. The third is the extent to which the objectives of the treaty are actually implemented.

In this chapter, we consider transparency in the context of trade policy from several perspectives, both old and new. Section 7.2 considers the issue of “policy transparency,” which would be consistent with the OECD (2012) definition cited previously. The topic itself does not lend itself easily to empirical work, though some of the salient research that has been undertaken regarding the implications of improved transparency on uncertainty will be reviewed. Section 7.3 focuses on “regulatory transparency,” which endeavors to proxy improvements in transparency via their effects on trade costs. This is followed in Section 7.4 by a review of issues related to

¹ http://www.wto.org/english/thewto_e/glossary_e/transparency_e.htm

transparency in the context of FTAs. In reviewing existing literature in Sections 7.3 and 7.4, it becomes clear that the net effects on trade and income can be large, and tend to be pro-development, that is, developing economies stand to gain more than developed economies. Section 7.5 concludes by summarizing the main results of the chapter and developing the concept of “conveyance,” which focuses on the importance of “advocacy” rather than merely on making information available. This is arguably a neglected aspect of transparency, but it is an area that is relevant to the general public, rather than just experts.

7.2 POLICY TRANSPARENCY

Policy transparency continues to be an important priority in multilateral and bilateral/regional arrangements, as evidenced by the number of Article X issues before the WTO Panel and Appellate Body and disputes between FTA partners. There are essentially two primary instruments to ensure policy transparency within the context of the WTO, that is, regular notifications, and trade policy reviews and nongovernmental assessments.

Greater policy transparency should affect international trade through several channels, including: (1) decreasing costs of information necessary to gain access to and penetrate foreign markets; (2) reducing uncertainty associated with trade policies in export markets (as well as at home); and (3) fostering an open environment in which barriers to international trade can be identified and reduced, with associated benefits in terms of lower prices of final products for consumers, and cheaper and greater selection of intermediate inputs for firms.

At the multilateral level, the WTO Trade Policy Review Mechanism (TPRM) is intended to achieve greater transparency and understanding of members’ trade policy via periodic reviews of the trade policies of member countries (the WTO site, <http://www.wto.org> http://english/tratop_e/tpr_e/tpr_e.htm, provides access to these reviews). The TPRM ensures that members are informed of the status quo and recent changes in each other’s trade policy and uses a peer-review format with an emphasis on dialogue between the country being evaluated and its trading partners. The frequency of country reviews is determined according to a member’s importance in the international trading system, gauged simply by share of global trade, that is: the 4 largest trading economies are reviewed every 2 years, the next 16 every 4 years, and the remaining members every 6 years, with least-developed member states having the option to be reviewed even less frequently if desired.

The purpose of the TPRM is one of providing transparency rather than imposing it; it has no authority to enforce member obligations, provide input for dispute settlement procedures, or to instigate new policy commitments. It offers commentary, but is unable to interpret rules; it ensures transparency, but cannot prevent government action.

Indeed, ensuring policy transparency and trade policy openness have become increasingly pressing priorities since the advent of the 2008 financial crisis to present day. The political economy of trade policy stresses that, in times of crisis, governments will have more pressure from special interests to protect domestic industry. With rising unemployment at home, the political incentive to increase tariff and non-tariff barriers in order to spur domestic production and limit employment loss from the crisis is strong. But in addition to generating the usual efficiency losses associated with protection, such an approach to crisis management has a negative effect on trading partners, thereby exacerbating demand problems or even provoking a crisis elsewhere. Moreover, “beggar-thy-neighbor” policies of this sort inevitably invite retaliation, leading to an accentuation of the crisis as well as a serious deterioration of trust. The Great Depression was the classic example of this problem; with the crash in asset markets in the United States in October 1929, the US Congress responded with an extensive hike in trade protection (the “Smoot-Hawley Tariff”) in 1930, and the ensuing retaliation and contraction in international trade fed the global crisis. The need for more efficient global trade governance trumpeted at Bretton Woods in 1944 (the meeting at which postwar international financial governance was also established) led to the eventual creation of the GATT.²

Thus, there were considerable fears that the same thing might happen when the Great Recession hit, particularly because WTO members have a great deal of leeway to adjust some trade-related measures even within the context of the WTO itself. For example, while OECD countries tend to “bind” almost all their tariffs—that is, set a limit for how high any product’s tariff might go—there is a large difference between applied tariffs and their bound rates (the difference is known as “water” in the tariff rates), leaving room for discretion. Moreover, few developing countries adopt tariff schedules that are mostly bound.

The response from global leaders in the face of the Great Recession was actually quite impressive; statements from various G-8, WTO, OECD, and G-20 ministerial meetings echoed that countries should resist using trade policy as a means of managing the crisis and pledging to resist domestic protectionist pressures.³ Policy transparency was viewed to be a mechanism to prevent creeping protectionism by giving trading partners the tools to hold each other accountable.

Wolfe (2011) looks at the use of accountability systems within and outside the WTO membership after the 2008 financial crisis both to determine the degree to which protectionist measures were promulgated and the extent to which the accountability systems already in place affected responses. In sum, although the study credits these systems for playing a role in maintaining the integrity of the international trade system

² The goal was to create an internationally legal body, the International Trade Organization (ITO), but the “Havana Charter” was not approved in 1947 and a “looser” organization, the General Agreement on Tariffs and Trade emerged as a temporary solution.

³ See, for example, OECD et al. (2010) for a summary of these statements and the economics behind them.

throughout a deep crisis, it does not appear that these systems themselves are powerful enough to do so. The study also notes that the WTO Agreement on Subsidies and Countervailing Measures has been largely ineffective; members either do not notify or notify only occasionally, and often do so late and do not provide enough information to allow for good understanding of the subsidies and if they are being used in a manner that puts foreign producers at a disadvantage.

The Global Trade Alert (GTA), supported by some academic think tanks and research institutes, maintains an online database of measures set up in response to the financial crisis to monitor trade policies and prevent increased protectionism as a result of the financial crisis.⁴ Wolfe (2011) examines this mechanism and compares it to WTO reporting and finds that, though in some instances the GTA may report more measures than the WTO, it does not necessarily have a good basis for inclusion of these additional measures. Moreover, the GTA suffers from the fact that it does not “normalize” its results, that is, it is not clear what the counterfactual would have been. In other words, it does not compare the results post-crisis to the status quo pre-crisis, thereby preventing a clear result as to what the effect of the crisis actually was (relative to the status quo ante).

Policy transparency can foster accountability to maintain the integrity of the international trading system, but it also has an important impact on trade growth and trade costs through the reduction of uncertainty for firms. For example, Handley and Limão (2012) focus on policy uncertainty and the effect it has on firms’ decisions to enter new export markets. Because of the costs associated with investing in new export markets, high levels of policy uncertainty will deter firms from making those investments. Handley and Limão (2012) concentrate on FTAs, for through FTAs countries encounter trade policy uncertainty via the set of FTAs that their partner country(ies) has(ve) with other economies, which could lead to price advantages or disadvantages. They conclude that, though the increasing number of FTAs in the global trading system has led to greater *potential* for trade policy uncertainty, on the whole the tendency has been to reduce rather than increase uncertainty.

The example of Portugal’s accession to the European Community (EC) is used to demonstrate the effect of trade policy uncertainty on firm-entry and export growth. After accession, the country’s firms increased entry into EC markets, even in members where there was little to no change in tariff rates. Handley and Limão (2012) argue that these changes were largely the result of decreased trade policy uncertainty. According to the authors’ estimations, Portuguese businesses believed they had a 39% chance of losing preferences before accession, and a 0% chance after accession.⁵ They calculate that this decrease in uncertainty with accession accounted for nearly two-thirds of the increase in entry of Portuguese firms in the EC market.

⁴ The URL of the Global Trade Alert website is <http://www.globaltradealert.org/>.

⁵ Portugal had special access to the EC markets via its Association Agreement with the EC.

Other forms of changes in trade policy uncertainty also affect the decisions of firms to postpone entrance into markets. For example, the lack of rules regarding exchange rates in the context of the WTO can generate considerable uncertainty with respect to countries accused of exchange-rate “manipulation,” as it stokes fears of potential retaliation (e.g., US complaints about Brazil’s threat to use bilateral tariffs to offset undervalued currencies). Very little is included in the WTO regarding binding restraints on export restrictions; this uncertainty has led to countries trying to preempt vulnerability to increasing export taxes by key suppliers (e.g., the Thai proposal to create a rice “OPEC” led to strong pressure for rice self-sufficiency policies in net importing countries such as Indonesia). Anti-dumping and countervailing duties also create uncertainties. While the WTO allows for these duties once certain conditions are met, they create uncertainties and can lead to “trade harassment.”⁶ Potential penalties for “environmental dumping,” for example, via green taxes, or bans on imports on grounds of Sanitary and Phytosanitary Measures (SPS) (from health scares to genetically-modified organisms, or GMOs) can also be important sources of uncertainty.

7.3 REGULATORY TRANSPARENCY

Most empirical work related to transparency tends to be classified under the rubric of “regulatory transparency”; however, the literature does not agree on a common definition. Regulatory transparency can be treated as a distinct concept but often it is conflated with many of the concepts that are included here under policy transparency (OECD, 2001). Objectives of much of the empirical work regarding regulatory transparency relates to its effect on trade costs, which will be our focus in this section. It should be noted that, unfortunately, the broadness of the term and the lack of agreement on definition make a common demarcation between policy transparency and regulatory transparency difficult if not impossible. Still, the literature does suggest that making this distinction is useful.

In particular, studies on the effects of regulatory transparency tend to focus either on indices that include broader trade facilitation measures, or are limited to evaluating case studies and using anecdotal evidence to extrapolate trends and causes. An example of the latter would be Moisé (2011), which considers four case studies to demonstrate that applying transparency mechanisms in the development of domestic regulation leads to removals of barriers to trade as well as savings both for governments

⁶ Trade harassment generally refers to the threat of an anti-dumping or countervailing duty as a means to persuade foreign suppliers to increase prices. Even if no dumping is occurring, the threat that an exporter might be found guilty could be sufficient to elicit a price undertaking.

and for the private sector.⁷ In a nutshell, the paper focuses on the importance of domestic transparency mechanisms in international trade. It notes that the first step in the process of improving regulatory transparency regards advance notice of regulatory changes, which is important because it allows firms to adjust to these changes. In the case studies surveyed, these proposed changes were announced one to two years before being formally written. The study underscores the importance of using information technology (IT) in accomplishing goals of transparency, as well as including foreign stakeholders in the consultative process. Other important factors in regulatory transparency include availability of impact assessments, interactivity and the involvement of experts, availability of structured and comprehensive information, formalized and systematic public consultations, and the responsiveness of the administration to comments and input.

The paper by Moïsé also addresses the deepening of transparency commitments in FTAs that go beyond WTO requirements (“WTO Plus”), but the case studies do not demonstrate any additional gains in transparency as a result of FTAs. However, as the studies focus on OECD countries, which have stronger institutions and deeper levels of transparency than those required by the WTO, the lack of demonstrated effect of FTAs might be expected. The study suggests that countries with weaker institutions and less transparency will have the most to gain from FTAs with more advanced economies, leading to greater efficiency.

Another case-based article (OECD, 2012) looks at regulatory transparency in three multilateral environmental agreements (MEAs): the Convention on International Trade in Endangered Species (CITES: endangered species, particularly tropical timber), the Basel Convention (hazardous e-waste), and the Kimberly Process (conflict diamonds). Each of these agreements allows countries to control exports and imports of sensitive commodities. In these MEAs, the effects of lack of transparency are not limited to just the less transparent economies but also have broader environmental impacts for all participating countries.

The OECD paper defines transparency as “governance by disclosure.” It notes that beyond just reducing policy uncertainty, transparency can be important to firms that trade in commodities, because it allows them to track availability of these commodities and to plan accordingly. It breaks transparency down into three categories: publication or “right to know,” monitoring and surveillance, and reporting and engagement. In terms of publication, without auditing procedures it is difficult to determine what governments should/could have notified their trading partners about but did not. The study refers to monitoring and surveillance as “horizontal accountability,” for through monitoring and trade policy peer review bodies, governments are able to hold each

⁷ These case studies include (1) the UK review of the Insurance Premium Tax (IPT) provisions; (2) two European directives relating to electrical and electronic equipment; (3) a review of Australia’s quarantine and biosecurity systems; and (4) the review of the Drug and Alcohol Testing rules of the US Department of Transportation.

other accountable to commitments. In terms of reporting and engagement, the authors consider collaborative transparency and external transparency. External transparency considers how governments publish information, and if they do so in such a way that allows for civil society, business, and/or citizens to have access to information necessary to make decisions and potentially affect change. Because of the nature of MEAs, these tend to have greater involvement with civil society than agreements that are not environmental in nature and thus greater external transparency requirements and success. The OECD study concludes that transparency mechanisms are not necessarily effective in and of themselves, but that rules need to be clear and information should be available and used. In addition, they find that transparency mechanisms work better when stakeholders are involved, and when there is an incentive for users to act on the information and influence outcomes.

In terms of effects of improved regulatory transparency on trade costs, Helbe et al. (2007) attempt to quantify gains from increased transparency in the Asia-Pacific Economic Cooperation (APEC) organization and create their own composite indices to measure transparency. The paper focuses on predictability and simplification, top priorities related to transparency measures under the 2001 APEC Principles on Trade Facilitation. Policy measures to increase predictability include decreasing delays for imports and exports, creating “flatter” (i.e., less variance in) tariff structures, lowering uncertainty among unofficial payments and reducing favoritism in administrative decision making. Steps to simplify trade include streamlining document requirements for imports and exports, reducing the number of border agencies, removing hidden trade barriers, and decreasing unofficial payments. The authors note that empirical analyses of APEC economies underscore the importance of hidden trade barriers and unofficial payments, areas that are particularly detrimental to the potential benefits of greater transparency.

Helbe et al. (2007) proxy these measures via (1) calculating the percentage of tariff lines that are bound (greater bindings indicate less discretion to increase rates and, therefore, greater predictability); (2) estimating the variance across commodities in the tariff schedule (less variance signifies less discrimination and less discretion, and, hence greater predictability); (3) estimating “hidden” tariff barriers, which can be in the form of standards that are not harmonized with international standards (with greater harmonization allowing for easier access to the market); (4) gauging active use of information technology; (5) estimating the predictability of import/export delays (e.g., via required documentation); (6) estimating the predictability of the level of unofficial payments in exports/imports; and (7) gauging the degree of favoritism in administrative decisions. Hence, in considering predictability and simplification, the authors evaluate the trading environment as well as the business environment. Inter alia they use data from the World Bank’s *Doing Business in the World*, the United Nation’s *Global E-Government Readiness Report*, the World Economic Forum’s *Global Competitiveness Report*, as well as government reports detailing the frequency and degree of official use of the Internet to convey information, products, and services. From these indicators, they find that the United States, Australia, and Canada have the highest degree of

regulatory certainty, and that APEC countries as a whole have been improving, even if much work needs to be done in implementing APEC's ambitious "open regionalism" agenda.

The gains from greater transparency in these areas are estimated to be large. Using a computable general equilibrium (CGE) model, the authors calculate gains from increased transparency in APEC to be at least \$148 billion, or the equivalent of 7.5% of baseline 2004 trade. These figures only consider intra-APEC trade and the authors note that these changes will also affect trade between APEC and non-APEC economies, which would suggest that the potential gains are significantly underestimated given that improvements in these areas have global rather than merely regional effects. The study identifies unofficial payments and hidden trade barriers as the two main areas that offer the highest potential gains from increased transparency. It also notes that the effects will vary by sector but should be greatest where trade takes place in highly differentiated products. Hence, greater transparency should be a boon to international production networks and the promotion of value chains. They do not consider services in the study—an even more complicated proposition than trade in goods—but argue that transparency in services trade can also lead to significant gains. In fact, the recent "trade in value added" (TiVA) database released by the OECD and WTO in January 2013 shows that trade in services is far more important than previously believed when calculated correctly (i.e., in terms of value added). For example, US trade in services constitutes a small majority of its overall trade (51%), and for China the corresponding share is 42%.⁸

A related study undertaken by Kazutomo and Wilson (2008) build on the Helble et al. (2007) paper by estimating the effect of transparency on variables other than just trade in the APEC context. They use a Global Trade Analysis Project (GTAP)-based CGE model to estimate gains at the sectoral level for APEC economies. The authors in particular distinguish between different types of transparency-related variables, i.e., (1) reducing waste and improving efficiencies in policies and procedures and (2) decreasing corruption and nontransparent payments. The study finds that, though the two have very different welfare effects, the effects on trade costs are effectively the same (and large). Importantly, the model allows the authors to consider effects beyond just intra-APEC trade to gauge the implications of transparency improvements for member-economy trade with non-APEC economies.

Finally, the International Trade Centre (ITC, 2010) considers transparency and fairness in trade. The report argues that export growth is necessary for poverty reduction, and to accomplish this, duties on imports from developing countries, which are still high, need to be decreased and trade transparency needs to be improved. The report finds that increased trade transparency will allow for developing countries to have access to trade information that will support their trade and exports. Included in this

⁸ See <http://www.oecd.org/industry/industryandglobalisation/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm>

increased transparency are reduced regulatory discretion over tariff and non-tariff measures; increased participation in setting standards; better analysis of non-tariff barriers; and better information about FTAs. The report also places a strong emphasis on the importance of developing strong institutions and effective rule-setting to promote transparency and reap the associated gains from increased trade. Multilateral institutions are important, however, domestic institutions and rule-setting tend to be even more significant.

7.4 TRANSPARENCY AND REGIONAL TRADING ARRANGEMENTS

There has been a good deal of empirical work dedicated to estimating the potential effects of greater transparency in regional trading arrangements, defined here to be preferential trading arrangements between two or more partners (the WTO definition). As it is difficult to estimate the effects of transparency directly, economists proxy it indirectly via the effects of greater transparency on trade costs. For example, Abe and Wilson (2008) examine the impact of reducing corruption and improving transparency to lower trade costs in the APEC region, using a CGE model.⁹ They find that increased transparency and lower levels of corruption would: (1) increase regional trade by 11%; (2) raise global welfare by \$406 billion, under the assumption that transparency rises to the APEC regional average in all countries; and (3) generate the greatest benefits for liberalizing economies, for example, gross domestic product (GDP) of Vietnam, Thailand, Russia, and the Philippines would increase by approximately 20%. As these tend to be among the less prosperous economies in APEC, improved transparency could help close the development gap, at least at the margin.

These results are impressive, even though they are, perhaps, based on a relatively optimistic scenario. On the other hand, Petri et al. (March 2012) also employ a CGE model to gauge the effects of related trade costs in context of Association of Southeast Asian Nations (ASEAN) Economic Community. The model includes the novel feature of employing recent innovations in heterogeneous firms trade theory and applying it in an empirical global CGE framework. It features intra-industry firm heterogeneity in productivity and fixed cost of exporting, which enables the authors to investigate the intra-industry reallocation of resources and the exporting decision by firms, and thereby capture both the intensive and extensive margin of trade. It is especially appropriate for assessing the implications of deep integration efforts, including the reduction of trade costs. The study finds that, *inter alia*: (1) net income rises by 5.2% of GDP relative to the baseline; (2) reductions in trade costs are the most important drivers for

⁹ For a description of CGE models, see Kreinin and Plummer (2012).

low-income members; (3) lower-income economies tend to gain more than the average for ASEAN as a whole, helping address the goal of economic convergence in the context of ASEAN economic integration. Using a variant on the same model, Petri, et al. (November 2012) consider the impact of “mega-regional” arrangements such as the Transpacific Partnership (TPP), various Asia-wide FTAs, and an APEC-wide FTA (Free-trade Area of the Asia Pacific [FTAAP]) and finds that the degree to which a regional template addresses trade-related costs is critical in determining the net benefits of the agreement (“deeper” reductions in behind-the-border measures yield gains that are more than 50% greater than weaker templates). Again, lower-income, open economies tend to gain the most from regional cooperation.

In short, the empirical literature would suggest that improving transparency generates important economic gains, such as improvements in welfare and more dynamic trade growth, via reductions in trade costs, and these gains tend to be most important for lower-income economies with weaker institutions and higher trade costs. Thus, better transparency due to FTAs is pro-poor and pro-development.

7.5 CONVEYANCE ISSUES AND CONCLUSION OF TRANSPARENCY OF INTERNATIONAL TRADE POLICY

To summarize the above discussion: (1) transparency has an important bearing on the functioning of international trade; (2) from a theoretical point of view, one would expect that improving transparency increases international trade by, *inter alia*, improving access to trade-related information and reducing potentially trade-disrupting discretion by government officials; (3) capturing empirically the potential effects of better transparency is complicated due to inexact proxies, but the literature that attempts to do so essentially finds important, welfare- and trade-enhancing benefits; and (4) improving transparency tends to be pro-poor and pro-development because weak transparency-related institutions and environments in low-income countries (LICs) are important development inhibitors.

Thus, from a trade point of view, better transparency should be a salient trade policy priority. However, this conclusion presupposes that trade is actually good for growth and development. Though there is generally consensus among mainstream economists that this is true, the public is far more skeptical. The popular press, for example, often takes strong anti-trade positions, particularly during times of economic downturn, and the anti-trade “no-global” movement burst on the public scene during the 1999 WTO Ministerial in Seattle. Perhaps this is natural, as the benefits of trade are complicated: as famously noted by Paul Samuelson, “comparative advantage” is the only concept in the social sciences that is both true and nontrivial, and “thousands of important and intelligent” people “. . . have never been able to grasp the doctrine for themselves or

to believe it after it was explained to them.” And if transparency is good for trade and the public perception is that trade is bad for the economy, we are stuck. Hence, creating greater transparency with respect to the economic implications of trade could be even more important than the various aspects of transparency discussed in the preceding text.

Trade is often blamed for many socially undesirable trends in the global economy, from rising inequality to global warming. A discussion of these issues is beyond the scope of this text; an excellent review of these accusations and the economic case for trade are found in Jagdish Bhagwati’s book, *In Defense of Globalization* (Bhagwati, 2004). Suffice it to note here that international trade tends to improve welfare via more efficient specialization of production and improved productivity, and such structural change will also involve winners and losers, who in turn are different people. It therefore becomes a policy challenge to ensure that there is an effective compensation mechanism in place (OECD et al., 2010). Developing effective methods of *managing* the associated changes needs to be a public priority.

In any event, it is important that such issues be discussed more fully in the public realm if trade is to regain its reputation as a force for economic good. Increasing transparency will do little good if it is only to reveal a steady retreat from the global marketplace. Hence, our definition of transparency would best be broadened to include public information of the economic implications of international trade, rather than just keeping it for experts.

REFERENCES

- Bhagwati, J. (2004). *In Defence of Globalization*. Oxford: Oxford University Press.
- Handley, K., and Limão, N. (2012). Trade and investment under policy uncertainty: Theory and firm evidence. NBER Working Paper No. 17790.
- Helble, M., Shepherd, B. and Wilson, J. S. (2007). *Transparency and Trade Facilitation in the Asia Pacific: Estimating the Gains from Reform*. Washington, DC: The World Bank.
- ITC. (2010). *Market Access, Transparency and Fairness in Global Trade: Export Impact For Good 2010*. Washington, DC: International Trade Center.
- Kazutomo, A., and Wilson, J. S. (2008). Trade, transparency, and welfare in the Asia Pacific. *Journal of International Economic Studies* 12(2), 35–78.
- Krein, M. E., and Plummer, M. G., Eds. (2012). *Oxford Handbook of International Commercial Policy*. Oxford: Oxford University Press.
- Moisés, E. (2011). Transparency Mechanisms and Non-tariff Measures: Case Studies, *OECD Policy Papers, No. 111*, Paris, OECD, http://www.oecd-ilibrary.org/trade/transparency-mechanisms-and-non-tariff-measures_5kgforzzwfq3-en.
- OECD. (2012). Regulatory transparency in multilateral agreements controlling exports of tropical timber, Ewaste and conflict diamonds. OECD Trade Policy Papers No. 141, Paris: OECD Publishing. <http://dx.doi.org/10.1787/5k8xbn83xtmr-en>.
- OECD, WTO, ILO. (2010). World Bank, seizing the benefits of trade for employment and growth. Final Report, prepared for submission to the G-20 Meeting, Seoul Korea, November 11–12, 2010. <http://www.oecd.org/trade/benefitlib/46353240.pdf>.

- Petri, P. A., Plummer, M. G., and Zhai, F. (2012a). *The Trans-Pacific Partnership and Asia-Pacific Integration: A Quantitative Assessment*, Washington, DC: Peterson Institute for International Economics.
- Petri, P. A., Plummer, M. G., and Zhai, F. (2012b). The economic impact of the ASEAN economic community: An applied general equilibrium approach. *Asian Economic Journal* 26(2), 93–118.
- Wolfe, R. (2011). Did the protectionist dog bark? Transparency, accountability, and the WTO during the global financial crisis, *ENTWINED Policy Report 01*, March. http://www.iisd.org/pdf/2011/protectionist_dog_bark.pdf.

CHAPTER 8

TRANSPARENCY OF CLIMATE CHANGE POLICIES, MARKETS, AND CORPORATE PRACTICES*

THOMAS L. BREWER AND MICHAEL MEHLING

8.1 INTRODUCTION: CONTEXT AND QUESTIONS

THIS chapter discusses three sets of closely related but diverse types of transparency issues: one set about carbon markets, the second about corporate exposures and disclosure practices concerning climate related risks, and the third about government climate change policies. All three have received much interest among business executives and government policymakers as well as researchers. (1) Carbon market issues concern the infrastructure and transactions in three market segments: emission allowances allocated by governments, including the European Union (EU); project-based emission reduction credits from the Clean Development Mechanism (CDM) and Joint Implementation (JI) programs of the Kyoto Protocol of the UN Framework Convention on Climate Change (UNFCCC); and voluntary markets. (2) Corporate practice issues reflect the exposure of firms to a wide range of risks posed by the consequences of climate change, including, for instance, damage to facilities, product sales, and reputations. (3) Government policy issues involve policymaking processes and outcomes in several policy areas: regulatory policies of governments and international organizations concerning the carbon markets noted previously; monitoring, reporting, and verifying (MRV) by governments and international organizations of countries' greenhouse gas (GHG) emissions; and MRV by nongovernmental organizations (NGOs) as well as governments and international organizations of international financial flows

* Authors' note: All views expressed by the authors are entirely their own as independent scholars, and do not reflect in any way the views of any organizations with which they are affiliated.

from “developed” countries for “developing” countries mitigation and adaptation measures.

The principal conclusions are that there are many serious transparency problems in carbon markets needing immediate attention by national and international governmental agencies; firms’ disclosures, with few exceptions, have been inadequate in view of their exposure to climate related risks, especially in the insurance industry in the United States; and monitoring, reporting, and verifying activities of international agencies and NGOs need to be augmented in order to keep track of GHG emissions and international financing programs.

The total of annual transactions in all the world’s “carbon markets” has exceeded US\$175 billion in recent years (World Bank, 2012a). Most of these transactions involve carbon dioxide emissions, but some involve other GHGs such as methane, nitrous oxide, and fluorocarbons. In addition, although most are based on emission allowances issued by governmental entities, many are based on crediting of physical project emission reductions that have been undertaken in the context of the CDM and JI programs of the Kyoto Protocol of the UNFCCC. Further, there are also voluntary markets that exist outside the framework of domestic and international compliance markets. The chapter addresses a broad range of questions about transparency in these carbon markets: What is at stake in carbon market transparency issues? What are the features of carbon markets that give rise to transparency issues? What are the specific kinds of events that have prompted transparency concerns?

There is similarly a wide range of transparency issues about government policies concerning the carbon markets and other types of government climate change policies. In particular, there are three sets of questions corresponding to regulatory policies; the monitoring, reporting, and verification of countries’ emissions; and the monitoring, reporting, and verification of international financial flows from “developed” to “developing” countries. Are regulatory policies adequate to ensure the integrity of allowance markets? Are the key features including the “additionality” of CDM and JI projects being properly assessed? Do the reporting systems for countries’ annual GHG emissions yield accurate data? Are the pledges being made by “developed” countries to assist in the financing of “developing” countries’ mitigation and adaptation measures being fulfilled?

As a result of these related but discrete types of transparency concerns, the term “transparency” is used in three different contexts—namely for carbon markets, corporations’ practices, and governments’ policies. Hence there is no single accepted definition of the term; nor is there a tendency to use it in any specific technical way. Rather, the term is widely used according to its multidimensional generic meanings: *clarity of content* or *openness of process*, and thus the *opposite of opacity or impenetrability*. There is a widespread presumption that more transparency is desirable. The particular transparency issues of interest vary in nature across the topical focus—whether on markets, corporations, or governments. Yet, they also interact and overlap, as is evident in the discussion of government regulation of carbon market rules and behavior and in the discussion of corporations’ carbon exposure disclosure practices.

The central questions of the chapter are addressed in the following sections: Section 8.2 concerns carbon markets, Section 8.3 focuses on corporate practices, 8.4 considers government policies, and 8.5 summarizes the literature to date and identifies topics needing further research.

8.2 CARBON MARKETS

Despite a number of challenges, including volatile prices and generally oversupplied markets, the past decade has seen strong growth in carbon trading, both at the domestic and the international level. New mechanisms at the international level and domestic markets in several countries around the world—including a number of emerging economies and economies in transition—will likely help sustain this trend. Recent years have seen isolated incidents of market manipulation and fraud, as well as a large number of emission reduction projects of doubtful quality. Issues of transparency and market integrity will continue to be relevant, although the economic relevance of the carbon market seems increasingly to hinge on the balance of supply and demand, with chronically depressed market prices not only undermining the environmental effectiveness of this instrument (OECD, 2009, pp. 18–19), but also lessening the incentive to engage in fraudulent activities.

In the following subsections, issues of transparency are addressed in the context of three important categories of carbon markets, starting with domestic emissions allowance trading systems, then proceeding to the international market for project-based credits under the CDM and JI, and finally touching on the voluntary carbon market. Experience with these markets has highlighted the challenges raised by multiple uncertainties accompanying their introduction and implementation. Such uncertainties have pronounced implications, affecting both central design choices in the carbon market—such as allowance quantity and allocation—and the behavior of market participants. Resulting price extremes and volatility can undermine confidence in the market and disrupt the stable price signal called for by investors. Opinions may differ on the extent to which consequences such as price swings need to be managed, but addressing uncertainty remains an important challenge in any carbon market, highlighting the value of transparency and general caution with any forecasts and assessments.

8.2.1 Allowance Markets

Experience has shown that transparency about emissions is critical for a functioning carbon market. Among the most widely publicized challenges faced under the European Union Emissions Trading System (EU ETS) in its first trading period was a dramatic fall in the price of European Union Allowances (EUAs) (European

Commission, 2006), due in large part to a discrepancy between forecast and verified emissions (Convery et al., 2008, p. 10). What this experience underscored is the importance of accurate and reliable data for a functioning carbon market. Policies geared toward improving data quality and availability are described in Section 8.3.2.

Another area where the transparency and integrity of carbon markets have been put to the test is intentional fraud and manipulation. In recent years, there have been a number of criminal activities and efforts to exploit regulatory loopholes, highlighting the need for adequate market oversight and governance in emissions trading systems, which are rendered particularly vulnerable because the traded commodity and hence the entire market are essentially based on policy decisions, not a physical entity, and can thus be traded instantly in high volumes.

Between 2009 and 2010, value-added tax (VAT) fraud—also known as “carousel” fraud—deprived EU member states of substantial tax revenue (CMI, 2012, p. 13). Around the same time, a series of scandals involving the sale of recycled Certified Emission Reductions (CERs), phishing attempts on national registries, and cyber-thefts which have undermined confidence in the European carbon market (World Bank, 2011, p. 10; Point Carbon, 2012, p. 3). Such events eroded the perceived legitimacy of the system and prompted the European Commission—as the market regulator—to adopt rules intended to avoid further fraud (World Bank, 2012a, pp. 30–31). Other jurisdictions equipped their emissions trading initiatives with more robust oversight and governance structures from the outset. For instance, in the United States, the Commodity Futures Trading Commission (CFTC) has been designated as the supervisory body for derivative trading in all carbon markets.

Overall, the challenges to transparency and market integrity from lacking data and regulatory loopholes are likely symptoms of the relative immaturity of carbon markets, but are being addressed as experience with these markets grows and common best practices emerge. Still, adequate governance structures will remain crucial to secure market integrity going forward, especially in the many emissions trading systems emerging in developing countries and economies in transition.

8.2.2 CDM and JI Project Markets

Questions of integrity have also been directed at the second category of carbon markets, namely markets for project-based offset credits. As long as these have been eligible as a mitigation option in compliance markets, offset credits such as the CERs generated by the CDM have come under criticism, including their underlying counterfactual assumption: to be eligible, projects yielding offset credits need to demonstrate environmental and financial “additionality,” which, in theory, requires that the underlying project would not have been carried out absent the incentive provided by the carbon market. Unsurprisingly, “additionality” is difficult to establish, aggravating the challenge of maintaining environmental integrity in a carbon market (Schneider, 2007, p. 72). Moreover, this regulatory framework is seen to create a strong incentive to

overstate projected emissions reductions and even to prevent adoption of binding mitigation policies in developing countries (Wara et al., 2008, pp. 23–24).

In terms of governance, project approval has been accused of being subject to regional and political bias (Flues et al., 2008, pp. 16–17), with inadequate provisions for the review of approval decisions (Millar and Wilder, 2009; Unger and Streck, 2009). Finally, origination and verification by private entities have been shown to result in conflicts of interest (Bachram, 2005, p. 5; Schneider, 2007, p. 73). A comprehensive reform process was therefore initiated under the UNFCCC (2012), although only limited changes have been implemented to date. Meanwhile, demand for CERs has dwindled, applying significant downward pressure on CER prices and putting to question the continued viability of the CDM going forward.

8.2.3 Voluntary Markets

Voluntary markets function outside of the foregoing compliance markets and enable companies and individuals to purchase carbon offsets on a voluntary basis. Both allowance and offset markets form part of the voluntary carbon market, and they are characterized by their informal nature compared to compliance markets. Instead of requiring formal approval from a government body or international organization, the registration, verification, and certification of voluntary emissions reductions occur in accordance with any of a number of standards adopted by the private sector.

Recognizing the need for strict quality assurance to safeguard the credibility of the market, over a dozen voluntary programs and offset standards have been developed (Kollmuss et al., 2008). Overall, the size of the voluntary carbon market is smaller than compliance markets (Peters-Stanley et al., 2012), however, and a vast majority of offset transactions were traded over-the-counter (OTC) rather than on exchanges, reducing the transparency of individual transactions. Already, various occasions have surfaced in which voluntary offset credits of questionable integrity or backed by no environmental benefits were sold (Transparency International, 2011, p. 159). Still, the widespread adoption and further refinement of standards, and a broader trend toward consolidation as the market further matures, have helped the voluntary carbon market make noticeable progress in terms of transparency in the past decade.

8.3 CORPORATE EXPOSURES AND DISCLOSURES

Carbon markets and climate change pose a variety of transparency issues for firms—among them the nature and extent of their exposure to climate-related risks and what they disclose about those risks and their responses to them (Brewer, 2005, 2014; Kolk

and Pinske, 2005; Levy, 2005; Levy and Newell, 2005; Kraft and Kamienieki, 2007; Jones and Levy, 2009; Meckling, 2012).

Shareholders and other stakeholders have an interest in knowing how firms respond to climate change along many managerial dimensions: *Strategy*—What goods and/or services should the firm produce? Where should it produce them? Where should it sell them? How should it produce them? *Operations*—How are the costs of transportation affected by new regulations? *Customer and public relations*—What kind of actions have firms taken or not taken about climate change in order to have beneficial relations with customers and the public? *Government relations*—What positions have firms taken on climate change issues? Concern about firms' responses to climate change has increased among investment banks, a concern that has been evident in their reports on industries' and firms' exposures to climate change risks, as well as in the business opportunities they face in a new era of climate change regulations and increasing investment in energy efficiency and renewable energy segments of the broader energy sector (see, e.g., Goldman Sachs, 2009; Bloomberg New Energy Finance, 2011b).

There are several organizations that scrutinize the exposures and disclosure practices of hundreds of firms in a wide range of industries. The Carbon Disclosure Project (2012, 2013), which is supported by "more than 655 institutional investors representing US\$78 trillion in assets", is collecting and disseminating information annually on firms' exposure to climate change issues and their disclosure practices. Another group is the Coalition for Environmentally Responsible Economics (CERES, 2013a), which "works with more than 130 member organizations [including institutional investors such as pension funds, NGOs, and unions]. . . to engage with corporations" and is similarly conducting periodic surveys, the conduct and publication of which also create pressures on firms to be more attentive to their carbon exposures and other climate change issues. Yet another group of institutional investors is the Investor Network on Climate Risk (2013), which includes the treasurers and other financial officials of states such as California, Connecticut, and New York, who represent their employees' pension funds. Altogether, the Network consists "of 100 institutional investors representing more than \$11 trillion in assets committed to addressing the risks and seizing the opportunities resulting from climate change and other sustainability challenges." In addition, resolutions concerning firms' responses are now regularly presented at the annual meetings of many corporations on behalf of institutional investors in the Interfaith Center for Corporate Responsibility (ICCR, 2013), with hundreds of billions of dollars in assets, which represents the pension funds of several religious organizations.

Another approach used to analyze firms' exposures and disclosures has been to examine corporate filings with the US Securities and Exchange Commission (SEC). A study by Young et al. (2009, p. v) of the climate change disclosure practices of the 101 largest firms in five heavily exposed industries found "strong evidence that investors are not getting the information they need in [U.S.] SEC filings, even from industries facing clear, immediate risks from climate change." That conclusion was based on an examination of SEC 10-K reports—or 20-F or 40-F reports for non-US firms—that were filed in 2008 for the 2007 fiscal year. Box 8.1 presents the three categories of

Box 8.1 Disclosure Items Included in Study of SEC Filings

Disclosure Categories and Items	Items Included for Electric Utilities, Coal, Oil&Gas and Transportation Industries	Items Included for Insurance Industry
<i>Disclosure of Emissions and Climate Change Position</i>		
-Greenhouse gas (GHG) emissions data disclosed	yes	yes
-States firm's position or mention climate change	yes	yes
<i>Disclosure of Risk Assessment</i>		
-Physical plant risks	yes	
-Regulatory risks	yes	
-Strategic risks	yes	
-Litigation risks	yes	yes
-Underwriting climate risks		yes
-Investment climate risks		yes
-Enterprise risks		yes
<i>Actions to Address Climate Risk Addressed</i>		
-Business opportunities addressed	yes	yes
-GHG reduction pledges mentioned	yes	
-Risk management and mitigation measures mentioned	yes	
-Enterprise risk management strategies mentioned		yes
-Loss control measures mentioned		yes

Source: Adapted by the authors from Tables 1 and 2 in Young, Suarez and Gladman (2009).

Table 8.1 Firms' Disclosures of Climate Change Risks in US SEC Filings (number of firms with some disclosure of the information indicated)

Industries	Electric utilities	Coal	Oil & gas	Transportation	Insurance
Number in study	26	6	23	19	27
Number with disclosure about...					
Emissions and climate change position	22	5	6	5	4
Risk assessment	26	6	22	10	9
Actions to address climate risk	19	3	11	13	3

Source: Compiled by the authors from Young et al. (2009).

types of disclosure and the individual items within each of the categories that were used to collect the data as to whether the firms did or did not disclose the various types of information.

Because of the insurance industry's distinctive features in regard to exposure to climate change risks, the information disclosure items included in the report vary slightly from those for the other four industries. Yet, there are nevertheless enough similarities so that the results for all of the industries can be summarized together in Table 8.1. The table presents a summary of the findings for each of the five industries in the study. All firms in the electric utility and coal industries and nearly all of them in the oil & gas industries disclosed some information about their assessments of climate risks for their firms. However, barely half in the transportation sector and only a third in the insurance sector did so. There was much less disclosure about their actual emissions, their positions about the climate change problem, and their own actions—or inaction—to do something about it.

These summary data do not fully reflect the amount or quality of the disclosure; nor do they indicate the disclosure performance of individual firms. However, such information is available in detail in the report of the results of the study.

In response to interest in firms' disclosure practices, the SEC has developed "staff interpretive guidelines" to clarify the implications of climate change for firms' reporting requirements under existing SEC rules. The guidelines explicitly note the potential for positive as well as negative impacts on individual firms; that is, there are business opportunities as well as business risks.

Because of the importance of US state governments' function as insurance regulators, there has been increasing interest in the impact of climate change on the insurance industry and its underwriting and damage claims policies (see Haufler, 2009; CERES, 2011, 2012; Mills, 2012; Schiller, 2012). As a result of concern among state insurance regulators about the possible impact of climate change on insurance company solvency as well as the availability and costs of insurance, which are traditional concerns of insurance regulators, a task force of the National Association of Insurance Commissioners (NAIC) developed a mandatory disclosure survey to be completed by insurance firms each year. Adopted by a unanimous vote at a 2009 NAIC meeting, the Insurer Climate Risk Disclosure Survey covers many issues about firms' risk management practices associated with climate change.

A year later, about a month before the insurers were required to submit their responses, at an NAIC meeting in March 2010, there was an unexpected reconsideration of the plans for the survey—in particular whether its results would be made public or remain confidential. It was decided that public disclosure would be voluntary, after a handful of states, led by Indiana and joined by Alabama, South Carolina, Utah, and others, withdrew their earlier support for mandatory disclosure (ClimateWire, 2010; *Financial Times*, 2010). Because of its own state law requirements, Pennsylvania nevertheless made the results public (Pennsylvania Insurance Department, 2010).

Shareholders have also been taking action to increase firms' disclosures by proposing shareholder resolutions at firms' annual shareholders meetings. By 2011 there

were 41 firms that faced 66 shareholder resolutions calling on the firms' boards and executives to explain what they were and were not doing in response to climate change (Greenwire, 2010; Investor Network on Climate Risk, 2010; ClimateWire, 2011). In the face of such resolutions, some firms have agreed to undertake measures to have the resolutions withdrawn. The major oil firm ConocoPhillips, for instance, made a commitment to spend \$300 million on research for low-carbon fuels. Meanwhile, the large West Coast bank Wells Fargo agreed to undertake evaluations of the GHG emissions by firms represented in its loan portfolios in the energy production, electric power generation, and agriculture sectors. Again in 2012 and 2013 similar types of resolutions were also filed (CERES, 2013b), with many of the same major oil firms on the list but with the additional issue of hydraulic fracturing being raised in part because of the "fugitive" emissions of methane, a potent GHG.

8.4 GOVERNMENT POLICYMAKING PROCESSES AND OUTCOMES

8.4.1 Regulation of Carbon Markets

Compared with conventional approaches to pollution mitigation, carbon markets generally place higher demands on the institutional and regulatory architecture (Greenspan Bell, 2006, p. 29). At a systemic level, carbon markets are highly sensitive to uncertainties or changes in the regulatory framework. But governance and regulation also are relevant to day-to-day market operations. Despite its reliance on market forces, emissions trading depends on strong governance in the definition of mitigation objectives and their enforcement (Hahn and Hester, 1989, p. 111). At a minimum, therefore, a functioning carbon market requires an infrastructure to track distribution and ownership of allowances, monitor transactions, and ensure compliance. Far more sophisticated architectures have already been implemented, however, and the recent international banking–financial markets crisis has also prompted calls for more extensive regulation and institutional oversight of carbon markets. Such perspectives were not as prevalent some years ago, when the EU ETS and the flexible mechanisms of the Kyoto Protocol were being established.

At the international level, the UNFCCC and its Kyoto Protocol have already set out a substantial architecture for the administration and oversight of carbon markets, with a number of actors involved in the operation of the three flexibility mechanisms—international emissions trading, JI, and the CDM, with rules and procedures specifying the requirements for market participation. A number of systemic factors and recent developments have converged to drive an intensified discussion on the governance of carbon markets and their institutional and regulatory implementation.

As carbon markets expand to cover new countries and regions, the challenge of adequate monitoring and compliance structures is likely to intensify: different countries show great variations in their legal and administrative systems, their regulatory cultures, and their traditions of transparency, accountability and access to information; weak enforcement capacities, less robust adherence to the rule of law, and an absence of effective civil society and public interest monitoring groups increase the risk of non-compliance with, or abuse of, trading rules (Greenspan Bell, 2003, p. 11). Also, because emissions trading creates valuable assets in the form of tradable allowances, placing a limit on emissions and thereby creating scarcity where none previously existed, the formation of carbon markets can incentivise corruption in government entities charged with administering the market (Nordhaus, 2006).

Some particularities of carbon trading may render it more susceptible to speculation and manipulation than conventional markets, reducing its efficiency as an instrument to incentivise investment and reveal low-cost abatement opportunities. Unlike traditional commodities, carbon is subject to an artificially constrained supply of allowances and credits, with a decrease in supply mandated over time to achieve the underlying environmental objectives. Such limited supply, however, can make it easier for an investor or group of investors to affect trading activity. When trading systems allow banking, moreover, the absence of any storage cost for allowances or credits makes it viable to accumulate large positions for sale at a later date (Monast, 2009, p. 15). And at a more general level, the very concept and underlying rationale of emissions trading differs significantly from more conventional markets: both buyers and sellers can afford being indifferent to whether transacted units reflect actual reductions, making emissions evasion a positive-sum game for both parties.

Carbon markets have already become increasingly complex, with trading on regulated exchanges exceeded by less transparent OTC transactions, and actual compliance trading rivaled by speculative trading through financial intermediaries. The recent financial crisis has given additional purchase to the need for regulatory oversight and good governance of carbon markets. Regarding market operation, therefore, attention has focused on, *inter alia*, the need to avoid strategic market behavior by dominant players, for instance when large volumes of tradable allowances become concentrated in the hands of a small group of countries or market participants, vesting them with considerable market power. Deceptive and fraudulent behavior to influence prices can involve *wash trades*, in which a firm, acting through agents, is itself both the beneficial buyer and seller of the instrument, pushing prices higher in order eventually to conduct a large genuine sale; or *price manipulation* through aggressive purchasing on a market with low liquidity, geared toward increasing profits on maturing derivative positions; or achievement of defined threshold or *trigger prices* to activate certain regulatory consequences, such as relaxed constraints on borrowing and offset use, or execution of strategic reserve auctions (Whitesell and Davis, 2008, p. 8). Even manipulation across different markets is conceivable, given that, for instance, developments in the carbon market will affect prices in energy markets (Chan, 2009a, p. 15).

Also, concern has been voiced about the ability of OTC transactions to discover a uniform price for carbon, given that these transactions occur on the basis of bilateral bargaining and usually without public disclosure of the price. Likewise, a fear of price fluctuations in the market and, by extension, of detrimental impacts on industrial competitiveness or social hardship for parts of society has triggered calls for government intervention in market price formation, whereas increased sales of allowances to improve balance sheets during the current economic downturn have prompted discussion about restrictions on the volume and frequency of permissible transactions, and consideration of measures to support prices in the carbon market.

Another tradable asset giving rise to controversy are carbon-based derivatives. Currently, most transactions are conducted through forward and futures contracts, which are derivatives embodying promises to deliver emission allowances or credits in a certain quantity, at a certain price, by a specified date. In the wake of the financial crisis, however, derivative trading has lost some favor and is seen by many as a highly leveraged and risky speculative activity driven more by the desire for capital gains than GHGs emission reductions. While theoretically increasing liquidity and thereby helping allocate risks and setting appropriate carbon prices, derivatives transactions are commonly not effected by regulated entities seeking to minimize compliance costs and risk exposure, but by financial intermediaries seeking to profit from developments in carbon price. Yet speculation with carbon-based derivatives can artificially inflate prices and create detrimental cycles in the market while incentivising risky projects or outright fraud. Securitization of derivatives—a process by which often sophisticated contractual arrangements are sold in tranches on capital markets after origination—further reduces transparency and accountability (Chan, 2009b, p. 4).

Finally, reflecting the challenges that have been faced in achieving agreement on an international treaty, the future evolution of the carbon market is increasingly seen as predicated on bilateral or regional cooperation between states that have implemented domestic emissions trading systems (Flachsland et al., 2009), an approach that is often described as the “bottom-up” pathway to global carbon trading. Inasmuch as the global trading architecture evolves through successive integration and assimilation of domestic and regional markets, however, it will necessitate strong coordination among participating jurisdictions. Barring such coordination, not only will design differences be perpetuated across a trading link, but also markets are likely to develop in a geographically diverse, fragmented, and heterogeneous manner. Yet even if the path to global carbon trading leads through a centralized, top-down framework, coordination will remain important to ensure robust implementation at the local level through administrative structures.

8.4.2 Monitoring, Reporting, and Verifying GHG Emissions

The acronym MRV (for monitoring, reporting, and verifying) has entered the UNFCCC negotiating agenda lexicon in several contexts. Developed countries,

especially the United States, are concerned that any financial support they provide for developing countries' mitigation or adaptation efforts is tied to the recipient countries' progress in reducing their emissions levels; the developed countries therefore want to know—and be able to report credibly to domestic constituents and stakeholders—the levels of emissions and reductions in them in the recipient countries on a country-by-country basis. For their part, developing countries want to see evidence that developed country commitments about financing have in fact been met (as discussed earlier). Though these two expressed desires for MRV are connected through a *quid pro quo* in international negotiating processes, they clearly require quite different technical capabilities and administrative procedures. Here we use the term MRV to refer to issues concerning emissions of GHGs.

UNFCCC Parties' MRV requirements have been formalized within the context of the UNFCCC negotiating process, including in the Kyoto Protocol and in the Bali Action Plan (UNFCCC, 2009). They include FCCC Annex I “developed” countries mitigation commitments or actions; FCCC Annex II “developing” country mitigation actions; and support by “developed” countries for “developing” countries' mitigation actions. Responses to these requirements have been embedded in specific tangible administrative processes. Annex I parties (i.e., developed countries and countries in transition) prepare annual GHG inventories based on methods approved by the Intergovernmental Panel on Climate Change (IPCC) and subject to review by panels of experts, with in-country inspections every five years. Non-Annex I countries are not required to report as frequently or according to IPCC methods, nor are the reports subject to an international review process.

At his press conference at the Copenhagen Conference of the Parties (COP) meetings in 2009, US President Obama noted that “. . . [W]e can actually monitor a lot of what takes place [in greenhouse gas emissions] through satellite imagery and so forth. So I think we are going to have a pretty good sense of what countries are doing” (US White House, 2009). Just before and after the Copenhagen meetings, the governments of the United Kingdom and France indicated their interest in GHG monitoring technologies, not only for monitoring emissions within the EU but also in other parts of the world (*The Telegraph*, 2010). At the EU level, the European Commission on behalf of the EU and the European Space Agency are in the process of enhancing their capabilities in this regard (Centre for European Policy Studies, 2011). The Japanese also already have in place some capabilities of this type, and the government of India has announced its intention to have satellites in operation to monitor GHG emissions “across the country and globe” (*The Times of India*, 2010). Verification procedures are thus likely to be issues in international negotiating arenas and administrative processes for many years. They are already attracting interest in domestic deliberations on US national climate change policymaking.

There is much information in the public domain about the technical capabilities for monitoring emissions and removals by sinks in agriculture, forestry, and other land uses—including the UN program “REDD,” whose purpose is Reducing Emissions

from Deforestation and Forest Degradation in Developing Countries (see especially US National Research Council, 2010). Though less is publicly known about existing or prospective capabilities for satellite based monitoring of other kinds of site-specific sources of greenhouse gas emissions, it is clear that questions about international cooperation, sharing, and transfers of these technologies will be on the international climate change negotiating agenda. There is interest—particularly in Europe—in the possibility of creating a new international agency that would be responsible for such monitoring. This could be in addition to whatever system the EU itself develops for its own regional purposes. Finally, regardless of any issues about the prospective international institutionalization of satellite-based monitoring methods, there are likely to be dual-use issues—namely, the use of such monitoring capabilities not only for GHG emissions monitoring, but also for military uses; and dual-use issues apply to US systems and to the systems of other countries.

8.4.3 Monitoring, Reporting, and Verifying International Financial Flows

An increasingly salient item on the agenda of multilateral climate change conferences has been international financial flows from “developed” to “developing” countries. It is convenient to separate these into relatively short-term issues concerning so-called “Fast Start Financing” during recent years and the longer term issues, in which the year 2020 is a benchmark. The transparency issues for the shorter term have been the subject of detailed attention and can be addressed with data about specific commitments made and actual flows that have occurred in relation to the commitments. The transparency issues for the longer term, however, are not as clear in their commitments, nor of course are they yet subject to empirical analysis of the actual flows in relationship to the commitments.

An especially ambitious non-official tracking system, The Climate Funds Update, has been established jointly by the Overseas Development Institute and the Heinrich Böll Foundation “to increase the transparency of climate finance flows” (Walton et al., 2011, p. 1). It monitors 22 financing arrangements in various stages from pledges to disbursements.

In 2009 developed countries pledged \$30 billion in international financial support for developing countries’ mitigation and adaptation actions during 2010–2012. The funds were to be “new and additional” beyond normal international economic assistance programs, and they were to be “balanced” between mitigation and adaptation. The pledge was reiterated the following year. In light of many accusations that the process of delivering the funds lacked transparency and that the actual amounts of disbursements were falling short of the amount pledged, there has been much interest in monitoring the entire process. Of the many reports on the issue, three of special interest because of their thoroughness are one by Bloomberg New Energy Finance (BNEF)

(2011b), a joint study by the World Resources Institute (WRI) and Overseas Development Institute (ODI) (Fransen et al., 2012) and a report from the Climate Policy Initiative (CPI) (Buchner et al., 2011). The BNEF analysis found that as of August 2011—that is, about half way through the 2010–2012 period of the pledges—the actual deliveries were about \$5.4 billion in arrears, compared with a schedule of equal monthly payments over the 36-month period. Among donor countries, Japan’s pledge of \$12.6 billion was by far the greatest, but it had actually delivered only 37% of that amount as of August 2011. The EU-27 had collectively pledged \$10.0 billion and delivered 48%. Of the US pledge of \$2.4 billion, only 36% had been delivered. Australia, Canada, and Norway had delivered, respectively, 64% of \$0.4 billion, 93% of \$0.3 billion, and 25% of \$1.6 billion. (Other donor countries included Monaco, New Zealand, Russia, and Switzerland.) The study also found that “not all” of the amounts delivered were “new and additional” as had been agreed; furthermore, it concluded that “It is nigh impossible to calculate developed countries’ pledges that are new and additional due to the lack of reporting transparency and agreed definition” (Bloomberg New Energy Finance, 2011a, p. 1). Another pledge made by the “developed” countries—this one for the longer term—was for \$100 billion per year by 2020. A UN High-level Advisory Group on Climate Change Financing (2010) undertook an extensive analysis of the topic and concluded that it is “a challenging but feasible” goal.

An important element of ambiguity in these pledges is that they include private sources of financing as well as governmental sources. Because the government cannot make private entities actually provide such funds, it is not clear what the implications for governments’ responsibilities are to “commit. . . to a goal of mobilizing jointly \$100 billion per year by 2020 to address the needs of developing countries.”

8.5 CONCLUSION ON TRANSPARENCY OF CLIMATE CHANGE POLICIES, MARKETS, AND CORPORATE PRACTICES

8.5.1 Summary of the Literature to Date

The literature on transparency in carbon markets, corporate disclosure, and government climate change policies is diverse in its topical coverage, analytic approaches, substantive conclusions, and implications for business practices and government policies. Yet, there is an underlying coherence in the themes: although there has been much increase in attention given to the subject and although much of the research is empirically and normatively rich in its content, the topic is such a rapidly evolving one that research has surely lagged behind the need.

Substantively, the studies indicate that:

- There are serious transparency problems in carbon markets needing immediate attention by national and international governmental agencies.
- Firms' disclosure practices, with few exceptions, have been inadequate in view of their exposure to climate related risks, especially in the insurance industry in the United States.
- The MRV activities of international agencies and NGOs need to be augmented in order to keep track of GHG emissions and international financing programs.

8.5.2 Topics for Further Research

All three of the closely interrelated topics of the paper present an array of challenges for further research. As for carbon markets, the potential proliferation of additional markets at the subnational, national, and international levels offers opportunities for future linkages, increasing overall market liquidity and efficiency—but this will place new demands on the transparency of trading systems to be linked, as well as any linkage mechanisms. Also, there is recurrent interest in the use of border adjustment measures to address the international “leakage” problem—that is, the possible increases in GHG emissions from increased production in countries with relatively lax climate change mitigation measures while emissions from countries with relatively stringent measures decline. Because of the potential for disguised protectionism, there are serious trade policy transparency issues at stake.

As for corporate disclosure practices, the repeated annual surveys based on firms' self-reporting have provided much data, but they suffer from the inevitable problems inherent in such research—namely, verification of the veracity of the responses and identification of the most appropriate individuals to reply on behalf of complex organizations with diverse interests and perspectives within them. Analyses of official filings with regulatory bodies and in-depth case studies are useful complements. Data should be updated annually to the extent feasible.

Much more analysis is needed on what information firms should disclose and how they should disclose it. Among industries, the laggard tendencies of most insurance firms—with a few notable exceptions—need more detailed and critical scrutiny, particularly in the United States.

Finally, as for government policies, there is a formidable “level of analysis” or “unit of analysis” challenge. Government policies *at all levels* are now highly relevant and consequential in economic and environmental terms, and they are evolving rapidly. Comparative studies of the transparency issues of policies are thus needed at all levels—local, national, and international. Indeed, the increasing need for studies at

all levels of government may be a distinguishing feature of the transparency issues addressed in the chapter.

REFERENCES

- Bachram, M., and Egenhofer, C. (2011). Space observation systems: An underused asset in EU and global climate change policy. CEPS Policy Brief No. 245. Brussels: Centre for European Policy Studies.
- Baker, A. (2011). Interpreting emission pledges: The need for a common accounting framework, Climate Strategies. <http://climatestrategies.org>
- Bell, R. G. (2003). *Choosing Environmental Policy Instruments in the Real World*. Paris: Organisation for Economic Co-operation and Development.
- Bell, R. G. (2005). Culture and history count: Choosing environmental tools to fit available institutions and experience. *Indiana Law Review* 38, 636–640.
- Bell, R. G.. (2006). The Kyoto placebo. *Issues in Science and Technology* 23, 28–31.
- Bloomberg New Energy Finance. (2011a). Have developed nations broken their promise on \$30 billion “fast-start” finance? www.bnef.com
- Bloomberg New Energy Finance. (2011b). Global renewable energy market outlook. Executive Summary. www.bnef.com
- Brewer, T. L. (2005). Global warming and climate change in the 21st century: New issues for firms, governments and research on business-government relations. In *International Business-Government Relations in the 21st Century*, ed. R. Grosse, pp. 147–170. Cambridge, UK: Cambridge University Press.
- Brewer, T.L. (2014). *The United States in a Warming World: The Political Economy of Government, Business and Public Responses to Climate Change*. Cambridge, UK: Cambridge University Press.
- Buchner, B., Brown, J., and Corfee-Morlot, J. (2011). *Monitoring and Tracking Long-term Finance to Support Climate Action*. Paris: Organisation for Economic Co-operation and Development and International Energy Agency.
- C2ES (n.d.). Verifying mitigation efforts in a new climate agreement. Washington, DC: Center for Climate and Energy Solutions.
- Carbon Disclosure Project. (2006). *Annual Report*. www.cdproject.int
- Carbon Disclosure Project (2012a). *Annual Report*
- Carbon Disclosure Project (2012b). *The Future of Reporting: CDP FTSE 350 Climate Change Report 2012*. www.cdproject.int
- Carbon Disclosure Project. (2013). *CDP Signatories and Members*. www.cdproject.int
- CERES. (2006). *Corporate Governance and Climate Change: Making the Connection*. Boston: Coalition for Environmentally Responsible Economics.
- CERES. (2013a). Who we are. www.ceres.org
- CERES. (2013b). Shareholder Resolutions. www.ceres.org
- CERES. (2013c). Insurer climate risk disclosure survey: 2012 findings and recommendations. www.ceres.org
- Chan, M. (2009a). Lessons learned from the financial crisis: Designing carbon markets for environmental effectiveness and financial stability. *Carbon & Climate Law Review* 3, 152–160.

- Chan, M. (2009b). *Subprime Carbon? Re-thinking the World's Largest New Derivatives Market*. Washington, DC: Friends of the Earth.
- ClimateWire. (2010). Insurance: Regulators in Ind. reject climate regulation; some others appear lukewarm. By Evan Lehmann. www.eenews.net
- Convery, F., Ellerman, D., and de Perthuis, C. (2008). *The European Carbon Market in Action: Lessons from the First Trading Period*. Paris: Caisse des Depots Mission Climat.
- Ecosystem Market Place and Bloomberg New Energy Finance. (2012). *Developing Dimension: State of the Voluntary Carbon Markets 2012*.
- European Commission. (2006). EU Emissions Trading Scheme delivers first verified emissions data for installations. Press release IP/06/612 of 15 May 2006.
- EU (2011). Review of Decision No. 280/2004/EC: (Monitoring Mechanism Decision) in view of the agreed Climate Change and Energy package Draft final report. Service Contract No 07.0307/2009/S12.543009/SER/C1. Report prepared for DG CLIMA. Berlin, March 2011. Authors: A. Herold (project management), H. Acker, J. Busche, J. Graichen, B. Gugele, H. Hermann, S. Oberthür, S. Seum, and K. Seuss. The views expressed in this study represent only the views of the authors and not those of DG CLIMA or any other organization. Prepared by Umweltbundesamt, Institute for European Studies Vrije Universiteit of Brussels, Öko Institut. www.ec.europa.eu
- Financial Times*. (2010). Climate change: Not necessarily a threat but insurers can't just muddle through. By Paul J. Davies. April 26. www.ft.com
- Flachsland, C., Marschinski, R., and Edenhofer, O. (2009). Global trading versus linking: Architectures for international emissions trading. *Energy Policy* 37, 1637–1647.
- Flues, F., Michaelowa, A., and Michaelowa, K. (2010). What determines UN approval of greenhouse gas emission reduction projects in developing countries? An analysis of decision making on the CDM executive board. *Public Choice* 145, 1–24.
- Fransen, T. (2012). *Fast-Start Finance: Where Do We Stand at the End of 2012?* Washington, DC: World Resources Institute.
- Fransen, T., Nakhooda, S., and Stasio, K. (2012). The US fast start finance contribution. London: Overseas Development Institute. <http://www.odi.org.uk/>
- Global Witness (2011). Safeguarding REDD+ finance: Ensuring transparent and accountable international financial flows. London: Global Witness, London.
- GoldmanSachs (2009). Change is coming: A framework for climate change. www.goldmansachs.com
- Hahn, R. W., and Hester, G. L. (1989). Where did all the markets go? An analysis of EPA's emissions trading program. *Yale Journal of Regulation* 6, 109–153.
- Haufler, V. (2009). Insurance and reinsurance in a changing climate. In *Changing Climates in North American Politics: Institutions, Policymaking, and Multilevel Governance*, eds. H. Selin and S. D. VanDeveer, pp. 241–261. Cambridge, MA: MIT Press.
- Interfaith Center for Corporate Responsibility. (2013). ICCR issue work & resources: Corporate engagement in action. www.iccr.org
- Institutional Investors Group on Climate Change. (2012). Global investor survey on climate change. www.ceres.org
- Investor Network on Climate Risk. (2010). Climate resolution tracker for 2010 as of 07-19-2010. www.incr.com
- Investor Network on Climate Risk. (2013). Who we are. www.ceres.org/investor-network

- Jones, C. A., and Levy, D. L. (2009). Business strategies and climate change. In *Changing Climates in North American Politics: Institutions, Policymaking, and Multilevel Governance*, eds. H. Selin and S. D. VanDeveer, pp. 219–240. Cambridge, MA: MIT Press.
- Kolk, A., and Pinkse, J. (2005). Business responses to climate change: Identifying emergent strategies. *California Management Review* 3, 6–20.
- Kollmuss, A., Zink, H., and Polycarp, C. (2008). *Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards*. Berlin: WWF Germany.
- Kraft, M. E., and Kamieniecki, S., Eds. (2007b). *Business and Environmental Policy: Corporate Interests in the American Political System*. Cambridge, MA: MIT Press.
- Levy, D. L. (2005). Business and the evolution of the climate regime: The dynamics of corporate strategies. In *The Business of Global Environmental Governance*, eds. D. L. Levy and P. J. Newell, pp. 73–104. Cambridge, MA: MIT Press.
- Levy, D. L., and Newell, P. J., Eds. (2005). *The Business of Global Environmental Governance*. Cambridge, MA: MIT Press.
- Meckling, J. (2012). *Carbon Coalitions: Business, Climate Politics, and the Rise of Emissions Trading*. Cambridge, MA: MIT.
- Millar, I., and Wilder, M. (2009). Enhanced governance and dispute resolution for the CDM. *Carbon & Climate Law Review* 3, 45–57.
- Mills, E. (2012). The greening of insurance. *Science*, 338. www.sciencemag.org
- Monast, J., Anda, J., and Profeta, T. (2009). *U.S. Carbon Market Design: Regulating Emission Allowances as Financial Instruments*. Durham, NC: Duke University.
- National Association of Insurance Commissioners. (2010). Insurer Climate Risk Disclosure Survey, Adopted Version March 28, 2010; as reported by National Association of Mutual Insurance Companies 2011. www.namic.org
- National Association of Mutual Insurance Companies (2011). Adopted Version, March 28, 2010. Insurer Climate Risk Disclosure Survey. www.namic.org
- Nordhaus, W. D. (2006). After Kyoto—Alternative mechanisms to control global warming, *Foreign Policy in Focus*. http://www.fpic.org/reports/after_kyoto_alternative_mechanisms_to_control_global_warming
- Obama, President Barack. (2009). Remarks at the Copenhagen International Conference on Climate Change. <http://www.whitehouse.gov/blog/2009/12/18/a-meaningful-and-unprecedented-breakthrough-here-copenhagen>
- OECD. (2003). *OECD Global Forum On Sustainable Development: Emissions Trading Concerted Action on Tradeable Emissions Permits Country Forum*. Prepared by Ruth Greenspan Bell. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2009). *Climate Change Mitigation: What Do We Do?* Paris: Organisation for Economic Co-operation and Development. <http://www.oecd.org/greengrowth/economicpolicies-to-foster-greengrowth/41753450.pdf>
- Peters-Stanley, M., and Hamilton, K. (2012). *Developing Dimension: State of the Voluntary Carbon Markets 2012*. Washington, DC, and New York: Ecosystem Marketplace and Bloomberg New Energy Finance. www.bloomberg.com
- Pennsylvania Insurance Department. (2010). Insurance Company Climate Risk Disclosure Survey. www.portal.state.pa.us
- Point Carbon. (2012, January 10). *Carbon Market Monitor: A Review of 2012*. Oslo: Point Carbon.
- Schiller, B. (2012). Insurance companies face increased risks from warming, Yale Environment 360. www.e360.yale.edu

- Schneider, L. (2007). *Is the CDM Fulfilling Its Environmental and Sustainable Development Objectives? An Evaluation of the CDM and Options for Improvement*. Darmstadt: Öko-Institut.
- The Telegraph* (2010). Articles on November 28, 2010, and December 20, 2010, in *The Telegraph* (London). www.telegraph.co.uk
- The Times of India*. (2010). Statement by Minister for Environment and Forests, reported in *The Times of India*. www.timesofindia.indiatimes.com
- Transparency International. (2011). *Global Corruption Report: Climate Change*. www.transparency.org
- UNFCCC. (2009). Copenhagen Accord. www.unfccc.int
- UNFCCC. (2011a). Copenhagen Accord, Appendix I—Quantified economy-wide emissions targets for 2020. www.unfccc.int
- UNFCCC. (2011b). Copenhagen Accord, Appendix II—Nationally appropriate mitigation actions of developing country Parties. www.unfccc.int
- UNFCCC. (2011c). Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action. www.unfccc.int
- UNFCCC. (2012). Climate Change, Carbon Markets and the CDM: A Call to Action. Report of the High-Level Panel on the CDM Policy Dialogue, September 2012. <http://www.cdm-policydialogue.org/report/rpt110912.pdf>
- UNFCCC. (2013). Clean Development Mechanism (CDM). www.unfccc.int
- UN High-level Advisory Group on Climate Change Financing. (2010). Report of the Secretary-General's High-level Advisory Group on Climate Change Financing. www.un.org
- Unger, M., and Streck, C. (2009). An appellate body for the clean development mechanism: A due process requirement. *Carbon & Climate Law Review* 3, 31–44.
- Overseas Development Institute (2013). The practical challenges of monitoring climate finance: Insights from Climate Funds Update. Accessed at <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7665.pdf> on 23 January 2013.
- US Securities and Exchange Commission. (2010). Commission guidance regarding disclosure related to climate change: Final rule. www.sec.gov
- Wara, M. W., and Victor, D. G. (2008). A realistic policy on international carbon offsets. Working Paper No. 74. http://iis-db.stanford.edu/pubs/22157/WP74_final_final.pdf
- Whitesell, W., and Davis, S. (2008). *Preventing Market Disruptions in Cap-and-Trade Programs*. Washington, DC: Center for Clean Air Policy.
- World Bank. (2011). *State and Trends of the Carbon Market, 2011*. Washington, DC: World Bank. www.worldbank.org
- World Bank. (2012a). *State and Trends of the Carbon Market, 2012*. Washington, DC: World Bank. www.worldbank.org
- World Bank. (2012b). *Carbon Finance at the World Bank*. Washington, DC: World Bank. www.worldbank.org
- World Bank. (2012c). *Turn Down the Heat: Why a 4°C Warmer World Must be Avoided*. Washington, DC: World Bank. www.worldbank.org
- Young, B., Suarez, C., and Gladman, K. (2009). *Climate Risk Disclosure in SEC Filings: An Analysis of 10-K Reporting by Oil and Gas, Insurance, Coal, Transportation and Electric Power Companies*. Sponsored CERES, EDF, and The Corporate Library. www.ceres.org

CHAPTER 9

TRANSPARENCY OF HUMAN RESOURCE POLICY*

ERIK MELLANDER

9.1 THE DOMAIN OF HUMAN RESOURCE POLICY

BEFORE trying to outline the domain of (public) human resource policy it is appropriate to ask why there is any need at all for political intervention. After all, much of education and training is privately run in many countries. Still, there is a real need for political governance, which arises because the private sector or, more correctly, private markets, cannot ascertain that individuals get equal chances to educate themselves according to their talents and aspirations. Neither will private markets guarantee that the total amount of education and training conducted in society is socially optimal. Both of these shortcomings are due to *market failures*, which are further discussed in the next section.

Given that political decisions about education and training are justified, what should they concern and how far-reaching should they be? Human resource policy is here considered as a broader concept than human capital policy, incorporating not only policies affecting individual decisions but firm behavior, too. Thus, human resource policy can, for example, be concerned with on-the-job training aimed at adapting competences once obtained through education to new forms of work organization. As such changes are continuously brought about by technological changes and international competition, human resources must be regarded as a dynamic, rather than a static, concept.

There is also a conceptual reason for preferring the term human resources over the term human capital. By analogy, human capital makes one think about the capacities of humans in the same way as capacities of machines, that is, real capital. The two

* Helpful suggestions and careful reading of Olof Åslund, Mary James, and Anna Vignoles are gratefully acknowledged.

are quite distinct, however. Whereas the capacity of a machine is depreciated by use, human skills are depreciated when they are *not* put to use.

Given this property of human skills, it is natural to include in the domain of human resource policy measures intended to ascertain that individuals' knowledge and competences are efficiently allocated in society, in the sense that they are exploited to their full potential. This is the problem of matching worker qualifications with occupational demands. To distinguish human resource policy from labor market policy, the relation between labor demand and the dimensioning of the educational system will be considered as a task for human resource policy while the actual matching process in the labor market will be considered to be in the domain of labor market policy and, thus, beyond the scope of the following discussion.

The chapter is outlined in the following way. Section 9.2 discusses why there is a need for transparency in human resource policy. Section 9.3 defines transparency of human resource policy. Section 9.4 elaborates on different aspects on human resource policies relevant for transparency. Section 9.5 deals with measures to improve transparency. Section 9.6 provides concluding comments.

9.2 WHY THERE IS A NEED FOR TRANSPARENCY IN HUMAN RESOURCE POLICY

Before going into details about the meaning of transparency in human resource policy—the issue of *how*, considered in the next section—it is reasonable to ask *why* transparency? For this purpose the general notion of transparency, that is, openness (with information) and accountability, is sufficient.

There are three general arguments for why there is a need for transparency in human resource policy. These arguments derive from the facts that human resource policies i) concern almost everyone, ii) do so for long periods of time, and iii) with respect to fundamental aspects of life. I will consider these arguments in turn.

First, as education and training in modern societies are endeavors extending over the entire life cycle—as reflected in the concept of life-long learning—all citizens in a country are influenced by the country's human resource policies. Indeed, because of the very long-term consequences characterizing many human resource policy reforms, even society's as yet born citizens are often affected. And, owing to international mobility, citizens in other countries may be affected, as well.

Second, the impact of most human resource policy reforms extends over long periods of time. This is especially relevant from the perspective of the politicians deciding on the reform. In general, these politicians will have left office long before the full impact of the reform has been felt. Accordingly, they seldom can be held accountable if the reform fails or if it, for example, should prove to have undesirable side effects.

Third, human resource policies directly affect human well-being. As concluded by Olshanky et al. (2012), “The lifelong relationships of education and its correlates with health and longevity is striking.” Moreover, human resources are crucial determinants of economic growth—often considered *the* most important—and, hence, essential for society’s prosperity.¹

In addition to these three arguments there are two aspects of human resource accumulation that are (at least) equally important. The first aspect has to do with the (partial) lack of automatic supply of information and control via the market mechanism. In a well-functioning market the price system conveys all the information that agents need to make well-informed decisions. For some goods and services markets do not exist, however. In the context of such *market failures* alternative ways have to be found to provide the information otherwise channeled through prices. Market failures can be found in the human resource domain, failures that pertain both to individuals and to the society as a whole.

At the individual level, the most well-known market failure has to do with credit constraints. Specifically, an important difference between human capital and real capital is that the former does not create its own collateral (Piore, 1968). Whereas in the market for real capital investments can be financed through loans using the capital object as security, an individual cannot borrow on the future human capital he or she intends to obtain through education; owing to an *information asymmetry* between the individual and the potential financiers the latter cannot judge whether the student’s learning capacity and future incomes will be large enough to repay the loan.

Fernandez and Gali (1999) have shown that under these circumstances ranking of students according to, for example, grades provides an efficient way of allocating students of varying ability to educations of varying quality—the resulting allocation is equal to the (perfect) market allocation that would arise in the absence of credit constraints. Given efficiency considerations only, the allocation based on ranking also indicates a solution to the credit constraint problem: student loans should be extended such that this allocation becomes financially feasible. Of course, in reality the situation is (much) more complicated. For instance, that a student is capable of taking a certain degree does not imply that he or she will actually do it, making repayment of the loan uncertain. Moreover, political decisions on student loans will be driven by equity as well as efficiency considerations.

More important from a transparency perspective is that the equality of the ranking procedure and the market allocation hinges on the proviso that there is reliable and comparable information on school quality and student ability. A critical task of a transparent human resource policy is to provide conditions supporting the compilation and dissemination of such information.

¹ Overviews of the theoretical and empirical literatures on the relation between education and growth can be found in Aghion and Howitt (1998) and Krueger and Lindahl (2001), respectively.

At the societal level, a market failure arises because of *positive externalities* associated with human resources. These externalities often stem from characteristics of the production technology, as in Lucas (1988) and Nelson and Phelps (1966), but may arise for other reasons, too, as in Acemoglu (1996). In either case, the positive externalities will lead to underinvestments in human skills.² Human resource policy can counteract this tendency by means of, for example, subsidies to education and training. Such subsidies will, however, as a rule, cause distortions to the economy. Policy transparency cannot eliminate the distortions but possibly reduce them.

The second aspect of human resource accumulation that points to a need for transparency is its dynamic nature. In the words of Carneiro and Heckman (2003), “early investments raise the productivity of later investment” and “learning begets learning.” This implies that human resource investment decisions are *path dependent*. When making human resource investments one has to account for the fact that the present choice set is constrained by earlier investments and that future investments will be further constrained by the investment made today. Human resource policies have to be transparent enough to enable individuals deciding on their educational and training careers to take these constraints and their long-term consequences into account.

9.3 TRANSPARENCY OF HUMAN RESOURCE POLICY DEFINED

Having just ascertained, in general terms, the need for transparency of human resource policy, I go on to define more precisely what I take the concept to mean.

One important aspect of transparency is the time dimension: transparency relates both to *ex ante* and *ex post* considerations. *Ex ante* refers to the time period before the policy is put into effect. Sometimes it is desirable to partition *ex ante* transparency into transparency regarding policy formulation and transparency regarding policy implementation, respectively. This is the case, for example, when decisions about human resource policies are taken at the EU level. The reason is that EU decisions on human resource policies are based on the Open Method of Coordination (OMC). According to the OMC, the *what-to-do* decision is taken at the supranational, that is, EU, level while the *how-to-do-it* decision is taken at the national level. As decisions based on the OMC are not legally binding, the nationally implemented policies can be quite different from the EU policy originally agreed on. However, as this issue has been extensively discussed in Mellander and Håkanson (2006), it is not pursued further here. In the

² For completeness, it should be pointed out that theoretically human resource accumulation can also give rise to negative externalities. For examples involving relations between education and residential choice, cf. Benabou (1993).

following only human resources policies decided on and implemented nationally will be considered.³

Ex ante transparency requires that the policy be clearly announced with respect to aims, content, benefits, and costs. This is a strong, and potentially quite costly, requirement—ex ante benefit–cost analyses are very rare and complicated to carry out, because of the characteristics of human resource policies discussed in the previous section.

Ex post transparency concerns all outcomes once the policy has been put in place. The policy’s consequences should be documented and its impacts evaluated. Finally, the benefits and costs induced by the policy should be assessed, in an ex post benefit–cost analysis.

Taken together, these requirements mean that a transparent policy will also be an evidence-based policy. By implication, a transparent human resource policy will have the property that it builds on assessments of earlier policies. Typically, this is not what we see—in contrast, new human resource policies are often decided on before all the consequences of the old ones have become apparent, much less evaluated with respect to their impacts.

Another way to define transparency in the area of human resource policy is to recognize that it is possible to distinguish several different facets of this concept. In particular, Geraats (Chapter 3, this volume) considers in the area of monetary policy transparency the following five: political transparency, economic transparency, procedural transparency, policy transparency and operational transparency. Their use in the context of human resource policy is best explained and illustrated by means of a specific example. Such an example is provided in Section 9.4.4.

9.4 ASPECTS ON HUMAN RESOURCE POLICIES RELEVANT FOR TRANSPARENCY

When considering human resource policies, it is useful to organize the discussion thematically by examining different aspects of such policies. The following (interrelated) aspects are considered: efficiency and equity, input utilization, skills and competences, the dimensioning of education and the labor market, and, finally, benefits and costs. The first aspect concerns two important objectives of human resource policies, while the second considers means utilized to fulfill these objectives. The third

³ Two-stage decision processes might occur in a national context, too; policies can be decided on at the state level but carried out on the regional or local level. However, unlike the EU, the state can impose sanctions on regional/local bodies not complying with the policy, thereby ensuring (long-term) conformity at the regional/local level.

aspect concerns the knowledge that the educational and training system imparts to the students while the fourth deals with the issue of making this knowledge be put to productive use. The final aspect relates the revenues of education and training to the corresponding costs.

9.4.1 Efficiency and Equity and Human Resource Management Principles

In economic terms, the efficiency of a system for education and training relates to its capability to promote and support economic growth. According to endogenous growth theory, human capital accumulation is the essential driver of economic growth; see, for example, Aghion and Howitt (1998, chapter 10). At a more detailed level, Hanushek and Wössmann (2008) have considered the role of cognitive skills for economic development. Efficiency demands that the generation of skills be maximized at a given level of resource utilization.

Equity can be defined in many different ways. Here, following Wössmann (2008), the concept of equality of opportunity proposed by Roemer (1988) is used, as this concept appears to be widely endorsed. In the present context, equality of opportunity means that an individual's educational and training outcomes should depend on her effort but not on her circumstances—family background, gender and so forth.

For a long time there has been a debate about efficiency and equity in education and training. The 21st century literature appears to agree that there is not necessarily a trade-off between the two objectives—some human resource policies may advance both efficiency and equity, and that the answer depends on the type of education or training considered. An illuminating illustration of these points with respect to education at different stages of the life cycle is given in Figure 9.1, from Wössman (2008).

As shown in Figure 9.1, policies targeting increased equity during the early stages of the life cycle will support efficiency objectives, too. Specifically, investments benefiting human resource accumulation of disadvantaged children, thus increasing equity, also yield a higher return, that is, are more efficient, than investments benefiting the human resource accumulation of well-off children. However, this concordance does not hold with respect to the later stages of the life cycle. With respect to higher education, training and life-long learning (LLL in Figure 9.1), investments targeted at disadvantaged groups will increase equity at the cost of a lower rate of return, implying reduced efficiency.

Another example of a tradeoff is provided by Brunello and Checci (2007), in an analysis of the long-term outcomes of tracking, that is, allocation of students into education or training programs with different curricula, according to the students' academic abilities. On the one hand, they find that tracking has a detrimental impact on educational attainment by preventing some students from tertiary level studies (the diversion effect). On the other hand, they also conclude that the curricula in vocational schools appear more effective in promoting further training and adult competences

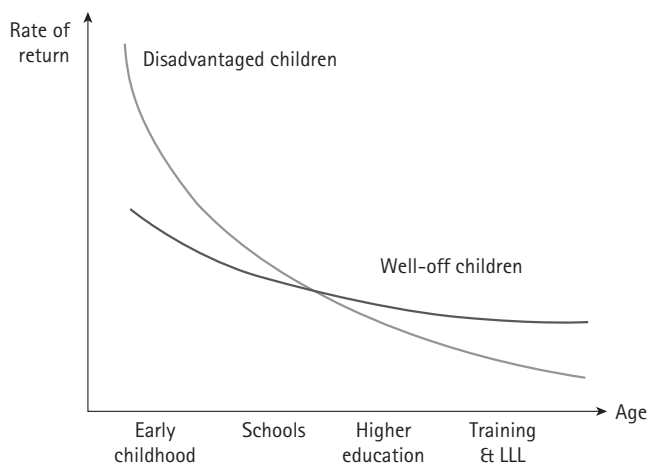


FIGURE 9.1 Stylized returns to different stages of education and training.

Source: Adapted from Wössman (2008). Reprinted with permission of Springer-Verlag.

(the specialization effect), thus reducing the impact of family background on these two outcomes. Accordingly, policy has to be specific with respect to the education or training addressed, the group(s) targeted, and the instruments utilized, thereby contributing to transparency regarding the choices made between efficiency and equity.⁴

Some policy instruments are straightforward and easily observed—tracking is a good example, school-starting age another. Others are more subtle, such as ability grouping and individualized teaching. Moreover, as pointed out by Dupriez et al. (2008), most policies cannot be adequately described in terms of a single instrument. They therefore advocate the use of the following typology of human resource management principles, suggested by Mons (2007):

- *The separation model*: Ability grouping and grade retention in primary school, ability tracking introduced from secondary school. Examples: Germany, Austria, Hungary, Switzerland, Luxembourg, Belgium, the Netherlands.
- *The à la carte integration model*: A common core curriculum until age 16, intra-class ability grouping at primary level, streaming (flexible grouping based on students' performance within each discipline) at secondary level. Examples: United States, Canada, United Kingdom, Australia, New Zealand.
- *The uniform integration model*: Common core curriculum at least to age 14, grade retention. Examples: France, Spain, Portugal.
- *The individualized integration model*: No tracking, almost no grade retention, infrequent ability grouping, but differentiated and individualized teaching. Examples: Denmark, Iceland, Finland, Norway, Sweden.

⁴ Compare also with Betts (2011) for a general discussion of economic aspects on tracking.

This typology accounts for the fact that several instruments are often used in parallel. Moreover, it enables analyses of how specific instruments work, depending on what other instruments they are combined with. For instance, as pointed out by Dupriez et al. (2008), the use and meaning of grade retention will be different in the uniform integration model and in the separation model, due to the fact that the latter also incorporates tracking.

Mons' (2007) typology also lends itself to a discussion about *ex ante* and *ex post* transparency. In the context of the separation model, where educational choices are made early and have far-reaching consequences, *ex ante* transparency is very important, at least for the individual student. The transparency required concerns information about the long-term implications of decisions made today, and the possibilities and costs of reversing earlier choices, in terms of, for example, grade repetition and/or additional education.

Ex post transparency will be more important in the context of the individualized integration model. Though postponing decisions concerning the level of education and field of specialization is good in terms of flexibility, it comes at a cost—in general it leads to longer periods of time spent in education and possibly to higher dropout rates. Moreover, it is not obvious that the possibility to choose among more educational pathways really leads to different choices.⁵ Transparency amounts to enabling assessments concerning whether the benefits of flexibility are large enough to justify the costs.

This discussion should not be interpreted as saying that *ex ante* transparency is not needed in educational and training systems applying the individualized integration model. Likewise, *ex post* transparency is certainly required in systems featuring the separation model. Contexts differ with respect to the emphasis to be put on the two types of transparency, however. Yet, some policy instruments are used in almost all kinds of systems, albeit in different ways. Grade retention is an example at hand. With respect to this instrument both *ex ante* and *ex post* transparency are essential: *ex ante* regarding the conditions under which grade retention is imposed and the obligations it inflicts upon the student, *ex post* concerning its remedial effect, relative to other measures that possibly could prolong the expected study time by less than one year.

9.4.2 Input Utilization

With respect to input utilization, *ex ante* transparency concerns institutional settings: rules and regulations specifying minimum standards and requirements.

⁵ Hall (2012) evaluates the effects of a Swedish policy reform where two-year programs in upper secondary school were extended to three years, mainly through the inclusion of academic subjects. The intention of the reform was to make the students eligible for tertiary (university) level education. However, beside (obviously) increasing the expected study time by 50%, the main effect of the reform was increased drop-out rates. The possibility to continue to higher education was exploited by a negligible number of students.

Consider, for example, regulations concerning student/teacher ratios: an example is provided by the so-called Maimonides' rule applied in Israeli schools and exploited by Angrist and Lavy (1999) to assess the effects of class size on student achievements. Other examples can be regulations regarding teaching equipment and study materials, premises, and subsidized transports to and from school. Ex ante transparency is especially important in contexts characterized by a wide variety of educational providers and different pedagogical approaches.⁶

The less binding minimum standards are the more important is information ascertaining ex post transparency. Such information amounts to follow-up documentation of resource use at the school level and/or at the level where decisions regarding inputs are taken. Given that student composition can be controlled for, the follow-up data should enable comparisons both within schools (over time) and between schools.

Teachers being the dominant input, transparency is foremost essential with respect to number of teachers per student (teacher/student ratios) and teacher quality. One way to define teacher quality is through licensure. Goldhaber (2011) finds, however, that while the effects of licensure on student achievements generally are positive, they are small and uncertain. Andersson et al. (2011) obtain a similar result for Sweden. Other quality measures, such as the teacher's education and cognitive and noncognitive abilities, appear to be more important than licensure. Regarding the teacher's education, Krauss et al. (2008) find that math teachers with more extensive mathematical training outscore teachers with less math training with respect to both content knowledge and pedagogical knowledge. The results in Grönqvist and Vlachos (2008) indicate that the importance of the teacher's cognitive and noncognitive abilities differ by categories of students: noncognitive abilities are important for low-aptitude students while high-performing students benefit from high-cognitive teachers.

The use of other inputs, beside teachers, could preferably be documented through expenditures.

9.4.3 Learning Outcomes: Skills and Competences

The education and training system should provide the knowledge and skills students need to successfully complete their educational careers. And, ultimately, it should provide citizens with the competences they need in their professional and civic lives. This means that transparency with respect to the outcomes of education and training will involve different time horizons, levels of aggregation, and kinds of information.

Short-term outcomes are especially relevant in primary and lower secondary school, in view of the large body of research that stresses the importance of adequate early

⁶ Here, the importance ex ante transparency derives from need to compare many different alternatives beforehand. In the extreme case with only one provider there is no need for transparency—you will get this single option anyhow.

investments in education and the dynamic nature of human resource accumulation; cf. Cunha et al. (2006) and the last paragraph in Section 9.2. Transparency can be improved by results on standardized tests, see, for example, Geier et al. (2008), provided that the students' backgrounds and previous achievements are accounted for when the test results are assessed. Grades are another important source of information—especially when combined with results on standardized tests; cf. Klapp Lekholm and Cliffordson (2008). Depending on the type of general human resource management principle applied (cf. Section 9. 4.1) grade retention can be another critical indicator.

Examples of medium-term outcomes are examination rates and transitions to higher level of study. At higher (tertiary) levels of education essential information includes enrollment rates, study times, and completion rates.

Long-term outcomes are, for example, labor market experience and earnings by education (education wage premia). In addition, there are important noneconomic outcomes such as, for example, civic engagement and political participation; cf. Lochner (2011).

To improve transparency and to be useful for policymaking, outcome measures have to be easy accessible and comparable over time and across space. At the aggregate, country, level, this is the idea behind internationally comparative tests such as Progress in International Reading Literacy Study (PIRLS) for 4th grade pupils; Programme for International Student Assessment (PISA) for 15-year-olds; and Trends in International Mathematics and Science Study (TIMSS) for 4th, 8th, and 12th grade students. These tests primarily capture whether skills develop according to curricula.

International tests examining long-term effects during adulthood, that is, effects relevant for coping with working life and civic conditions, are less common. Examples include International Adult Literacy Survey (IALS) conducted in the 1990s and Adult Literacy and Life skills survey (ALL) conducted in the early 2000s. Unfortunately, relatively few countries participated in these surveys. That is not the case with the Programme for the International Assessment of Adult Competencies (PIAAC) launched in 2012, however. PIAAC covers about 25 Organisation for Economic Co-operation and Development (OECD) countries, all of which participate in PISA, too.

PIAAC makes it possible to compare short- and long-term outcomes. For instance, it can be investigated if countries that have been successful in PISA also prove to be successful when it comes to competencies of adults (which was the case with, for example, Finland). Moreover, PIAAC provides information about whether adult education and on-the-job training are positively correlated with skills and competencies.

From a transparency perspective, it is important, however, that international comparisons are not limited to the aforementioned surveys. Fortunately, commendable work has been conducted to establish international standards in the human resource field. The international grading system for tertiary education established through the Bologna Process is a good example. Less unified, but equally important, are the ongoing efforts in many countries to validate foreign educations and skills.

Comparability over time is another crucial issue. Publications like *Education at a Glance*, issued by the OECD, play an important role by recurrently reporting indicators

on education and training that allow for comparisons of changes over time, as well as across countries.

9.4.4 The Dimensioning of Education and the Labor Market

While human knowledge in the sense of *Bildung* has a value in itself, the economic value of an education is determined by the value of the productive use it can be put to.⁷ This makes it necessary to consider developments in the labor market when formulating human resource policy. Doing so requires planning: most upper secondary educations extend over two or three years while tertiary educations may last four or five years. When deciding on the dimensioning of the educational system the policymaker thus has to make an assessment of the students' labor market prospects at least three years ahead, say. And the planning horizon becomes even longer, of course, if large educational reforms are considered.

For simplicity, assume that the policy parameters are the number of students to be admitted to different educational programs. We are thus abstracting from (a potentially large set of) quality facets of the programs.

Essentially, the determination of these policy parameters requires three (interrelated) pieces of information: demographic projections, forecasts of economic growth, and predicted supply and demand of labor, by education. For brevity, the discussion here focuses on the predictions of labor supply and labor demand.

In most countries, short-term surveys of labor supply and demand are conducted regularly, within the context of the national Labour Force Surveys. In some countries more long-term projections are produced as well. For instance, the Nordic countries, regularly provide forecasts 10–15 years ahead for a relatively large number of educational categories. Pan-European forecasts over the 10-year horizon, by broad levels of education, have also been published recently; cf. Cedefop (2010).

However, for the policy parameters of interest in the present context quite detailed information about education is required and the prediction horizon needs to be closer to the average time needed to complete an educational program. One example of such a survey is provided by the Swedish Labour Market Tendency Survey; cf. Statistics Sweden (2012). This survey covers more than 70 different categories of educations and is targeted to chiefs of staff at workplaces with at least 10 employees. Qualitative information is provided about the employers' view of the supply of labor by educational category—oversupply, supply in balance with demand, or undersupply—and their assessments of how demand will change over the three-year horizon—increase, stay constant, or decrease.

⁷ For ease of exposition, nonproduction benefits of education, cf. Lochner (2011), are abstracted from here.

To consider transparency aspects associated with the determination, implementation, and resulting effects of the policy parameter “number of students to admit,” it is instructive to apply the framework suggested by Geraats (Chapter 3, this volume), involving political, economic, procedural, policy, and operational transparency.

For concreteness, imagine a planned expansion of preschool teacher education.

Political transparency amounts to spelling out the underlying objectives. These could be, for example, access to preschool for children who earlier have been denied access, higher ambitions with respect to the pedagogical content in preschool, and improved possibilities for labor force participation for young mothers.

Economic transparency means explaining the economic information that has been employed in the political consideration. Examples could be analyses of early age skill formation like Cunha et al. (2010) and supply-and-demand surveys of the kind discussed above.

Procedural transparency concerns how the economic information and other types of information have been weighted together and how the decision to increase the number of students to admit to preschool teacher education has been taken.

Policy transparency requires that details be provided about where preschool teacher educations are to be expanded, by how much, and for how long the expansion is planned to be in effect. To be transparent also in the sense of allowing the agents affected to adjust their behavior according to the new conditions, this information should be also provided well ahead of the date when the new rules are put into effect.

Operational transparency would involve follow-ups of the relation between policy intentions and actual outcomes. To what extent is the increased numbers of available slots matched by an increased number of applying students and an increase in the number of (examinated) preschool teachers? Do the additional teachers go on to work in preschool? Is labor force participation increased among mothers with small children?

While this discussion shows that different kinds of transparency can be identified and addressed, it should be said that the particular example considered—featuring a single, quantitative, policy parameter—has not been chosen by accident. In contexts with many interdependent policy parameters, several of which may be qualitative and hard to measure, it will, of course, be less straightforward to apply the suggested framework.

9.4.5 Benefits and Costs

There may be many incentives to invest in human skills that cannot be expressed in money terms, such as, for example, curiosity and social standing. This section, however, considers only *economic* benefits and costs of education and training. Accordingly, because benefits and costs are measured in the same metric it will be possible to consider net benefits, that is, the difference between the two.

While public benefits and costs naturally are more interesting from a policy transparency point of view, private benefits and costs will be considered as well. One

reason is that public benefits and costs often are not available. However, as noted in Section 9.2, the public benefits of education and training should generally exceed the private benefits, because of the existence of positive externalities. An education or a training program that can be justified based on private benefits and costs is thus likely to be justified from a social point of view, too, provided the public costs are not very much larger than the private costs. This brings us to the other reason for considering both public and private benefits and, especially, costs: most types of human resource investments involve funding from both the public and the private sector. Moreover, the shares of each may vary substantially between different types of education and training. For example, primary and lower secondary schools are (entirely) publicly funded in many countries while on-the-job training often is only privately funded. Tertiary education provides a common example of combined public and private funding.

In the following, benefits and costs arising at the various stages of education and training will be considered, from pre-school to adult education and on-the-job training. For preschools, there are not many benefit–cost analyses. This is unfortunate as there seems to be a widespread consensus among researchers about the importance of early human capital investments; cf. Carneiro and Heckman (2003) and Kilburn and Karoly (2008). However, a recent article by Karoly (2012) contains both a review of the literature on early childhood interventions and a framework for standardized benefits and costs measurement, aimed at supporting greater transparency in benefit–cost analyses. The recommended standards concern, *inter alia*, disaggregation of benefits and cost for different stakeholders, the valuing of outcomes and sensitivity analyses.

Continuing with the regular educational system, that is, primary, secondary, and tertiary education, there are two dominating approaches to benefit–cost analysis: estimation of wage premia or computations of internal rates of return. The wage premium measures how much an individual's wage increases due to an increase in education, *ceteris paribus*. In principle, estimation of the wage premium is straightforward: for a sample of individuals wages are regressed on (years of) education and a set of control variables—age, gender, work experience, and so forth.⁸ Estimation of the internal rate of return, on the other hand, requires knowledge of all the discounted revenues and costs associated with the education. The internal rate of return is the discount rate that makes the discounted revenues equal to the discounted costs. It

⁸ In practice, credible estimates of the *causal* effect of education on earnings can be quite difficult to obtain, however. Causal estimates need to account for the fact that well-educated individuals have generic skills—abilities—that make them more likely than others to be successful in school and in the labor market. Failure to do so will result in the wage premium being overestimated; cf. Card (1999). Unfortunately, ability data are seldom available; information about the individual's family background (parents' education and earnings, etc.) is often used to proxy for the missing ability. However, Mellander and Sandgren (2008) show that family background variables either tend to reduce the positive bias in the estimated wage premium very little or, if education is measured with error, instead can give rise to substantial *negative* bias, that is, underestimation of the wage premium.

thus provides the interest rate at which the individual's investment in education breaks even. For an interest rate higher than the internal rate of return, the investment would not be worthwhile.

Under certain conditions, the wage premium and the internal rate of return will coincide. The most important of these conditions is that the only cost associated with the education is the individual's forgone earnings, while studying. Another condition is that income taxes can be disregarded, that is, that the gross wage can be taken as valid measure of the individual's earnings.

The economics literature abounds in estimates of wage premia. Even when considering internationally comparable estimates only, one can find everything from aggregate premia measuring the extra earnings from one extra year of (any kind of) education (Psacharopoulos and Patrino, 2004; Peracchi, 2006), down to premia for educational differences among subcategories of specific professions (Mellander and Skedinger, 1999).

With respect to internal rate of return calculations, the OECD publication *Education at a Glance 2012* provides an example. For a large number of countries estimates of both private and public benefits and costs are provided, as well as internal rates of return. Private benefits consist of earnings increases and reduced probability of becoming unemployed. Private costs include forgone earnings while studying; tuition, books, and other expenses; and increased future taxes and lost transfers. Grants are treated as negative costs. Public costs include public spending on education, public grants and stipends, and lost tax receipts during education. Public benefits are measured in terms of additional (post-education) tax payments and transfers saved. Unfortunately, no attempt has yet been made to capture the most important public benefit, that is, the positive externalities associated with human capital investments noted in Section 9.2. Some attempts have been reported in the research literature, however. According to Acemoglu and Angrist (2000), the externalities are modest with respect to secondary school; they find social returns to be 1–3% in excess of private returns. Moretti's (2004) results regarding college education point to much higher returns, with spillover effects corresponding to 1.5 times the effects on the individuals obtaining college degrees.

After leaving the regular system of education, individuals will sooner or later be extending or updating their skills, through (formal) adult education or (non-formal) on-the-job training. The incidence and costs of adult education and on-the-job training are rather well documented, and often also internationally comparable; see, for example, Eurostat's *Adult Education Survey* and Bassanini et al. (2005). Less is known about the benefits.

Jenkins et al. (2003) and Stenberg (2011) are two of the few studies assessing the benefits of adult formal education. Both find positive effects for adults with a low initial level of education. The former study estimates the benefits of obtaining an academic or vocational degree in the United Kingdom in the 1990s, among adults aged 33–42. It finds positive effects on wages only for men who left school with low-level qualifications and took a lower academic degree. Stenberg (2011), analyzing a large Swedish adult education program in the late 1990s yielding upper secondary qualifications, estimates the

average increase in annual earnings to be 4.4%. In a simulation study, Albrecht et al. (2009) analyzed the program's aggregate effects—which can be given an externality interpretation—and found them to be about 1.5 times the effects on the program participants, that is, of the same magnitude as Moretti's (2004) estimate mentioned above.

A large number of studies have been carried out regarding the private effects of on-the-job training. In a meta-analysis based on 71 studies, Haelermans and Borghans (2011) find the average wage effect to be 2.6% per course. The impact on firm performance is reviewed in a study by Cedefop (2011) that comes to the conclusion that the effects on productivity generally are positive while the effects on company costs are insignificant.⁹

Adult education and on-the-job training are part of life-long learning. The preceding examples show that life-long learning can be associated with both private and public net benefits. Life-long learning is an important area for human resource policy, both because of the credit constraint problem associated with human resource investments and because of technological changes that require skill updating. Policy transparency is essential here, as life-long learning involves long planning horizons, both regarding the possibilities to be on leave from work and with respect to the buildup of (private and company) funds to finance the education/training. Individual learning accounts have been proposed as a means to support life-long learning; cf. Schuetze (2007). However, lifelong learning concerns not only individuals but firms and organizations, too. Håkanson et al. (2003) show that there are tax and accounting rules that both reduce the volume of life-long learning and obstruct it from being conducted in economic downturns, when workers more easily can be spared in production than during boom periods.¹⁰ These mechanisms are not well known among politicians; transparency would benefit from extended discussion.

9.5 MEASURES TO IMPROVE TRANSPARENCY

In this section I suggest four ways to improve transparency. What, then, is to be understood by improved transparency? Already the simple observation that *increased* transparency generally involves more information implies that more transparency cannot

⁹ This conclusion is somewhat surprising in the sense that productivity effects should be mirrored by cost reductions. In the long run, when returns to scale are constant, the impact on total factor productivity from firm training can be directly derived from its impact on firm costs; cf. Kazamaki Ottersten et al. (1999).

¹⁰ These problems derive from the fact that, unlike machines and structures, the firm cannot treat its human capital as an asset. This implies, inter alia, that it cannot write off its human capital investments over an extended period of time and that it has to finance them internally.

always be preferable, given limited resources, as additional information comes at a cost. Furthermore, increased transparency can in some cases be harmful from a social point of view; consider, for example, Gugler (Chapter 6, this volume), showing how increased transparency in competition policy runs the risk of facilitating collusion. My suggestions are therefore followed by comments in which I reflect on possibly negative consequences that the suggestions may induce.

1. The preceding section has shown that there is a lack of information regarding the empirical importance of one of the primary reasons for human resource policies, namely the existence of positive human capital externalities. Educational researchers need, therefore, to devote more efforts to the estimation of these externalities.

Comment: It is not obvious that this measure will improve transparency—the effect estimates needed are difficult to obtain and bound to be subject to considerable uncertainty. In the long run, some methods are likely to be considered more trustworthy than others, however. At that stage transparency will be improved, in the sense of making available relevant, but previously nonexistent, information.

2. It is desirable to change the human resource policymaking process such that ex ante benefit–cost analyses are facilitated. Given the far-reaching and long-term consequences of changes in the system of education and training, taxpayers have a right to expect that these consequences have been appropriately considered before the policy is implemented.

Comment: The extra work that this suggestion imposes on the policymakers is likely to have the impact that some policies that would otherwise have been implemented will not be attempted at all. In quite a few cases that is likely to be a positive consequence. But, taken to the extreme, it might have the effect of conserving existing structures. Also, in some instances expenditures on ex ante benefit–cost analyses are likely to be wasted—when the analyses involve so much uncertainty that they provide no decision support. This is why it is suggested that ex ante benefit–cost analyses should be facilitated; whether such an analysis is worthwhile in a specific situation must be judged against the particular prevailing circumstances.

3. Measures should be taken to increase accountability. One possibility is to make the full implementation of long-term policy decisions contingent on the outcomes of intermediate follow-ups and progress reports. That might reduce the hazards associated with the fact that politicians can decide on reforms whose effects extend far beyond their political mandate. Moreover, the policy decision should include the setting aside of a small part of the reform costs (0.5–1.0%, say) for follow-up and evaluation of the reform, thus ascertaining an ex post benefit–cost analysis, too.

Comment: Though intermediate progress reports will limit the possibilities to transfer responsibility to politicians elected later they also involve the risk of

suboptimization, that is, a shift of effort to satisfy intermediate goals, at the expense of final outcomes. This calls for careful choices of intermediate output indicators and is also the reason why the intermediate assessment should be combined with a commitment to evaluate the entire reform.

4. Support compilation of impartial data and the building up of infrastructures enabling national, regional, and local comparisons of education and training benefits and costs.

Comment: When easy to use, comparable data can be effective in promoting good examples, that is, human resource policies that work well. Moreover, given sufficient local and international mobility they can be instrumental in weeding out inefficient policies through *Tiebout competition*, that is, by voters expressing their opinions by choosing place of residence. However, data can also be used incorrectly or irresponsibly, in which case the information may be misleading or counterproductive. This is not unusual in, for example, school rankings. Good infrastructure in the form of proper documentation and expertise regarding data quality and handling can mitigate this problem, though, by facilitating judicious use of data.

9.6 CONCLUDING COMMENTS ON TRANSPARENCY OF HUMAN RESOURCE POLICY

This chapter has established that there is a need for increased transparency in human resource policy. Human resource policies profoundly affect most people in society during most of their lifetimes, and essential information regarding education and training will not be supplied automatically because of institutional shortcomings (market failures). Because learning is a dynamic process where choices today impose constraints on future decisions, transparency for planning and decision-making purposes—*ex ante* transparency—is necessary, as well as transparency with respect to realized outcomes—*ex post* transparency.

Five aspects on human resource policy have been identified that are particularly important for transparency: equity and efficiency, input utilization, skills and competences, the dimensioning of education and the labor market, and benefits and costs.

With respect to equity and efficiency in education and training, the discussion has shown that there can be, but need not be, a tradeoff between the two; it depends on the kind of education or training considered and for whom it is intended. Transparency thus demands that the type(s) of education and training that the policy involves be clearly delineated and that the target groups be well defined.

Regarding input utilization, it has been noted that the less regulated the provision of education and training is, the more important is ex post transparency. Of course, this point is all the more valid if education and training are supplied by many different kinds of providers. Second, the teachers should be focused as they constitute the, by far, most important input. In addition to student/teacher ratios there are important quality dimensions such as the teacher's subject matter knowledge and noncognitive skills; licensure does not appear to be very informative, though.

Transparency with respect to the outcomes of education and training systems concerns comparability across individuals and education/training systems, as well as over time. Recently, internationally comparable information about *adult* skills and competencies has been made available through the survey PIAAC. This survey will significantly contribute to making transparent the abilities of national education and training systems to respond to the ultimate requirements of generating skills and competences necessary to cope with working life and citizenship.

A vital responsibility of human resource policy is to design the systems of education such that the skills and competencies generated are in line with the qualifications demanded in the labor market. It has been shown that a basic consideration in this respect, the number of students to admit to different educational programs, lends itself to an analysis in terms of several different facets on policy transparency suggested by Geraats (Chapter 3, this volume)—political, economic, procedural, policy, and operational transparency.

Historically, it has not been common practice to relate the benefits of education and training to the corresponding costs. An important reason is that there are still obstacles to be overcome in the estimation of the positive externalities associated with human resources. However, it was noted that efforts are made to come to grips with these problems.

Several suggestions on how to increase transparency in human resource policy have been put forward. One is to require that human resource policy decisions be preceded by ex ante benefit–cost analyses. Another suggestion calls for a strengthening of political accountability by means of intermediate follow-ups during policy implementation, combined with commitment of resources to an independent evaluation of the policy's (final) effects, made at the point when the policy is decided on. Finally, availability of reliable information is crucial. To this end, compilation of impartial data and the buildup of infrastructures enabling judicious comparisons of education and training benefits and costs should be supported.

REFERENCES

-
- Acemoglu, D. (1996). A microfoundation for social increasing returns in human capital accumulation. *Quarterly Journal of Economics* 111(3), 779–804.
- Acemoglu, D., and Angrist, J. (2000). How large are human capital externalities? Evidence from compulsory schooling laws. In *NBER Macroeconomics Annual*, Vol. 15, eds. B. S. Bernanke and K. Rogoff, K., pp. 9–59. Cambridge, MA: MIT Press.

- Aghion, P., and Howitt, P. (1998). *Endogenous Growth Theory*. Cambridge, MA: MIT Press.
- Albrecht, J., van den Berg, G., and Vroman, S. (2009). The aggregate labor market effects of the Swedish knowledge lift program. *Review of Economic Dynamics* 12(1), 129–146.
- Andersson, C., Waldenström, N., and Johansson, P. (2011). Do you want your child to have a certified teacher? *Economics of Education Review* 30(1), 65–78.
- Angrist, J., and Lavy, V. (1999). Using Maimonides' rule to estimate the effect of class size on scholastic achievement. *Quarterly Journal of Economics* 114(2), 633–575.
- Bassanini, A., Booth, A., Brunello, G., de Paola, M., and Leuven, E. (2005). Workplace training in Europe. IZA Discussion Paper No. 1640.
- Benabou, R. (1993). Workings of a city: Location, education and production. *Quarterly Journal of Economics*, 108(3), 619–652.
- Betts, J. R. (2011). The economics of tracking in education. In *Handbook of the Economics of Education*, Vol. 3, eds. E. A. Hanushek, S. Machin, and L. Woessmann, pp. 341–382. Amsterdam: North-Holland.
- Brunello, G., and Checchi, D. (2007). Does school tracking affect equality of opportunity? New international evidence. *Economic Policy* 22(52), 781–861.
- Card, D. (1999). The causal effect of education on earnings. In *Handbook for Labor Economics*, Vol. 3, eds. O. Ashenfelter and D. Card, pp. 1801–1863. Amsterdam: North-Holland.
- Carneiro, P., and Heckman, J. J. (2003). Human capital policy. In *Inequality in America: What Role for Human Capital Policies?*, eds. Heckman, J. J. and Krueger A. B, pp. 77–240. Cambridge, MA: MIT Press.
- Cedefop. (2010). *Skills Supply and Demand in Europe: Medium Term Forecast Up to 2020*. Luxembourg: Publications Office of the European Union.
- Cedefop. (2011). The impact of vocational education and training on company performance. Cedefop Research Paper No. 19. Luxembourg: Publications Office of the European Union.
- Cunha, F., Heckman, J. J., Lochner, L., and Masterov, D. V. (2006). Interpreting the evidence on life cycle skill formation. In *Handbook of the Economics of Education*, Vol. 1, eds. E. Hanushek and F. Welch, pp. 697–812. Amsterdam: North-Holland.
- Dupriez, V., Dumay, X., and Vause, A. (2008). How do school systems manage pupils' heterogeneity? *Comparative Education Review* 52(2), 245–273.
- Fernandez, R., and Gali, J. (1999). To each according to need? Markets, tournaments, and the matching problem with borrowing constraints. *Review of Economic Studies* 66(4), 799–824.
- Geier, R., Blumenfeld, P. C., Marx, R. W., Krajcik, J. C., Fishman, B., Soloway, E., and Clay-Chambers, J. (2008). Standardized test outcomes for students engaged in inquiry-based science curricula in the context of urban reform. *Journal of Research in Science Teaching* 45(8), 922–939.
- Goldhaber, D. (2011). Licensure: Exploring the value of this gateway to the teacher workforce. In *Handbook of the Economics of Education*, Vol. 3, eds. E. A. Hanushek, S. Machin, and L. Woessmann, pp. 315–340. Amsterdam: North-Holland.
- Grönqvist, E., and Vlachos, J. (2008). One size fits all? The effects of teacher cognitive and non-cognitive abilities on student achievement. IFAU Working Paper 25.
- Haelermans, C., and Borghans, L. (2011). Wage effects of on-the-job training: A meta-analysis. IZA Discussion Paper No. 6077.
- Håkanson, C., Johanson, S., and Mellander E. (2003). Employer-sponsored training in stabilization and growth policy perspective. IFAU Working Paper No. 8.
- Hall, C. (2012). The effects of reducing tracking in upper secondary school: Evidence from a large-scale pilot scheme." *Journal of Human Resources* 47(1), 237–269.

- Hanushek, E. A., and Woessmann, L. (2008). The role of cognitive skills in economic development. *Journal of Economic Literature* 46(3), 607–688.
- Jenkins, A., Vignoles, A., Wolf, A. and Galindo-Rueda, F. (2003). The determinants and labour markets effects of lifelong learning. *Applied Economics* 35(16), 1711–1721.
- Karoly, L. A. (2012). Toward standardization of benefit-cost analyses of early childhood interventions. *Journal of Benefit-Cost Analysis* 3(1), 1–43.
- Kazamaki Ottersten, E., Lindh, T., and Mellander, E. (1999). Evaluating firm training, effects on performance and labour demand. *Applied Economics Letters* 6, 431–437.
- Kilburn, M. R., and Karoly, L. A. (2008). The economics of early childhood policy: What the dismal science has to say about investing in children. OP-227. Santa Monica, CA: RAND Corporation.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics* 22(1), 3–42.
- Klapp Lekholm, A., and Cliffordson, C. (2008). Discrepancies between school grades and test scores at individual and school level: Effects of gender and family background. *Educational Research and Evaluation* 14, 181–199.
- Krauss, S., Brunner, M., Kunter, M., Baumert, J., Blum, W., Neubrand, M., and Jordan, A. (2008). Pedagogical content knowledge and content knowledge of secondary mathematics teachers. *Journal of Educational Psychology* 100, 716–725.
- Krueger, A., and Lindahl, M. (2001). Education for growth: Why and for whom? *Journal of Economic Literature* 39, 1101–1136.
- Lochner, L. (2011). Nonproduction benefits of education: Crime, health, and good citizenship. In *Handbook of the Economics of Education*, Vol. 4, eds. E. A. Hanushek, S. Machin, and L. Woessmann, pp. 183–282. Amsterdam: North-Holland.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics* 22(1), 3–42.
- Mellander, E., and Håkanson, C. (2006). Transparency in human capital policy: A prerequisite for European economic growth. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, L., pp. 117–154. Oxford: Elsevier.
- Mellander, E., and Sandgren-Massih, S. (2008). Proxying ability by family background in returns to schooling estimations is generally a bad idea. *Scandinavian Journal of Economics* 110(4), 853–875.
- Mellander, E., and Skedinger, P. (1999). Corporate job ladders in Europe: Wage premia for university vs high school level jobs. *Swedish Economic Policy Review* 6(2), 449–487.
- Mons, N. (2007). *Les nouvelles politiques éducatives: La France fait-elle les bons choix?* Paris: Presses Universitaires de France.
- Moretti, E. (2004). Worker's education, spillovers, and productivity: Evidence from plant-level production functions. *American Economic Review* 94(3), 656–690.
- Nelson, R., and Phelps, E. (1966). Investment in humans, technological diffusion, and economic growth. *American Economic Review* 61, 69–75.
- Olshansky, S. J., Antonucci, T., Berkman, L., Binstock, R. H., Boersch-Supan, A., Cacioppo, J. T., Carnes, B. A., Carstensen, L. L., Fried, L. P., Goldman, D. P., Jackson, J., Kohli, M., Rother, J., Zheng, Y., and Rowe, J. (2012). Differences in life expectancy due to race and educational differences are widening and many may not catch up. *Health Affairs* 31(8), 1803–1813.
- Peracchi, F. (2006). Educational wage premia and the distribution of earnings: An international perspective. In *Handbook of the Economics of Education*, Vol. 1, E. A. Hanushek and F. Welch, pp. 189–254. Amsterdam, North-Holland.

- Piore, M. J. (1968). On-the-job training and adjustment to technological change. *Journal of Human Resources* 3, 435–449.
- Psacharopoulos, G., and Patrino, H. (2004). Returns to investment in education: A further update. *Education Economics* 12, 111–134.
- Roemer, J. E. (1998). *Equality of Opportunity*. Cambridge, MA: Harvard University Press.
- Schuetze, H. G. (2007). Individual learning accounts and other models of financing lifelong learning. *International Journal of Lifelong Education* 26(1), 5–23.
- Statistics Sweden. (2012). *Arbetskraftsbarometern 2012* (The 2012 Labour Market Tendency Survey); in Swedish but with a summary in English. Örebro: SCB-tryck.
- Stenberg, A. (2011). Using longitudinal data to evaluate publicly provided formal education for low skilled. *Economics of Education Review* 30, 1262–1280.
- Wössmann, L. (2008). Efficiency and equity of European education and training policies. *International Tax and Public Finance* 15, 199–230.

CHAPTER 10

TRANSPARENCY OF INNOVATION POLICY

BO CARLSSON

10.1 INTRODUCTION

INNOVATION is fundamental to economic growth. As pointed out by Solow (1956), Abramovitz (1962), Denison (1962), and others more than half a century ago, most of economic growth is attributable to innovation rather than to increased inputs of resources such as labor, capital, and raw materials. As a consequence, promoting innovation is arguably one of the most important tasks for government policy. The task in this chapter is to explain how transparency of innovation policy contributes to economic growth, and hence why it is important.

Transparency may be defined as the absence of asymmetric information. One party (such as the seller in a market) usually has better information about the product involved in the transaction than the other party (the buyer). As in other policy domains, transparency with respect to innovation policy has several dimensions, including openness, communication, and accountability. Transparency refers to the extent to which policymakers (the “sellers”) provide clear information to guide decisions by individuals and organizations—the “buyers”—and are held accountable for policies in their policy domain. Lack of clarity of policy goals, how they are to be achieved, and how progress is to be measured make for non-transparency.

As described in the introductory chapter, the premise of this volume is that the main engine of economic growth is technological change resulting from investments by people who respond intentionally and rationally to market incentives, and that the outcome of investment decisions is influenced by the institutional environment in a broad sense.

In most areas of government policy, the setting of goals and selection of instruments of policy may be controversial, but the *domain* of policy intervention is usually well understood and agreed upon. For example, it is commonly agreed what the domains

for fiscal and monetary policy and trade policy are, even though there may be fundamental disagreement about goals and how to achieve them. But this is not true when it comes to innovation policy. There are at least two different views concerning what is the appropriate domain for innovation policy resulting from different interpretations of what “innovation” means. One view is that innovation is basically the result of investment in research and development (R&D), whereas the alternative view places innovation in a broader socioeconomic, systemic context.

In traditional (orthodox) economic theory, innovation is viewed as a growth-enhancing factor in the aggregate production function. This is the view in endogenous growth theory as formulated by Romer (1986, 1990), Lucas (1988), and others. Innovation is driven by new knowledge that is created by investment in research and development (R&D). Given market failure resulting from insufficient incentives to engage in R&D (only a portion of the results can be appropriated, and some of the results “spill over” to other users), the primary role of public policy is to stimulate research and development activities via science and technology policy.

In the late 1980s a new view of innovation and innovation policy emerged, based on the concept of innovation systems. In this view, innovation policy is much broader than science and technology policy; innovation is deeply embedded in the competitive processes of the economy and interacts with many other areas of policy. It matters where and how new knowledge is created and how (by which mechanisms) new knowledge is converted into innovation and economic growth. Investment in R&D does not automatically result in economic growth. Innovation is the result of interactions among many actors and institutions, not simply of R&D activities, and the outcomes are highly uncertain.

For a discussion of transparency in the innovation policy arena, it is necessary to distinguish between the two approaches. The chapter is organized as follows. Section 10.2 presents transparency in the science and technology policy arena. Section 10.3 presents the broader innovation systems policy domain. This discussion involves an analysis of the nature of innovation and innovation processes and the rationale for innovation policy including the goals, instruments, and actors involved in such a policy. We proceed in Section 10.4 with an analysis of transparency in the innovation systems policy domain and conclude in Section 10.5 with a few reflections on the benefits of transparency in the innovation policy arena.

10.2 TRANSPARENCY OF SCIENCE AND TECHNOLOGY POLICY

The conventional approach to innovation policy is to correct market failures—failures of market mechanisms to reach optimal solutions. The types of market failure that are most problematic when it comes to innovation are externalities. From an innovation

perspective, the most significant externalities relate to imperfect property rights in the exploitation of knowledge. If a discovery by one firm spills over and benefits other firms, the discovering firm can appropriate only a part of the total benefit, reducing its incentive to innovate. Hence the objective of science and technology policy is to encourage R&D spending and investment in education and technology while also providing reasonable protection of the intellectual property that results from innovative activity.

There are many instruments that can be applied in the area of science and technology policy both directly through public investment in research, education, and infrastructure, and indirectly through encouragement of private investment via tax incentives, laws concerning protection of intellectual property rights (IPR, including patents and copyright), public procurement, standardization, and labor training programs; see Lundvall and Borràs (2005) for a fuller discussion.

In fields where public procurement is involved it may be most efficient to combine several instruments. Besides public procurement, direct economic incentives in the form of subsidies and tax reductions may be offered to firms. Supporting research at universities in the science fields in which the new technologies are rooted may be an important part of a public policy, but one that is difficult to make transparent. A further complication of these kinds of policies is that “industrial complexes” combining the vested interests of a group of public users with those of a segment of industry emerge and that a lack of transparency is exploited by these vested interests. A more subtle problem is the kind of convergence and agreement on the direction of technological trajectories that might develop in such complexes, excluding new and more promising venues (Lundvall and Borràs, 2005).

In addition to these policy instruments there are also “soft” institutions that influence the outcomes of science and technology policy. Among these are cultural norms and rules of social behavior that influence entrepreneurial activity, experimentation, and risk-taking. These may be deeply imbedded in the society and difficult to change but may contribute to uncertainty and lack of transparency, with a negative impact on growth.

The protection of IPR constitutes the area of highest concern and intense debate in recent years in the science and technology policy area. The conventional view is that IPR have a positive effect on cumulative innovation, but recently there has also emerged a growing “anti-commons” perspective suggesting a negative role of IPR over scientific knowledge. This debate is centered on how IPR over a given piece of knowledge affect the propensity of future researchers to build upon that knowledge in their own scientific research activities. “Dual knowledge” involves cases in which a single discovery contributes to both scientific research and useful commercial applications: a scientific paper is published at the same time as a patent is applied for. This is part of a broader debate about whether publicly supported scientific research should be made freely available to the public or provided IPR. Given that patents are granted with a substantial lag, often many years after the knowledge is initially disclosed through paper publication, the question is whether or not knowledge is diffused less effectively when

it is protected by IPR than when it is not. Research has shown that there is evidence for a modest anti-commons effect, that is, that the citation rate declines by approximately 10–20% after the patent is granted compared with published papers not associated with patents (Murray and Stern, 2007). Is that a price worth paying in order to stimulate the scientific effort in the first place?

Another transparency issue with respect to IPR is the uncertainty associated with the time it takes for a patent to be granted. Research has shown that reduced uncertainty surrounding the scope and extent of IP rights facilitates trade in the market for ideas (Gans et al., 2007). A thorough review of patent applications may delay the granting of the patents but may also raise the quality of the patents.

In recent years there has been increasing concern about the role of IPR in the global economy. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) went into effect in 1995 covering standards, enforcement, and dispute settlement concerning IPR for the members of the World Trade Organization (WTO). The agreement represents an effort to globalize IPR (Matthews, 2002), thereby increasing transparency and reducing uncertainty. It has been shown, for example, that weak protection deters foreign investors in technology-intensive sectors that rely heavily on IPR. Also, a weak IPR regime encourages investors to undertake projects focusing on distribution rather than local production (Javorcik, 2004). Weak IPR protection leads to low returns to innovation and underutilization of innovative talents; Further, research on multinational firms shows that technologies developed in countries with weak IPR protection are used primarily internally within the multinational firms (MNFs) themselves, and that technologies developed by firms with R&D in weak IPR countries show stronger internal linkages. This suggests that firms may use internal organizations to substitute for inadequate external institutions (Zhao, 2006). Thus, the lack of transparency causes uncertainty that limits the diffusion and implementation of new knowledge.

IPR play an important role in the process of establishing international standards. An example is the designing of the Global System for Mobile Communications (GSM) standard in the telecommunications industry (Bekkers et al., 2002). A balance had to be struck to avoid a situation in which a single IPR holder could hamper or even block the development of the standard, while at the same time making it possible to rely on certain “essential” IPR without which the implementation of GSM would have been impossible.

There are a few attempts in the literature to measure IPR protection. For example, Ostergard (2000) studied how IPR protection affects international investments and capital movements. His work emphasizes the importance of examining compliance with international agreements such as TRIPS involving not only the strength of IPR laws but also the enforcement thereof. Enforcement of IPR laws involves both the institutional capacity and the institutional will to enforce laws. The former addresses the actual institutions needed to enforce the laws (i.e., the statutes, the nature of the judiciary, technical expertise, and policing organizations). The latter addresses whether those institutions actually carry out the enforcement of the laws. The institutional

dimension is a necessary condition for enforcement, but it alone is not sufficient to constitute enforcement; the institutional will to do so is also needed. Further research in this direction can contribute much to the discussion concerning the role of IPR protection in business and national development.

Thus, lack of transparency in the science and technology policy arena may result from lack of clear policy objectives, from tradeoffs or conflicts between policies aimed at support for higher education versus those supporting basic education, from the absence of institutions dedicated solely to encouraging innovation, and from innovation issues taking a back seat to other agenda items. One implication is that the economic outcomes of policy actions are not always easy to measure or predict.

The preceding discussion shows that there are many dimensions to science and technology policy and its transparency. Policy transparency means clarity of goals and the means of achieving them (including the actors and their organizations), as well as the integration and continuous evaluation of performance. The goals and instruments here are part of the ongoing political debate in conjunction with annual budget and policy discussions and are relatively transparent and easy to monitor, at least in principle. Still, the policy instruments for science and technology policy need to be addressed in the public debate, not just in conjunction with periodic budget discussions internally within the government. The fact that science and technology policy issues are often buried in a broader policy agenda does raise transparency problems. Better articulation of policy goals and measurement of outcomes would enhance both transparency and performance.

10.3 THE BROADER DOMAIN OF INNOVATION POLICY

While the concept of transparency is relatively straightforward in the domain of science and technology policy, it is much more complicated in the broader domain of innovation policy. Here innovation is viewed not simply as a result of investment in R&D; instead, it involves a complex and dynamic process whose outcome is highly uncertain. This makes transparency inherently problematic in this domain.

To understand the fundamental differences between science and technology policy and innovation policy, it is necessary to take a deeper look at “innovation” and the pertinent transparency issues in a broader systemic context. First, there are several important attributes of innovation that must be recognized.

10.3.1 Attributes of Innovation

1. Innovation is a process of discovery whose outcomes are highly uncertain, often unexpected, frequently involving experimentation. It is to a substantial degree a

matter of judgment, imagination, and guesswork. It is not a matter of calculable risk, for probabilities cannot be formed with respect to unique events, or events that change the conditions under which future events occur.

2. The innovation process requires new knowledge or new combinations of existing knowledge.
3. Innovation is embedded in the market process. As a result, competition policy is a necessary element in innovation policy, while on the other hand a pro-innovation policy is perhaps the most effective element of a strong competition policy.
4. Firms have to invest in their own understanding (absorptive capacity) if they are to participate effectively in innovation information networks; this is why it is necessary for them to conduct their own R&D even if much R&D is conducted in academia and organizations dedicated to research.
5. The innovation process is increasingly “roundabout” involving an increasingly elaborate division of labor in the creation of knowledge. When this division of labor is not contained within the firm but involves collaboration with outside entities, we have the conditions for an innovation system to emerge and the necessity of the coordination of the elements within that system.
6. Innovation systems are the necessary consequence of this division of knowledge (Metcalfe, 2007, pp. 943–948).

The interactions between firms and their environment take place on two different levels. On one level there are interactions between firms—between a firm and its network of customers and suppliers. Such interfirm linkages are far more than arms-length market relationships; they often involve sustained quasi-cooperative relationships that shape learning and technology creation. The second level involves broader factors shaping the behavior of firms: the social and cultural context, the institutional and organizational framework, infrastructure, and the processes that create and distribute scientific knowledge, and so forth. These environmental conditions are often specific to regional or national contexts, but they are also dynamic, changing with political conditions, new technological opportunities, economic integration processes, and so on. The basic argument of system theories is that system conditions have a decisive impact on the extent to which firms can make innovation decisions, and on the modes of innovation that are undertaken (Smith, 2010).

Thus, innovation processes are mediated by a range of nonmarket methods, primarily involving information networks and other forms of arrangement between organizations and individuals. Such processes build confidence and trust and work to limit the damaging consequences of uncertain, asymmetric information. They are precisely contrary to the idea of competition between isolated, atomistic, independent firms. Without market power, to a degree, innovation becomes less likely, and collaborative R&D arrangements are one way of dealing with the implied coordination failures (Metcalfe, 2007, p. 951).

Collaboration itself is a source of innovation; “open innovation” (Chesbrough, 2003) involves stimulation and even organization of collaboration, networks, and local clusters. But collaboration is often risky and difficult, and frequently fails. So, we need to consider the governance of collaborative relationships.

In relationships of collaboration, players are each other’s agents as well as principals. Operation in markets is not warfare but alliance management. Governance in networks must be multilateral, in equilibration of power or dependence, somehow. If we can still talk of control, it must be mutual control (Nooteboom, 2008). It is not hierarchical.

Innovation in a systemic context is more a result of knowledge flows than of the exercise of market power. In exploring knowledge flows in high-tech industry clusters, it is useful to distinguish between two different innovation regimes: discovery-driven innovation such as in biotechnology and in applications of semiconductors, and design-driven innovation as represented by the aircraft and automobile industries. In both types of innovative collaboration, the sources of knowledge (e.g., the role of universities and other creators of knowledge) and the mechanisms of knowledge dissemination are examined. In the aircraft and automobile industries, knowledge transfers are market-mediated via tightly controlled “global pipelines” connecting major suppliers in the form of contracts and licenses. Innovation takes place in supply chains (production and innovation systems) linking several tiers of suppliers of subsystems, components, and parts to the firms that design and assemble the final products. In contrast, knowledge transfers in discovery-driven innovation are typically nonmarket mediated and undirected transfers (“true” spillovers). But while the mechanisms are different, both design-driven and discovery-driven knowledge flows are largely self-governing, regardless of whether or not they are market mediated (Carlsson, 2012). The role of government policy is primarily to set standards and provide a regulatory framework. The standards-setting and regulatory processes are subject to capture by incumbent firms, raising serious transparency issues. Also, such regulatory policies may come into conflict with other policies, such as competition policy.

Collaboration requires trust, especially in exploration (discovery) where high uncertainty limits the scope for contracts and monitoring of contract compliance. In such collaboration one is vulnerable to mishaps, mistakes, lack of dedication, and opportunism. Neither trust nor openness can be imposed from outside; trust must be earned by a constructive response to reports of error (Nooteboom, 2008). Hence, there is no clear role for government policy; transparency is not an issue here.

10.3.2 Innovation Systems

As already shown, the attributes of innovation require that innovation be considered in a systemic context. Innovation systems are defined as “knowledge and competence networks supporting the development, diffusion and utilization of technology

in established or emerging fields of economic activity. They consist of networks of firms, research and development (R&D) infrastructures, educational institutions and policy-making bodies. . . . [I]nnovation systems can be seen as mediating structures between the knowledge base of a sector and the firms active in it. Their quality influences the degree to which the firms can exploit the emerging technological complexity and heterogeneity of the knowledge base of innovation” (Carlsson, 1997, p. 2). The firms participating in innovation may be either existing firms creating new products or business activities, or they may be new start-ups.

The following are key characteristics of innovation systems (Carlsson et al., 2010):

1. Innovation systems emerge and evolve; the composition of actors and their roles vary over time as the magnitude and direction of the underlying driving forces shift; these changes do not necessarily follow any particular pattern or trajectory, linear or otherwise. Therefore, we need to move beyond static analyses.
2. There are several dimensions of innovation systems: cognitive (e.g., technology), organizational, and economic.
3. To understand the dynamics and evaluate the *economic* performance of an innovation system, it is necessary to view the innovation process from two angles simultaneously: the cognitive or technology side, and the product or market side, respectively. A (technological) innovation system is defined primarily from the input (technology) side and focuses on the knowledge base of the system. Innovations are generated, diffused, and utilized within the system. The market-demand side is represented by the notion of development and/or competence blocs, which are defined primarily from the product or user side. A development bloc is a synergistic cluster of firms and technologies that together constitute an industry or set of industries (Dahmén, 1989).

The market selection of technologies and products is intertwined and dynamic; it is not a linear process. Not all technical possibilities are converted into business opportunities, and not all business opportunities are successfully exploited in the market. Sometimes the impetus for change comes from the product side, sometimes from the technology side. Their confrontation in the market is what generates industrial dynamics in the form of economic transformation and growth. By combining the two sides we can examine why a particular system is or is not successful in converting technical possibilities into business opportunities that create economic growth (Carlsson et al., 2010, pp. 155–156).

10.3.3 Rationale for Innovation Systems Policy

Certainly science and technology policy needs to be part of innovation policy. Innovation is one, and arguably the most important, element of the investment activities in an advanced economy, complementary with other types of investment undertaken by firms and other organizations (including the government). But it requires

much more than expenditure on science and technology for its realization. R&D may be a necessary underpinning for innovation but it is certainly not sufficient; other complementary investments in skills, productive capacity, and markets are also required. Innovation is an evolving process of discovery with highly uncertain outcomes. It often requires collaboration among firms, academic institutions, and other organizations. Sometimes this collaboration is market mediated (e.g. contractual), while often it takes place outside the market, involving informal interaction via networks or innovation systems. Processes of innovation depend on the emergence of innovation systems connecting the many actors engaged in the innovation process. Innovation systems may not emerge spontaneously but have to be constructed, instituted for a purpose, usually but not uniquely to facilitate the pursuit of innovation in search of competitive advantages by firms. Innovation policy should be about facilitating the self-organization of innovation systems across the entire economy, not only in “new” sectors (Metcalf, 2007).

This is why the market failure approach to innovation policy is necessary but not sufficient. There are many market failures (due to externalities, absence of markets, etc.), but there are also nonmarket (system) failures. These occur when interventions (or lack of interventions) by government, institutions, or networks cause a more inefficient allocation of goods and resources than would occur otherwise. Such outcomes result from failure to identify, formulate, implement, and execute the necessary actions. In addition, the failures may interact and create failures at the level of an entire innovation system. There are several types of systems failure: capability failures (lack of competence or absorptive capacity), institutional failures (e.g., lacking or poorly designed technical standards, financial regulation, and intellectual property laws), network failures (through too much or too little interaction), and framework failures (unsupportive macroeconomic conditions, culture, and social values) (Arnold, 2004; Woolthuis et al., 2005).

Such failures justify policy intervention not only through the funding of basic science but more widely to ensure that the innovation system as a whole performs well. Consequently, the policy discussion needs to be broadened to encompass system failures as well as market failures. What is needed is an evolutionary cum systemic approach to innovation policy (Carlsson and Jacobsson, 1997). The purpose of innovation policy is not to promote individual innovation events but rather to set the framework conditions in which innovation systems can better self-organize across the range of activities in an economy (Metcalf, 2007). Reducing the uncertainty that is an inherent part of innovation is important; greater transparency can contribute significantly by creating more realistic expectations.

Consequently, innovation policy can be seen in large part as a form of coordination problem—components of the system must work together in a coherent way (that is, move in more or less the same direction, with more or less compatible objectives) toward the development and use of the new technology that is the object of the innovation process. A systems approach suggests that the identification of coordination failures, the design of policy instruments to overcome them, and the development of appropriate actors are likely to be important rationales for public policy intervention,

and important also in deciding its scope and objectives. The argument is that coordination problems with respect to innovation systems relate primarily to institutional action that precedes the operation of markets, or organizational action that creates a new arena for economic behavior (Smith, 2010).

Another important rationale for innovation policy is the need to create new businesses. Innovation policy must include creation of new business opportunities that can be exploited via creation of new firms or new lines of business in existing firms, not preservation of existing business units. As in many other policy arenas, it is easy for innovation policy to be hijacked (captured) by existing businesses.

Globalization provides yet another rationale for innovation policy. Instead of supporting national flagship industries or projects through subsidies, national procurement, or protection from foreign competition, governments at all levels need to compete for investments by providing an attractive environment for innovation, R&D, and production for multinational companies that have many location options to choose between. In this sense, national policy has come closer to the traditional role of regional development policy (Thorslund et al., 2006, p. 30).

Thus, not only should innovation policy be broadly conceived and go beyond science and technology policy; it also needs to be integrated with many other policies, such as competition policy, international trade policy, and regional development policy.

10.4 TRANSPARENCY OF INNOVATION POLICY

Given the complexity and dynamic nature of innovation systems, transparency of policy in this domain is inherently problematic. There are many dimensions, actors, and institutions to be considered, and interactions among them must also be included. Innovation systems are networks, not hierarchies; governance works through multi-lateral agreement and trust, not through fiat or control. In innovation policy, governance has to deal with two types of distributive conflicts: one among the actors within the system (e.g., scientific or academic versus industrial interests), and another among jurisdictions (such as nation-states) in the case of international collaboration, for example, at the European level (Kuhlman, 2001).

Innovation policy may be defined as all combined actions undertaken by public organizations that influence innovation processes, whether intentionally or inadvertently (Borràs and Edquist, 2013, p. 3). The task is to orchestrate highly complex, dynamic, and uncertain processes of collective action in a systemic context.

The “generic” issues for public policy in a systemic cum evolutionary approach (Carlsson and Jacobsson, 1997) are:

1. Increasing the absorptive capacity (the ability to understand and exploit new knowledge/technology) in the economy (or system) as a whole. This involves policies concerning, for example, how much to encourage R&D spending, what

kind of education system to construct and operate, and how much to spend on education.

2. Increasing connectivity within as well as among systems, for example, by building and financing knowledge infrastructures. The transformation of scientific discoveries into an engineering design space takes time and effort and requires the presence of appropriate institutions, as recent developments in biotechnology and nanotechnology demonstrate (Stankiewicz et al., 2009).
3. Creating variety, especially via promotion of new technology-based firms and supporting new areas of specialization, for example, through public procurement.

As mentioned previously, there are three main dimensions of innovation systems. The cognitive dimension includes knowledge creation and the resulting knowledge flows. The organizational/institutional dimension involves the actors within the system, and the economic dimension refers to the interaction in the market of competent customers, innovators, entrepreneurs, venture capitalists, mechanisms of exit (e.g., via initial public offerings and being acquired by other firms), and firms capable of exploiting the technology at sufficient scale (Carlsson and Stankiewicz, 2002, p. 23. See also Eliasson and Eliasson, 1996).

How does transparency influence the outcome of innovation policy (i.e., economic growth) in this domain? Transparency here is largely a function of the institutional arrangements.

10.4.1 Institutions and Actors

Given the broad definition of innovation policy, the relevant set of institutions includes many public organizations and their interaction with private institutions. Prominent among these are educational and research institutions and technology policy agencies whose main focus is on innovation. There are many other government agencies whose policies influence innovation (ministries of education, industry, labor, defense, and international trade, to name a few) but whose mission may have been established long ago without attention to innovation policy and that also have a legacy of deeply vested interests. Many other public organizations also influence innovation, even if that is not a central part of their mission. For example, military procurement agencies, telecommunications and financial, and other regulatory agencies can provide important incentives or disincentives for innovation.

This complexity makes transparency of innovation policy quite challenging. The more open are the political processes, and the more clearly the goals and instruments are articulated, the greater is the transparency. A source of complication when it comes to transparency of innovation policy stems from the very nature of innovation—the uncertainty, unpredictability, experimentation, and extended timeframe that characterize most innovation processes. Experimentation involves many failures as well as successes, and a great deal of effort may be “wasted” in the short term but prove

useful learning in the longer term. This is a necessary part of the process of knowledge accumulation. However, concerns for public accountability within the political process do not easily accommodate failures or apparently misdirected efforts, which often appear only with the benefit of hindsight. This means that governments must learn to be experimental and adaptive too, just like the firms and other organizations whose innovative efforts they seek to jointly stimulate.

Innovation policy may also take different forms in different contexts. One version—*laissez-faire*—emphasizes non-intervention and focuses on “framework conditions” rather than on specific sectors or technologies. In the extreme version of this type of innovation policy, basic research and general education are viewed as the only legitimate public activities and IPR protection as the only legitimate field for government regulation. Here transparency is relatively easy to achieve. But in other more system-oriented versions, many major policy areas need to be considered in the light of how they influence innovation (Lundvall and Borràs, 2005). Here transparency is much more problematic. The role of the government is to “secure framework conditions, remove barriers to innovation, enhancing technology diffusion, promoting networking and clustering and leveraging research and development” (OECD, 1999, p. 71).

The large number and heterogeneity of policy actors and policies means that there are many dimensions to transparency and that coordination is needed, not only of innovation policy but also of the policy actors: who are the appropriate policy actors needed to achieve particular objectives, and how are they to be coordinated? While there are usually separate mechanisms in place to coordinate research policy and industrial policy across ministries, there may be no institutional setting in existence to handle a jointly coherent innovation policy in a network rather than hierarchical setting (Thorslund et al., 2006, p. 7).

As an illustration, it is useful to consider the coordination of knowledge creation in four different sectors: (1) higher education; (2) vocational training and professional education; (3) basic research; and (4) technological research and development. Each of these sectors has its own orientation, traditions, cultures, and institutions (Braun, 2008). Painter (1981) mentions five objectives for policy coordination: (1) avoidance of duplication and overlap; (2) avoidance of policy inconsistencies; (3) minimization of conflicts, both bureaucratic and political; (4) quest for coherence and an agreed ordering of priorities; and (5) promotion of a comprehensive “whole government” perspective against particularistic or sectoral perspectives.

“Policy” or “functional” coordination is concerned with the formulation of a clear, consistent, and agreed on set of policies; the determination of priorities; and the formulation of strategies for putting these policies into practice. “Administrative coordination” concerns the problem of getting everyone to pull in the same direction, given agreement on policy goals, that is, policy implementation (Braun, 2008). Innovation is often the victim of policy conflicts resulting from the desire to protect national champions and current employment, thereby suppressing the formation of new markets and firms. The failure of the European Union to make Europe, by 2010, “the most competitive and the most dynamic knowledge-based economy in the world” is an

example of the result of policy conflicts and lack of coordination due, in part, to lack of transparency.

Policy integration across government agencies involves coordination of goals, while strategic coordination aims at the development of common visions and strategies for the future. Coordination between ministries (“external coordination”) can be arranged at the cabinet level through an office attached to the prime minister or president or through “internal coordination” via one single superministry. Both mechanisms require a high level of leadership and competence.

The magnitude of the policymaking task in the innovation systems arena requires high competence, a large measure of adaptability, and continuous learning. In addition, policymaking in a dynamic (evolutionary), complex nonergodic world means that theory, practice, and policy must coevolve. Smits et al. (2010) view innovation policy as a dance: innovation practice and innovation theory are partners in an evolutionary process. As pointed out by Lindblom (1959), policymaking is a rough, interactive, and iterative process of continuous learning and approximation.

To have trust in the conduct of policy, one needs trust in the *competence* of the actors involved, that is, in their ability to act according to agreements and expectations, as well as trust in their *intentions*, that is, their will to act properly with attention, commitment, and benevolence (no opportunism, no cheating, no free riding) (Nooteboom, 2008, pp. 200–201). There also needs to be trust in the organization and coordination of policy both within and across policymaking agencies.

10.4.2 Instruments

When it comes to innovation policy more broadly there are instruments that can be used in support of innovation generally. However, given the unique, dynamic, and multidimensional nature of each innovation system, there is no policy that can possibly fit all cases or any specific case over an extended period of time. It is necessary to identify and address the weaknesses in each system, from each period to the next. A key role for policymaking is “bottleneck analysis”—continuously identifying and rectifying structural imperfections (Arnold, 2004; Woolthuis et al., 2005). But not all weaknesses need to be addressed through public policy. Systems may emerge spontaneously and actors within them take appropriate action to avoid or overcome hurdles. In other cases, policy intervention such as building networks and infrastructure (perhaps in the form of increased absorptive capacity and greater legitimacy) or providing incentives and resources is necessary.

10.4.3 Functional Areas of Policy

Before specifying the policy instruments to be used in support of innovation systems, it is useful to identify the *functional areas* of policy. The specific tools to be applied can then be determined case by case. The functional areas (Bergek et al., 2008) are:

1. *Knowledge development and diffusion.* This function involves the identification, development, and diffusion of the necessary knowledge base and refers to all the scientific, technical, and practical knowledge related to all activities within the system or cluster. This may occur through transfer of knowledge from preexisting industries or from research institutions.
2. *Influence on the direction of search.* If an innovation system is to develop, a whole range of firms and other organizations have to choose to enter it. There must then be sufficient incentives and/or pressures for the organizations to be induced to do so, and it may be necessary to influence the direction of search for competing technologies, applications, markets, business models, and so forth.
3. *Legitimation.* Legitimacy is a matter of social acceptance and compliance with relevant institutions: the new technology and its proponents need to be considered appropriate and desirable by relevant actors for resources to be mobilized, for demand to form, and for actors in the new innovation system to acquire political strength. Legitimacy also influences expectations among managers and, by implication, their strategy.
4. *Entrepreneurial experimentation.* In some cases the technical opportunities (when identified) provide enough incentives, and the entrepreneurial climate is sufficiently favorable, to stimulate existing firms to innovate and new firms to emerge. When such incentives are lacking, public policies may help to promote entrepreneurial experiments.
5. *Market formation.* In many cases, new start-ups are able to create new markets on their own. But in other cases public intervention may be necessary, for example, in the form of public procurement, defense contracts, and regulatory changes.
6. *Resource mobilization.* Lack of human, technical, and financial resources may impede the formation of new innovation systems. Sometimes such resources coevolve with the business opportunities in the new cluster, as happened for example, with respect to venture capital in Silicon Valley. But sometimes the injection of new resources can help new clusters to form, for example, in the form of supporting services such as legal and financial services.
7. *Development of positive externalities.* The formation of a successful industry cluster involves positive externalities within the system, such as economies in the form of common labor markets, an elaborated division of labor, and knowledge spillovers.

Transparency issues arise in each of these functional areas. It is difficult to articulate clear goals and objectives, especially in the context of a network with no hierarchical structure and a fuzzy role of government involvement and policy. The government role may be more clear in some functional areas, such as legitimation, market formation, and resource mobilization than in entrepreneurial experimentation and determining the direction of search for new knowledge.

Connected to each of these functions is a wide range of systemic policy instruments that may be deployed. These instruments fall into three general categories: (1) regulatory instruments, (2) economic and financial instruments, and (3) “soft” instruments (Borràs and Edquist, 2013). Regulatory instruments use legal tools to regulate social and market interactions. Economic and financial instruments provide pecuniary incentives or disincentives in support of specific social and economic activities. “Soft” instruments are noncoercive, involving recommendations, normative appeals, and voluntary contractual agreements.

A useful tool to enhance transparency is policy evaluation. At the system level, the key questions to ask are about appropriateness (Are we doing the right thing?), impacts (What are the results of policy actions?), and effectiveness (Could we do it better?). But it needs to be kept in mind that innovation systems are complex and often emerging and that there may be no endpoint or equilibrium toward which the system is tending. However, continuous improvement may still be a good indicator of performance and worth striving for. At the subsystem level, the key questions are more concerned with the effects of specific interventions and their coherence (Arnold, 2004).

The political debate needs to include discussion of what, if any, innovation systems to support. Once such decisions have been made, the choice of instruments will depend on the functional needs of each particular innovation system, and where government support can be justified. This may include regulatory changes to promote market formation and legitimization of new products. Increasing absorptive capacity may involve R&D spending at the national level as well as investment in education and training programs at other levels. Connectivity and networking, though mostly self-organized, may be facilitated through funding and organization of events, forums, and platforms for debate and exchange of ideas. Variety creation can be stimulated by encouraging new business formation.

An effective instrument of ensuring transparency, particularly at the subsystem level, is competition among multiple approaches. An example of this can be found in German innovation policy. The main idea of this approach is to allocate public support based on contests among competing groups for funding of self-organized cooperation in R&D (Eickelpasch and Fritsch, 2005). An important benefit of this approach is greater transparency, along with better quality of submitted concepts and of project selection, and mobilization of innovative activity.

Strong protection of IPR appears necessary to stimulate innovation, but it is less clear what particular legal arrangements are optimal (i.e., whether the intellectual property should belong to the inventor or to the organization of which the inventor is an employee).¹ There is also a tradeoff between providing sufficient IPR protection to stimulate invention by private entities and facilitating the dissemination of the results of invention to benefit society more generally. This is the function of the patent system.

¹ For a discussion of these issues, see Mowery et al. (2001), Kenney and Patton (2009, 2011), Lissoni et al. (2009), and Jacobsson et al. (2013).

Greater openness (transparency) does not necessarily translate into economic growth. An example here is the discussion regarding whether or not pharmaceutical companies that have invented new drugs that are effective in treating certain medical conditions (e.g., AIDS) should be forced to give up their IPR to make the drugs available at lower prices to more beneficiaries. The short-term benefits must be weighed against the long-term costs.

Another aspect of IPR protection comes into view when one considers inventions created jointly in networks (innovation systems or subsystems) rather than by individual entities. If imitation is relatively easy, it may be necessary to supplement even iron-clad IPR protection with complementary assets to capture the spillover benefits (Teece, 1986). This is a case in which greater openness (transparency) may be detrimental. On the other hand, there are cases in which openness is essential: "The success of the internet in the US fundamentally rests on 30 years of consistent FCC policy which sought to maintain network openness by making key network components available to all, on cost-effective terms, so as to foster competition and innovation." (Bar et al., 2000, p. 489).

It is important to keep in mind that innovation systems are transient, that they have useful but not infinite lives, and that they need to be dissolved when their purpose is fulfilled. In innovation policy as elsewhere, there is an ever-present danger of preserving arrangements designed and instituted for yesterday's problems, not the problems of the future (Metcalf, 2007, pp. 962–963). While the market may take care of the dissolution of the innovation system, removing the policies and institutions supporting it can be a big political problem, particularly as far as transparency is concerned.

It also needs to be kept in mind that micro management (control) of innovation processes yields poor results. Codified, explicit, and detailed control raises transaction costs and reduces the flexibility that is needed to allow for openness to the surprises and unpredictable results that are characteristic of innovation.

10.5 CONCLUSION ON TRANSPARENCY OF INNOVATION POLICY

Transparency is often viewed as crucial to government performance and accountability, but its measurement remains elusive and is seldom done.² Most discussion of transparency in government policy appears to be focused on transparency of monetary

² One specific dimension of transparency that has actually been examined is governments' collection and dissemination of aggregate data, not confined to transparency of innovation policy (Hollyer et al., 2012). The authors constructed a measure of government transparency, using data used in the construction of the World Bank's World Development Indicators, resulting in an index covering 149 countries over the period 1980–2008.

policy (Winkler, 2000). As shown in other chapters in this volume, transparency is relatively well understood and to some extent measured in some policy domains, such as monetary policy, price transparency and international market integration, and financial regulation. However, in each case it is far from clear how large the economic benefits are.

Very limited literature exists on transparency with respect to innovation policy, and there appear to be few attempts to measure it empirically. This may be partly due to the lack of a common understanding of the policy domain, that is, what constitutes innovation and what role it plays in the economy. The fact that the innovation systems literature started to emerge only two decades ago means that it is still a relatively young field, that the policy discussion in this domain is only beginning, and that transparency issues have yet to be addressed. The lack of transparency is also due in part to the uncertainty, experimentation, and extended time horizons associated with innovation. But as in other policy domains, it seems clear that greater transparency of innovation policy—whether science and technology policy or innovation systems policy—would be beneficial. Increased transparency would reduce (though not eliminate) the uncertainty inherent in innovative activity, thereby encouraging investment and enhancing long-term economic growth. A wider and more open public debate about innovation and innovation policy is likely to lead to better policy in terms of all the dimensions of transparency: better articulation of policy objectives, coordination, and choice of policy instruments.

A good starting point for such a public debate would be a discussion of the policy objectives. This would open up possibilities for a deeper understanding and greater acceptance and engagement on the part of the general public. Such a discussion would focus on improving the conditions for economic growth in a long-term perspective rather than on “recovery” from cyclical downturns in the short or medium term—that is, raising long-term growth prospects and the means to achieve them. This may require the establishment of a high-level agency within the national government to set goals and be held accountable for outcomes. This can be done through cabinet-level appointments (science and technology advisors), through establishment of a ministry for innovation, or through a range of government agencies such as the National Institutes of Health, the National Science Foundation, the National Aeronautics and Space Administration, the Defense Advanced Research Projects Agency, and the Small Business Administration in the United States. Whatever mechanism is chosen, transparency is essential. Competition at all levels—whether system, subsystem, organizational, or project-level—may be the most effective means of ensuring transparency and increasing growth.

The transparency of the process involves the openness of the policymaking, the clarity of the goals, the appropriateness and efficacy of the instruments, the competence of the policy actors, as well as the organization and coordination of policies and actors. Transparency refers to both the *process* of policy formulation and the *outcomes* of policy. It seems possible, at least in principle, to measure transparency in all these dimensions. Criteria could be devised to gauge the openness of the process, the specificity of

goals and the degree of goal attainment, and the degree of policy coordination. These would be worthy tasks for public debate and policy discussion.

One dimension of innovation policy that is not discussed much in the literature is the international one. The increasing internationalization of innovation in multinational firms implies a need for international (e.g., at the European level) technology policies and for a transparent and global framework for policy coordination and priority-setting worldwide (Meyer-Krahmer and Reger, 1999; Kuhlmann, 2001).

REFERENCES

- Abramovitz, M. (1962). Economic growth in the United States. *American Economic Review* 52(4), 762–782.
- Arnold, E. (2004). Evaluating research and innovation policy: A systems world needs systems evaluations. *Research Evaluation* 13(1), 3–17.
- Bar, F., Cohen, S., Cowhey, P., DeLong, B., Kleeman, M., and Zysman, J. (2000). Access and innovation policy for the third-generation Internet. *Telecommunications Policy* 24, 489–518.
- Bekkers, R., Verspagen, B., and Smits, J. (2002) Intellectual property rights and standardization: The case of GSM. *Telecommunications Policy* 26(3-4), 171–188.
- Bergek, A., Jacobsson, S., Carlsson, B., Lindmark, S., and Rickne, A. (2008). Analyzing the functional dynamics of technological innovation systems: A scheme of analysis. *Research Policy* 37(4), 407–429.
- Borràs, S., and Edquist, C. (2013). The choice of innovation policy instruments. CIRCLE, Lund University, Working Paper 2013/04.
- Braun, D. (2008). Organising the political coordination of knowledge and innovation policies. *Science and Public Policy* 35(4), 227–239.
- Carlsson, B., Ed. (1997), *Technological Systems and Industrial Dynamics*. Boston: Kluwer Academic.
- Carlsson, B. (2013). Knowledge flows in high-tech industry clusters: Dissemination mechanisms and innovation regimes. In *Long Term Economic Development: Demand, Finance, Organization, Policy and Innovation in a Schumpeterian Perspective*, eds. E. S. Andersen and A. Pyka, pp. 191–222. Heidelberg: Springer-Verlag.
- Carlsson, B., Elg, L., and Jacobsson, S. (2010). Reflections on the co-evolution of innovation theory, policy and practice: The emergence of the Swedish Agency for Innovation Systems. In *The Theory and Practice of Innovation Policy*, eds. R. E. Smits, S. Kuhlmann, and P. Shapira, pp. 145–166. Cheltenham, UK: Edward Elgar.
- Carlsson, B., and Jacobsson, S. (1997). In search of a useful technology policy—General lessons and key issues for policy makers. In *Technological Systems and Industrial Dynamics*, eds. B. Carlsson, pp. 299–315. Boston: Kluwer Academic.
- Carlsson, B., and Stankiewicz, R. (2002). Introduction. In *Technological Systems in the Bio Industries: An International Study*, ed. B. Carlsson, pp. 1–33. Boston: Kluwer Academic.
- Chesbrough, H. W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business School Press.
- Dahmén, E. (1989). Development blocs in industrial economics. In *Industrial Dynamics: Technological, Organizational, and Structural Changes in Industries and Firms*, ed. B. Carlsson, pp. 109–121. Boston and Dordrecht: Kluwer Academic.

- Denison, E. F. (1962). The sources of economic growth in the United States and the alternatives before us. Supplementary Paper 11. New York: Committee for Economic Development.
- Eickelpasch, A., and Fitsch, M. (2005). Contests for cooperation—A new approach in German innovation policy. *Research Policy* 34, 1269–1282.
- Eliasson, G., and Eliasson, Å. (1996). The biotechnological competence bloc. *Revue d'Economie Industrielle* 78(4), 7–26.
- Gans, J. S., Hsu, D. H., and Stern, S. (2007). The impact of uncertainty intellectual property rights on the market for ideas: Evidence from patent grant Delays. In *The Selected Works of Joshua S Gans*. <http://works.bepress.com/joshuagans/9>
- Hollyer, J. R., Rosendorff, B. P., and Vreeland, J. R. (2012, July 19). Measuring transparency. <http://ssrn.com/abstract=2113665> or <http://dx.doi.org/10.2139/ssrn.2113665>
- Jacobsson, S., Lindholm-Dahlstrand, Å., and Elg, L. (2013). Is the commercialization of European academic R&D Weak?—Critical assessment of a dominant belief and associated policy responses. *Research Policy* 42, 874–885.
- Javorcik, B. S. (2004). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. *European Economic Review* 48(1), 39–62.
- Kenney, M., and Patton, D. (2009). Reconsidering the Bayh-Dole Act and the current University Invention Ownership Model. *Research Policy* 38, 1407–1422.
- Kenney, M., and Patton, D. (2011). Does inventor ownership encourage university research-derived entrepreneurship? A six university comparison. *Research Policy* 40, 1100–1112.
- Kuhlmann, S. (2001). Future governance of innovation policy in Europe—three scenarios. *Research Policy* 30, 953–976.
- Lindblom, C. E. (1959). The science of “muddling through.” *Public Administration Review* XIX, Spring, 79–88.
- Lissoni, F., Llerena, P., McKelvey, M., and Sanditov, B. (2009). Academic patenting in Europe: Evidence on France, Italy and Sweden from the KEINS Database. In *Learning to Compete in European Universities: From Social Institution to Knowledge Business*, eds. M. McKelvey and M. Holmén, pp. 187–218. Cheltenham, UK: Edward Elgar.
- Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics* 22, 3–39.
- Lundvall, B.-Å., and Borrás, S. (2005). Science, technology and innovation policy. In *Innovation Handbook*, eds. J. Fagerberg, D. C. Mowery, and R. R. Nelson, pp. 599–631. Oxford: Oxford University Press.
- Matthews, D. (2002). *Globalising Intellectual Property Rights: The TRIPs Agreement*. London: Routledge.
- Meyer-Krahmer, F., and Reger, G. (1999). New perspectives on the innovation strategies of multinational enterprises: Lessons for technology policy in Europe. *Research Policy* 28, 751–776.
- Mowery, D. C., Nelson, R. R., Sampat, B. N., and Ziedonis, A. A. (2001). The growth of patenting and licensing by U.S. universities: An assessment of the effects of the Bayh-Dole Act of 1980. *Research Policy* 30, 99–119.
- Metcalf, J. S. (2007). Policy for innovation. In *Elgar Companion to Neo-Schumpeterian Economics*, eds. H. Hanusch and A. Pyka, pp. 943–966. Cheltenham, UK: Edward Elgar.
- Murray, F., and Stern, S. (2007). Do formal intellectual property rights hinder the free flow of scientific knowledge?: An empirical test of the anti-commons hypothesis. *Journal of Economic Behavior & Organization* 63(4), 648–687.

- Nooteboom, B. (2008). Collaboration, trust, and the structure of relationships. In *Micro-Foundations of Innovation Policy*, eds. B. Nooteboom and E. Stam, pp. 199–218. Amsterdam: Amsterdam University Press.
- OECD. (1999). *Managing National Innovation Systems*. Paris: Organisation for Economic Co-operation and Development.
- Ostergard, R., Jr. (2000). The measurement of intellectual property protection. *Journal of International Business Studies* 31(2), 349–360.
- Painter, M. (1981). Central agencies and the coordination principle. *Australian Journal of Public Administration* 40, 265–280.
- Romer, P. (1986). Increasing returns and economic growth. *American Economic Review* 94, 1002–1037.
- Romer, P. (1990). Endogenous technical change. *Journal of Political Economy* 98, 71–102.
- Smith, K. (2010). Globalization and innovation systems: Policy issues. In *The Theory and Practice of Innovation Policy*, eds. R. E. Smits, S. Kuhlmann, and P. Shapira, pp. 75–91. Cheltenham, UK: Edward Elgar.
- Smits, R. E., Kuhlmann, S., and Shapira, P., Eds. (2010). *The Theory and Practice of Innovation Policy*. Cheltenham, UK: Edward Elgar.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics* 70(1), 65–94.
- Stankiewicz, R., Ad, J., Molas-Gallart, J., Kahane, B., and Delemarle, A. (2009). Knowledge dynamics scoping paper. *Security and Defense in the European Research Area*, Deliverable 2.1.
- Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. *Research Policy* 15, 285–305.
- Thorslund, J. G., Elg, L., and Sandgren, P. (2006). *End of an Era? Governance of Swedish Innovation Policy*. Vinnova Analysis VA 2006:1.
- Winkler, B. (2000). Which kind of transparency? On the need for clarity in monetary policy-making. ECB Working Paper 26. <http://ssrn.com/abstract=355587>
- Woolthuis, R. K., Lankhuizen, M., and Gilsing, V. (2005). A system failure framework for innovation policy design. *Technovation* 25, 609–619.
- Zhao, M. (2006). Conducting R&D in countries with weak intellectual property rights protection. *Management Science* 52(8), 1185–1199.

PART III

INSTITUTIONAL,
MARKET, AND
REGULATORY
TRANSPARENCY

CHAPTER 11

LABOR MARKET TRANSPARENCY

ESKIL WADENSJÖ

11.1 INTRODUCTION

THE labor market differs from other markets in many respects. Most important is that those who supply labor also have to deliver it in person, so that the work environment and organization of work are important for those who deliver labor, as they have to be at the workplace. Exceptions are those who have the workplace at home. Second, the result of a person's work varies with the price of labor (remuneration) and how the work is organized. Third, the definition of work or a job for an employed person is not fixed but dependent on the person.

Information is crucial for the functioning of the labor market.¹ There is much information on the labor market from official authorities, unions, employer associations, newspapers, and so forth but transparency is lacking in several respects. This chapter discusses different aspects of information and transparency in the labor market. The first part of the chapter is organized in three sections dealing with labor supply, labor demand, and labor remuneration, respectively. The following sections discuss complications regarding transparency in the context of international migration, the conditions for migrant workers, and public policy. A final section concludes the chapter. In an appendix, information on the labor market and international migration provided by different entities is presented.

¹ See Stigler (1962) for an early contribution to the theoretical development of information in the labor market.

11.2 SOURCES OF LACK OF TRANSPARENCY IN THE LABOR MARKET

Transparency problems are different for the supply side and the demand side of the labor market. Workers and employers look for different types of information and have access to different information. The information is asymmetric. Of interest to both parties is the remuneration. It should be stressed already here that for different reasons the actors on both sides of the labor market do not use all of the information available. Intuitive inference based on some data available combined with information retrieved from memory may be used instead as a basis for decisions (see Gennaioli and Shleifer, 2010).

11.2.1 Labor Supply

In the labor market there is a large variation in both workers and jobs, creating a matching problem. And as information is not easily available there are important differences compared to a perfect labor market with standard workers and standard jobs and complete and free directly available information for both sides. The workers looking for a job have in many cases several different alternatives and, at the start of the search process, often have limited information on the alternatives available. A person who is unemployed and looking for a job has a minimum or reservation wage or package, meaning she will not accept a job offering below this expectation, but instead search for a job that satisfies this reservation package, an example of search unemployment.² The reservation wage varies depending on education and earlier work experience. It can vary over time, rising or falling as the worker learns more about the labor market. The search period and the reservation wage vary over the business cycle and by alternative income compensation available as, for example, compensation from unemployment insurance. Higher compensation when unemployed may increase the reservation wage and lengthen the unemployment spell.

Many employed workers also seek new jobs. They want to build a career by changing to another employer or want a change for other reasons. Most people have more than one job over their working careers. It is typical for young people entering the labor market to change jobs frequently before staying at one job for an extended period. It can be seen as a form of job shopping—learning by testing different jobs.³ The labor

² See Phelps (ed.) (1970) and Phelps (1972a) for the first important contributions on search unemployment and Mortensen (1986) and Mortensen and Pissarides (1999) for surveys on research on job search.

³ See Jovanovic (1979) for an analysis of job shopping.

market and jobs are not transparent, so job shopping could be an efficient method to learn the characteristics of the job by being employed.

A person's productivity at a job is not fixed. The person may acquire new skills on the job via formal training on the job and learning by doing.⁴ Important for getting a job and for getting a specific type of job is education—investment in human capital—mainly before entering the labor market. Education leads to the capacity to do different jobs but it may also be utilized as a filter by signaling the capabilities of the person (see Arrow, 1973a, for higher education as filter, and Spence, 1974, for a theory that sees education as a signal regarding ability). This form of influence of education on wages is also called sorting. Those who are not able to be accepted on a certain level or are not fulfilling the requirements of education at that level are sorted away (and get a lower wage as they are showing a lower ability). A person who has completed a difficult educational program with good grades demonstrates high ability to the prospective employer. More experience in the labor market also means on average higher productivity, but the gain in knowledge for each additional year at work may decline with the number of years in the labor market. In a simple form of earnings equation, the Mincer equation, the earnings (the wage rate) are explained by the number of years in school and the number of years of work experience (first and second grade terms). Adding other explanatory variables, including seniority, gender, ethnicity, and civil status, makes it possible to estimate the existence and size of discrimination and generally to take account of other variables that influence wages. The problem with this method for estimating discrimination is that it does not take account of nonobservable variables that may influence wages.

Productivity may also be influenced by the wage paid and how it is perceived. A study by Greiner et al. (2011) shows that the effect of a wage increase may depend on if the person who gets a raise knows about the development of the wages of the peers at the workplace. Only with the knowledge of being the higher paid employee, is performance better. Transparency is, according to this study, important for the work effort.

The matching of unemployed individuals and vacancies can be illustrated by the Beveridge curve—the more vacancies the fewer unemployed persons and vice versa.⁵ The further out the curve is situated the more complicated is the matching. One of the factors that contributes to inefficient matching is lack of transparency—it takes time to find a suitable vacant job even if it is there. The Beveridge curve differs between countries and within a country over time. The Beveridge curve has in some countries in recent years moved outward (becoming less favorable). One factor may be that the vacancies and the unemployed persons do not match regarding education and educational requirements or other characteristics of jobs and workers, but declining transparency in an increasingly diverse labor market may also be a factor. Absence of

⁴ See Arrow (1962) for learning by doing and Becker (1964) for firm-specific education.

⁵ For the first article on the Beveridge curve, see Dow and Dicks-Mireaux (1958).

transparency on the part of employees may lead to monopsony power on the part of the employer.⁶

The wiring of the labor market—that it is easy to find information regarding vacancies on the Internet—may in the long run lead to faster matches.⁷ The person looking for a job may also find information about the employer on the Internet, just as the employer may find information about job applicants. This may lead to better matches but also to some problems regarding privacy. Another development in recent years has been the growth of temporary employment agencies. They employ people and send them to other employers for shorter or longer periods. They are in a way specializing in recruitment of personnel but also in combining different part-time or short-term jobs into full-time employment.⁸

11.2.2 Labor Demand

Employers have a demand for specific types of labor; they want productive workers. It is not easy to ascertain the productivity of a person who applies for a job, as ability is not transparent and easy to evaluate by looking at job applications and CVs. The selection of workers is often done in several steps. This and other issues regarding recruitment and advancement inside a firm are covered by “personnel economics” (see, e.g., Lazear, 1999; Lazear and Shaw, 2007; and Oyer and Schaefer, 2011, for surveys of this part of economic theory). First a position is announced, some of the applicants are selected for several rounds of interviews and tested, and finally a person is hired for the vacant position. In many cases the newly hired employee first gets a contract for a trial period with a relatively low wage. Thereafter a decision is taken regarding tenure and a higher wage. The trial period can also serve as a form of self-selection of workers. Those who know that they will not be able to pass the test in the trial period abstain from applying, as they know that they will be employed only for the trial period with a low wage.

As the employers do not have complete information on the productivity of those they hire, they use information available such as, for example, the unemployment duration of the job applicants (see Kroft et al., 2013). This may be interpreted as a form of statistical discrimination owing to the lack of transparency of the individuals’ productivity.

Piece-rate payment is the main wage form selected by the employer in only a minority of cases. In most cases a time-based wage is paid as the main form as it is not possible to know and is expensive to measure the productivity of the worker on an hourly or a daily basis. It does not mean that there is not a demand for measurement of productivity or that the pay is not related to productivity. On the contrary, employers are eager to

⁶ See Manning (2003, 2011) and Ashenfelter et al. (2010).

⁷ See Autor (2001) for a discussion.

⁸ See, for example, Houseman et al. (2003) and Autor (2009).

measure individual productivity, but not on an hourly or daily basis as it is too expensive to do so. In many cases, a worker's productivity is measured relative to that of other workers in a way that may be labeled a tournament. The winners of the tournament are promoted or get higher pay. In most cases there are several levels in the hierarchy of the firm and several "prizes" in the tournament.

It may be difficult to motivate workers who are not promoted to be productive and not shirk. One way to motivate them to do a good job is to defer some of their compensation for example by paying more senior people more (even if they do not become more productive over time) or by a company pension or another reward for those who stay until retirement. Such a system motivates workers to stay and do a good job so that they do not miss the deferred payment. Another way to induce workers to be efficient and not shirk is to pay workers a wage higher than the market wage—in other words, to pay "efficiency wages" (see Shapiro and Stiglitz, 1974, for an early contribution to this part of wage and unemployment theory). An efficiency wage makes it more expensive for a worker to lose the job due to shirking. A higher wage than the market wage may also be seen as a gift to the worker and the worker may respond by being more productive (see Akerlof, 1982).

A further complication in the theory of the demand for labor is that the jobs in many cases are not fixed but adjusted to those employed and their abilities. Different work tasks are combined to jobs depending on the abilities of a worker. It is difficult in advance to know what the combination will look like (see Autor, 2013, for a theory of labor demand based on work tasks).

An important aspect of the lack of transparency is that the incumbent employer has more information about the productivity of his or her workers than prospective employers. For those entering the labor market, employers have easy access to information on education but lack detailed information about skills. They learn that only after employing a person, but after that they have more information than other employers and may therefore get a form of monopoly rent. This varies between occupations; in occupations that require more communication outside the firm it is easier for other firms to get reliable information on the worker's productivity (see Kahn, 2013). If the information on productivity becomes public, it helps the worker and the employer does not benefit by getting a monopoly rent (see Pallais, 2013, for an experimental study).

A person's productivity depends on education but also on skills not dependent on education. This may be part of the explanation that some people are overeducated (they have fewer skills compared to their education) and some are undereducated (they have more skills compared to their education). It is rather easy for all employers to evaluate formal education, but easier for the incumbent employer than for prospective employers to evaluate skills besides education. This asymmetric information may explain why overeducated workers more often get a higher level position by switching to other employers, who do not know their skills, but that undereducated workers more often are promoted within the firm, where their skills are known (see Rubb, 2013, for an analysis and an empirical investigation).

11.2.3 Remuneration

The wage an employee receives may not be a specific amount of money. There may be a basic wage (for hours or piece-rate), a bonus, a wage rate for overtime hours, a wage rate for work on evenings and weekends, and so forth. It is therefore not easy to compare the wages in different job offers.

The wage is not the only part, even if often the most important part, of the remuneration. There are several other forms of compensation and different forms of fringe benefits. Often very important are different forms of social and occupational insurance. They can be the same system for everyone (social insurance related to labor income), determined industry-wide by agreements between a union and an employer association, and also be specific to the employer or the individual employment contract (see Ebbinghaus, 2011, for studies of the complicated structure of occupational pensions in a number of countries). Many of those who have a right to supplementary compensation may miss the compensation owing to lack of information. Sjögren Lindquist and Wadensjö (2006) provide a detailed analysis of this problem for Sweden. La Lettre de l'Observatoire des Retraites (2010) stresses the importance providing information about the pension systems and by that contribute to increased transparency.

There may be other fringe benefits related to the job, such as a company car, free or subsidized housing, lunch or other meals at the workplace, and so forth.⁹ It is not only the wage and related remuneration when being hired that is important, but also the expected career afterwards at the firm.

Very important also is the work environment. The risk of occupational injuries is one aspect, but the behavior of colleagues and how the work is organized and led are factors difficult or impossible to learn until a worker is on the job.

Adam Smith (1776, 1981, pp. 116–135) outlined different aspects important for wage setting and wage differences. This analysis is often called the theory of comparable worth. He listed five factors leading to wage differences:

1. The hardship, the cleanliness or dirtiness, the honorableness or dishonorableness of the employment
2. The ease and cheapness, or the difficulty and expense of learning the business
3. The constancy or inconstancy of employment
4. The smaller or greater trust reposed in the workmen
5. The probability or improbability of success

Adam Smith also mentioned other factors leading to wage differences, for example, that higher wages were paid in expanding industries (Smith 1776, 1981, p. 131). The firms in those industries have to pay more to be able to recruit workers. According

⁹ See Granqvist (1998) for studies of fringe benefits in Finland with a survey of studies covering other countries, and Granqvist (1997) for a study on Sweden.

to Adam Smith (pp. 135–159) the wage structure was also influenced by public policy such that the supply of workers to some occupations was subsidized, the supply in other occupations was restricted, and mobility between parts of the labor market was restricted. The factors put forward by Adam Smith are still valid for research on wage setting today.

11.3 AN INTERNATIONAL LABOR MARKET

As shown earlier, the transparency of the labor market is limited even for those who are born in one country and have lived there all their lives. Transparency is of course often even more limited for those who migrate to another country and those who have lived in a particular country for only part of their working lives. Transparency is limited not only regarding prospective jobs, but also regarding other conditions in the destination country. It may also be more difficult for the employer to evaluate the credentials of foreign-born workers. Katz and Stark (1987) is an early example of a study on the importance of asymmetric information in international migration. Kar and Saha (2011) show how asymmetric information could be one factor explaining why migrants are overrepresented among the self-employed. Persons with high productivity who are not hired because of asymmetric information turn to self-employment.

11.3.1 Migration

People move for various reasons to another country—work, study, family reasons, and as refugees are the most common ones. I here discuss primarily those who migrate for work. Many of those who migrate for work already have a job at arrival. They have applied for a job or been recruited by an employer in the destination country. Others have secured a job with the help of relatives or friends—a network effect. It is also possible for those looking for a job in another European Union country to do so by living in that country for up to three months without a special permit.

In most cases, those arriving from another country for work have information only on a limited part of the labor market, in some cases only about the job to which they have been recruited. The labor market is not transparent on arrival. Several studies show that there is gradual wage assimilation—in some cases leading to higher wages than the wages of natives with the same characteristics owing to a positive selection of those who migrate.¹⁰ Getting a higher wage by higher seniority and by learning the

¹⁰ See, for example, several studies by Barry Chiswick but also a critique of Georges Borjas, who stress that cohorts differ and that cross-sectional analysis may therefore be misleading. See, for example, Chiswick (1978) and Borjas (1991). Selection may also be due to selective return migration—those not succeeding return or move to another country.

language of the destination country are explanations for wage assimilation, but better knowledge about the labor market in the destination country also plays a role. The labor market gradually becomes more transparent for those immigrants who integrate.

Information is important regarding not only the gross wage but also taxes (the net wage) and what the taxes are used for, such as health care, education, and child care. Also important is how migrants are treated in the legal framework and if there is discrimination by employers and native workers. The possibilities to be joined by family members and the qualifications for becoming a citizen in the new country may also be important.

There are other groups of migrants. Those coming to a country as students and who want to stay there after completing their studies may get information regarding the labor market while in school, while those coming as family members may get information from settled family members on jobs. The situation is generally most critical for those who come as refugees with no earlier knowledge of the labor market and are without relatives and friends to meet and guide them in the new country.

11.3.2 Migrants

Several studies using different methods show that foreign-born persons may suffer discrimination in the labor market. They are, for example, less often called for interviews when applying for a job, and when interviewed for a job they are less often hired. Discrimination in the first phase of the hiring process has been revealed in many different countries by sending job applications to a number of employers for applicants with the same merits who have names common among natives and foreign-born, respectively. The name and the applications are combined by lottery. For studies of ethnic discrimination based on correspondence testing see, for example, Carlsson and Rooth (2007) for Sweden, Drydakis and Vlassis (2010) for Greece, and Riach and Rich (1991) for Australia.

There are several forms of discrimination. One important form is information-based discrimination.¹¹ The basis of that theory is that the quality of migrant labor is not easy to evaluate. In its simplest form, the employer is just misinformed and discriminates as a result.¹² An employer may believe that foreign-born applicants are less qualified than the native born, even if they are equally productive in practice, and discriminates based on this misperception. The most well-known form of information-based

¹¹ See Phelps (1972b). There are other types of discrimination theories such as those based on preferences of the Becker type and monopsonistic discrimination. See Becker (1957) and Manning (2003), respectively. See also Arrow (1972a, 1972b, 1973b) for important contributions to the development of the economic theory of discrimination. We do not deal with those forms of discrimination here as they are not in the same way closely related to labor market transparency. See Lundahl and Wadensjö (1984) for a survey and comparison of different discrimination theories.

¹² See McCall (1972, 1973) for analyses of this case.

discrimination is statistical discrimination, which builds on the idea that the employer does not have information on individual abilities of the applicants but has easily available and inexpensive information on the average ability or variance in ability of workers belonging to various groups. If those who are foreign-born on average have lower productivity than natives (e.g., owing to lack of knowledge of the language in the country of destination), employers may not hire foreign-born workers with a high (unknown) ability, or hire them only with lower wages. The average values for different groups are used when recruiting. Also, if it is known that foreign-born and natives have the same productivity, but the variance in the estimation of the individual's productivity is higher for foreign-born than for natives, a risk-averse employer avoids the foreign-born. Those with the same school tie as the employer are easier to evaluate than those who are foreign-born or with another ethnic background than the employer and the natives are therefore hired. It underlines that the ethnic backgrounds of the employers and those who make the hiring decisions are important. There may of course be some occupations where the employer is willing to take a risk to increase the possibility of gaining a star, for example, in sports and arts. The high variance in expected ability increases the chances of recruiting a star and thereby the possibility of getting a very high reward.

Standardization of educational systems such as through the Bologna process for higher education in Europe may make it easier to compare education acquired in different European countries. The Bologna Process is a series of agreements between European countries designed to ensure comparability in the standards and quality of higher education qualifications. The Bologna Process has at present 47 participating countries, that is, almost all European countries. In the same way, the founding of common labor markets such as the Common Nordic Labor Market and the Common European Labor Market may both result in education credentials being formally accepted (certified) in countries other than those where they are acquired (e.g., for medical doctors, nurses, electricians) and in making employers more interested in employing those coming from other countries. It should also be noted that there are systems of ranking universities worldwide that may give some guidance regarding the quality of education in different universities.

11.4 POLITICAL DECISIONS AND LABOR MARKET TRANSPARENCY

Political authorities may improve the transparency of the labor market, for example, through information, laws, and design of different policy programs. Public employment exchanges have been introduced in many countries with the intention to improve information on job vacancies and thereby to improve the worker–job matching in the labor market. But even in countries with well-functioning and well-equipped employment exchanges, they do not cover the total labor market despite some countries

prohibiting private employment exchanges. And they do not have full information on their customers (employers, job seekers).

There are several other ways of finding job vacancies, such as newspaper advertisements, Internet and personal networks, and by directly asking for jobs at different employers. How jobs are found usually differs between different segments of the labor market. In some segments, networks are most important for finding a job, while in other segments formal application procedures for announced jobs are most important. It is more complicated for job applicants to get an overview of alternatives in some segments of the labor market, especially those with many employers who each have only a few employees.

Political authorities may decrease the differences in the compensation structure between jobs by legislation and by making it easier to compare different job offers. Legislation regarding working hours, overtime, vacation length, and other work conditions may make differences between employers regarding these aspects disappear or at least become smaller so that those comparing jobs may concentrate on fewer characteristics of the employment contract. In the same way, legislation regarding public pensions, sickness benefits, and other forms of income transfers as well as health care may have the same effect, facilitating comparison of remuneration at different employers.

Agreements between unions and employer associations regarding work conditions and occupational insurance may make the rules more uniform, again facilitating comparison of different employers, and transferability of occupational insurances facilitates mobility. Also important here is that the authorities working with occupational safety enforce high minimum standards.

Another important part of the public policy related to the transparency of the labor market is labor market policy.¹³ An integral part of that policy is in most countries the public employment service, which gathers information on vacant jobs and job applicants and tries to match jobs and applicants. Another part of that policy is facilitating occupational or geographical mobility via training and mobility grants. A third part of labor market policy is to subsidize jobs in the private or public sector to increase the labor demand for those who are out of work. It should here be noted that there are connections between the labor and housing markets. Regional mobility may be hindered by a lack of transparency in the housing market.

11.5 CONCLUSION ON LABOR MARKET TRANSPARENCY

There are serious problems with a lack of transparency in the labor market. The labor market is a complicated one for several reasons. The employee has in most cases to be

¹³ See Schmid et al. (1996) for a number of surveys on labor market policy.

at the workplace to deliver the labor. Transparency of workplace conditions may be lacking for those looking for a job. Workers differ from each other in several respects. The transparency of the qualifications of the job applicants may be lacking for employers. And the jobs offered vary and often change as a result of who is hired. Nor are all individuals interested in the same information. Those leaving secondary school are, for example, interested in other kinds of information than those who have just completed a university education or are established in an occupation in the labor market. Dentists, for example, generally are not interested in the labor market situation for engineers and vice versa.

It is not easy to get a good picture of the different aspects for those on both sides of the labor market, either those searching for a job or employers wishing to hire workers. Information asymmetries are pervasive. It is even more difficult for the foreign-born and for employers who receive job applications from those with credentials from another country. The transparency of the labor market is to a high extent incomplete. Public authorities also lack vital information on the actual functioning of the labor market and the results of various policies. Agreements and knowledge of the existence of agreements are also important for transparency in the labor market.

Politicians, public authorities, and social partners may through laws, public policy programs, and collective agreements make conditions more similar irrespective of who the employer is and thereby increase transparency in the labor market and promote mobility.

APPENDIX

INFORMATION ON THE LABOR MARKET AND INTERNATIONAL MIGRATION

The lack of transparency in the labor market may be counteracted by governments and social partners. International organizations are important for collecting and disseminating information to those who migrate between countries. In this appendix some important sources of information regarding national and international labor markets are presented.

Information Regarding the Labor Market

It is obvious that the labor market is sometimes not very transparent for workers and employers. The public authorities have a good overview of the rules regulating the labor market, but the statistics and the statistical databases are only partial. The wage statistics may be good, but information on non-wage remuneration is often lacking.

Governments collect and disseminate information on the labor markets mainly through their Central Statistical Offices. The information is of several different

types: surveys (such as the labor force surveys), statistics based on administrative registers, and censuses. The information covers different parts and aspects of the labor market and is sometimes outdated at the time it is published.

Labor force surveys are conducted at short intervals and rapidly published, but they are based on small samples of the population, limiting their use in particular labor markets.

Register-based statistics are published or made available in other ways only after a time lag (years in some occasions) and there may be problems in getting access to the information because of data security restrictions. The quality of the information in the registers also varies between countries.

A census covers all residents of a country at a specific point of time, but censuses are conducted at wide time intervals (usually every tenth year), are in most cases published a long time after the data collection, and are not carried out in all countries (e.g., not in Sweden since 1990).

Labor market administrations are other sources of information on, for example, job vacancies and those searching for a job, both unemployed and employed looking for a new job. The coverage varies a great deal among countries.

The social partners, the employer associations and the unions, collect and produce information for their members and also to some extent for the general public. The extent and quality varies greatly among countries. The percentage of employers and workers who are members of organizations differs between countries.

For individuals other sources may be more important such as media and networks.¹⁴ The media gives the general picture and the networks provide information on specific workplaces. Relatives and friends are a source of information on conditions at workplaces, though such networks are weaker for people with relatives and friends who do not have jobs.¹⁵

The information available to the employer differs regarding different groups of job applicants. It is often difficult to evaluate the capabilities of people with different forms of functional impairments. They may therefore be discriminated against because of the lack of information. The labor market administration's role as information provider is here even more important than it is for most other job applicants. The same may be said for those entering a labor market as young people and for newly arrived refugees. The labor market is characterized by asymmetric information—the actors on the two sides of the labor market have different information.

Labor Market Information on Migration and for Migrants

Comparable information on labor market conditions in different countries may be found in a variety of sources provided mainly by international organizations that have

¹⁴ On networks in general on the labor market see, for example, Granovetter (1973, 1983) and Rees (1966).

¹⁵ See Montgomery (1991) for the United States and Olli Segendorf (2005) for Sweden.

governments as members, but nongovernmental organizations (NGOs) also take part in information collection and dissemination. It should be stressed that there are problems comparing labor market statistics from different countries, as definitions, ways of collecting statistics, and quality vary.

The International Labour Organization (ILO) is one source that covers most of the world (Taiwan is one of only a few exceptions because the country is not a member of the United Nations). It regularly provides information on wages and employment and also publishes studies of specific countries or comparing countries (see www.ilo.org). Two sections on the website are on statistics and databases and on labor standards.

The Organisation for Economic Co-operation and Development (OECD) also publishes detailed information for the member countries and also an annual book on international migration. The yearbooks contain a wealth of statistics on international migration as well as chapters covering general developments and sections on specific topics. For example, the 2011 yearbook, OECD (2011), contains sections on migrant entrepreneurship and international migration to Israel and the 2012 yearbook, OECD (2012), has sections on migration policy development and the changing role of Asia in international migration.

Eurostat collects and publishes labor statistics for the 28 member countries of the European Union (see www.ec.europa.eu/eurostat). One section contains statistics on population and social conditions and includes information from the labor force surveys in the member countries. The European Union publishes statistical information regarding the labor markets not only of the member states but also of the candidate states.

There is also information on other regional levels as, for example, for the five Nordic countries (see www.norden.org). A Nordic Statistical Yearbook is published and a large amount of comparable statistics can be found on the website.

There is also some regularly published information on how migrants are treated in various countries. One example is the Migrant Integration Policy Index, which compares the integration policy in EU countries in various fields: labor market mobility, family reunion, education, political participation, long-term residence, access to nationality, and anti-discrimination.¹⁶

Another example is the International Organization for Migration (IOM), which has published a large report on how to improve information access for both migrants and employers (IOM, 2013a) and another on the recognition of qualifications and competences of migrants (IOM, 2013b). The first report contains separate chapters on good practices and recommendations from five selected EU member states (Germany, Italy, Poland, Sweden, and the United Kingdom) and two other countries (Canada and the United States). The second report contains separate chapters on good practices and recommendations from six selected EU member states (Denmark, Germany, Italy, the Netherlands, Sweden, and the United Kingdom) and two other countries (Australia and Canada).

¹⁶ See Huddleston et al. (2011).

As earlier underlined, the most significant information for prospective migrants is most likely that from people in their networks who have already migrated.

We have here dealt only with information regarding migrants on the formal labor market. In most countries there are also irregular migrants employed on the informal labor market, which comprise a large group in some countries. The authorities lack reliable information on the size and composition of this group, large differences in wages and working conditions may exist, and employees and employers may also have limited information.

There may also be a lack of information on immigration policy and especially on future immigration policy. Changes in immigration policy may have large consequences both for those who have already migrated and for those who intend to migrate later on. One example are proposed changes in US immigration policy, which may lead to a better situation for many who have already immigrated but hinder some who want to migrate to the United States in the future.

ACKNOWLEDGMENTS

I thank Christer Gerdes, Phillip Martin, Anders Stenberg, and Yuyu Wang for valuable comments on earlier versions.

REFERENCES

- Akerlof, G. A. (1982). Labor contracts as partial gift exchange. *Quarterly Journal of Economics* 97(4), 543–569.
- Arrow, K. (1962). The economic implications of learning by doing. *Review of Economic Studies* 29(3), 155–173.
- Arrow, K. J. (1972a). Models of job discrimination. In *Racial Discrimination in Economic Life*, ed. A. Pascal. Lexington, MA: D. C. Heath, 83–102.
- Arrow, K. J. (1972b). Some mathematical models of race in the labor market. In *Racial Discrimination in Economic Life*, ed. A. Pascal. Lexington, MA: D. C. Heath, 187–203.
- Arrow, K. J. (1973a). Higher education as a filter. *Journal of Public Economics* 2(3), 193–216.
- Arrow, K. J. (1973b). The theory of discrimination. In *Discrimination in Labor Markets*, eds. O. Ashenfelter and A. Rees. Princeton, NJ: Princeton University Press, 3–33.
- Ashenfelter, O., Farber, H., and Ransom, M. R. (2010). Modern models in labor markets: a brief survey, IZA DP No. 4915.
- Autor, D. H. (2001). Wiring the labor market. *Journal of Economic Perspectives* 15(1), 35–40.
- Autor, D. H., Ed. (2009). *Studies of Labor Market Intermediation*. Chicago: The University of Chicago Press.
- Autor, D. H. (2013). The “task” approach to labor markets: An overview. *Journal of Labour Market Research*, 46(3), 185–199.
- Becker, G. S. (1957). *The Economics of Discrimination*. Chicago: The University of Chicago Press.

- Becker, G. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. New York: Columbia University Press.
- Borjas, G. (1991). Self-selection and the earnings of immigrants. *American Economic Review* 77(4), 531–553.
- Carlsson, M., and Rooth, D.-O. (2007). Evidence of ethnic discrimination in the Swedish labor market using experimental data. *Labour Economics* 14(4), 716–729.
- Chiswick, B. (1978). The effect of Americanization on the earnings of foreign-born men. *Journal of Political Economy* 86(5), 897–921.
- Dow, J. C. R., and Dicks-Mireaux, L. (1958). The excess demand for labour: A study of conditions in Great Britain, 1946–1956. *Oxford Economic Papers* 10(1), 1–33.
- Drydakis, N., and Vlassis, M. (2010). Ethnic discrimination in the Greek labour market: Occupational access, insurance coverage and wage offers. *The Manchester School* 78(3), 201–218.
- Ebbinghaus, B., Ed. (2011). *Varieties of Pension Governance: Pension Privatization in Europe*. Oxford: Oxford University Press.
- Gennaioli, N., and Shleifer, A. (2010). What comes to mind. *Quarterly Journal of Economics* 125(4), 1399–1433.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology* 78(6), 1360–1380.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory* 1, 201–233.
- Granqvist, L. (1997). Sidoförmåner—skillnader mellan män och kvinnor. In *Kvinnors och mäns löner—varför så olika?* SOU, No 1997:136.
- Granqvist, L. (1998). *A Study of Fringe Benefits. Analysis Based on Finnish Micro Data*. Dissertation No. 33 from the Swedish Institute for Social Research, Stockholm University.
- Greiner, B., Ockenfels, A., and Werner, P. (2011). Wage transparency and performance: A real-effort experiment, University of Cologne. Working Paper Series in Economics No. 48.
- Houseman, S. N., Kalleberg, A. L., and Erickcek, G. A. (2003). The role of temporary agency employment in tight labor market. *Industrial & Labor Relations Review* 57(1), 105–127.
- Huddleston, T., Niessen, J. with Chaoimh, E. N. and White, E. (2011). *Migrant Integration Policy Index III*. Brussels: British Council and Migration Policy Group.
- International Organization for Migration. (2013a). *Improving Access to Labour Market Information for Migrants and Employers*. Brussels: International Organization for Migration.
- International Organization for Migration. (2013b). *Recognition of Qualifications and Competences of Migrants*. Brussels: International Organization for Migration.
- Jovanovic, B. (1979). Job matching and the theory of turnover. *Journal of Political Economy* 87(5), 972–990.
- Kahn, L. B. (2013). Asymmetric information between employers. IZA DP No. 7147.
- Kar, S., and Saha, B. (2011). Asymmetric information in the labor market, immigrants and contract menu. IZA DP No. 5508.
- Katz, E., and Stark, O. (1987). International migration under asymmetric information. *Economic Journal* 97(387), 718–726.
- Kroft, K., Lange, F., and Notowidigdo, M. J. (2013). Duration dependence and labor market conditions. Evidence from a field experiment. *Quarterly Journal of Economics* 128(3), 1123–1167.

- La Lettre de l'Observatoire des Retraites. (2010). *Informing the European Working Population of their Pension Benefits*. Paris: Observatoire des Retraites.
- Lazear, E. P. (1999). Personnel economics: Past lessons and future directions. *Journal of Labor Economics* 17(2), 199–236.
- Lazear, E. P., and Shaw, K. L. (2007). Personnel economics: The economist's view of human resources. *Journal of Economic Perspectives* 21(2), 91–114.
- Lundahl, M., and Wadensjö, E. (1984). *Unequal Treatment: A Study in the Neoclassical Theory of Discrimination*. London: Croom Helm.
- Manning, A. (2003). *Monopsony in Motion: Imperfect Competition in Labor Markets*. Princeton, NJ: Princeton University Press.
- Manning, A. (2011). Imperfect competition in the labor market. In *Handbook of Labor Economics*, Vol. 4b, eds. O. Ashenfelter and D. Card. Amsterdam: Elsevier, 973–1041.
- McCall, J. J. (1972). The simple mathematics of information, job search, and prejudice. In *Racial Discrimination in Economic Life*, ed. A. Pascal. Lexington, MA: D.C. Heath, 205–224.
- McCall, J. J. (1973). *Income Mobility, Racial Discrimination and Economic Growth*. Lexington, MA: Lexington Books.
- Montgomery, J. D. (1991). Social networks and labor-market outcomes: Toward an economic analysis. *American Economic Review* 81(5), 1408–1418.
- Mortensen, D. T. (1986). Job search and labor market analysis. In *Handbook of Labor Economics*, Vol. 2, eds. O. Ashenfelter and R. Layard. Amsterdam: North Holland, 849–919.
- Mortensen, D. T., and Pissarides, C. (1999). New developments in models of search in the labor market. In *Handbook of Labor Economics*, Vol. 3B, eds. O. Ashenfelter and R. Layard. Amsterdam: Elsevier, 2567–2627.
- OECD. (2011). *International Migration Outlook*. SOPEMI 2011. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2012). *International Migration Outlook 2012*. Paris: Organisation for Economic Co-operation and Development.
- Olli Segendorf, Å. (2005). *Job Search Strategies and Wage Effects for Immigrants*. Dissertation No. 65 from the Swedish Institute for Social Research, Stockholm University.
- Oyer, P., and Schaefer, S. (2011). Personnel economics: Hiring and incentives. In *Handbook of Labor Economics*, Vol. 4b, eds. O. Ashenfelter and D. Card. Amsterdam: Elsevier, 1769–1823.
- Pallais, A. (2013). Inefficient hiring in entry-level labor markets. NBER Working Papers No. 18917.
- Phelps, E. S., Ed. (1970). *Microeconomic Foundations of Employment and Inflation Theory*. New York: W. W. Norton.
- Phelps, E. S. (1972a). *Inflation Policy and Unemployment*. New York: W. W. Norton.
- Phelps, E. S. (1972b). The statistical theory of racism and sexism. *American Economic Review* 62(4), 659–661.
- Rees, A. (1966). Networks in the labor markets. *American Economic Review* 56(1/2), 559–566.
- Riach, P. A., and Ric, J. (1991). Testing for racial discrimination in the labour market. *Cambridge Journal of Economics* 15(3), 239–256.
- Rubb, S. (2013). Overeducation, undereducation and asymmetric information in occupational mobility. *Applied Economics* 45(6), 741–751.
- Schmid, G., O'Reilly, J., and Schömann, K., Eds. (1996). *International Handbook of Labour Market Policy and Evaluation*. Cheltenham, UK and Brookfield, MA: Edward Elgar.
- Shapiro, C., and Stiglitz, J. E. (1984). Equilibrium unemployment as a worker discipline device. *American Economic Review* 74(3), 433–444.

-
- Sjögren Lindquist, G., and Wadensjö, E. (2006). *National Social Insurance—Not the Whole Picture. Supplementary Compensation in Case of Loss of Income*. ESS Report No. 2006:5.
- Smith, A. (1776 [1981]). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Indianapolis, IN: Liberty Classics.
- Spence, M. (1974). *Market Signaling: Informational Transfer in Hiring and Related Screening Processes*. Cambridge MA: Harvard University Press.
- Stigler, G. J. (1962). Information in the labor market. *Journal of Political Economy* 70(5, part 2), 94–105.

CHAPTER 12

TRANSPARENCY OF FINANCIAL REGULATION

JAMES R. BARTH, APANARD (PENNY) PRABHA,
AND CLAS WIHLBORG

12.1 INTRODUCTION

ANDREW Haldane (2012), Head of Financial Supervision at the Bank of England, made headlines by speaking in favor of greater simplicity in financial-sector regulation in a speech at the Jackson Hole Economic Policy Symposium. Charles Goodhart (2012), however, stated at another conference that “If regulation is simple, it will be simple to avoid it.” Haldane’s call for greater simplicity may reflect his frustration with the lack of effectiveness of regulation in terms of crisis prevention in spite of the rapidly increasing number of man-hours spent in the private and the public sectors on fulfilling regulatory requirements. In this regard, the lack of transparency, apart from simplicity, may be an important contributing factor in limiting the effectiveness of regulation.

Clearly, simplicity and transparency are not necessarily the same but Haldane’s call for simplicity is partly based on his perception that financial regulation is not transparent in contents and effects. Partly to blame is the ever-increasing complexity and detail of the Basel Capital Accords, Basel I, II, and III. Goodhart’s warning against simplicity is based on non-transparency caused by simplicity. Specifically, he refers to the first, relatively simple version of the Basel capital adequacy framework with its crude risk weights assigned to assets that enabled banks to achieve their desired risk-return trade-off contrary to the intent of regulation by means of “risk arbitrage.”

The concept of transparency in financial regulation is discussed in more detail in Section 12.2. The perspective we take is that of the public. Most people are stakeholders in financial institutions as shareholders, depositors, or borrowers, among other ways, and therefore concerned about the likelihood of the failure of financial institutions. Transparency cannot be perfect, however, because a bank’s competitive advantage may be its superior capability to assess particular types of risk. There is a limit to the

public's access to information and hence its ability to judge the riskiness of financial institutions. Thus, optimal transparency is not the same as total disclosure of all relevant information but only that relevant information that does not put an institution at a competitive disadvantage.

In the financial sector transparency often refers to sufficient information to assess risk appropriately. Risk, like the expected return on an asset, is a forward-looking concept that cannot be fully measured objectively. It is remarkable that the Basel committee members seem to work under the illusion that the risk of an asset can be measured objectively and thus proceed toward a system of risk assessment that will make all banks achieve the same objective assessment of a particular risk.¹

It is our view that risk assessment cannot be totally objective and that the desirable level of transparency and regulatory environment more generally must be based on this fact. To be effective, competition requires pluralism and in the financial sector pluralism implies diversity of opinions about the future.

Both Haldane and Goodhart are searching for a new direction in regulation and supervision in the speeches referred to earlier. Goodhart expresses skepticism that simplicity in regulation will be a solution because the complexity of the financial sector and its operations may make complexity of regulation inevitable. It is important to consider whether the complexity of the financial services industry and its products necessarily implies that effective regulation can be understood only by a few insiders and technocrats. If so, the actions taken to enhance transparency must be limited to the political process and its ability to select public sector experts who will serve the public interest best. But in this case the relatively uninformed public would never be able to check on whether its representatives serve its interests well.

Haldane argues that greater simplicity would contribute to greater transparency. He offers empirical evidence that more complex models of financial risk do not offer better out-of-sample predictions than relatively simple models. Simple models for predicting bank failures also seem to perform better than complex models. Furthermore, he argues that the regulatory structure has encouraged complexity and a lack of transparency for financial firms. For example, Basel II encouraged banks to develop "sophisticated" internal models for risk evaluation. If banks used relatively complex quantitative models for risk evaluation they would be able to lower their required capital. The Basel Committee's quantitative impact studies (QIS) prior to the implementation of Basel II indicated that banks with similar asset compositions and apparently similar risk arrived at very different measures of required regulatory capital. In an ongoing study of the regulatory consistency of risk-weighted assets across banks the Committee found that when 15 banks in 9 countries were asked to estimate the total capital they would be required to hold against a specific set of assets, they arrived at very different results. The

¹ In the press release for a recent report (BIS, 2013) the Head of the Basel Committee, Stefan Ingves, states that "While some variation in risk weightings should be expected, excessive variation arising from bank modelling choices is undesirable when it does not reflect actual risk-taking."

results ranged from €13 million to €35 million but the variation was even greater within some asset classes. Stefan Ingves, who heads the Basel Committee, complained that “. . . there is variety and there is lack of transparency. It is hard to judge from publicly available information how banks come up with their weightings.”² Another aspect of these results is that a large share of the variation was due to supervisors’ decisions with respect to capital required to be held against specific assets.

The failure of Northern Rock in September 2007 illustrates how the relatively complex procedures for calculating regulatory capital can be misleading. Three months before the failure of the bank its regulatory capital ratio was well above the minimum Basel II ratio, while the simple nonweighted equity-to-asset ratio was at a relatively low 2%. The more complex risk-weighted equity-to-asset ratios that were disclosed proved to be less than transparent about the actual risk taking by banks. As a result of these types of experiences during the financial crisis a simple non-risk-weighted leverage ratio has obtained more weight in financial regulation. Indeed, it has been incorporated in Basel III along with the risk-weighted required capital ratios.

The chapter is organized as follows. In Section 12.2 we discuss the meaning of “transparency of financial regulation” and its relation to simplicity in greater detail. The progression of the Basel capital adequacy framework from the relatively simple Basel I to the much more complex Basel III is described and sources of lack of transparency in the framework are then discussed in Section 12.3. In Section 12.4 we present data illustrating the lack of transparency in the Basel Capital Accord. Problems of comparability of accounting data across countries that limits transparency, which is related to the discussion on “Accounting Transparency and International Standard Setting,” in Chapter 22 by Gray and Kang in this Handbook, are discussed in Section 12.5. Then, in Section 12.6, survey evidence about regulatory responses in various countries to the global financial crisis is presented. We emphasize the differences in the implementation of regulation regarding systemically important financial institutions. In Section 12.7 we turn to recent proposals for separation or separability of financial activities with the objective of enhancing the transparency of banks’ activities for market participants as well as for resolution authorities. Lastly, concluding comments are presented in Section 12.8.

12.2 TRANSPARENCY AS VIEWED BY DIFFERENT PARTIES

There are a number of dimensions to transparency of financial regulation. One may talk about transparency of the regulator (including the supervisor) or transparency

² *Financial Times*, February 1, 2013.

of the regulated (and supervised). The transparency of the regulator may refer to the objective of regulation, the instruments of regulation, or the implementation and achievements of regulation relative to the objective. The regulator's transparency can be evaluated from the points of view of the regulated and the public. The transparency of the regulated may refer to its actions in response to regulation or to its ultimate achievements relative to the regulatory objectives. Transparency of the regulator and of the regulated is interdependent. In particular, the implementation and achievements of the regulator are likely to depend on the transparency of the actions of the regulated. The perspective taken with respect to transparency can be the regulator's or the public's.

To determine which dimensions to consider we need to have in mind an objective of regulation and a view of what role transparency of the regulator and the regulated can play in achieving the objective. In this chapter we assume that the objective of financial regulation is to achieve an appropriate level of risk taking by financial institutions at minimum cost without any sacrifice of efficiency. We think of risk taking of an individual financial firm in terms of the probability of insolvency and possibly factors that may contribute to contagion throughout the financial industry. As noted, risk taking is by definition a forward-looking variable that cannot be assessed objectively even with the benefit of hindsight. The fact that a bank becomes insolvent does not necessarily mean that it took too much risk based on available information at the time decisions were made. An insolvency may be the result of an extreme event that could not have been foreseen or had a very low probability of happening.

To achieve a desired level of risk taking of financial firms at minimum costs we also assume that efficiency in other dimensions requires competition among financial firms based on differences in core competencies with respect to the provision of various financial services. In this setting the need for regulation of risk taking must be based on market failures that create a divergence between the privately desired level of risk taking and the socially optimal level. Explicit and implicit protection of banks' creditors is one cause of market failure in risk taking but, without a degree of protection, lack of transparency with respect to bank's risk taking for the public can be a source of contagion.

Incentives of the regulator as well as of the regulated play a crucial role for the degree of transparency that exists. The regulator's objective may be stated in terms of, for example, risk taking of financial institutions but the implementation and the choice of instruments are bound to be affected by various interest groups influencing regulation and by the objectives of the supervising regulator. It is well-known that "regulatory capture" and forbearance by the supervisor influence the implementation and effectiveness of regulation. It may lie in the interest of both politicians and regulators to limit the degree of transparency in order for them to be able to achieve objectives that differ from the generally stated objectives of regulation.

The incentives of the regulated are more obviously at odds with the incentives of the regulator. The existence of a market failure as a motivation for regulation implies the regulation interferes with the incentives of the regulated. Thus, it can be expected that

the regulated institutions have incentives to limit the transparency about its activities relative to the activities the regulator wants disclosed.

With this background we can draw a number of implications for transparency of financial regulation:

1. Transparency for the public as well as for the regulator about risk taking by financial institutions will increase with reduced discrepancy between the regulatory objectives with respect to risky activities and the objectives financial firms have incentives to achieve.
2. It follows that transparency about risk taking can be enhanced by regulatory instruments that influence risk taking incentives as opposed to instruments that simply constrain activities.
3. The choice between instruments affecting incentives and constraining instruments depends on the costs of enforcing the two types of instruments and the ability of firms to achieve desired objectives by means of unregulated activities that can substitute for the regulated activity. One aspect of these costs is the transparency of the instrument in terms of ability for the regulator to define the instrument in unambiguous and observable terms. For example, the ambiguity of accounting definitions of capital creates the need for costly examinations of banks' accounting procedures. Incentives can be influenced by the imposition of a cost (e.g., tax) on certain activities but the effectiveness of such measures is reduced if other activities can serve as substitutes. Goodhart and Lastra (2012) discuss boundary conditions for financial regulation to capture the ability of financial firms to find substitutes.

Incentives in the financial sector are influenced by the degree of explicit and implicit protection of creditors in the form of explicit deposit insurance and implicit "too big to fail" protection. Removal of such protection, however, may also be associated with costs.

4. Transparency with respect to regulators objectives and instruments increases with reduced ability of regulators to achieve private objectives at the expense of legislated objectives and instruments. The organization of regulation, the formulation of legislation in terms of observable objectives and variables, and the ability of the political process to hold regulators accountable influence their ability to achieve private objectives and, therefore, the transparency of regulators' activities. This aspect of transparency has been largely neglected until recently (see Barth et al., 2012).
5. The transparency of the political process setting the legislative agenda is ultimately of the greatest importance for the transparency of regulators activities as well as activities of firms. We cannot here go into the complex factors influencing the multitude of interests that determine the formulation of

legislation and its transparency with respect to regulatory objectives and powers.³

12.3 TRANSPARENCY IN THE BASEL CAPITAL ACCORDS

It has been argued that the objective of regulation in terms of risk taking cannot be defined objectively but must be defined in terms of one or more proxies. In the Basel framework the objective of regulation is stated in terms of capital adequacy of banks in particular. From the point of view of the public as well as the regulator there is an inevitable degree of lack of transparency in the relationship between a stated objective with respect to a capital ratio for a bank and the risk the bank is taking. The Basel Committee has struggled with this issue since 1988, attempting to reduce the likelihood of failures within the financial system. In the process the capital adequacy requirements (CAR) have become more detailed, elaborate, and complex to make capital more risk sensitive and sufficient to reduce the likelihood of banking crisis to an acceptable minimum. In this section we review the development of the CAR from the relatively simple Basel I through Basel II to the most recent Basel III proposals.

There is general agreement that the risk classification determining capital requirements in the 1988 Basel Capital Accord was too crude with the consequence that banks were able to shift assets within each risk category to relatively high-risk assets with relatively high returns (risk arbitrage) without an appropriate increase in capital. In the words of the Basel Committee when presenting the Basel II proposal in June 1999:

The current risk weighting of asset results, at best, in a crude measure of economic risk, primarily because degrees of credit risk exposure are not sufficiently calibrated as to adequately differentiate between borrowers' differing default risks. Another related and increasing problem with the existing Accord is the ability of banks to arbitrage their regulatory capital requirement and exploit differences between true economic risk and risk measured under the Accord. Regulatory capital arbitrage can occur in several ways, for example, through some forms of securitization, and can lead to a shift in banks' portfolio concentrations to lower quality assets.

The June 1999 version of the proposal for Basel II was intended to replace the Basel I risk weightings by a system that would include finer calibration of risk weights for assets. Initially it was proposed that external ratings would provide the basis for risk weights.

³ There is a literature viewing the financial crisis as caused mainly by a series of policy measures with the objective of making it affordable for broad groups in the United States to own their own homes (e.g., Wallison, 2012).

The Committee mentioned very briefly the possibility that “sophisticated banks” could be allowed to use their internal ratings as a basis for setting regulatory capital charges. The debate triggered by the June 1999 proposal quickly led to greater emphasis on internal ratings in Basel II (Basel Committee on Banking and Supervision [BCBS], 2000).

The regulatory dilemma that the Basel Committee struggled with (and still struggles with) was that if supervisors specify “risk buckets” (assets with the same risk weights) that are too broad, then a bank’s expertise can be used for regulatory arbitrage, while if they specify risk buckets that are too narrow, then the incentives for banks to develop expertise in risk assessment—their presumed comparative advantage—are removed.⁴ The Committee’s solution to this dilemma of either allowing regulatory arbitrage with broad risk buckets or removing incentives for banks to develop risk-assessment expertise was to allow “sophisticated” banks to use internal ratings as the basis for risk weighting.

Basel II developed three approaches to risk weights. The Standardized approach was based on ratings but banks could qualify to use one of two internal ratings approaches to internal ratings of loans. In the first one—the Foundation approach—the ratings were based on banks’ estimates of probabilities of default (PDs) on various loans. The second approach—the advanced approach—would take “loss given default” (LGD) into account as well. Any approach taken by a bank must be evaluated and accepted by the bank’s supervisory authority. If a bank was able to apply only the Foundation approach, then supervisors would provide the bank with a standardized method for arriving at LGD estimates. Neither the foundation nor the advanced approach incorporates portfolio considerations.

The potential for risk arbitrage existing under Basel I remained to an extent under the Basel II Accord as well. First, all banks would not qualify for use of internal ratings either because they did not have sufficient expertise or because they did not have the required five years of history of estimating (at least) PDs for various types of loans. Second, additional opportunities for risk arbitrage under an internal ratings standard were created by the greater scope for institutions to engage in “gaming and manipulation” of ratings.

One type of “gaming and manipulation” would occur if a bank uses its private information to place relatively high-risk and high-return credits in a lower risk bucket. For example, if the foundation approach is used, then the PD reported to the supervisory authority can be made to differ from the bank’s true estimate. The latter probability may have been updated by the bank based on information that is not available to supervisors. If the PDs are based on a more refined credit scoring system that has been deemed acceptable by regulators, then private information within the bank would make manipulation of the credit scores prior to translation into PDs possible. The quantitative importance of “gaming and manipulation” has been estimated by Carey

⁴ Benink and Wihlborg (2002).

and Hrycay (2000). They conclude that officially reported default rates for a given rating can be made as low as half the bank's private estimates.

Both the European Commission and the Basel Committee recognized the potential scope for gaming and manipulation. Two pillars of the capital adequacy framework, supervision and market discipline, were to limit this scope. Most of the burden of controlling banks' internal risk assessment was placed on expanded and active supervision. Supervisory authorities were expected to build up their expertise substantially in both quantitative and qualitative terms. In fact, supervisors were expected to work closely with the banks when they developed and upgraded their internal risk-scoring models. This envisioned very close cooperation between banks and supervisors and was naturally intended to reduce the information and knowledge asymmetry between banks and supervisors. However, banks will always be able to make decisions based on private information not available to supervisors. The intensified involvement of supervisors could instead lead to greater "regulatory capture," in the sense that supervisors identify themselves more strongly with the banks they supervise.

The need for market discipline as an instrument to induce banks to hold sufficient capital was recognized as the third pillar of Basel II. Disclosure of risk relevant information to the public was expected to contribute to market discipline and, thereby, to provide incentives for banks to reduce risk taking. However, effective market discipline requires not only that information is available to some observers, but also that the observers value the information and are able to impose a cost on the bank that releases negative information (or abstains from releasing positive information). As long as depositors and other creditors of banks are insured, or implicitly expect to be bailed out, information about potential credit losses is not going to be a major concern to the public. Another aspect is that the disclosed information is going to be more relevant and effective if the choice of disclosed information is based on demand for information in the marketplace.

By putting their faith in rules for information disclosure alone to create market discipline, the European Commission and the Basel Committee neglected that the amount and transparency of information available in the market place depend on incentives on the demand side as well as supply side for information.

The financial crisis in 2007–2009 revealed a number of weaknesses with Basel II. Ratings and the output from quantitative risk models seemed in hindsight to have failed to reveal the riskiness of banks' portfolios. Counterparty risk seemed to have been a greater source of risk than envisioned in Basel II. In response to the crisis the Basel Committee developed a substantial revision in Basel III.

The proposed Basel III framework presented in December 2010 broadened the current risk-weighted capital ratio framework in Basel II to include (1) a minimum ratio of common equity employing a stricter definition of equity capital, (2) a capital conservation buffer, (3) a countercyclical provision, and (4) enhanced risk coverage that includes counterparty credit risk and derivatives. Furthermore, Basel III complements the risk-weighted ratios with 5) a simple leverage ratio and 6) adds minimum liquidity coverage and funding ratios.

Although solvency problems generally are at the core of financial crises the recent crisis demonstrated that illiquidity can magnify the depth of crises. Banks faced potential illiquidity of two kinds: “market illiquidity” occurred when banks could not sell assets without realizing large losses, and “funding illiquidity” occurred when banks that relied on short-term funding could not refinance longer maturity assets. The degree to which funding illiquidity was the result of lack of transparency about solvency remains a controversial issue.

The Basel Committee produced two requirements in the form of ratios that must be satisfied by banks involved in maturity transformation. The Liquidity Coverage Ratio (LCR) refers to the stock of high-quality liquid assets relative to the net cash outflow that would happen in a stress scenario. A high ratio enables a bank to avoid having to sell assets at depressed prices (fire sale) if funding is withdrawn or not renewed. The Net Stable Funding Ratio (NSFR) refers to a ratio between availability of stable funding relative to the need created by long-term assets. NSFR limits the degree of maturity transformation of banks and, therefore, enhances “funding liquidity.” Both ratios are based on a complex set of weighting factors that appear somewhat arbitrary.

The European Shadow Financial Regulatory Committee (2011) identified the following problems with the Basel III approach: “banks will be assessed using up to seven different ratios to be introduced over a long period of time. Instead of contributing to financial stability, the net result may turn out to be an increase in regulatory uncertainty and risk arbitrage. Some of the drawbacks of the current Basel II framework have not been appropriately addressed: First, procedures specifying predictable consequences for banks violating existing regulation (“Structured Early Intervention and Restructuring” or “Prompt Corrective Action”) are still in the making. As a result, incentives of banks to keep a high capital buffer relative to minimum ratios remain ambiguous. Second, incentive effects and competitive distortions introduced by some banks being “Too Big to Fail” have not yet been adequately addressed. Thereby, market discipline on the risk taking of these banks remains weak. Third, enforcement of market discipline through the use of contingent capital has been given a too narrow a role in the proposed Basel III framework.”

The full implementation of the liquidity requirements has been pushed forward to 2019 in response to lobbying from banks. Nevertheless, they represent a direction for future regulatory initiatives and some countries may take initiatives in the direction proposed by the Basel Committee well in advance of 2019.

From a transparency point of view the Basel CAR has a number of deficiencies:

1. The discrepancy between banks’ desired capital and required regulatory capital has created incentives to manipulate credit risk evaluation in order to lower the required capital. These incentives have become stronger with the higher capital requirements in Basel III and the lack of progress in enhancement of incentives to increase capital. Implicit protection of creditors of banks considered “Too Big to Fail” has, if anything, become stronger. Furthermore, Basel II did not specify any consequences and schedule of costs for failing to satisfy regulatory capital requirements.

2. The complexity of the methods for translating banks' credit scoring systems to risk weights created scope for manipulation already in Basel II. Liquidity requirements create additional incentives for manipulation if incentives to increase liquidity do not exist.
3. Blundell-Wignall (2012) argues that the specification of risk of derivatives positions in terms of net positions rather than gross positions enable banks to adjust risk to desired levels without having to change their required capital.
4. The Basel Capital Adequacy Framework focuses on keeping the banking system sound to the neglect of what happens when a bank fails or an economy-wide crisis erupts. This neglect is revealed by the lack of clarity about the role of capital. If capital is considered a buffer against unanticipated losses one must recognize that circumstances may arise when the buffer is insufficient and some actions must be taken by supervisors and banks. By the same token, the need for capital depends on what procedures will be put in place to resolve a situation of insolvency.
5. Both Basel II and III envisioned close cooperation between banks and supervisors in the development of models for credit scoring and translation of credit scores into risk weights. The close cooperation created a fertile ground for "regulatory capture."
6. It is up to each country's supervisory authority to decide how requirements would be enforced. The degree of enforcement and the transparency of regulators' implementation depend on their inclination to serve the interests of the financial industry and on their accountability.
7. There remains ambiguity in "fair value" measurements in the absence of market pricing in liquid markets.

12.4 MEASUREMENT OF CAPITAL RATIOS AND REGULATORY REQUIREMENTS

There are several different ways in which to measure capital-to-asset ratios. There is a Tier 1 capital ratio, with Tier 1 capital consisting of common stockholders' equity, qualifying perpetual preferred stock, and minority interest in consolidated subsidiaries less goodwill and other disallowed intangibles, and assets being measured on a risk-weighted basis. There is also a total regulatory capital ratio, which includes Tier 1 capital and supplemental capital in the form of perpetual preferred stock ineligible for Tier 1, perpetual debt and mandatory convertible securities, qualifying senior and subordinated debt, limited life preferred stock, and qualifying allowance for credit losses, and assets being measured on a risk-weighted basis.

Figure 12.1 shows that the country averages (mean and median) of both actual risk-based capital ratios just mentioned worldwide have increased during the period 2008–2010. There is a relatively high emphasis still placed on these risk-based capital ratios. Moreover, it is clear that there has been improvement in both ratios since the global financial crisis that began to emerge more fully in 2008. However, Figure 12.2, parts 1 and 2,

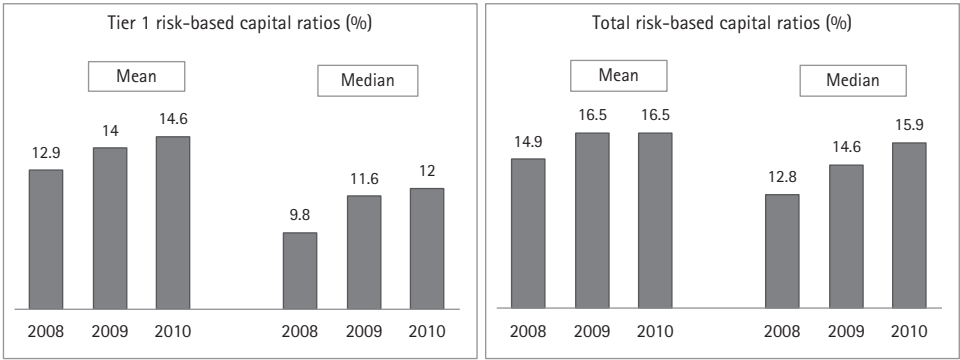


FIGURE 12.1 Country averages of actual risk-based capital ratios worldwide.

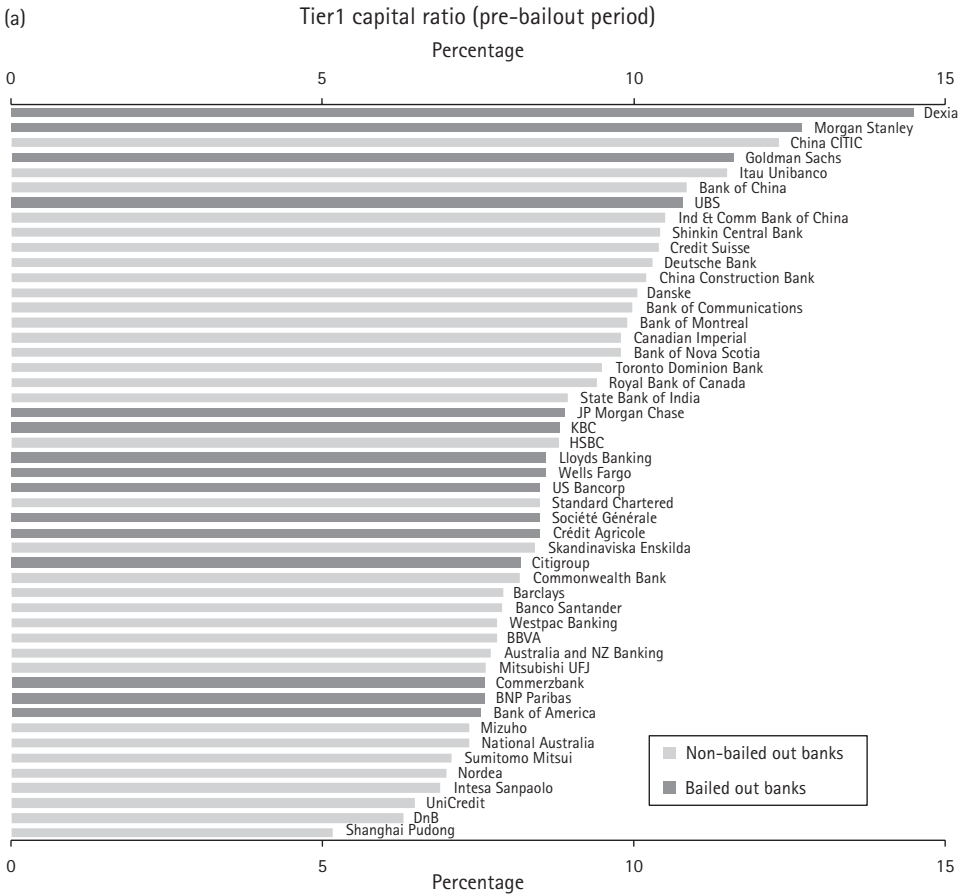


FIGURE 12.2A Capital ratios of the world's biggest banks prior to the bailout period. Tier 1 capital ratio.

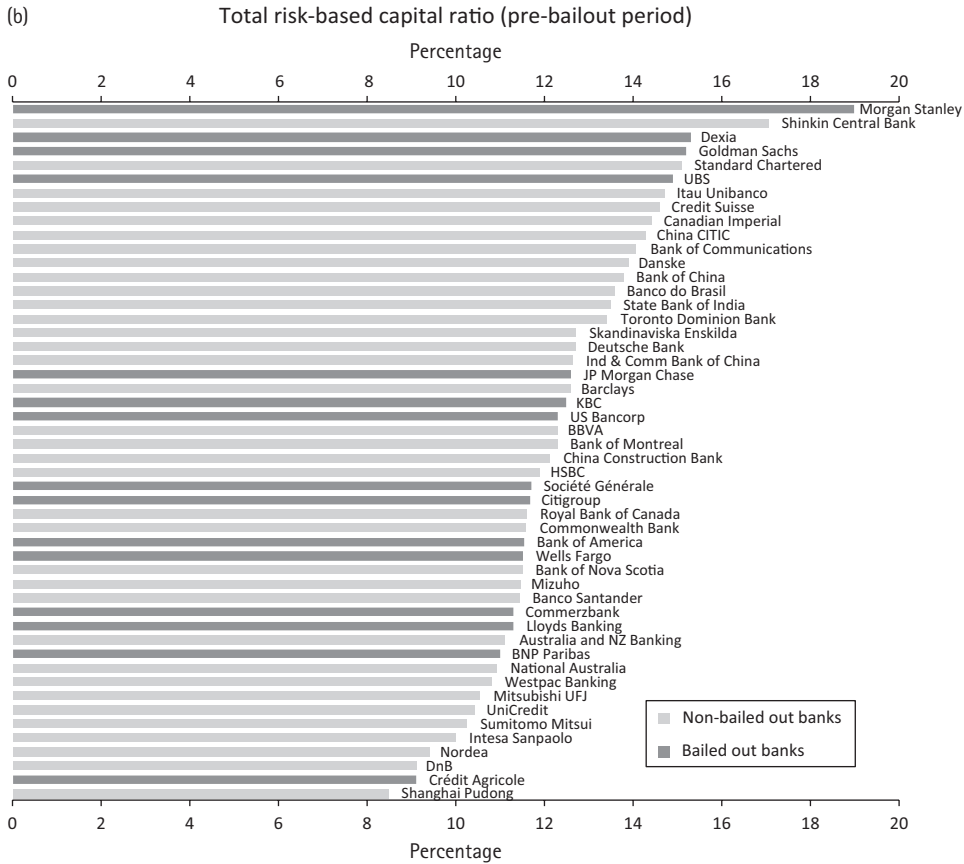


FIGURE 12.2B Capital ratios of the world's biggest banks prior to the bailout period. Total risk-based capital ratio.

shows these same ratios for the world's 50 biggest banks, some of which were bailed out during the crisis (also see Table 12.A1). The bailed out banks are shown in dark. It is clear that the risk-based capital ratios did not truly reflect the level of (in)solvency of troubled banks because there is no clear delineation between the bailed-out and non-bailed out banks in terms of these ratios. This indicates that banks can manipulate the ratios. There is no clear evidence that these particular capital ratios of either failed/bailed-out banks were relatively low enough that the banks would fail or be in need of bailout funds.

There are two other capital-to-asset ratios that were more informative about the condition of banks during the crisis. One is the leverage ratio, which is the ratio of common equity (share capital + additional paid in capital + retained earnings) to non-risk-based assets.

The other is the tangible equity-to-tangible asset ratio, which is the ratio of tangible capital (common equity less intangibles like goodwill) to non-risk-based tangible assets. Figure 12.2, Parts 3 and 4, shows these two ratios for the same banks prior to

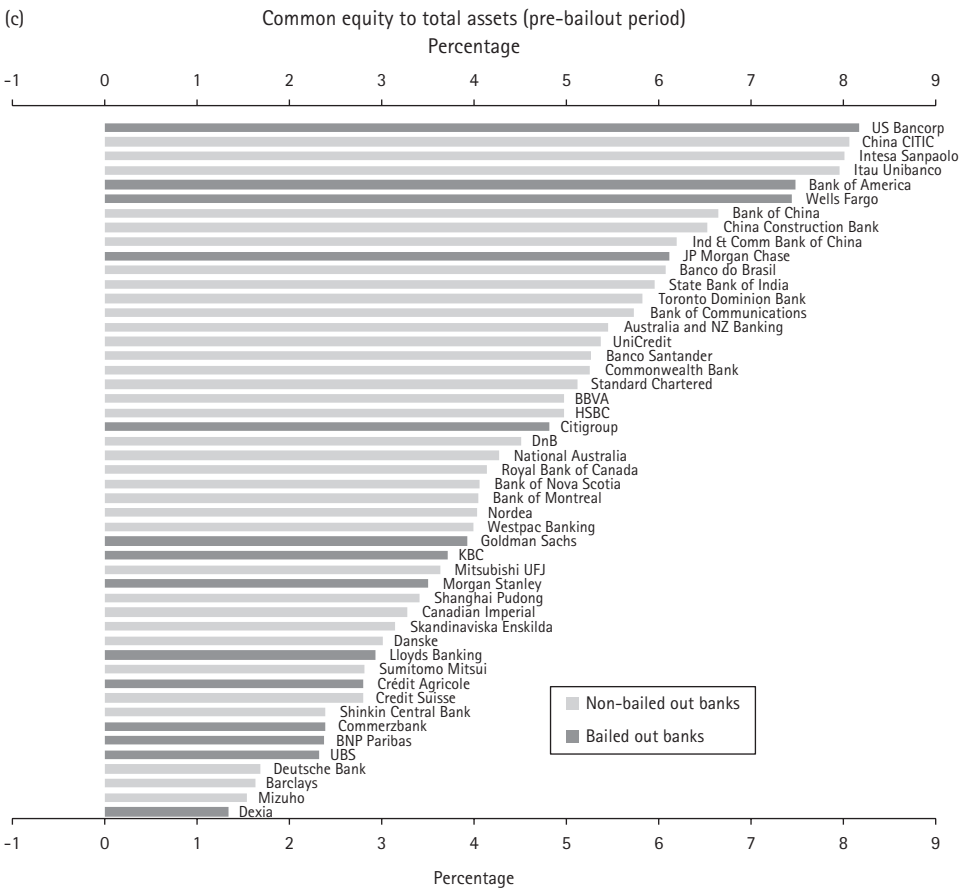


FIGURE 12.2C Capital ratios of the world's biggest banks prior to the bailout period. Common equity to total assets.

the bailouts during the crisis. The capital ratio that seems to indicate most strongly the need for a bailout is the tangible equity-to-tangible asset ratio. Most of the bailed-out banks had relatively low ratios. Also, with the exception of the US banks, all of which were asked to participate in the bailouts whether needed or not, most of the bailed-out banks had relatively low common equity-to-asset ratios.

In a related manner, Haldane (2012) provides evidence regarding capital measures with respect to bank failure prediction. He shows that there is little correlation between levels of sophisticated regulatory capital to risk-based asset measures and subsequent bank failure. On the other hand, the simple leverage ratio for the same set of banks was a statistically and significantly important predictor of bank failure.

Furthermore, Barth et al. (2012) illustrate that the asset size of US banks that received Troubled Asset Relief Program (TARP) capital injections and the amount of capital

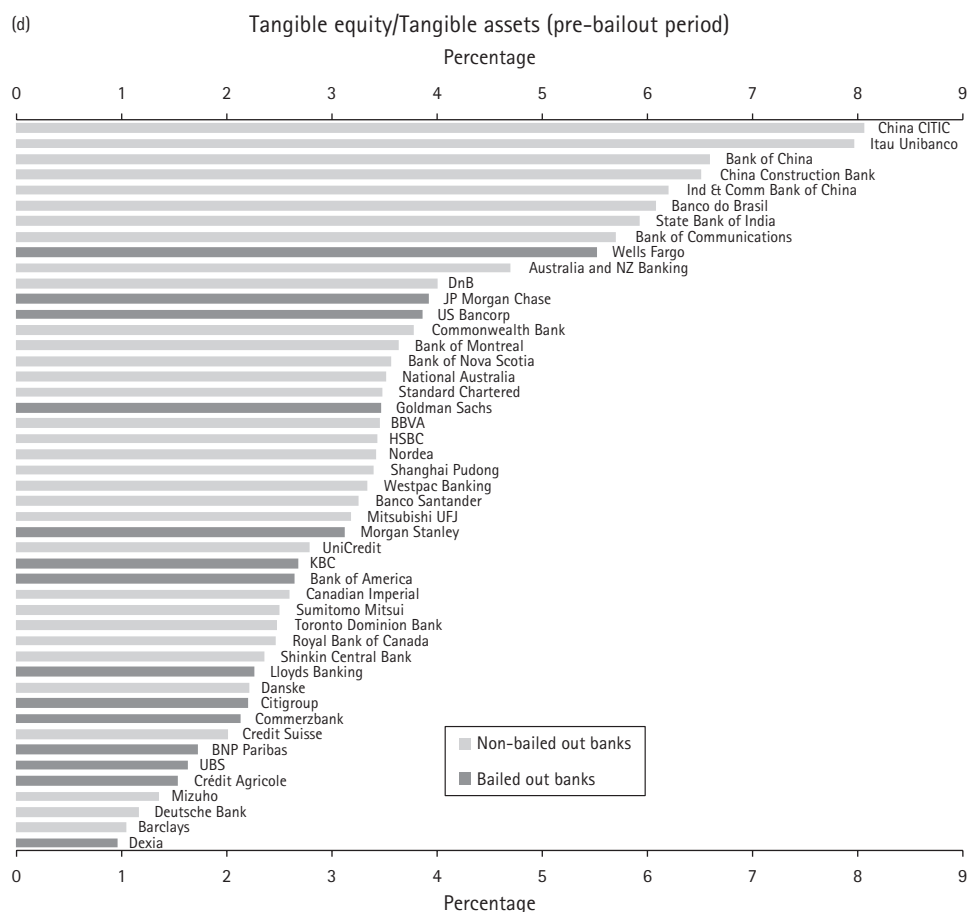


FIGURE 12.2D Capital ratios of the world's biggest banks prior to the bailout period. Tangible equity to total assets.

Note: Data were as of Q3 2008, which was the period prior to the bailouts (see Table 12.A1 for the information on bailout and capital ratios of these banks). The sample includes the 50 biggest publicly traded banks in the world for which data are available in the period prior to the bailout. The common equity-to-total assets ratio is not adjusted for derivatives for US banks. This ratio of US banks will be lowered with the adjusted assets.

Sources: BankScope and Bloomberg.

injection to those banks are highly and significantly correlated (a correlation coefficient of 0.92). Thus, larger institutions received more TARP funds. Importantly, they also show that the capital injection is significantly and negatively correlated with both a bank's common and tangible common equity capital-to-asset ratios, while not significantly related to either a bank's Tier 1 risk-based or total risk-based capital ratios. This indicates that the injections on average were smaller for the better capitalized

institutions, but “better capitalized” based only the two non-risk-based measures of capital.

A decision to bail out a bank during the financial crisis may not have been made mainly because the particular bank was facing a liquidity problem, but rather for (non-transparent) political reasons, such as a bank being “Too Big to Fail.” Unfortunately, the reasons for bailing out certain banks are not transparent. The available bailout information (e.g., TARP in the United States and bank state support in the EU banking sector) does not indicate the exact reason a certain bank received a bailout.

Usually, the decision to bail out a bank should be a joint decision of the bank as to whether to apply for emergency support and of the regulators as to whether to grant emergency support. However, in many cases, a bank’s bailout may be a unilateral decision of the regulators. The publicly available information mainly identifies only those banks that received bailout funds, but not those banks that were relatively healthy and did not need to be bailed out and therefore never requested government support.

Information for ailing banks that needed bailout funds but were rejected by the regulators is available to some extent with considerable effort. For example, Duchin and Sosyura (2012) “Using hand-collected data on firm applications for TARP funds, . . .” find that politically connected firms are more likely to be funded, controlling for other characteristics.”

12.5 ACCOUNTING PRACTICES AND IMPACT ON CAPITAL RATIOS

Accounting practices are not the same in all countries. Figure 12.3 demonstrates this fact. Global systemically important banks (G-SIBs) in Europe and the United States as identified by the Financial Stability Board (FSB) are ranked by total assets as of 2011.⁵ However, these rankings do not produce an apples-to-apples comparison. The reason is that there is no uniform worldwide accounting standard for measuring assets (see Table 12.A2 for the accounting standard used in selected countries). In Europe, most of the banks rely on International Financial Reporting Standards

⁵ The FSB identified 28 G-SIBs on November 2012 using end-2011 data (see Financial Stability Board, 2012). The list of G-SIBs is published annually. On November 2011, the FSB identified an initial group of 29 global systemically important banks (G-SIBs). Compared with the group of G-SIBs published in 2011, the FSB added two banks (BBVA and Standard Chartered) and removed three banks as result of a decline in their global systemic importance (Dexia, Commerzbank, and Lloyds). The group of G-SIBs is updated every year in November. The list of G-SIBs is identified based on the following factors, with the individual weights in parentheses: cross-jurisdictional activity (20%), size (20%), interconnectedness (20%), substitutability (20%), and complexity (20%) (see BCBS, 2011).

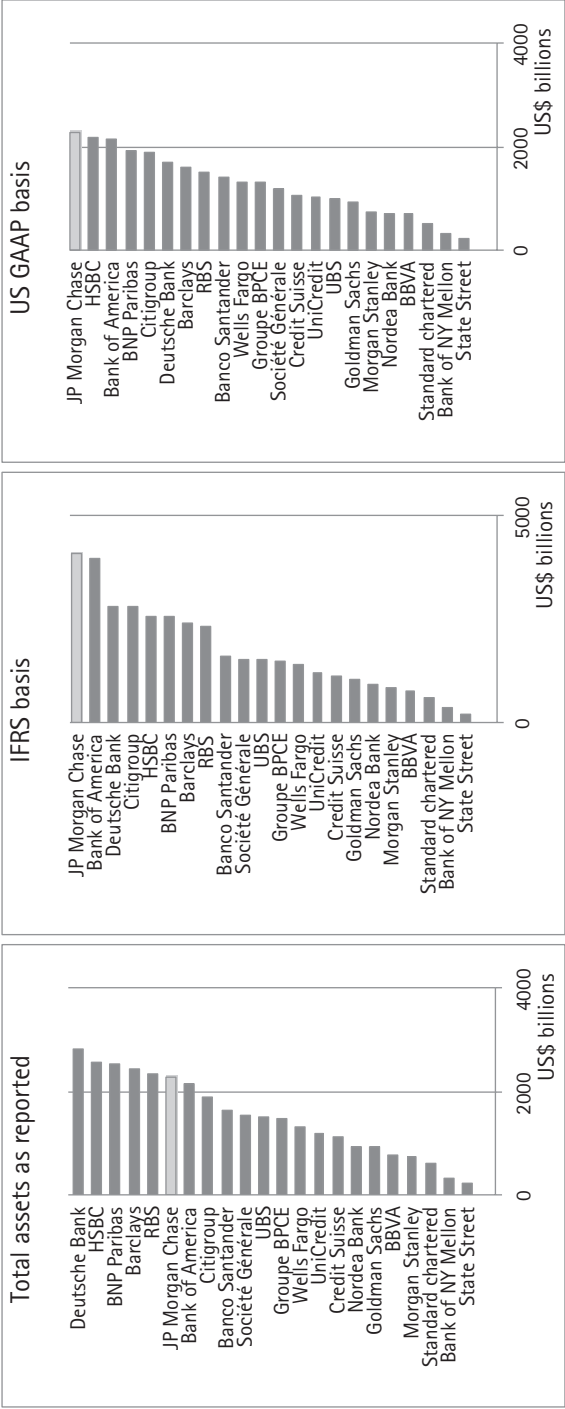


FIGURE 12.3 Selected G-SIBs in Europe and the United States ranked both by reported total assets and total assets when derivatives are on a gross, not net (US GAAP), basis (IFRS), 2011.

Sources: BankScope, Bloomberg, SNL Financial and banks' annual reports.

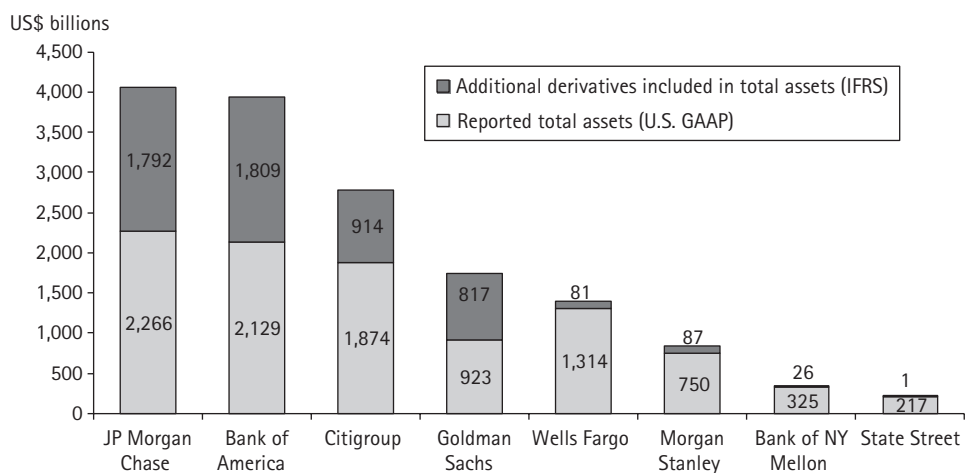


FIGURE 12.4 Differences in total assets of US G-SIBs due to differences in the accounting treatment of derivatives (2011).

Sources: BankScope, Bloomberg, and banks' annual reports.

(IFRS),⁶ while US banks rely on Generally Accepted Accounting Principles (GAAP). Countries that use IFRS, and some that use GAAP, report derivatives on a gross rather than a net basis. It is useful to elaborate on the importance of this distinction. The Europe-based International Accounting Standards Board (IASB), for example, allows less balance sheet offsetting than the US-based Financial Accounting Standards Board (FASB). The different offsetting requirements result in a significant difference between assets reported in accordance with IFRS and assets in accordance with US GAAP. This is particularly the case for entities that have large derivative activities (see ISDA, 2012).

For the United States, it is useful to illustrate more fully the impact on total assets of the treatment of derivatives under different accounting standards.⁷ Figure 12.4 shows what happens to the total assets of the eight G-SIBs US banks if derivatives are measured under the IFRS rules rather than under US GAAP. The most dramatic changes occur at the biggest of the big US banks, which carry out a disproportionate share of trading in derivatives. As a result, several of those institutions suddenly appear to eclipse competitors in other countries if they are measured on the same basis. Indeed, US GAAP treatment may be understating the assets of all US banks on our list by a total of \$5 trillion.

⁶ In Switzerland, banks are allowed to choose between the two accounting standards.

⁷ For purposes of satisfying the Basel Capital Accord, all banks are allowed to use net derivatives when calculating the risk-based capital requirements under Basel II. However, no final decision has yet been made regarding the leverage requirement under Basel III.

The difference in the derivative treatment leads to big differences in ranking of the world's biggest banks. When an adjustment is made to measure total assets on a comparable basis, the result is a significant change for several of the world's biggest banks, as shown in Figure 12.3. In particular, JP Morgan Chase reported total assets of \$2.3 trillion under US GAAP for 2011, in which case derivatives are measured on a net basis. When derivatives are calculated on a gross basis (i.e., based on IFRS), JP Morgan's assets almost double to \$4 trillion and the bank jumps to first place among the world's biggest banks. Likewise, Bank of America leaps from seventh to second place.

Figure 12.5 shows how the treatment of derivatives affects leverage ratios of US and European globally systemically important banks. As may be seen, in the case of the US banks the leverage ratio for JP Morgan Chase nearly doubles, increasing to 22 on the basis of IFRS from 12 on the basis of US GAAP. The same is true of Bank of America, whose leverage ratio increases to 17 from 9 when moving to IFRS to US GAAP. Both of these banks are major players in the derivatives market. It is clear from this figure that it makes a big difference whether a bank's capital-to-asset ratio is based on assets

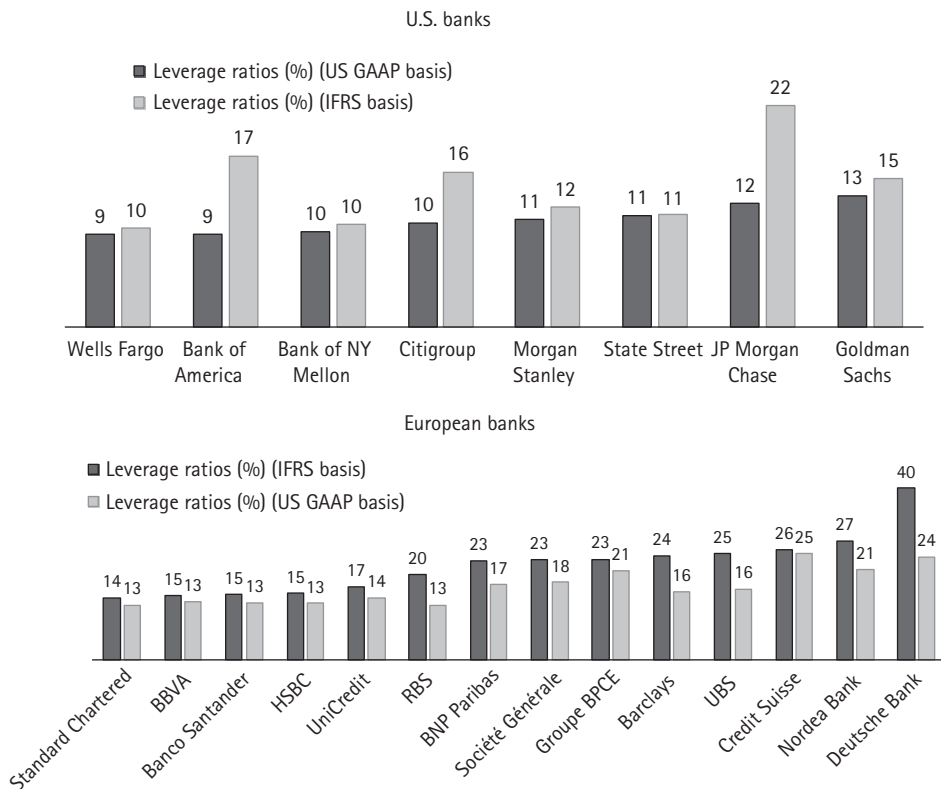


FIGURE 12.5 Impact of the treatment of derivatives on the leverage ratios (assets-to-equity) for the US and European G-SIBs (2011).

Sources: BankScope, Bloomberg, SNL Financial and banks' annual reports.

measured using IFRS rather than US GAAP. This underscores the importance of transparency when it comes to different accounting practices being used in the banking industry, which has increasingly become a global industry for the biggest banks. It also underscores the importance of the potential differential impact of regulations that do not take into account differences in accounting practices in countries.

The netting of derivatives position is permitted for the calculation of capital requirements against derivatives under the Basel Capital Accord. Blundell-Wignall and Roulet (2013) show that the risk of a bank in terms of “distance to default” is strongly associated with its gross market value of derivatives relative to total assets.

12.6 POST-CRISIS REGULATORY ENVIRONMENT; SURVEY RESULTS

The importance of systemic risk has been widely recognized by the regulatory authorities as a result of the recent global financial crisis. Despite this recognition, not all countries have responded to this risk in a similar manner. Table 12.1 presents information about what selected countries are doing to better assess systemic risk. Of the 15 countries, 7 indicated that they have a specialized department dealing with financial stability and systemic supervision, while 6 reported they do not. Two countries did not provide such information. Countries in which these departments exist include Belgium, Brazil, Canada, France, India, Spain, and the United Kingdom. Australia, Denmark, Italy, Switzerland, and the United States were among those reporting that they did not have a specialized department.

Table 12.1 also shows the factors that countries consider in assessing systemic risk within the banking sector. Regulators in almost every country that responded (12) consider bank capital ratios as a key factor. The least-mentioned factor is the foreign exchange position of banks (7). Countries that reported considering all of the potential factors include Australia, Canada, India, the United Kingdom, and the United States. Two of these are advanced countries that suffered a banking crisis. France and Germany, both advanced economies, indicated they did not consider any of the factors listed in Table 12.1.

Table 12.2 provides information on whether regulators supervise systemic institutions in a different way than nonsystemic ones. Of the 14 countries that provide information, 12 indicated that they do indeed supervise systemic institutions differently. Canada and Switzerland indicated they do not. The table also provides information on the regulatory tools used by some countries to oversee more closely and/or limit the activities of the large/interconnected institutions. None of the countries place any restrictions/limits on the size of institutions. In regard to all the other tools, there is a split among countries. Some countries rely on such tools as a capital requirement and additional liquidity requirements, while other countries do not use these tools. In the

Table 12.1 Information on Factors Considered for Large/Interconnected Banks of Selected Countries

Country	Is there a specialized department in your agency dealing with financial stability and systemic supervision?	Which of the following factors do you consider in assessing systemic risk?														Housing prices	Other
		Bank										Sectoral					
		capital ratios	leverage ratios	profitability ratios	liquidity ratios	Growth in bank credit	composition of bank loan portfolios	FX position of banks	loan ratios	nonperforming ratios	provisioning ratios	Bank	Stock market prices				
Australia	No	X	X	X	X	X	X	X	X	X	X	X	X	X	X ^a		
Belgium	Yes	G	X	X	X	X	X	X	X	X	X	X	X	X	—		
Brazil	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X ^b		
Canada	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X ^c		
China	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Denmark	No	X	X	X	X	X	X	X	X	X	—	X	—	—	—		
France	Yes	—	—	—	—	—	—	—	—	—	—	—	—	—	X ^d		
Germany	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
India	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	—		
Italy	No	X	X	X	X	X	X	X	X	X	X	X	X	X	—		
Spain	Yes	X	X	X	X	X	X	X	X	X	—	X	X	X	X ^e		
Switzerland	No	X	X	—	X	X	X	X	X	X	—	X	—	X	—		
United Kingdom	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	—		
United States	No	X	X	X	X	X	X	X	X	X	X	X	X	X	X ^f		

^aAll of the above and much more, depending on industry risk profiles.

^bThe Central Bank of Brazil also considers the following factors: open market positions, gold positions, fixed income positions, and reserve requirements positions at the Central Bank of Brazil.

^cInterconnectivity across FRFI's. Central Bank opinion.

^dComprehensive approach based on multiple indicators.

^eAll previous factors are considered (with the exception of FX position in banks) as well as others (sovereign spreads, macroeconomic variables).

^fWe consider numerous factors and not just one.

Source: World Bank Survey IV, September 2012.

Table 12.2 Information on Regulations for Large/Interconnected Banks of Selected Countries

If yes, do you have any tools to oversee more closely and/or limit the activities of large/interconnected institutions?										
Country	Do you supervise systemic institutions in a different way than non systemic ones?	Additional capital requirements	Additional liquidity requirements	Asset/risk diversification requirements	Restrictions/limits on activities	Restrictions/limits on size of institution	Additional corporate institutions	Closer or more frequent supervision	Restrictions on the group's legal structure	Other
Australia	Yes	No	No	No	No	No	No	Yes	No	No
Belgium	Yes	Yes	No	No	Yes	No	No	Yes	No	Yes ^a
Brazil	Yes	No	No	No	No	No	No	Yes	No	Yes ^b
Canada	No	—	—	—	—	—	—	—	—	—
China	Yes	Yes	Yes	Yes	—	—	—	Yes	—	—
Denmark	Yes	No	No	No	No	No	No	Yes	No	No
France	Yes	No	No	No	No	No	Yes	Yes	No	No
Germany	—	—	—	—	—	—	—	—	—	—
India	Yes	No	No	No	No	No	No	No	No	No ^c
Italy	Yes	Yes	No	Yes	Yes	No	No	Yes	No	— ^d
Norway	Yes	Yes	No	Yes	Yes	No	No	Yes	No	No
Spain	Yes	No	No	No	No	No	No	Yes	No	Yes ^e
Switzerland	No	—	—	—	—	—	—	—	—	—
United Kingdom	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	—
United States	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes

^aAssessment of business plan.

^bDedicated supervisory teams. Usually a group of examiners, headed by a supervisor, is responsible for a group of Brazilian banks. In the case of systemic banks, The Central Bank of Brazil has decided to associate each financial conglomerate to a group of examiners and a dedicated supervisor.

^cClose monitoring through off-site financial conglomerates returns.

^dThe current framework does not provide for a special regulatory regime for systemically important institutions. In accordance with the proportionality principle—which guides the whole supervisory activity—large and important banks (and banking groups) are subject to a more intensive supervision.

^eThey are subject to more intense reporting requirements and ad hoc demand for information, including periodical internal management reports.

Source: World Bank Survey IV, September 2012.

case of closer or more frequent supervision, there is a lack of transparency regarding these tools because there is no information about what this means. More generally, the use of all these types of tools is not based on a cost–benefit analysis, which indicates a lack of transparency as to the fundamental reasons that such tools would be used or not used by regulators.

12.7 TOWARD ORGANIZATIONAL REFORM OF FINANCIAL INSTITUTIONS?

The perception that banks perceived to be “too big and too complex to fail” has become widespread after the financial crisis.⁸ Table 12.2 shows that few countries have restriction on bank size while some countries have some restrictions on what activities banks are allowed to be involved in. Even those restrictions do not prevent banks from becoming *de facto* conglomerates in financial services. The complexity of banks, as well as the size of banks operating cross-border in many cases, has had the effect that most countries lack procedures that allow authorities to close down insolvent banks without fearing severe contagion effects. As a result banks’ creditors have strong implicit protection with the consequence that market discipline on risk taking is weakened. The implicit subsidization of banks considered “too big and too complex to fail” also creates incentives for banks to become just that.

Lehman Brothers was put into bankruptcy under US Chapter 11 intended for restructuring of corporations. Foreign subsidiaries were resolved under host countries’ insolvency laws. Carmassi and Herring (2013) note that the mismatch between Lehman Brothers’ legal organization in cross-border subsidiaries and its operational integration was an important source of value losses in foreign subsidiaries, in particular.

On the European side a similar mismatch between the legal organization of cross-border banks and the functional organizations developed as cross-border banking expanded within the EU’s Internal Market. Cross-border banking takes place overwhelmingly in subsidiaries, which are legal entities in the host countries, while the banks functionally and operationally are highly integrated. Thus, the resolution of a bank’s failure will be complex, associated with value losses and contagion among the different entities of the cross-border bank. The same reasoning applies on financial conglomerates with a variety of financial activities, which may be highly integrated while organized in hundreds of subsidiaries.

Already before the euro crisis international organizations such as the International Monetary Fund (IMF), the Financial Stability Board established by the G-20 and the Basel Committee, as well as national policymakers, awakened to the need for a

⁸ This section is based on Wihlborg (2013).

regulatory framework for dealing with banks in distress, including large and complex financial institutions with cross-border operations in traditional commercial banking as well as investment banking. There exist a number of proposals for reform of banks' organization with the objective to make resolution of financial institutions possible without severe contagion. Increased transparency for resolution authorities as well as for financial market participants should strengthen market discipline on risk taking.

There are a number of different approaches to organizational reform. These approaches can only be mentioned briefly here. Several are analyzed in greater detail in the papers referred to.

1. *Recovery and resolution plans (living wills)* have become prominent in the reform work worldwide. For example, the US Dodd–Frank Act (2010) introduces a requirement for Living Wills for Bank Holding Companies and for non-bank financial companies with assets greater than \$50 billion. These companies are required to submit periodic reports regarding plans for rapid and orderly resolution under the bankruptcy code in the event of distress or failure. The living will requirement is intended to help regulators develop a comprehensive and coordinated resolution strategy for complex financial institutions.

Avgouleas et al. (2013) argue that living wills have the potential to contribute to the simplification of organizational structures and, thereby, to greater transparency of large banks. Carmassi and Herring (2013) discusses the potential contribution of living wills in greater detail.

2. *Prompt operational separability* of subsidiaries from a parent bank in distress. As discussed in Mayes (2013) such separability, if practical, would enable host and home countries to resolve their subsidiaries separately without creating serious spillover effects and value losses. The potential cost of such separability would be difficulties of taking advantage of operational economies of scale and scope. New Zealand requires that foreign subsidiaries must be operational independently within 24 hours in case the parent bank fails. Thereby, the banks must have a functional and operational organization that coincides with the legal organization.

3. *Separation (ringfencing)* of different types of financial activities in independent entities that can be resolved separately in distress. There are a number of different proposals for separability motivated by distorted incentives for risk taking. Blundell-Wignall and Roulet (2013) analyze the feasibility and risk consequences of different proposals for separation. The Volcker rule incorporated in the Dodd–Frank Act in the United States emphasizes separation of proprietary trading. The Vickers report in the United Kingdom focuses on separation between traditional commercial banking and investment banking (Independent Commission on Banking, 2011). The Liikanen proposal (Liikanen, 2012) in the EU is designed to reduce interconnectedness by ring-fencing trading activities within a holding company structure. The Organisation for Economic Co-operation and Development proposal presented in Blundell-Wignall and Roulet (2013) focuses on activities in markets for derivatives.

The benefits and costs of these organizational reforms, if implemented, depend on their effectiveness, the strength of ring-fencing, as well as lost economies of

scale or scope. If there are economies of scope for organizations including activities that must be separated, there are incentives for banks to obscure activities in various ways. In this case, transparency benefits are limited as well. The strength of ringfencing affects the degree of coinsurance that exists among separate entities within a holding company structure. Luciano and Wihlborg (2013) analyze how coinsurance among affiliates within different organizational forms affect risk incentives of banks.

12.8 CONCLUSION ON TRANSPARENCY OF FINANCIAL MARKET REGULATIONS

Some of the drawbacks of all three Basel Capital Accords have not been appropriately addressed. Most troublesome, countries worldwide continue to put too much emphasis on the risk-based regulatory capital requirements. Basel III, however, does include a leverage ratio, but it seems too little emphasized than the more complex risk-based capital requirements. This contributes more to obfuscation than to transparency.

Unfortunately, there is no uniformity among the countries in addressing systemic risk and the “too big and too complex to fail” issue. Some supervise systemically important institutions differently from nonsystemic ones, and the countries rely on different factors to assess systemic risks. Some countries have established a specialized department to deal with financial stability and systemic supervision, while others have not. Not all countries have the same tools to oversee and/or limit the activities of large/interconnected institutions. The failure of cross-border resolution agreements, moreover, creates unnecessary uncertainty. Tracking and empirically assessing these differences will provide valuable information about which approaches work best in preventing and mitigating future financial crises. Unfortunately, it may take a future crisis to make a real assessment on what works best.

APPENDIX

Table 12.A1 Selected Information on Bailout and Capital Ratios of the World's Biggest Banks

Bank	Country	Total assets (US\$ billion) (Q2 2012)	Bailout/capital injection		Selected capital ratios (pre-bailout; Q3 2008)			
			Date of the first capital injection	Amount of capital injection (US\$ billion)	Tier1 capital ratio (%)	Total risk-based capital ratio (%)	Common equity/ total assets (%)	Tangible equity/ tangible assets (%)
Deutsche Bank	Germany	2,822	No		10.30	12.70	1.69	1.17
Mitsubishi UFJ Financial	Japan	2,708	No		7.63	10.55	3.64	3.18
Ind&Comm Bank of China	China	2,699	No		10.51	12.62	6.19	6.19
HSBC	United Kingdom.	2,652	No		8.80	11.90	4.98	3.43
Barclays	United Kingdom	2,545	No		7.90	12.60	1.63	1.04
BNP Paribas	France	2,480	10/22/2008	6.51	7.60	11.00	2.37	1.72
JP Morgan Chase	United States	2,290	10/28/2008	45	8.90	12.60	6.12	3.91
CréditAgricole	France	2,269	10/21/2008	3.83	8.50	9.10	2.80	1.54
Bank of America	United States	2,161	10/26/2008	45	7.55	11.54	7.48	2.64
China Construction Bank	China	2,135	No		10.20	12.10	6.53	6.51
Mizuho Financial	Japan	2,034	No		7.36	11.45	1.54	1.35
Bank of China	China	2,028	No		10.85	13.78	6.65	6.59
Citigroup	United States	1,916	10/29/2008	55	8.19	11.68	4.81	2.20
Sumitomo Mitsui	Japan	1,727	No		7.08	10.25	2.82	2.50
Banco Santander	Spain	1,627	No		7.89	11.42	5.27	3.25
Lloyds Banking Group	United Kingdom	1,500	10/13/2008	18.077	8.60	11.30	2.94	2.26
UBS	Switzerland	1,478	10/16/2008	6.344	10.80	14.90	2.32	1.63
SociétéGénérale	France	1,570	10/21/2008	4.34	8.50	11.70	n.a.	n.a.
Wells Fargo	U.S.	1,336	10/29/2008	25	8.59	11.51	7.44	5.52
UniCredit	Italy	1,202	No		6.49	10.44	5.38	2.78

Table 12.A2 Accounting Standards for Selected Countries That Are Headquarters of the World's Biggest Banks

Accounting standard	Country	
IFRS (IAS): Countries that have mostly or completely transitioned to IFRS, or that have adopted New GAAPs that are convergent with IFRS.	Austria	Korea, South
	Australia	Netherlands
	Belgium	Norway
	Brazil	Russia
	Canada	Singapore
	China	Spain
	Denmark	South Africa
	France	Sweden
	Germany	Switzerland
	Hong Kong	United Kingdom
	India	
	Italy	
	Ireland	
GAAP: Countries that are still in transition	China	
	Japan	
	Switzerland	
	Taiwan	
	United States	

Sources: World Bank Survey IV, September 2012, countries' websites.

REFERENCES

- Avgouleas, E., Goodhart, C. A. E., and Schoenmaker, D. (2013). Bank resolution plans as catalyst for action. *Journal of Financial Stability* 9(2), 210–218.
- Bank of International Settlements. (2013, January 31). Report on the regulatory consistency of risk-weighted assets for market risk, issued by the Basel Committee.
- Barth, J. R., Caprio, G., and Levine, R. (2012). *Guardians of Finance*. Cambridge, MA: MIT Press.
- Barth, J. R., and Prabha, A. P. (2013). Breaking (banks) up is hard to do: New perspective on too big to fail. Working Paper No. 12-16, Wharton Financial Institutions Center.
- Barth, J. R., Prabha, A. P., and Swagel, P. (2012). Just how big is the too big to fail problem? *Journal of Banking Regulation* 13, 265–299.
- BCBS. (1988). International convergence of capital measurement and capital standards. Basel: Basel Committee on Banking Supervision.
- BCBS. (1999). A new capital adequacy framework Basel: Basel Committee on Banking Supervision.
- BCBS. (2000). Range of practice in banks' internal ratings systems Basel: Basel Committee on Banking Supervision.
- BCBS. (2001). The New Basel Capital Accord. Basel: Bank of International Settlements.
- BCBS. (2011, November). Global systemically Important banks: Assessment methodology and the additional loss absorbency requirement. Basel: Bank of International Settlements.

- Benink, H., and Wihlborg, C. (2002). The New Basel Capital Accord: Making it effective with stronger market discipline. *European Financial Management* 8(1), 103–115.
- Blundell-Wignall, A., and Roulet, C. (2013). Bank business models, capital rules and structural separation policies: An evidence-based critique of current policy trends, *Journal of Financial Economic Policy*, 5(4), 339–360.
- Carey, M., and Hrycay, M. (2000). Parameterizing credit risk models with rating data. Symposium paper on Credit Ratings and the Proposed New BIS Guidelines on Capital Adequacy for Bank Credit Assets. New York: Salomon Center, New York University.
- Carmassi, J., and Herring, R. (2013). Living wills and cross-border resolution of systemically important banks. *Journal of Financial Economic Policy*, 5(4), 361–387.
- Dodd–Frank. (2010). Wall Street Reform and Consumer Protection Act (Public Law 111–203, July 21, 2010).
- Duchin, R., and Sosyura, D. (2012). The politics of government investment. *Journal of Financial Economics* 106(1), 24–48.
- European Shadow Financial Regulatory Committee. (2011). Basel III: The need for simplicity in capital and liquidity requirements. Statement No. 33.
- Financial Stability Board. (2012, November 1). Update of group of globally systemically important banks. http://www.financialstabilityboard.org/publications/r_121031ac.pdf.
- Haldane, A. G. (2012, August). The dog and the frisbee. London: Bank of England.
- Goodhart, C. A. E. (2012, November 15). A ferment of regulatory proposals. Keynote speech at the Fifteenth Annual International Banking Conference, Federal Reserve Bank of Chicago.
- Independent Commission on Banking. (2011, April). Interim Report: Consultation on Reform Options.
- ISDA. (2012, May). Netting and offsetting: Reporting derivatives under U.S. GAAP and under IFRS. New York: International Swaps and Derivatives Association.
- Liikanen, E. (2012, October). High-Level expert group on reforming the structure of the EU banking sector. Final Report. Brussels: EU Commission.
- Luciano, E., and Wihlborg, C. (2013). The organization of bank affiliates: A theoretical perspective on risk and efficiency. Working Paper, Social Science Research Network.
- Mayes, D. G. (2013). Achieving plausible separability for the resolution of cross-border banks. *Journal of Financial Economic Policy* 5(4), 388–404.
- OECD. (2009). The financial crisis: Reform and exit strategies. Paris: Organisation for Economic Co-operation and Development. (Presented to the 2009 London G-20 Summit).
- Wallison, P. (2012). The lost cause: The failure of the Financial Crisis Inquiry Commission. In *Research Handbook in International Banking and Governance*, eds. J. R. Barth, C. Lin, and C. Wihlborg. Cheltenham, UK: Edward Elgar.
- Wihlborg, C. (2013). The organization of banking and supervision: Introduction and overview. *Journal of Financial Economic Policy*, 5(4), 334–338.

CHAPTER 13

PRICE TRANSPARENCY AND MARKET INTEGRATION

RICHARD FRIBERG

13.1 INTRODUCTION

PRICES of many products depend on where they are sold. An Apple iPad may, for instance, cost much less in New York City than in Zurich. There are many potential reasons for price divergences but a lack of information about prices in other locations is one plausible contributor. In the present chapter we survey theoretical and empirical work to help us understand the role of price transparency for market integration. Looking back a few years two trends were seen as having a potentially large effect on transparency and market integration. Both in policy circles and in the press it was stressed that increased transparency due to a common currency in Europe and due to information technology would act as an equalizing price force. Two quotes from *The Economist* may serve to bring out this view.

The Economist (2001, November 29) noted that “the greater transparency the single currency brings to prices will make a big difference to the way business is conducted. Simple economic theory suggests that savvy consumers will look across European markets and note where the price of a good or service is lowest. They will then either purchase the good or service there, conducting a form of what economists call ‘arbitrage’; or they will use the information to prevail upon their more expensive local provider to bring the price down. . . . In the past, manufacturers have been able to maintain price differentials because their customers found it difficult to compare prices. With the euro, it will become much easier [to compare prices].”

Regarding the market integration effects of greater transparency due to the Internet—where price comparisons are only a “mouse-click away”—there were also high expectations. We again let *The Economist* (1999, November 19) portray this view “The explosive growth of the Internet promises a new age of perfectly competitive markets. With perfect information about prices and products at their fingertips, consumers

can quickly and easily find the best deals. In this brave new world, retailers' profit margins will be competed away, as they are all forced to price at cost."

As these events have had some time to manifest themselves it is a good time to take stock of what we know about market integration and price transparency—with a particular focus on Internet and a common currency. I start in Section 13.2 by clarifying what I mean by market integration and the methods that have been used to delineate market boundaries. In Section 13.3 I consider the evidence on market segmentation—both in the general case and with a closer look to the European Union and the impact of the Economic and Monetary union in Europe (EMU). To understand the role of price transparency for market integration I examine the different mechanisms that may lead to market integration and the empirical evidence on their effects. Section 13.4 addresses the forces that push toward market integration and how they interact with price transparency. In Section 13.5 I discuss transparency and endogeneity. Section 13.6 concludes the chapter.

Before moving on it is useful to clarify what we mean by transparency and to delineate our study. The definition of transparency may differ between different fields of study as shown in this book. In the case of price transparency it broadly refers to whether prices of goods in different locations or for different specifications are easily observable. Some of the relevant literature covered here refers to transparency explicitly but much of the literature uses other wording, instead focusing on consumer search costs. These are costs for consumers of finding out about prices. Greater transparency would then be associated with lower search costs or a greater share of consumers that have no search costs (see Stiglitz [1989] for an unusually clear overview of the main mechanisms). I discuss this literature in more detail in the text that follows. Much of the literature focuses explicitly on search costs for the price and assumes that once the consumer knows price she knows all the relevant information regarding the product. Clearly other aspects of transparency are large research fields in their own right and are also potentially important for consumer choice. In particular there can be uncertainty about quality and consumers may learn about this from retailers through advertising (see Bagwell [2007] for an overview), from other consumers by word-of-mouth communication (Cai et al. [2009] provide a recent example), from certifying agencies such as health authorities (see Dranove and Jin [2010] for an overview), or from reviews by experts such as wine or movie critics (see, e.g., Friberg and Grönqvist [2012] for a study of the causal effect of reviews on sales). The empirical work that I cover will capture learning on the part of consumers both about prices and product quality, but the main focus in this chapter is on price transparency.

Let us also be clear on some other delineations that I make. I will focus on consumer goods markets—thus largely disregarding studies of financial market integration. The reason for this limitation is that the mechanisms governing the possibilities for arbitrage are very different in financial markets and in consumer goods markets. I also disregard issues of market integration and transparency in markets for intermediate inputs. The reason for this omission is largely that there is a very limited number of empirical studies that examine these issues—in all likelihood reflecting the difficulties

in obtaining transaction prices in upstream markets (see, e.g., Bonnett and Dubois [2010] for a discussion of some of the literature that has tried to analyze prices between upstream and downstream firms).

13.2 HOW DO WE DELINEATE MARKETS?

We may think of markets being delineated in two dimensions—one *geographical* and one in *product space*. I first focus on market delineation in the geographical dimension. In the case of a small island that is completely isolated from the rest of the world it is clear that it is a separate market in the geographic dimension. In other cases, the geographical delineation of markets relies on studies of how prices in different locations influence each other. Let us first note that if cross-price elasticities between two goods are zero then we can infer that these two goods are in different markets. In that case, a change in the price of one of the goods has no effect on the demand for the other good and the demands are independent. It is easy to think of cases where cross-price elasticities are indeed zero—between haircuts in Wellington, New Zealand and Lund, Sweden for instance. In many other cases cross-price elasticities are not zero but low enough that we can fruitfully think of the respective goods as representing separate markets. In a tradition that stretches back to at least Augustin Cournot (1838) we define the extent of the market as the area within which prices rapidly converge to equality after corrections are made for transport costs. The underlying logic is that of arbitrage, if prices were much lower in one location it would pay for an arbitrageur to buy it there and resell in the high price region. Indeed for many commodities traded on exchanges, such as oil, silver, or frozen pork bellies, arbitrage rapidly eliminates any price differences over and above transport costs. In such a market, we say that the “law of one price” (LOP) holds—the price of the good is the same irrespective of where I buy it.

As we broaden our focus to typical consumer goods we need to take into account that the same physical product bought in different locations may differ along some dimensions and thus prices may to some extent differ as well. Prices of consumer goods differ across stores also in the same block because consumers are not constantly comparing prices, and also because the extent of sales services given and other aspects of the purchase may be important besides the price. Nevertheless, also for typical consumer goods we expect the price differences to be limited by transport costs. Take for instance a cheap self-service gas station that is located across the street from a somewhat more expensive full-service station. Given the differences in service content a certain price differential may be stable. However, now assume that the manager of the cheap station on a sudden whim decides to slash prices a given morning—we expect the station across the street to respond within not too long whereas we have no such belief for a gas station located in another city. That is, we expect the closely located stores to belong to the same market.

Similar logic applies if we consider goods in the product space dimension. If two products have a high cross-price elasticity they belong to the same market. If we were to successively order products along diminishing cross-price elasticities we can somewhere draw the line and say that two products belong to different markets. Two bottles of Burgundy wines that are close substitutes are part of the same market whereas bottled water is not likely to be a part of that market—even though all these products are liquids fit for human consumption. In this chapter we focus on the geographical dimension of market definition.

To clarify the discussion, consider a firm that sells a particular product on two national markets, Home and Foreign. If markets are segmented we expect the firm in each market to set prices equal to marginal cost times a markup that depends on the elasticity of demand, which in turn depends on factors such as income levels, demand shocks, and the set of substitute products. We can see market integration as a constraint on the prices that the firm is able to set—if markets are separate the prices can be set without any additional constraint and increasing integration can be operationalized as a tighter constraint—price differences need to be lower than a certain bound. When prices are different because of different markups this is an instance of third-degree price discrimination.¹ In the current chapter we do not consider the welfare effects of such price discrimination—typically some groups win, some lose, and the overall effect on welfare depends on functional forms of demand (see Malueg and Schwartz [1994] for one analysis of welfare effects of price discrimination in international markets).

A large literature indeed uses price differences, and the correlation of price changes, to investigate market delineation. An important application for market delineation has been in antitrust cases—Davis and Garcés (2010) survey the tools that have been used to delineate markets. Determining the relevant geographic market is typically crucial in cases involving the abuse of a dominant position or proposed mergers. Intuitive reasoning is used to identify plausible markets to include—if we're, for instance, interested in whether the Swedish market for used cars is a separate market we confine ourselves to a comparison with neighboring regions. Considering price movements is the most standard way of examining market delineation—are prices changing in tandem and, if there are shocks that affect prices in only one region, how quickly do prices react so as to limit the deviations? Clearly applications of these methods need to take into account that prices may move together because of common cost shocks (prices on the markets for Rice Krispies[®] in Sweden and New Zealand are likely to move together because both rely on rice as an important input that is traded on a global market—despite the

¹ In a more complex setting we can also see different prices as a form of price discrimination under self-selection constraints. For instance, to take an extreme case, Anderson and Ginsburgh (1999) consider the case where a product is offered in a foreign country even though there is no local demand for it. If there are costs of purchasing it in the foreign country the firm can offer it at a lower price there, in effect using it as a low-quality substitute that can be targeted to weaker consumer groups and thus act in a way so as to permit price discrimination under self-selection constraints.

two markets for Rice Krispies[®] clearly being separate). Applications also need to take into account demand shocks that may be hitting both markets—a sunny summer in Toronto and in Stockholm may drive up the price of swimwear in both locations, even though they are clearly separate markets. Other ways of delineating markets rely on asking consumers about substitution patterns, examining the impact of specific events such as market entry by a new player or directly trying to estimate cross-price elasticities (see Davis and Garcés [2010] for applications). In the present chapter we focus on price comparisons, which is also the method that exhibits the largest literature.

13.3 THE EVIDENCE—AN OVERVIEW OF EMPIRICAL RESULTS

13.3.1 Transparency and Price Dispersion within a Market

Starting with Stigler (1961) a large literature examines the links between consumer search and price dispersion *within* a geographic market. Other seminal references are Diamond (1971), Salop and Stiglitz (1977), and Burdett and Judd (1983)—see Lester (2011) for a recent contribution. A central concern has been to understand the conditions under which a lack of information about all prices on the part of consumers can generate equilibrium price dispersion. Even markets where homogeneous products are sold by symmetric firms can feature different prices as long as some consumers face search costs to learn about prices. The models point to the crucial role of information in generating price dispersion and have also formed an impetus for models of search in labor markets (see, e.g., Albrecht [2011] for an overview). The theoretical models are typically quite stylized and we do not cover any one of them in detail here, instead focusing our attention on the empirical literature. There is a large empirical literature that confirms the existence of consumer search costs, parts of which we cover below. Some articles set out to test a particular model of consumer search—a topic that we disregard for now even if many of the papers that we discuss below fall in this category. Instead let us focus on papers that examine if (proxies for) lower search costs are associated with less price dispersion.

The typical answer is in the affirmative. Chandra and Tappata (2011) use daily gasoline prices from essentially all gas stations in four US states and establish that prices are closer in line for gas stations at the same street intersection—where search costs are negligible given the prominent display of gasoline prices in the United States. They further find that price dispersion is higher for premium grades—a fact that they argue is consistent with consumers who purchase such grades having a higher opportunity cost of time. In a search cost model a higher opportunity cost of time translates into a higher search cost and hence a higher potential for some consumers to purchase at high prices because high search costs make them oblivious of lower prices elsewhere. Two

other frequently cited studies that link price dispersion to search costs are Dahlby and West (1986) and Sorensen (2000). Both studies point to patterns of price dispersion that are consistent with costly search and show that price dispersion is lower in submarkets where the benefits of search are likely to be higher (examining automobile insurance and prescription drugs, respectively). There is also some evidence on price dispersion from the introduction of information technology into settings where there was previously very little—Jensen (2007) examines how the expansion of mobile phone coverage lowers price dispersion across local fish markets in the Kerala province of India and Aker (2010) examines the effect of mobile phone coverage on grain markets in Niger. Both find large decreases in price dispersion, see Aker and Mbiti (2010) for an overview of research in this vein.

Before we continue let us note that in the dawn of the Internet age it was sometimes hypothesized that the ease of price comparisons associated with the Internet would imply a strong reduction in price dispersion. In contrast, a number of studies point to substantial price dispersion also for goods sold online (see, e.g., Baye et al. [2004]). Thus though greater transparency and lower search cost both reduce price dispersion, an important measure of price dispersion remains.

13.3.2 Transparency and Price Levels

A question closely related to the one above is whether average prices are lower when there is greater transparency. The literature just mentioned indicates that consumer search matters but there is little focus on transparency per se. To estimate the effects of transparency we would need some variation in time or across markets in the degree of transparency and then trace out the effect on price levels. One potential source of differences in transparency is the share of consumers that have access to online purchases. Brown and Goolsbee (2002) show that increasing Internet access in a metropolitan area of the United States induces a fall in the prices paid for life insurance. Their findings suggest that the growth of the Internet has reduced prices for life insurance by 8–15%. Similarly, Orlov (2011) relates price dispersion in airline fares to the Internet penetration rates across US metropolitan areas for 1997–2003. He finds that higher Internet penetration lowers the average price—a finding in line with many of the theoretical models that higher transparency strengthens competition. Perhaps more surprisingly, he also finds that higher Internet penetration is associated with greater price dispersion within a given firm in a given location; a possible explanation is that it is easier to offer a wider variety of choices online, which allows a greater extent of second- and third-degree price discrimination. This highlights that in practice it is easily the case that other aspects of the choice architecture change as transparency changes—warranting caution before we interpret results as capturing comparative statics with respect to transparency.

The literature that we covered in the preceding text focuses on the transparency of prices to consumers. It has also been noted that price transparency may raise prices if

it makes collusion easier to sustain. The intuition is plain—in a standard oligopolistic repeated game a trigger strategy can sustain collusion. If deviations from the (implicitly) collusive outcome are rapidly spotted by the other firms then the punishment can be swifter and collusion is easier to sustain (see, e.g., Ivaldi et al. [2003] for an overview). A frequently cited empirical examination of a policy to increase transparency in the Danish market for ready-mixed concrete by Albæk et al. (1997) shows that such effects can be important. The Danish competition authority decided to collect and make public the transaction level prices for concrete in some Danish regions. Following this policy change the average prices in the treated markets increased by 15–20% relative to other Danish regions. The authors examine the episode closely to rule out explanations for the price increase linked to local demand shocks. Support for transparency as the source of higher prices is also rendered by the fact that price dispersion between suppliers diminished. Thus, in at least one case the evidence is consistent with the notion that higher prices facilitated collusion. A number of antitrust cases have also concerned various forms of information exchange between competing firms—where firms have either agreed to limit information sharing after negotiations with antitrust authorities (as in *US Department of Justice v. the Airline Tariff Publishing (ATP) Company*) or where courts have limited information exchange (as in *EU Commission v. UK Agricultural Tractor Registration Exchange*); see Møllgaard and Overgaard (2006) for a discussion of other cases.

Facilitating collusion by greater transparency is likely to be most relevant in markets where prices (or discounts) are individualized and confidential. Thus, though it is important to be aware of this possibility, it is most likely to affect a typical consumer goods market only indirectly, via higher costs for final goods producers or retailers.² Furthermore it is not clear how this potential link between ease of collusion and transparency translates into market integration issues. With these observations made let us therefore turn to studies of *price dispersion across national markets*. Search costs are typically greater across markets—but so are transport costs and other costs that are possibly associated with trying to take advantage of a lower price in another location.

13.3.3 Market Segmentation along National Borders

The standard way to delineate a market is to consider an area within which prices relatively rapidly converge after idiosyncratic shocks. With this as motivation a large literature in international economics tests whether the LOP holds—whether prices are equalized across locations for individual goods. Similarly, many works test for

² There are of course consumer markets that also feature secret prices—see Allen et al. (2012) for a study of search costs in the Canadian mortgage market for instance. Mortgage markets are, however, almost completely segmented along national borders.

purchasing power parity (PPP), whether the prices of baskets of goods are equalized across different locations. In practice it is often hard to observe levels and many tests are therefore performed on the relative versions of LOP and PPP, whether price movements are such that they tend to diminish price differences. Much of the literature focuses on the relation between the nominal exchange rate (such as the number of pounds needed to buy a dollar) and the real exchange rate (the relative price of goods expressed in two different currencies). Following a weakening of the nominal exchange rate of a country's currency we, for instance, expect prices to rise faster in that country than in other countries, so that the nominal depreciation is only partially reflected in the real exchange rate if LOP and PPP are useful guides to price developments.

The evidence on LOP and PPP shows that markets are to an important degree segmented along national borders and that nominal exchange rate changes are an important driver of relative price variability. Deviations from PPP are highly persistent and much evidence points to half-lives of deviations in the order of 3–5 years (see, for instance, Rogoff [1996] and Burstein and Gopinath [2013]). Similarly, more detailed studies of individual prices indicate that relative prices of consumer goods move closely in line with the nominal exchange rate (see Gopinath et al. [2011]) and furthermore that for many goods there are substantial price differences across countries (see, e.g., Crucini and Telmer [2012]). A number of papers have also examined deviations from LOP within countries and compared them with findings observed across countries. The evidence suggests that factors such as distance tend to increase deviations from LOP also within countries, but that price differences between two equidistant locations are much greater if they are on opposite sides of a border (see, e.g., Parsley and Wei [1996], Engel and Rogers [2001], or Fan and Wei [2006]).

In sum, goods markets are to an important degree segmented along national borders. This is perhaps little surprise—many factors that affect costs are determined nationally (sales taxes, wage negotiations at the national level, the composition of wholesale suppliers) as well as many factors that affect demand (incomes, tastes for different types of goods). Furthermore, many barriers to taking advantage of lower prices in other locations increase discretely at borders (transacting in a different jurisdiction and possibly in another language and other currency). A concerted effort has been made in the EU to bring down such barriers to market integration—let us briefly analyze the impact of this.

The EU is notable in that there has been a sustained effort to integrate markets—an effort that intensified with the Single European Act of 1986 that aimed to create a single market by 1992 and that also served as one motivation for the European Monetary Union (EMU) that was launched in 1999 with common notes and coins introduced in 2002. There are remarkably few articles that attempt to track price developments in the EU and the impact of EMU on market integration. A notable exception is Faber and Stokman (2009), who examine price level convergence using subcategories of the consumer price index (HICP) for EU countries from 1960 to 2002. They find that price level dispersion has shown a trendwise decrease over the period, with an especially marked fall during the time of the single market program: late 1980s and early 1990s.

Their study indicates that harmonization of taxes, convergence in the price of non-traded inputs, exchange rate stability, and increased openness all contributed to the fall in price dispersion and associated market integration. There is no large effect associated with the EMU. A similar conclusion is drawn by Andrén and Oxelheim (2011) in their study of producer prices from 13 two-digit industries across the first countries that adopted the euro. They show that there was significant price convergence in the period 1993–1998, but for the period associated with the euro introduction, 1998–2005, there was only weak evidence of price convergence.

A handful of detailed case studies speak to the effect of EMU on market integration. Goldberg and Verboven (2004) examine European car markets using data up until 2003 that, even though large differences remained, there had been a clear trend toward market integration, and results indicate that the common currency played a significant but still limited role. Méjean and Schwellnus (2009) use French export prices disaggregated to the firm/product/export market level—they find that European integration has had a marked effect on price convergence but find no important effect of EMU by itself. Fischer (2012) examines the evolution of the prices of washing machines across 17 European countries 1995–2005 and finds no significant price convergence associated with EMU. Imbs et al. (2010), finally, consider prices of TV sets across European countries and show that large price differences exist. Their data start in 1999 and thus they are not really able to examine the impact of the introduction of EMU—they note that price differences are smaller within EMU countries but they cannot necessarily attribute them to EMU itself.

Where does this leave us then? The safest conclusion would be that the steps taken to create a single European market have been successful in working toward market integration but that the impact of EMU itself has been limited. If expectations were that price transparency associated with a common currency would create a sharp equating pressure, there is clearly little support for that. Against this backdrop let us take a closer look at possible mechanisms that link market integration to price transparency. We will consider two national markets that we initially view as segmented. What are the mechanisms via which they may integrate?

13.4 WHAT ARE THE FORCES THAT PUSH TOWARD MARKET INTEGRATION—AND HOW DO THEY INTERACT WITH PRICE TRANSPARENCY?

13.4.1 Consumers May Choose to Buy in the Cheaper Location

If we consider a rational consumer she will choose to purchase a good abroad if she travels there anyway and price differences are large, if transport costs are limited, if

there are few regulatory constraints, and if the quality of the product when purchased abroad is sufficiently high (note that we may, for instance, include the quality of the salesmanship in the evaluation of the product). We would, for instance, expect more of a price pressure on products that are cheap to transport in relation to the product value and that differ in relatively few dimensions (are warranties valid in both countries? Are the same technical specifications and brand names used in both locations?) For most product markets and most consumers we believe that direct cross-border shopping of this type is a rather weak constraint on price setting in different national markets. Transport costs are large in relation to the potential savings for many products for a consumer who buys only to satisfy his or her own needs.

The, relatively few, studies of cross-border shopping that exist establish that standard economic mechanisms are at play. For instance Chandra et al. (2012) use detailed data on border crossings from Canada to the United States to examine the determinants of cross-border shopping. Their regression estimates establish that Canadian households are more likely to travel across the border and purchase goods in the United States when the gas price is low and the exchange rate favorable, if the household has lower income. These are all intuitive effects—the cheaper it is to access (lower) prices abroad the more likely are you to do so. Households with a lower income are more likely to be bargain hunters and take the time to save on purchase price. They further establish that distance has a large negative effect on the decision to travel across the border. Their estimates imply a travel cost of some US\$30 per hour of car travel. This implies that savings need to be very substantial before they motivate a household to travel and that cross-border shopping is expected to peter out rather rapidly with distance. Indeed, they note that the median cross-border shopper lives 18 miles from the US border whereas the median Canadian lives 81 miles from the border. Asplund et al. (2007) examine the cross-price elasticity of Swedish alcohol demand at the municipal level with respect to prices in Denmark and also establish that effects, while marked close to the border, die off rather quickly with distance. This suggests that for typical consumer goods we expect cross-border shopping by consumers to be an important price equating mechanism only if potential savings are very large or if many consumers live close to the border.

One implication is that for big-ticket items the mechanism may play a role. Indeed, a number of European court cases testify to the fact that (1) consumers try to take advantage of lower prices abroad and (2) producers have in several cases tried to stop them. For example, fines of more than 100 million euro were levied on Nintendo and Volkswagen in court cases revolving around a threat by manufacturers to revoke licenses by retailers that sold to foreign customers. In the case of Nintendo game consoles were up to 65% cheaper in the United Kingdom than in other European countries—a price difference that clearly invited consumers to take advantage of this. Goldberg and Verboven (2004) show that price differences on cars were still substantial in Europe in the early 2000s but also note that there were various exceptions to European competition rules regarding exclusivity of distribution that were not relaxed until 2002 (Brenkers and Verboven [2006] provide an analysis of these rules).

What is the role of price transparency in the decision to cross-border shop? There are two facets to this—one is whether consumers know about prices and assortment in another location and another is if they find the price comparison transparent. The cost associated with the first source of transparency has clearly fallen sharply in the last decade with an increased online presence from retailers. The second issue, whether the price comparison is transparent, would revolve around issues such as how international payments are charged to the credit card, whether there are hidden fees, and whether it is difficult to compare prices expressed in different currencies. It is clear that there is some (small) time cost associated with checking the relevant exchange rate and some (small) mental cost of performing the calculation. The evidence covered earlier in this section suggests that both of these channels are relevant. On the other hand, the time costs of cross-border shopping suggest that they take on importance only in markets where other frictions are low.

The preceding discussion has focused on goods that have to be purchased in a brick-and-mortar store abroad. For products that are available online prices are relatively transparent, available at a low search cost, and the consumer can perform the purchase abroad from the comfort of her own home. Even in cases such as this the evidence points to substantial price differences, however. Cabolis et al. (2007), for instance, examine prices of textbooks on the US and UK sites of Amazon in 2002. At the time prices of textbooks produced by commercial publishers were some 50% higher in the United States than in the United Kingdom. Overall they interpret their evidence as suggesting that prices differ because of markup differences. Thus the transparency associated with having prices available online is not sufficient to equalize prices. One interpretation of this finding is that transport costs and other costs associated with shipping internationally (such as customs, adding of VAT, different delivery systems, delivery delays, differences in returns policy, frequent customer rebates) are large enough to make the purchasing of consumer products from abroad too costly, even if the prices per se are transparent. Boivin et al. (2012) examine textbooks sold in the US and Canada on Barnes & Noble and Amazon. They find that prices are essentially unresponsive to foreign competition and, using sales ranks as a proxy for quantities, that demand is relatively unresponsive to lower foreign prices as well. Why online competition is largely fragmented by the Canada–US border is not clear. One potential clue is that there is evidence that consumers engage in little search, also online. Johnson et al. (2004) consider Internet search patterns of some 10,000 US households. They find that on average households visit only between one and two Internet sites when they purchase books, compact discs, or air travel.

A complicating factor in cross-border purchases on the Web is that in many cases the providers try to segment markets by requiring an IP address of certain nationality or a domestic credit card—leading to limited possibility to benefit from transparent prices. We return with a discussion of such tactics by firms. For now we note that there is a dearth of studies examining international price differences of products that are delivered electronically—one such study is by Ng (2013), who examines prices of iTunes gift cards sold on eBay. These gift cards allow for downloading of iTunes content at US prices also for consumers residing outside the United States. That gift cards are trading

above face value is a clear indication of at least some consumers trying to benefit from the lower prices (and possibly different assortment) offered in the US iTunes store.

A common difficulty in testing for the law of one price is that goods sold in different locations may differ in many respects, some of which may be hard to observe for a researcher. Differences in warranties, regulations, or taxes can create price differences across different jurisdictions even in the face of fully transparent prices. Identifying the relative importance of different frictions is a challenge—but let us here cover some of the papers that have tried to address aspects of this. Asplund and Friberg (2001) note that in some duty-free stores the same good is priced in different currencies. We use data from Scandinavian duty-free stores to examine the role of different currencies in generating price dispersion. Because the goods examined are identical in all respects apart from the currency in which price is set, we are able to isolate this reason for price deviations. We find that prices can differ up to 10% before retailers adjust the relative prices. This clearly points to one mechanism whereby a lack of transparency allows price differences. Bachis and Piga (2011) examine online prices of low cost airlines in Europe 2002–2004 and their results point in the same direction—having different currencies greatly increases price dispersion.

Summing up: the evidence points to an important role for price transparency in integrating markets—but only in the rather particular cases where there are few other impediments to benefit from a lower price. Some of those impediments may be endogenous, an issue that I return to below.

13.4.2 In Bargaining Markets More Information May Allow the Consumers to Bargain for a Better Price

Most consumer markets are characterized by take-it-or-leave-it prices posted by sellers. In a few markets there may be some amount of bargaining, however, car markets being one such case. When there is bargaining, reservation prices are private knowledge but if (foreign) transactions prices are observed low foreign prices can be used as a bargaining chip against the sellers to lower the price. There is some intranational evidence that this mechanism can play a role. Zettelmayer et al. (2006) show that Californian car buyers who use an Internet comparison site are able to bargain a price reduction of on average 1.5% for their car purchase. This may be of some importance in business-to-business negotiations but unlikely to play an important role in a typical consumer market.

13.4.3 Arbitrageurs May Buy in the Cheaper Location and Resell in the Dearer

In financial markets arbitrage is operating at high frequency. In regular goods markets the constraints on such behavior are much tighter and constrained by the need to physically transport and store goods. A further cost to an arbitrageur in a typical goods market is that reselling may be subject to lemons type problems—if I buy 10 new iPads

in New York and attempt to resell them in Zurich I'm likely to need to offer a much lower price than the Zurich Apple store in order to sell. Is it counterfeit? Is it really the same specification? How does the warranty work? These, and a host of other concerns, lower the price that an arbitrageur can charge. Contrast this with a financial arbitrageur that purchases stock of a cross-listed firm in the United States and sells the same stock in Zurich—she faces no such constraints.

For goods that are covered by trademarks and other forms of intellectual protection only retailers authorized by the trademark holder have the right to sell the product in a particular country. For instance, a pharmaceutical product sold in Canada can't simply be imported into the United States and sold by a retailer there. However, in the European Union the policy follows what is known as community exhaustion of intellectual property rights—which has allowed parallel importers to ship goods from low price locations in the European Union to high price locations. For instance, parallel importers are buying pharmaceutical products in Greece and reselling them in Sweden. In several cases this has been associated with a substantial impact on prices; see, for instance, Ganslandt and Maskus (2004) for a case study of parallel imports of medicine in the European Union. Some aspects of transparency are likely to matter for parallel imports—in particular uncertainty and a lack of transparency about the legal status of parallel imports may deter arbitrageurs from taking the fixed costs of building up capacity to engage in parallel imports. As regards price transparency itself it is hard to see that it matters to any important degree for third-party arbitrageurs, however: the literature on search costs implies that the greater the potential gains from searching, the more will agents search and learn about prices. For someone looking to buy large quantities, the potential gains are clearly orders of magnitude greater than for an individual consumer only looking to satisfy her own consumption. It is also clear that the large potential volumes cut the link between the price of an item and cross-border trade. Though it may be tempting to travel abroad to save thousands of euros on a car, a Swedish consumer will not travel to Poland to purchase a week's supply of Coke even if it is 40% cheaper in Poland. In contrast, an entrepreneur loading a truck full of Coke cans in Poland and reselling to cafés and small restaurants can make a handsome profit and such actions may act as an important constraint on firm pricing policies.

This section has been short but the conclusions are no less important for that. For most goods third-party arbitrage is likely to be much more important than cross-border shopping by consumers themselves to take advantage of lower prices abroad. Price transparency is not likely to play an important role for such third-party arbitrage.

13.4.4 Consumer Dissatisfaction May Limit the Possibility for Price Differences

When investigating the price differences in Scandinavian duty-free stores for Asplund and Friberg (2001), the managers told us that an important impetus to adjust relative

prices was customer complaints rather than consumers choosing to buy in the stronger currency. One of the major ferry lines that we approached to receive a time series of prices in different currencies informed us that old catalogs were “confidential”—also suggesting a concern that consumers may be angered if they learn that they consistently are paying higher prices than some other consumer group. Similarly Boivin et al. (2012) point to customer anger as a source of price adjustment in their examination of prices of textbooks in Canada and the United States.

An outpouring of research in the last two decades has made it clear that consumers react negatively to behavior that they view as unfair. In a seminal paper Kahneman et al. (1998) show that people claim to be upset if retailers raise the price of snow shovels. Customer anger at firms that are perceived to not be sufficiently altruistic vis-à-vis their customers may lead firms to refrain from pricing practices that otherwise would be profit maximizing. In ultimatum games many respondents are willing to walk away from deals that give them less than 30% of the divisions of a cake (Thaler, 1998; Henrich, 2000). If we apply such findings to relations between firms and customers they suggest that customers may choose not to buy even if the price is below the reservation price as commonly defined if they believe that the price is unfair. Rotemberg (2011) presents a model of this type, where the fear of angering a minority of customers can be sufficient for even a firm that cares only about profit to behave altruistically. Notions of what is seen as fair depend on the social context. Lower prices to students don’t seem to anger consumers but a simple thought experiment of a restaurant that asked people to show their passports and then quoted a price suggests that some forms of price discrimination across countries may anger consumers. Here transparency may play a role—if prices are expressed in different currencies, and price comparisons are largely influenced by swings in floating exchange rates, even publicly available prices may not trigger a response. If people are not searching for a bargain abroad they will react to price differences only if these price differences are transparent.

If prices are transparent, and price differences are motivated by differences in demand elasticities rather than in costs, this may result in customer anger and in such cases transparency will tend to equalize prices. Thus, summarizing this section we conclude that evidence about fairness concerns are abundant and there is considerable anecdotal evidence that it has been one factor in some price adjustment processes. Beyond this it is hard to know how effective the mechanism can be.

13.5 TRANSPARENCY IS PARTLY ENDOGENOUS

As we have seen, transparency may have important market integrating effects for big ticket items or for products that are retailed online. The last subject that I would like to raise in relation to this is that transparency, and the ease of arbitrage, is endogenous. Consider the case of a differentiated product such as a bicycle sold on two national markets. Making prices available online and having retailers offer international

shipments are two choices that one can refrain from, and thus make arbitrage more costly. Furthermore, firms have the choice of using different brand names and different packaging in different locations. Consider a product like Pringles' chips that has text in a dozen languages and looks the same all across Europe. An arbitrageur selling to mom-and-pop video stores could charge a price only a little below the local price and still sell. In contrast, if the product was the same but the label only in Polish, the willingness to pay by, for example, Swedish consumers would be lower. Only selling in your own wholly controlled retail outlets (such as IKEA, H&M, or Zara) takes away the risk that retailers buy from parallel importers. Also rules and regulations can be endogenous. DVDs use different formats in the United States and Europe, for instance, which allows some degree of price discrimination. If markets were wholly segmented there would clearly be no need for such different formats. Likewise many Internet sites allow you to access some Web pages only from IP addresses located in a certain country.

There are plenty of examples where firms engage in measures to lower transparency to raise profits. Ellison and Ellison (2009) examine this theoretically and present evidence that such attempts to decrease transparency played a role in one market for computer parts (see also Ellison and Wolitzky [2012] for further theoretical developments).

There may also be interactions between investments to make price comparisons less transparent and the variability of demand. Friberg (2001) notes that the more optimal prices differ between two markets, the higher is the value of being able to segment these markets. If a monetary union lowers the possibility of future changes in willingness to pay across markets it could thus lower the incentive to invest in market segmentation. Friberg (2003) further develops the model to an oligopoly setting—in both cases there is an option value associated with being able to segment markets. Goldberg and Verboven (2004) note that the restrictions on wholesale cross-border trade in cars in Europe were relaxed at about the same time as EMU was implemented. One potential reason is that the perceived need for being able to segment markets was lower when the potential for large exchange rate swings was diminished. The lower price differences among countries that were long part of the D-Mark block are also consistent with such a channel (Anderton et al. [2003]; Faber and Stokman [2009]).

13.6 CONCLUSION ON PRICE TRANSPARENCY AND INTERNATIONAL MARKET INTEGRATION

New information technology and a common currency foster greater transparency. This greater transparency has important market integrating effects—but only if other barriers that separate markets are low and sellers are not able to create barriers endogenously. Overall the market integrating effects of greater transparency associated with new technology and a common currency in Europe have been minor so far.

REFERENCES

- Aker, J. C. (2010). Information from markets near and far: Mobile phones and agricultural markets in Niger. *American Economic Journal: Applied Economics* 2, 46–59.
- Aker, J. C., and Mbiti I. M. (2010). Mobile phones and economic development in Africa. *Journal of Economic Perspectives* 24, 207–232.
- Albæk, S., Møllgaard, P., and Overgaard, P. B. (1997). Government-assisted oligopoly coordination? A concrete case. *The Journal of Industrial Economics* 45, 429–443.
- Albrecht, J. (2011). Search theory: The 2010 Nobel memorial prize in economic sciences. *Scandinavian Journal of Economics* 113, 237–259.
- Allen, J., Clark, R., and Houde, J.-F. (2012). Price negotiation in differentiated products markets: Evidence from the Canadian mortgage market. Mimeo, Wharton School of Business.
- Anderson, S. P., and Ginsburgh, V. A. (1999). International pricing with costly consumer arbitrage. *Review of International Economics* 7, 126–139.
- Anderton, R., Baldwin, R. E., and Taglioni, D. (2003). The impact of monetary union on trade prices. Working Paper No. 238, European Central Bank.
- Andrén, N., and Oxelheim, L. (2011). Exchange rate regime shift and price patterns. *International Journal of Managerial Finance* 7, 153–178.
- Asplund, M., and Friberg, R. (2001). The law of one price in Scandinavian duty-free stores. *American Economic Review* 91, 1072–1083.
- Asplund, M., Friberg, R., and Wilander, F. (2007). Demand and distance: Evidence on cross-border shopping. *Journal of Public Economics* 91, 141–157.
- Bachis, E., and Piga, C. A. (2011). Low-cost airlines and online price dispersion. *International Journal of Industrial Organization* 29, 655–667.
- Bagwell, K. (2007). The economic analysis of advertising. In *Handbook of Industrial Organization*, Vol. 3, eds. M. Armstrong and R. H. Porter, pp. 1701–1844. Amsterdam: Elsevier.
- Baye, M. R., Morgan, J., and Scholten, P. (2004). Price dispersion in the small and in the large: Evidence from an internet price comparison site. *Journal of Industrial Economics* 52, 463–496.
- Boivin, J., Clark, R., and Vincent, N. (2012). Virtual borders: Online nominal rigidities and international market segmentation. *Journal of International Economics* 86, 327–336.
- Bonnet, C., and Dubois, P. (2010). Inference on vertical contracts between manufacturers and retailers allowing for non linear pricing and resale price maintenance. *RAND Journal of Economics* 41, 139–164.
- Brenkers, R., and Verboven, F. (2006). Liberalizing a distribution system: The European car market. *Journal of the European Economic Association* 4, 216–251.
- Brown, J. R., and Goolsbee, A. (2002). Does the Internet make markets more competitive? Evidence from the life insurance industry. *Journal of Political Economy* 110, 481–507.
- Burdett, K and Judd, K. L. (1983). Equilibrium price dispersion. *Econometrica* 51, 955–969.
- Burstein, A., and Gopinath, G. (2013). International prices and exchange rates. In preparation for *Handbook of International Economics*, Vol. IV. <http://scholar.harvard.edu/files/gopinath/files/priceser.pdf>
- Cabolis, C., Clerides, S., Ioannou, I., and Senft, D. (2007). A textbook example of international price discrimination. *Economics Letters* 95, 91–95.
- Cai, H., Chen, Y., and Fang, H. (2009). Observational learning: Evidence from a randomized natural field experiment. *American Economic Review* 99, 864–882.

- Chandra, A., Head, K., and Tappata, M. (2012). The economics of cross-border travel. SSRN Working Paper. <http://ssrn.com/abstract=1722423>
- Chandra, A., and Tappata, M. (2011). Consumer search and dynamic price dispersion: An application to gasoline markets. *RAND Journal of Economics* 42, 681–704.
- Cournot, A. (1838/1897)/*Researches into the Mathematical Principles of the Theory of Wealth*. New York: Macmillan.
- Crucini, M. J., and Telmer, C. I. (2012). Microeconomic sources of real exchange rate variability. NBER Working Paper No. 17978.
- Dahlby, B., and West, D. S. (1986). Price dispersion in an automobile insurance market. *Journal of Political Economy* 94, 418–438.
- Davis, P., and Garces, E. (2010). *Quantitative Techniques for Competition and Antitrust Analysis*. Princeton, NJ: Princeton University Press.
- Dranove, D., and Jin, G. Z. (2010). Quality disclosure and certification: Theory and practice. *Journal of Economic Literature* 48, 935–963.
- Ellison, G., and Ellison, S. F. (2009). Search, obfuscation, and price elasticities on the internet. *Econometrica* 77, 427–452.
- Ellison, G., and Wolitzky, A. (2012). A search cost model of obfuscation. *RAND Journal of Economics* 43, 417–441.
- Engel, C., and Rogers, J. R. (2001). Violating the law of one price: Should we make a federal case out of it? *Journal of Money, Credit and Banking* 33, 1–15.
- Faber, R. P., and Stokman, C. J. (2009). A short history of price level convergence in Europe. *Journal of Money, Credit and Banking* 41, 461–477.
- Fan, C. S., and Wei, X. (2006). The law of one price: Evidence from the transitional economy of China. *Review of Economics and Statistics* 88, 682–697.
- Fischer, C. (2012). Price convergence in the EMU? Evidence from micro data. *European Economic Review* 56, 757–776.
- Friberg, R. (2001). Two monies, two markets? Variability and the option to segment, *Journal of International Economics* 55, 317–327.
- Friberg, R. (2003). Common currency, common market? *Journal of the European Economic Association* 1, 650–661.
- Ganslandt, M., and Maskus, K. (2004). The price impact of parallel imports in pharmaceuticals: Evidence from the European Union. *Journal of Health Economics* 23(5), 1035–1057.
- Goldberg, P. K., and Verboven, F. (2004). Cross-country price dispersion and the euro. *Economic Policy* 19, 484–521.
- Gopinath, G., Gourinchas, P.-O., Hsieh C.-T., and Li, N. (2011). International prices, costs and markup differences. *American Economic Review* 101, 2450–2486.
- Henrich, J. (2000). Does culture matter in economic behavior? Ultimatum game bargaining among the Machiguenga of the Peruvian Amazon. *American Economic Review* 90, 973–979.
- Imbs, J. M., Mumtaz, H., Ravn, M. O., and Rey, H. (2010). One TV, one price? *Scandinavian Journal of Economics* 112, 753–781.
- Ivaldi, M., Jullien, B., Rey, P., Seabright, P., and Tirole, J. (2003). The economics of tacit collusion. Report for the European Commission. http://ec.europa.eu/competition/mergers/studies_reports/the_economics_of_tacit_collusion_en.pdf
- Jensen, R. T. (2007). The digital provide: Information (technology), market performance and welfare in the South Indian fisheries sector. *Quarterly Journal of Economics* 122: 879–924.

- Johnson, E. J., Moe, W. W., Fader, P. S., Bellman, S., and Lohse, G. L. (2004). On the depth and dynamics of online search behavior. *Management Science* 50, 299–308.
- Kahneman, D., Knetsch, J., and Thaler, R. (1986). Fairness as a constraint on profit: Seeking entitlements in the market. *American Economic Review* 76, 728–741.
- Lester, B. (2011). Information and prices with capacity constraints. *American Economic Review* 101, 1591–1600.
- Malueg, D. A., and Schwartz, M. (1994). Parallel imports, demand dispersion, and international price discrimination. *Journal of International Economics* 37, 167–195.
- Méjean, I., and Schwellnus, C. (2009). Price convergence in the European Union: Within firms or composition of firms? *Journal of International Economics* 78, 1–10.
- Møllgaard, P., and Overgaard, P. B. (2006). Transparency and competition policy. In *The Pros and Cons of Information Sharing*. Stockholm: Swedish Competition Authority, 101–130.
- Ng, C. F. (2013). Arbitrage across borders: Why iTunes gift cards sell above face value on eBay. *Economic Inquiry* 51, 1299–1310.
- Orlov, E. (2011). How does the internet influence price dispersion? Evidence from the airline industry. *Journal of Industrial Economics* 49, 21–37.
- Parsley, D., and Wei S.-J. (1996). Convergence to the law of one price without trade barriers or currency fluctuations. *Quarterly Journal of Economics* 111, 1211–1236.
- Rogoff, K. (1996). The purchasing power parity puzzle. *Journal of Economic Literature* 34, 647–668.
- Rotemberg, J. J. (2011). Fair pricing. *Journal of the European Economic Association* 9, 952–981.
- Salop, S., and Stiglitz, J. (1977). Bargains and ripoffs: A model of monopolistically competitive price dispersion. *The Review of Economic Studies* 44, 493–510.
- Sorensen, A. T. (2000). Equilibrium price dispersion in retail markets for prescription drugs. *Journal of Political Economy* 108, 833–850.
- Stiglitz, J. (1989). Imperfect information in the product market. In *Handbook of Industrial Organization*, eds. R. Schmalensee and R. Willig. New York: North Holland, 769–847.
- Thaler, R. H. (1988). Anomalies: The ultimatum game. *Journal of Economic Perspectives* 2, 195–206.
- Zettelmeyer, F., Morton, F. S., and Silva-Risso, J. (2006). How the internet lowers prices: Evidence from matched survey and automobile transaction data. *Journal of Marketing Research* 43, 168–181.

CHAPTER 14

TRANSPARENCY AND INWARD INVESTMENT INCENTIVES

FREDERICK LEHMANN AND
ANA TERESA TAVARES-LEHMANN

14.1 INTRODUCTION

THIS chapter deals with the issue of transparency as it relates to inward foreign direct investment (FDI), and, particularly, to inward investment-focused policies and incentives. Transparency is a theme that commands a sprawling theoretical and empirical literature (Forssbaeck and Oxelheim, 2006; Michener and Bersch, 2011). Transparency has been established as a complex, multidimensional, and multifunctional concept, and has been discussed (in terms of its meaning, levels, and other characteristics) in a detailed and competent manner by several authors (e.g., Oxelheim, 2006; UNCTAD, 2012a).

In recent years, governments at different levels (national, regional, even municipal) have competed, in an ever-increasing proactive and aggressive manner, to attract inward FDI, believing on the potential positive benefits (“spillovers”) that such inflow of capital-cum-package of other resources/capabilities could have in the local economy (Tavares and Young, 2005). In so doing, these jurisdictions have entered in a stiff race to pursue Multinational Enterprises (MNEs) and their projects, such race having often an important degree of opacity (Oxelheim and Ghauri, 2004).

In this chapter, we do not define or redefine transparency, but instead work with an implicit framework that understands the objective of transparency as being that of reducing the information costs, information asymmetries, and information risks faced by a potential or existing foreign investor (traditional view); and also that of moderating similar information cost, asymmetries, and risks faced by the host country, region, or community (emerging and complementary perspective). Further ahead in this chapter, and because the virtues of transparency have been extolled in relevant literature, we will limit ourselves to briefly review some of the merits of transparency from

the point of view of how transparency affects the quantity, the quality, and the process by which FDI is attracted. However, even with this limited “definition” and narrower focus, this is no simple or settled debate, and, in what relates to FDI attraction, it will be shown that transparency may bring added complexity and some clear tradeoffs.

This chapter has two main objectives. The first is to provide a synthesis of the key literature on transparency and inward investment. Extant literature is reviewed, aiming to shed light on the following important and related questions: (1) what do we understand by transparency in the context of inward FDI?; (2) how does transparency shape inward FDI—in quantity and in quality?

Based on the findings of the literature review, and on some lacunae there identified, the second objective of the chapter is to contribute to the relevant debate on transparency and inward investment by developing some novel perspectives on this theme, notably focusing on three issues:

1. Transparency and inward investment: norms versus process
2. Multilevel transparency and inward investment
3. Multiparty transparency and inward investment

The remainder of this chapter is organized as follows. Section 14.2 presents a review of the literature on transparency and inward investment incentives. Sections 14.3, 14.4, and 14.5 present conceptual developments on the three specific topics just mentioned, as follows: Section 14.3 focuses on the distinction between transparency in norms versus transparency in processes, and on how these differences affect FDI attraction. Section 14.4 addresses the issue of understanding what is multilevel transparency and why and how multilevel transparency impacts on inward investment. Section 14.5 explains what is multiparty transparency and how it affects FDI, and also the relationship between MNEs and host economies. Section 14.6 presents some final remarks and suggests avenues for future theoretical, empirical and policy-based research on transparency and inward investment.

14.2 LITERATURE REVIEW

14.2.1 What Do We Understand by Transparency in the Context of FDI?

The concept of transparency has been dealt with in significant detail in relevant literature (for a thorough compilation of different perspectives on this issue, see Oxelheim [2006]). This chapter does not aim to discuss this concept and its nuances in great length, preferring to focus on transparency as it concerns inward investment, and its related incentives.

Transparency vis-à-vis international investors is generally understood to involve (1) effective communication to investors of meaningful information on local laws, regulations, policies, and practices that may materially affect their investments; (2) prior notification and consultation of regulatory changes of interest to them; and (3) due process and procedural fairness in obtaining the necessary licensing, permits, registration, and other formalities for carrying out a business. In other words, in the context of traditional literature on FDI, transparency is concerned with reducing information costs, asymmetries, and risks (OECD, 2003, p. 8).

This chapter is focused mainly on the public and policy angles of transparency, that is, those related to decisions taken by different types of governments. As defined by the OECD (2003, p. 13), “Public sector transparency results from policies, institutions and practices that channel information in ways that improve understanding of public policy, enhance the effectiveness of political processes and reduce policy uncertainty.” Transparency is not an end in itself. It is an instrument for achieving other goals such as raising general welfare and promoting efficient and effective governments (OECD, 2003). Thus, as regards FDI promotion the goal is to reach a level of transparency that is conducive to maximize the quantity and quality of FDI attracted. In this context, transparency can be also used to reach other goals, but these are ancillary to the promotion of inward investment. For instance, together with accountability, transparency is a means to ensure the broader aim of good governance and the rule of law (UNCTAD, 2012a), and that commitments are being respected and fulfilled by all parties involved.

In the realm of international investment, transparency is closely related to the main objectives of the international investment framework, notably promotion, protection, and liberalization (UNCTAD, 2012a). Concerning promotion, transparency involves the dissemination of information not only about the general investment climate but also about investment opportunities, incentive packages, and other measures taken by home and host countries, with the aim of facilitating and supporting investment. Regarding protection, it is related insofar as it is essential to have a clear set of rules to guarantee protection of property rights, to ensure fair and equitable treatment, and to guarantee and enforce due process and access to justice. In what concerns liberalization of conditions of entry and operation of FDI, information about laws, regulations, and administrative procedures needs to be made available to all stakeholders whose rights and interests are affected by them.

Transparency can be critical at different moments of the investment cycle. On the one hand, “preestablishment” transparency is vital to assist investors in the decision-making process, to create an enabling environment, and to allow investors (and governments) to carry out their due diligence before investment decisions are made (UNCTAD, 2012a). In turn, transparency is also important during the operation of the investment, to ensure due process (UNCTAD, 2012a).

More aspects (specifically related to norms vs. process, multilevel and multiparty section) are developed in Sections 14.3 to 14.5 of this chapter. One interesting aspect of the debate about transparency and FDI is related to the increasing use of offshore financial centers and special purpose entities to funnel funds to and from recipient

countries of inward investment. The reasons and rationales—both legitimate and illegitimate—for the use of these channels to move FDI are complex, specifically focused on tax issues, and beyond the scope of this chapter, hence we will not discuss it further. However, much information and a discussion can be found at the multilateral level (e.g., UNCTAD, 2013).

14.2.2 How Does Transparency Shape FDI?

This debate can be situated in the realm of FDI determinants, as transparency and, in a broader sense, good institutional environment, can be envisaged as a FDI determinant. The importance of the institutional environment for FDI attraction has been emphasized by Mudambi and Navarra (2002). In terms of the OLI framework (Dunning, 1977), a considerable degree of transparency can be seen as a location advantage. In short, transparency is an enabling condition, of critical importance for the creation of a predictable, stable, and secure climate for foreign investment (WTO, 2002).

Conversely, opacity is usually considered a FDI deterrent (Hooper and Kim, 2007). It acts as an extra liability for a foreign firm (Calhoun, 2002), or like a tax on foreign investors (Smarzynska and Wei, 2002).

14.2.2.1 *Transparency and Quantity of FDI*

The basic argument that helps explain why transparency could have an effect on inward FDI is that the lack of transparency increases the risk and uncertainty faced by foreign investors in the host country (Oxelheim, 2006). Foreign investors faced with increased risk and uncertainty would be willing to bet only relative smaller stakes of capital than otherwise under a more transparent setting (Globerman and Shapiro, 2003). Transparency also helps to identify potential opportunities, and to inform market expectations, thereby creating credibility and accountability (Seyoum, 2009).

Current empirical literature (Drabek and Payne, 2001; Gelos and Wei, 2002; OECD, 2002; Hooper and Kim, 2007; Kim, 2010) arrives to a basic conclusion that confirms the conceptual proposition that less transparency leads to lower quantity of FDI. Allowing us to conclude that transparency measured at the country level increases the *quantity* of inward FDI flows. Drabek and Payne (2001, p. 2), in particular, arrive to the impressive conclusion “that on average a country could expect 40 percent increase in FDI from a one point increase in their transparency ranking.”

Even though the exact percentage effect on FDI inflows, or the adequate indicator to measure transparency can be debatable, what appears clear is that transparency seems to have an effect on inward FDI quantities and that the effect is non-negligible. In the context of FDI promotion, transparency seems to be connected to economic growth in a very linear fashion, through the positive links between transparency and inward investment, and between such investment and growth.

In addition, though extant literature has been concerned with measuring the effects on the size (quantity) of yearly FDI inflows, following the path opened by this research

and a similar economic logic, we would argue that the lack of transparency may also diminish the stock of FDI in the host country relative to its potential. For instance, in the same way that lack of transparency increases the risk and uncertainty faced by foreign investors vis-à-vis new investment directed to the host country, this same lack of transparency increases risk and uncertainty faced by foreign investors on the profits that their investments generate, creating an incentive to increase short-term remittances, royalties, and dividends, thus diminishing reinvested profits and reducing the stock of FDI relative to its potential. There is not, to the best of our knowledge, extant empirical work testing this hypothesis, but it seems a sensible inference, and also easily testable as it would suffice to assess the same transparency indicators against either the growth rate of FDI stock, or the ratio of FDI payouts (remittances, royalties, and dividends) to FDI stock.

14.2.2.2 *Transparency and Quality of FDI*

In the preceding section, we addressed what has been the main concern of the transparency and inward FDI literature up to recently—how transparency affects the quantity of FDI inflows—and added some thoughts about the quantity of FDI stock. Now, although the interest on the effects of transparency on the quantity of FDI is understandable, it is detached from the interests of more recent FDI literature that is more preoccupied with the quality of FDI than with the quantity.

It should be thus of much interest to have some ideas about how transparency affects inward FDI quality. However, the current literature leaves us wanting on that aspect. In summary, we do not have direct answers either conceptually or empirically about the potential effect of transparency on inward FDI quality. MNEs may exploit their ability to choose the optimal mode of entry to target economies, and it is not entirely clear whether this is to the benefit or at the expense of the countries receiving the investment (Hooper and Kim, 2007). Hence, there is no simple connection between transparency and the quality of FDI. Economic opacity will deter the nature and scope of FDI, and can reduce the benefits from such investment (PriceWaterhouseCoopers, 2001).

There are nevertheless some hints within the extant literature that allow us to infer conceptually and empirically how transparency may be affecting inward FDI quality (Gelos and Wei, 2002; OECD, 2002; Razin and Sadka, 2007). Following those clues, a basic argument can be construed that would help explain how transparency could have a negative effect on inward FDI *quality*. The argument is a bit more complex than the one regarding the impact on the quantity of inward investment, but can be summarily presented as follows.

Lack of transparency increases the risk and uncertainty faced by most foreign investors in the host country, but might reduce the risk and uncertainty faced by some well-connected foreign investors (Hooper and Kim, 2007). In this case, the asymmetry in the risk and uncertainty faced by different groups of foreign investors would favor investment by the well-connected foreign investors to the detriment of the rest of foreign investors regardless of the qualities and/or capabilities of either group. In a nutshell, lack of transparency allows the allocation of FDI opportunities under criteria

that do not favor the intrinsic quality of the foreign investor first. This leads to reducing the relative quality of FDI projects and of FDI originators in a more pronounced manner than otherwise would have taken place under a more transparent setting.

Current empirical literature (Gelos and Wei, 2002; OECD, 2002b; Razin and Sadka, 2007) arrives to some results that indicate that this positive relationship between transparency and the quality of FDI is borne by the data. For example, Razin and Sadka (2007) show that relative corporate transparency in the host country diminishes the value of FDI opportunities for “cream-skimming” investors, thereby reducing FDI. In an analogous fashion, but in a setting concerned with portfolio investment, Gelos and Wei (2002) show that diminished transparency increases herding behavior by investors, and increases withdrawal size given exogenous events. These two results indicate that in a portfolio investment setting abridged transparency impacts the quality of foreign investors, favoring those funds with a less committed and more volatile investment profile.

Even if much more empirical research is needed, there seem to be enough conceptual arguments and some solid preliminary evidence suggesting that transparency seems to have a non-negligible effect on inward FDI quality. Again, in this context, transparency through its reduction of information cost, asymmetries, and risks appears to have a positive impact on inward investment, and through FDI on economic growth.

14.2.2.3 *Transparency and the Stickiness of Bad FDI Decisions*

In the two previous sections, we addressed the effect of transparency on the quantity and quality of FDI inflows, as well as stating some ideas about the effect on FDI stock. There is an additional issue worth mentioning on the potential effect of transparency on the quality of FDI stock. That is, lack of transparency may contribute to making bad foreign investment stickier and less prone to failure based on economic merit (or lack of). This as a whole would hinder the quality of the stock of FDI. When lack of transparency encourages foreign investors, or foreign investment projects, on the basis of other criteria besides those germane to the economic virtues of the project, those projects seem to stick around for much longer than their natural economic life span. This is particularly true when the FDI project required tax breaks or the allocation of subsidies. The lack of transparency of the conditions under which that FDI took place encourages the public authorities that accompanied the genesis of the investment to want to “save face” and sustain the life of the investment for much longer than economic viability would have had it.

14.3 TRANSPARENCY AND FDI: NORMS VERSUS PROCESS

If we were to use two very straightforward definitions, defining norms or normativity as the set of standard principles that guide, control, or regulate proper and acceptable

behavior, and process as the series of coordinated actions or steps needed to achieve an end, we could see that there is tension between using a purely normative versus a process-driven approach to establish the correct FDI incentives, and that the issue of transparency of incentives is at the heart of this tension. To explain this tension between norms vs. process, and the issue of transparency, we will use a simplified description of the history of FDI incentives. This allows us to present the major aspects that generate this tension and how it has evolved toward using process despite rendering the transparency issue more complex.

Historically, incentives toward inward FDI were tackled as an issue of normativity (norms), that established what foreign individuals or entities were allowed to produce and sell in the host territory, and how these individuals or entities could repatriate capital and profits back to the home country. In that context, the primordial issue for the host country was to set up norms that would incentivize investment, by addressing fairness in access to local markets, by guaranteeing no nationalization, and by presenting a tax policy that allowed for the repatriation of profits.

This set of norms about how (and which) foreign capital can enter a home country, and how it can leave, is the baseline of inward investment incentives. Without them there are no FDI incentives. In addition, this set of norms were associated with transparency, as they usually were set *erga omnes*, covering the integrality of inward investment coming toward a territory, or toward specific sectors (industries) in those territories.

Transparency in this context was substantially understood as the existence of a set of established (passed into law), publicly disclosed, and stable norms that allowed MNEs to understand how they could invest in a host country, how they would be taxed, and how they would be allowed to repatriate profits periodically and capital eventually. In addition, this set of norms was also deemed transparent as it in principle covered domestic investments on an equal footing. Together these norms were aimed squarely at eliminating information cost, reducing information asymmetries, and diminishing risk toward foreign investors.

This baseline set of norms was to be commonly known in the late 1980s as liberalization of FDI regimes (Brewer and Young, 2000). Starting from this baseline, that is, once a country was deemed open to receive inward investment, the distinctive attributes of countries came to be defined by their differences in tax policies, and the idiosyncratic business environment (notably regarding the easiness/difficulty of doing business). Looking at tax regime differences, the use of tax policy as an additional incentive toward FDI attraction fueled concerns that countries would engage in a “race to the bottom” concerning taxes levied on FDI returns (Oxelheim, 2006). At this stage transparency in incentives’ issues became associated mostly with the type of tax breaks allowed, and whether these were properly disclosed both locally and abroad, and available to all potential inward investors.

Looking at differences in the business environment, it quickly became clear that even after several liberalization rounds, and despite the existence of similar norms covering FDI across countries, the persistence of difficulties in doing business

constituted negative incentives or deterrents to FDI. This led countries to engage, in addition to baseline normativity, in a series of coordinated actions to achieve the promotion of their territory, dispel idiosyncratic based fears, and facilitate the proper landing of FDI.

In the early 1990s, a second round in incentives toward FDI went beyond the establishment of general inward investment norms to the creation of national (and other circumscription) agencies charged with the promotion of the territory as an FDI destination; “image-building,” including dispelling of idiosyncratic based fears, and, most importantly, with the facilitation of procedures to help the arrival of inward investments. This was a big step that moved FDI incentives beyond the realm of normativity (static) and landed it squarely in the realm of processes (dynamic), hence rendering the issue of transparency in FDI incentives additionally more complex.

Questions that became pertinent in this new context include: What is the meaning of transparency when a government agency is to promote and facilitate inward investment? Who gets presented with specific opportunities abroad? Who gets the meetings with government officials or with local business? Who gets introduced to whom, and why? More complicated, what does facilitation entail? And at what level if it is given? And again are there resources, personnel, and attention to offer it equally to all investors? What are the allocation rules of this access and facilitation?

Perhaps the substantial difference between incentives through norms versus incentives through process is that in contrast with normativity, the process is not available to all (non *erga omnes*). The allocation of the resources available for the process becomes an issue of transparency—even if there is no questioning on whether facilitation should occur—because any allocation rule may be deemed opaque. First come–first served, random draw, size of investment, number of employees, export potential—all are debatable as allocation mechanisms on grounds of transparency.

From this point, there is a tradeoff between vying for transparency in FDI incentives and effective selection (targeting), facilitation, and maximization of the potential benefits of FDI. This tradeoff should be kept in mind when looking at a next generation of incentives to inward investment.

In the late 1990s and early 2000s, the realization that not all FDI is equally useful, or not equally relevant in terms of economic development, and that the resources spent on incentives to attract it were costly and not necessarily effective (Blomström and Kokko, 2003), might have been at the source of a change in the policies implemented by investment promotion agencies. Such agencies moved from attracting a generic sort of FDI to target particular types of FDI in specific sectors or industries (at times, targeting specific companies) that were deemed to be aligned with the strategic development objectives of the territory. This move to targeted promotion and selection of investors compounds the problematic issues with transparency in incentives, as these incentives become more and more bespoke. In particular when the target is a specific MNE. In the last decades, this progression toward targeted FDI incentives shows that a least implicitly most policymakers opted to favor

effectiveness in FDI promotion over transparency. At this point, as FDI promotion becomes a process-oriented policy, a picture starts to emerge where the relationship between transparency and economic growth is not as linear as previously assumed. In fact, as policymakers make subjective decisions about how to implement the process, and whom to target, they are implicitly choosing “optimal” levels of transparency.

We have been looking at the issues of transparency that emerge when using FDI incentives, and how this issue got more complex as incentives moved from a normative to a process setting. However, we have looked at transparency only from the perspective of the host territory, and its representative agency, in general a public institution. But, as incentives become tailored to the investor, the investor has to divulge more information to the host and two additional issues of transparency emerge: (1) how to preserve the investor’s privileged information; and (2) how to guarantee transparency in the reporting of ongoing contractual obligations by the investor.

Concerning privileged information, although transparency might be desirable, not all information can be disclosed, in particular when this information pertains to business strategy or secrets that can jeopardize the competitive position of the targeted investor. But then, how does one treat privileged information that might justify the granting of specific and valuable incentives to the investor? Transparency in such a situation is at odds with the effectiveness of the incentives, and again an “optimal” level of transparency, not an absolute one, must be chosen.

Now concerning the reporting of contractual obligations by the investor, there is a whole new set of issues concerning transparency from the private investor toward the public entities it has to report to, starting by defining what are proper levels of transparency for a private firm. What could be expected when private information might be treated differentially across public institutions (e.g., a MNE may be contractually obliged to demonstrate high value added to an agency—investment agency, but may want to minimize this activity to another agency—tax authorities).

This issue of transparency in private reporting is bound to become even more of an issue in creating and managing incentives towards inward investment, as FDI promotion policies are currently not only moving more and more toward targeted promotion, but are also beginning to move toward targeting sustainable FDI. Sustainable FDI is here understood as inward investment that fosters advancement in economic development, is environmentally sustainable, advances social development, and abides by and promotes good corporate governance. The way to advance in the promotion of sustainable FDI is by addressing the issue of what can be understood by proper levels of transparency in private reporting in economic development, environmental impact, social responsibility, and corporate governance. Here again, as other dimensions are added to qualify the impact of the investment beyond economic growth, the relationship of transparency with one specific goal, that is, economic growth or environmental impact, is no longer linear. As multiple goals are established for FDI, policymakers implicitly or explicitly have to choose “optimal” levels of transparency across all dimensions of interest.

All in all, it seems that the move of incentives toward inward investment from the realm of normativity to a realm of norms-plus-process is here to stay. In addition, the more important the process is in allocating and making the incentives effective, the more complex the issue of transparency becomes. Moreover, as the incentives and selection of investors become more targeted, the more the tradeoff between transparency and effectiveness becomes apparent. Finally, and complicating the issue of reciprocal transparency (or private transparency) is that the more the targeted investors are selected or wanted for their ability to commit to a sustainable agenda, the more the investor has to be willing to commit to ever more complex, multidimensional, and transparent reporting.

Conscious of the tradeoff between transparency and effectiveness on FDI incentives, we could speculate that the next step is perhaps that we are moving from independently questioning the transparency and effectiveness in the norms and the process that create the incentives toward inward investment, to concentrate in defining a set of guidelines and objectives that maximize the relationship for both the host territory and the MNE, in such a way that while knowingly acknowledging that some opacity would take place in some key aspects of the process, it would be expected that the correct assessment of the cost of the incentives and the key measures of success (or failure) of the relationship are visible to all. Therefore, if (some) transparency has to be sacrificed in the name of effectiveness of the FDI incentives' process, then the discussion needs to move to debate not only the rationale for (less) transparency in the process, but also to assess whether (more) transparency should be reclaimed in the way the outcomes of inward investment are defined and measured. In this case, choosing the "optimal" level of transparency becomes optimization of transparency between the means (process) and the ends (outcomes).

14.4 MULTILEVEL TRANSPARENCY AND FDI: MULTILATERAL, NATIONAL, REGIONAL, AND LOCAL

14.4.1 Introduction

When reviewing the literature about the concepts and the practice of FDI attraction, there are three important aspects that allow organizing our thinking about the territorial scale at which incentives to inward investment should exist, and how they interact with the issue of transparency.

First, we find that incentives toward inward investment are set in a top-down manner, from macro to micro levels. Second, those levels might design and implement different policies, and they are not naturally coordinated (Young and Tavares, 2004). Third, transparency needs to be explicitly addressed at all levels.

14.4.2 The Top-down Nature of Incentives toward FDI and Respective Transparency Implications

Starting with the top-down issue, in Section 14.3 we saw that there is a minimal normative framework that establishes the baseline (incentives) allowing FDI to take place. We also saw that, usually, the establishment of this baseline normativity takes place at the national level, as it requires the setting of legal norms/regulations that permit the entry of capital, respect of property rights, periodic repatriation of profits, and the eventual return of invested capital. All of these norms depend on the institutions where the sovereignty of the state resides, and this tends to occur at the national level.

Thus, when talking about multilevel incentives toward FDI, we have a basic top-down setup that goes from the national level, to the regional (e.g., federal, departmental, etc.), to the subregional (districts, prefectures, etc.), to the local (municipalities, townships, etc.).

It is important to realize that for an FDI investment to effectively land in a specific location it needs approval at all territorial levels, as an investment enters a nation, region, and a subregion but effectively lands in a specific locality. Some of the norms and regulations pertaining to its day-to-day activity would arise from the national level (import duties, exchange rate, remittances, national taxes, VAT, etc.), from the regional level (state taxes, sale taxes, environmental licenses, highway access or signalization), and from the local level (activity licenses, building permits, city taxes, etc.). In turn, each level of approval (incentives) depends on a set of norms and processes that are idiosyncratic to the particular level and are not necessarily aligned or coordinated. Transparency on incentives (deterrents) to inward investment is not achieved until the transparency issues are addressed at each level of territorial approval. Thus, because transparency for FDI incentives is achieved, let's say, at the national level, it does not mean that the incentives that would ultimately permit the landing of such investment are respectful of that transparency. A colorful illustration of this sort of issues is the recently exposed case of Walmart in Mexico, where the arrival of that investment, while deemed transparent at the national level, has been questioned at the local level, and was conclusively marred in a morass of municipal and local corruption in obtaining the actual zoning licenses and building permits that allowed for the Walmart stores to open at specific locations in record time.¹ As this discussion illustrates, transparency in incentives toward inward investment, in a world where multilevel territorial jurisdictions exist, can be attained only if all levels of decision making involved in the setup of the foreign investment are involved and proactively maintain transparent norms and processes.

¹ http://www.nytimes.com/2012/12/18/business/walmart-bribes-teotihuacan.html?pagewanted=all&_r=0

To complicate more the issue of multilevel transparency, additional territorial jurisdictions operate on top of the national level. These are the multilateral and (macro-) regional/trade blocs jurisdictions, where blocs of countries, such as those forming the European Union, or those that are members of the World Trade Organization (WTO), agree on a set of criteria, norms, and rules that govern the incentives toward FDI that nation-states can grant. This phenomenon remains in line with the top-down approach of incentives, where now a multilateral layer comes on top of the national level in organizing the incentives toward inward investments. In addition, the emergence of these supranational levels comes with an agenda of unification and coordination of some of the policies used to incentivize FDI across member nations, which brings us to our next topic, the coordination of incentive toward FDI across levels in a multilevel setting.

14.4.3 Multilevel Incentives, Coordination, and Transparency in Incentives toward FDI

As we saw in Section 14.4.2, multilevel jurisdiction requires coordination in policies both for incentives to be effective, and to foster transparency in incentivizing and landing FDI. The main issue about multilevel coordination of inward investment incentives is that any sublevel not only can sabotage the proper landing of FDI, and reduce the transparency of incentives, but the remedies to foster coordination also bring their own issue of transparency. In this sense, the top level jurisdiction has three options: first, to be responsible for its jurisdiction only; second, to negotiate the coordination of national to local policies; and third, to establish a one-stop shop where it leverages its authority to override local level powers. Each one of these alternatives has its own issues regarding transparency.

First, when each level, in particular the top level, decides to be responsible only for its own process and policies, the road is open for any authority at any level to sabotage the potential investment and leverage this power toward obtaining benefits for that particular authority. This gravely hinders transparency as the investor has a long road ahead to discover and access the real incentives and disincentives its investment may face. Such a situation is illustrated with the recently cited example of Walmart in Section 14.4.2.

Second, when top level authorities negotiate from the national to local level on behalf of the investor, to secure the smooth landing of FDI, transparency of the incentives toward the foreign investor might be protected, but new issues of transparency across public actors become apparent. On the one hand, how is it determined with which sublevel territories is the national top level authority going to negotiate? The most docile? Those that are better suited for the investment? Or those with most political affinity?—and are these criteria to be properly divulged? On the other hand, in this setup, what are the *quid pro quos* that allow for this negotiation to reach an adequate conclusion? Are these recompenses properly disclosed? And, how transparently is the negotiation process divulged?

Third, when the top-level authorities leverage their power to override local authorities to facilitate the landing of FDI, this renders the process not only easier for the investor, but also more transparent. However, this expeditious alternative raises issues of transparency toward local constituents, and their rights to vet a project that affect their community.

In summary, besides the obvious issues of corruption at different territorial levels, which can hinder otherwise transparent efforts and incentives to land FDI by a top-level authority, there seems to be a permanent conundrum between achieving multilevel coordination and attaining transparency to all stakeholders.

As briefly exposed here, we can see that both the coordination and absence of coordination across levels in implementation of incentives toward inward investment always present a challenge of transparency, either toward the investor, the territories that are left out of the negotiations, or the local constituents that are banned from deciding on the appropriateness of an investment project in their backyard. Thus here, the inclusion of one or more additional interlocutor in the FDI attraction process allows to understand that the policymaker is faced with a scenario where the “optimal” levels of transparency might differ from one interlocutor to the next.

14.4.4 Multilevel Incentives, Homogenization, and Transparency in Incentives toward FDI

As we saw in Section 14.4.2, multilevel jurisdiction requires policy coordination, both for incentives to be effective and to foster transparency in incentivizing and landing FDI. We saw also that multilateral and macro-regional levels have emerged above the national level, and at these supranational levels there has been an explicit effort to try to coordinate what is allowed across countries in terms of incentives toward inward investment.

However, what we have not discussed is that coordination of incentives across jurisdictional levels, when it works toward the homogenization of incentives across territories, impedes competition between territories and pushes away competition in FDI attraction toward domains that are more difficult to monitor, and thus can ironically foster a loss of transparency in FDI incentives.

The literature on international business has often divided incentives toward FDI in three large groups: (1) financial and tax incentives; (2) labor and environmental incentives; and (3) other, where everything that is not in (1) and (2) falls, and many issues that act as incentives but are actually difficult to define.

Now, much of the effort in the coordination and homogenization of incentives toward inward investment in the multilevel context has concentrated on issues (1) and (2). For instance, concerning point (1), the European Union generally forbids having direct subsidies differentially allocated to FDI projects, or to proceed with tax breaks to inward investment beyond pre-agreed and authorized levels, available to all

nation-state members. Analogously, Canada forbids its provinces from giving direct financial incentives or differential tax breaks to FDI. This prevents these states and provinces from, for instance, using differential tax policies to lure inward investments and compete against other territorial jurisdictions. Similarly, concerning point (2), the European Union does not accept bargaining of environmental conditions or labor standards to retain or attract any investment, including FDI. Thus, member states cannot use differential implementation of these policies to attract inward investments and compete against other territorial jurisdictions.

This leaves (3) Other, as the set of policies where competition across territorial jurisdictions is still possible and where policymakers center their efforts to distinguish their territory from others. The homogenization of (1) and (2), and the convergence of competition in incentives toward FDI in the category (3), has a particular effect in transparency. It renders incentives more opaque as it forces policymakers to compete on issues that are more difficult to define and monitor. It also pushes policy makers to compete by establishing tacit commitments that by their very nature are more opaque. Finally, it pushes to compete, in an opaque and procedural fashion, where the incentive is not in how the norm is different from that of other jurisdictions, but in how the norm is enforced or not enforced within a given jurisdiction.

In summary, the coordination and homogenization of standards in FDI incentives has the unintended consequence of pushing competition across territories from areas more amenable to monitoring to areas where opacity is more prevalent.

14.5 MULTIPARTY TRANSPARENCY AND FDI: MNEs' TRANSPARENCY VIS-À-VIS HOST TERRITORY

14.5.1 Introduction

In Sections 14.2, 14.3, and 14.4, the issue of inward investment incentives and transparency was analyzed. In all three sections, the point of departure has been the elements that characterize the transparency of the norms or the process with which the public agent incentivizes the arrival of FDI. Yet, in both Sections 14.3 and 14.4, we also saw that, as we explore the issues of norm versus process, and of multilevel transparency, even if we start by concentrating on the public agent, issues of transparency concerning the action or the disclosure to other stakeholders emerge.

In this section, we intend to summarily gather these emerging issues, organizing them in three topics: transparency from the investor toward the public agency, transparency of the national entity toward other territorial levels, and transparency of both investor and public entities toward the public at large.

14.5.2 Transparency from the Investor toward the Public Agency

As we saw in Section 14.3, as incentives become tailored to the investor, the public agency selecting the investor, and providing the incentives, incurs information costs, endures different types of information asymmetries, and ultimately is exposed to increased risks. In this context, the investor benefiting from those tailored incentives should oblige in divulging more information to the host, during the negotiations of those benefits and on an ongoing basis. Also, the private agent should guarantee transparency in the reporting of its ongoing contractual obligations. This need for ongoing reporting by the investor requires a clear definition of (1) the proper levels of transparency that should be expected from a private firm; (2) how to treat and segregate information across separate public institutions; and c) whether segregated information reported to distinct public agencies might differ in quality, detail, and other characteristics (e.g., what MNEs report to the investment agency vs. the tax authorities).

None of these issues is easily answered, and the natural answer is not necessarily that more transparency is better (WTO, 2002; Etzioni, 2010). Notably, (1) the firm might have very good strategic reasons not to oblige with transparency at all levels of its operations, thus full transparency or a high level of transparency cannot be expected from a private entity; (2) the issue of keeping segregated information across public entities is in itself antagonistic with the concept of transparency; thus it is to be expected that requiring higher levels of transparency to the private agent means transparency toward all public institutions; and (3) similarly to (2), while differential content of information provided to public agencies might be justifiable, this is again antagonistic with the concept of transparency in its purest form.

As we feel compelled to require and demand more transparency from investors, to create better and more targeted incentives, but are also concerned by the effectiveness of those incentives toward inward investment, perhaps we need to pause the transparency pursuit for transparency sake and concentrate in defining a set of guidelines and objectives that maximize the relationship for both the host territory and the MNE, in such a way that while knowingly acknowledging that some opacity would take place in some key aspects of the process, it would be expected that the correct assessment of the cost of the incentives and key measures of the success (or failure) of the relationship are visible to all.

14.5.3 Transparency of the National Entity toward Other Territorial Levels

As shown in Section 14.4, there seems to be a permanent conundrum between achieving multilevel coordination and attaining transparency for all stakeholders, as several

issues of multiparty transparency emerge from the consideration of FDI incentives across territorial jurisdictions. First, the issue of negotiating the coordination of inward investment incentives across multiple jurisdictions creates issues of transparency regarding the actors selected for the negotiation and the quid pro quos necessary to achieve the proper bargaining. The negotiation reduces transparency requirements toward foreign investors but increases issues of transparency across public agencies and territories. Second, the issue of the national authority overriding local authorities to facilitate the landing of FDI renders the process for the investor transparent (reduces information costs), but raises issues of transparency toward local constituents and their rights to vet a project that affect their community (increases information asymmetry).

Both negotiated and coercive coordination of multilevel FDI incentives always present a transparency tradeoff across multiple parties: as multilevel transparency toward foreign investors is increased, transparency toward other public entities or stakeholders is diminished. Transparency is reduced toward territories that are left out of the negotiations, or toward the local constituents that are excluded from deciding on the appropriateness of an investment project in their backyard.

14.5.4 Transparency of Both Investor and Public Entities toward the Public at Large

As incentives become more targeted and more geared toward attracting sustainable inward investment (UNCTAD, 2012b), an interesting phenomenon is emerging wherein some type of transparency toward the public gets curtailed while another type gets considerably expanded. For instance, we can see the case where there is an imperative to preserve (prior to negotiations) both the secrecy needed by the national investment agency about the type of priorities/targets, plus the need to preserve privileged information of the targeted company, but then, conversely, providing detailed information on the implementation of the foreign investment project. This can mean curtailing transparency until the investment can be firmly announced. Thus we can be moving with targeted incentives to FDI to a situation where *ex ante* transparency elucidating all the reasons of providing a specific foreign investor with tailored incentives might be considerably reduced, while substantially increasing *ex post facto* transparency of the evaluation of the impact of said investment across multiple dimensions, such as advancement in economic development, environmental sustainability, progresses toward social development, and promotion of good governance and corporate social responsibility standards. This latter observation might point out that, more than attaining an optimal level of transparency, there is a dynamic timing of transparency, with different temporal levels of optimality along the life cycle of inward investment: attraction, landing, development, maturity, and exit.

14.6 CONCLUSION ON TRANSPARENCY AND INWARD INVESTMENT INCENTIVES

This chapter analyzed the theme of transparency and inward foreign direct investment, notably focusing on inward investment-focused policies and incentives. It started by reviewing the relevant literature, clarifying what was understood by transparency in the context of FDI, and how transparency may affect FDI, both in terms of quantity and quality.

A careful screening of extant literature on transparency and FDI allowed us to find that there are three major areas where much emphasis is need and more research is felt wanted. These are (1) transparency and FDI: normativity versus process; (2) multilevel transparency and FDI; and (3) multiparty transparency and FDI. We explained, as thoroughly as space permitted, several aspects about these issues and advanced some novel perspectives on these major themes. In addition we linked these specific themes with three key issues: (1) transparency as a means to reduce information asymmetry across intervening agents; (2) the implicit emergence of “optimal” transparency levels in FDI promotion, and (3) the tradeoff between transparency and effectiveness of FDI attraction policies.

As we moved historically from a more modest, baseline, and norms-focused type of inward investment incentives to a more ambitious, process-based and targeted type of policies, the issue of transparency becomes ever more complex to tackle. This happens not only as a result of the increased multidimensionality and the more present tradeoffs between disclosure versus targeting/secretcy/effectiveness, but also because the addressees of transparency contemplate an increasing number of stakeholders and groups of interest. Furthermore, the objectives of host countries tend to be more encompassing (e.g., with aims on the realm of sustainability), all of this compounding the complexity of the theme. With the recent developments testified in reviews provided by UNCTAD (2012a, 2012b), it can be clearly anticipated that there will be, in the near future, considerable opportunities for conceptual and empirical deepening of the topic of transparency and inward investment policies.

REFERENCES

- Blomström, M., and Kokko, A. (2003). The economics of foreign direct investment incentives. NBER Working Paper No. 9489. Cambridge, MA: NBER.
- Brewer, T., and Young, S. (2000). *The Multilateral Investment System and Multinational Enterprises*. Oxford: Oxford University Press.
- Calhoun, M. (2002). Unpacking liability of foreignness: Identifying culturally drive external and internal sources of liability for the foreign subsidiary. *Journal of International Management* 8, 301–321.

- Drabek, Z., and Payne, W. (2001). The impact of transparency on foreign direct investment. WTO Working Paper ERAD-99-02. Geneva, Switzerland: World Trade Organization.
- Dunning, J. (1977). Trade, location of economic activity and the MNE: A search for an eclectic approach. In *The International Allocation of Economic Activity*, eds. B. Ohlin, P. Hesselborn, and P. Wikman, pp. 395–418. London: Macmillan.
- Etzioni, A. (2010). Is transparency the best disinfectant? *Journal of Political Philosophy* 18(4), 389–404.
- Forssbaeck, J., and Oxelheim, L. (2006). Transparency, capital formation, and economic growth In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, pp. 1–46. Oxford: Elsevier.
- Gelos, G., and Wei, S. (2002). Transparency and international investor behavior. IMF Working Papers 02/174. Washington, DC: International Monetary Fund.
- Globerman, S., and Shapiro, D. (2003). Governance infrastructure and US foreign direct investment. *Journal of International Business Studies* 34(1), 19–29.
- Hooper, V., and Kim, S. (2007). The determinants of capital inflows: Does opacity of recipient country explain the flows? *Economic Systems* 31, 35–48.
- Kim, H. (2010). Does corporate governance or transparency affect foreign direct investment? *International Journal of Human & Social Sciences* 5(11–14), 876.
- Michener, G., and Bersch, K. (2011, May). Conceptualizing the quality of transparency. *Paper presented at the 1st Global Conference on Transparency*, Rutgers University, Newark.
- Mudambi, R., and Navarra, P. (2002). Institutions and international business: A theoretical overview. *International Business Review* 11(6), 635–646.
- OECD. (2002). *Foreign Direct Investment: Maximising Benefits, Minimising Costs*. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2003). *Public Sector Transparency and the International Investor*. Paris: Organisation for Economic Co-operation and Development.
- Oxelheim, L., ed. (2006). *Corporate and Institutional Transparency for Economic Growth in Europe*. Oxford: Elsevier.
- Oxelheim, L., and Ghauri, P. (2008). EU-China and the non-transparent race for inward FDI. *Journal of Asian Economics* 19, 358–370.
- PriceWaterhouseCoopers. (2001). *Investigating the Costs of Opacity: Deterred Foreign Direct Investment*. New York: PriceWaterhouseCoopers.
- Razin, A., and Sadka, E. (2007). Corporate transparency, cream-skimming and FDI. *European Economic Review* 51(5), 1263–1276.
- Seyoum, B. (2009). An empirical analysis of the impact of corporate transparency on foreign direct investment. *Multinational Business Review* 17(3), 29–48.
- Smarzynska, B., and Wei, S. (2002). Corruption and cross-border investment: Firm level evidence. NBER Working Paper No. 7969. Cambridge, MA: NBER.
- Tavares, A. T., and Young, S. (2005). FDI and multinationals: Patterns, impacts and policies. *International Journal of the Economics of Business* 12(1), 1–16.
- UNCTAD. (2012a). *Transparency*. UNCTAD Series on Issues in International Investment Agreements II. New York and Geneva, Switzerland: United Nations.
- UNCTAD. (2012b). *Investment Policy Framework for Sustainable Development*. New York and Geneva, Switzerland: United Nations.
- UNCTAD. (2013). *World Investment Report 2013: Global Value Chains*. New York and Geneva, Switzerland: United Nations.

- WTO. (2002). *Transparency*. Note by the Secretariat. Working Group on the Relationship between Trade and Investment. WT/WGTI/W/109, March 27. Geneva, Switzerland: World Trade Organization.
- Young, S., and Tavares, A. T. (2004). Multilateral rules on FDI: Do we need them? Will we get them? A developing country perspective. *Transnational Corporations* 13(1), 1–30.

CHAPTER 15

TRANSPARENCY AND CORRUPTION

ALVARO CUERVO-CAZURRA

Publicity is justly commended as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants; electric light the most efficient policeman.

—US Supreme Court Justice Louis Brandeis (1913)

15.1 INTRODUCTION

CORRUPTION hurts. As government officials misuse their offices for private gain, they do so at the expense of both the citizens they are supposed to serve or represent and the companies and individuals with whom they interact. Corruption results in weaker growth (Mauro, 1995), lower investment (Lambsdorff, 2003), lower investment in education and healthcare (Mauro, 1998), lower public policy effectiveness (Ades and Di Tella, 1997), lower foreign direct investment in the country (Wei, 2000), and more foreign direct investment from corrupt countries (Cuervo-Cazurra, 2006). Corruption also increases the costs of operating in the country and reduces profits (Kauffman, 1997; Svensson, 2005).

Although there are incentives for corruption everywhere, the effective levels of corruption vary across countries (Transparency International, 2012; World Bank, 2012). In every country, public officials have the incentive to line their pockets and individuals have the incentive to get around regulations or obtain contracts from the government without open competition by bribing officials. The differences in the effective levels of corruption across countries are related to the effectiveness of the monitoring and control of misbehavior by public officials, companies, and individuals in place in the country; countries that used to be very corrupt can become less so, and countries that had limited corruption can become corrupt (Tanzi, 1998).

Transparency can help tackle corruption by exposing the corrupt relationship to the knowledge of others. Corruption is illegal in all countries and thus can be effective only in an environment of opacity, in which few people outside the corrupt relationship know about it. Exposing a corrupt relationship to the light of public opprobrium can be an effective deterrent and can help combat it.

However, I will argue that transparency is not sufficient. In addition to transparency, there is a need for effective systems of control and punishment of the corrupt parties. If there is no effective punishment, some government officials or managers may merely dismiss the exposure as a nuisance and continue with their corrupt relationship.

In the rest of the chapter I elaborate on these themes. In Section 15.2 I review the concept of corruption, its types, and the reasons for its existence. I then explain in Section 15.3 how corrupt relationships can be analyzed as multiagency relationships. Building on this, I discuss in Section 15.4 how transparency can help tackle corruption by solving the information asymmetries in the agency relationships. After this, I explain in Section 15.5 how increasing transparency is a necessary but insufficient condition to reduce corruption; for transparency to be effective in reducing corruption, it requires a set of complementary efforts in the areas of monitoring and punishment. Section 15.6 concludes the chapter.

15.2 CORRUPTION

The common definition of corruption is the abuse of public power for private gain. Although this definition of corruption tends to bring a government official to mind, it can be used to explain both public corruption—when a civil servant or politician uses his or her position in government to obtain a payment in exchange for providing a good or service whose costs are borne by the government—as well as private corruption—when employees in a firm abuse their position in the company's hierarchy to obtain private benefits. In this chapter I will focus on public corruption to simplify the analysis, but many of the ideas discussed here can be easily adapted to the analysis of private corruption. This section of the chapter draws from Cuervo-Cazurra (2014). More detailed reviews of the topic of corruption appear in Bardhan (1997), Svensson (2005), Rose-Ackerman (2006), and Rose-Ackerman and Soreide (2011).

The separation between public and private corruption is one of many ways to classify types of corruption. Classifying by objective, there is corruption to deviate from the application of existing rules or laws, and corruption to change existing rules or create new rules or laws. By economic impact on the government, one can distinguish between corruption without theft, when the official provides the government with the price of the good (e.g., license fee) and only keeps the bribe, and corruption with theft, when the official keeps both the price and the bribe (Shleifer and Vishny, 1993). By the level of coordination of bribing officials, there is organized corruption, when the

payment of the bribe results in the delivery of the goods, and disorganized corruption, when the payment of the bribe does not ensure delivery (Shleifer and Vishny, 1993). By the economic impact on the firm, one finds petty corruption, when civil servants demand small bribes in exchange for accelerating permits or waiving regulations, and grand corruption, when politicians allocate contracts or subsidies to the firm that pays a bribe (Elliot, 1997). By the probability of corruption, there is pervasive corruption, when the firm encounters corruption whenever it deals with government officials, and arbitrary corruption, when the firm faces uncertainty regarding the request for and type of bribe (Rodriguez et al., 2005).

Leaving aside ethical considerations, which I do not discuss in this chapter, most people have a negative view of corruption and see it as “sand in the wheels of commerce,” but some have a positive view of corruption and see it as “grease.” On the one hand, corruption is commonly viewed in negative terms because it increases the cost and uncertainty of operation. Corruption becomes an additional tax on investors (Wei, 2000). Costs increase because corruption requires managers to devote human and financial resources to manage and pay bribes; these resources could be invested more profitably elsewhere (Kaufmann, 1997). Government officials create additional and unnecessary regulations and bureaucratic requirements to generate opportunities for demanding bribes, which increases costs to companies (Djankov et al., 2002). The payment of a bribe creates uncertainty because it does not ensure that the promise is fulfilled. The government official can demand additional bribes, further increasing costs to the firm, without delivering the goods. Unlike other contracts, managers cannot use the courts to force government officials to fulfill their promises and deliver the goods, because bribery is illegal. On the other hand, some view corruption in positive terms, as “grease in the wheels of commerce,” because it facilitates transactions and accelerates procedures that would otherwise occur with more difficulty, if at all (Huntington, 1968). In this view, corruption introduces competition into a monopolistic setting, with government officials expediting procedures in order to serve as many customers as possible and obtain more bribes. Investors who value time or access to a good more than others will pay a bribe (Lui, 1985).

There are two sides to a corrupt relationship and both have incentives to engage in bribery. Government officials have the power to demand bribes and increase their income whenever they have discretionary power over how a “good” (e.g., contracts, permits) or a “bad” (e.g., fees, taxes, regulations) is imposed on the firm (Shleifer and Vishny, 1993). Bribes increase the officials’ income at little cost to them; the good given to the firm is owned by the government and not the official. Firm managers have the incentive to offer bribes to government officials to obtain benefits that would not be obtainable without corruption, such as being given a contract without competitive bidding, or avoiding compliance with regulations. Bribes help firm managers advance in their careers, as their units or companies can bypass competitors who do not engage in bribery and the managers are then rewarded for this success with bonuses and promotions.

15.3 CORRUPTION AS AN AGENCY PROBLEM

I use agency theory to analyze corrupt relationships and how transparency affects them, following a long tradition in the literature (Rose-Ackerman, 1978, 1999; Bac, 1996, 2001; Mishra, 2006). An agency relationship is any relationship between two parties where one of these, the agent, acts on behalf of or as a representative of the other, the principal, in making a decision (Ross, 1973, p. 134). Agency costs emerge from the differences in objectives and attitudes towards risk between principal and agent, which require the principal to monitor and control the agent in a world of rational self-interested behavior, imperfect and asymmetric information, imperfect contracting, bounded rationality, and opportunism (Jensen and Meckling, 1976; Eisenhardt, 1989). There are two main agency problems in terms of the timing of information asymmetries between the principal and agent in the contracting relationship. When the information asymmetry exists before principal and agent establish a relationship, the problem is one of adverse selection. When the information asymmetry exists after the principal and agent have established a relationship, the problem is one of moral hazard.

Although the corrupt relationship involves the government official and firm manager, I increase the scope of analysis to include two other agency relationships involved in the success of a corrupt relationship: the relationship between the government official and citizens, and the relationship between the firm manager and top managers in the firm. Transparency, or the reduction of information asymmetries, helps alleviate the problems of adverse selection and moral hazard that encourage corruption. However, transparency in addition requires effective control and punishment mechanisms to be effective. Table 15.1 summarizes the ideas that I discuss in the rest of the chapter.

In a corrupt relationship, the main agency relationship is between the government official and the firm manager. In this relationship, the firm manager is the principal who wants the government official, as the agent, to provide the good or avoid the bad to the firm in exchange for a bribe. Different from other contractual relationships, a corrupt relationship requires and creates higher degrees of opacity and information asymmetry. Bribery tends to be illegal, and thus both the government official and the firm manager will hide the corrupt relationship. Moreover, there is no market evaluation of the bribery ability of a government official; a manager cannot rely on others to certify that the government official will deliver the goods after the bribe is paid or that the government official is the right person to bribe, especially when the bribe is solicited by the government official rather than requested by the manager.

This added information asymmetry heightens the two problems of adverse selection and moral hazard. In the adverse selection problem, the firm manager does not know whether a bribe is needed to get the good, or whether the government official is the appropriate person to bribe to get the good. In the moral hazard problem, the firm manager does not know whether the government official exerted additional effort to

Table 15.1 Agency Relationships in a Corrupt Transaction, the Impact of Transparency, and the Limitations of Transparency for Reducing Corruption

	Agency relationships		
	Firm manager and government official	Citizens and government official	Top managers and firm manager
Relationship	Firm manager is the principal who charges the government official as the agent to provide a good in exchange for a bribe.	Citizens are the principals who charge government officials as agents to run the country and provide services to the citizens in exchange for continued employment.	Top managers are the principals who charge the firm manager as agent to achieve success in the firm's operation in exchange for continued employment.
Agency problems	<i>Adverse selection problem:</i> Firm manager does not know whether a bribe is needed to get the good or whether the government official is the appropriate person to bribe to get the good.	<i>Adverse selection problem:</i> Citizens do not know whether government officials will not be corrupt when they elect or select them.	<i>Adverse selection problem:</i> Top managers do not know whether the manager will bribe to succeed in business and advance his career.
	<i>Moral hazard problem:</i> Firm manager does not know whether the government official exerted additional effort to get the firm the good.	<i>Moral hazard problem:</i> Citizens do not know whether government officials are requesting or accepting bribes, and whether poor services are the result of bribes or incompetence.	<i>Moral hazard problem:</i> Top managers do not know whether the manager is bribing government officials and succeeding dishonestly, potentially harming the reputation of the firm and creating a legal threat.
Impact of transparency on agency problems in solving the corrupt relationship	<i>On adverse selection problem:</i> Firm manager knows whether a bribe is required to obtain the good, which government official will ask for a bribe and can avoid the official, or which government official is appropriate to bribe and approaches the official.	<i>On adverse selection problem:</i> Citizens know whether the government official will be corrupt and can avoid electing or selecting the official.	<i>On adverse selection problem:</i> Top managers know whether the manager will use bribes to succeed and can avoid selecting the manager.

(Continued)

Table 15.1 (Continued)

Agency relationships			
	Firm manager and government official	Citizens and government official	Top managers and firm manager
Limitations to the impact of transparency on agency problems in solving the corrupt relationship	<p><i>On moral hazard problem:</i> Firm manager knows whether government official exerted special effort to provide the firm with the good or no effort was required to obtain the good.</p>	<p><i>On moral hazard problem:</i> Citizens know whether government official is requesting or accepting bribes and whether poor services are the result of bribes and can threaten to terminate employment if they do not reelect official or threaten to take to court if they are organized as pressure group.</p>	<p><i>On moral hazard problem:</i> Top managers know whether firm manager used bribes to succeed and can threaten to terminate employment and to sue to avoid damage to firm reputation.</p>
	<p><i>On adverse selection problem:</i> Government official may not be deterred by being known to be corrupt when there are no repercussions because of the lack of effectiveness or control of the judicial system.</p>	<p><i>On adverse selection problem:</i> Citizens may not exclude from election or selection the corrupt government official when the political system is not competitive and citizens have limited impact on the election or selection.</p>	<p><i>On adverse selection problem:</i> Top managers may not be able to avoid selecting manager when the manager controls the firm.</p>
	<p><i>On moral hazard problem:</i> Firm manager does not have recourse to the judicial system when the government official does not comply with agreement and exert effort to provide the firm with the good because of the illegal nature of corruption.</p>	<p><i>On moral hazard problem:</i> Citizens may not be able to punish corrupt government official when there is no competitive system for replacing corrupt officials, no punishment for corruption, or no effective judicial system.</p>	<p><i>On moral hazard problem:</i> Top managers may not be able to terminate employment when the manager controls the firm or may not want to terminate employment when bribery is not illegal.</p>

get the firm the good, or whether the firm could have gotten the good without the help of the official.

Moreover, there are limited effective monitoring and control mechanisms that can help the firm manager ensure that the official will fulfill his part of the bargain. As corruption is illegal, the manager cannot threaten to sue the official for breach of contract; there is no contract to which the official can be held accountable. The manager cannot establish monitoring mechanisms that ensure that the government official acts according to the agreement and delivers the goods promised. It may be even more problematic when the promised good is not an action but rather an inaction on the part of the official, for example, when the government official extorts a bribe from the firm with the threat of additional taxes or inspections if the firm does not pay the bribe.

A second agency relationship in a corrupt relationship exists between the government official and the citizens of the country. Citizens are the principals who expect government officials as agents to run the country and provide services to the citizens in exchange for continued employment.

This relationship is also plagued by information asymmetries. In the case of corruption, there is an increase in the asymmetry of information as citizens, who tend to know little about how officials behave, will know less about corrupt relationships that officials hide. The adverse selection problem emerges as citizens do not know during elections whether or not government officials will be corrupt, and they know especially little about officials that are selected to join the state bureaucracy. The moral hazard problem arises as citizens do not know whether government officials are requesting or accepting bribes; neither the government official nor the firm will announce the payment of a bribe. Hence, citizens do not know whether they are receiving poor services from government officials because officials are incompetent or because officials have been bribed not to provide appropriate services, such as imposing safety regulations on firms.

Citizens have a limited ability to establish controls over the corrupt behavior of officials. Officials who are selected within the state bureaucracy are not directly accountable to citizens but rather to their superiors, and they are bound by the constraints and controls imposed in the state bureaucracy. Officials who are elected in a democratic process are directly accountable to citizens, but citizens have only the ability to not reelect them periodically if government officials are not fulfilling their promises.

The third agency relationship in a corrupt relationship emerges between the manager of the firm that bribes the government official and the superiors in the firm. Top managers or the board of directors are the principals who expect the firm manager as agent representing the firm in its contractual relationships to achieve success in the firm's operation in exchange for continued employment.

The payment of bribes is likely to be done in secrecy, heightening the information asymmetry and associated problems. Although the manager may have discretion in how to interact with government officials, the manager is not likely to have the right to engage in bribery. However, to succeed and advance his career, the manager may feel impelled to bribe to obtain a contract and increase revenues or avoid regulations

and reduce costs. Thus, the manager may have to find ways to conceal the payment of bribes, usually via creative accounting and the hiring of third parties who manage the transfer of bribes to the government official. Top managers face an adverse selection problem, as they do not know whether or not the manager will bribe to succeed in business and advance his career. Managers who bribed in a prior position and were not caught are unlikely to reveal that they succeeded thanks to bribery. Top managers also face a moral hazard problem because they do not know whether a manager is bribing government officials and succeeding dishonestly. The misbehavior is likely not sanctioned by the firm because bribery is illegal and its disclosure would have a negative impact of the reputation of the firm and could expose the firm to criminal prosecution.

15.4 TRANSPARENCY AS A SOLUTION TO CORRUPTION

The illegal nature of corruption is reflected in the metaphors used to refer to it across different countries (Tillen and Delman, 2010). Thus, in some countries the names used aim to diminish its importance, like the Italian *spintarella* (a little push), the Greek *fakelaki* (a little envelope), the Egyptian *ashaan ad-dukhaan* (something for your cigarettes), and the Kenyan *kitu kidogo* (small things). Corruption can be disguised as part of accepted holiday gift exchanges, like in Korea *ttokkap* (rice cake expenses, small gifts of cash in envelopes during major holidays), in sub-Saharan Africa *kola* (thank you to helpful civil servant) *kalam dene* (thank you to government official handling a case), or *moo dabu* (thank you to bank teller/post office cashier to avoid evil eye on withdrawn money), or in China *hong bao* (red envelopes containing cash gifts) or “enhanced” moon cakes (fall festival sticky rice cakes). Some names make direct reference to the hidden nature of corruption, such as the American and Indian backhander; the Slovakian *pod stolom* (under the table); Korean *noemul* (giving goods in secret), *gum eun don* (black money), or *du don* (back money); or Japanese *kuroi kiri* (black mist). Some names refer to its use to facilitate relationships, such as the Hungarian *kenopenz* (oil money), German *spicken* (to lard), or American grease money. Finally, bribes are disguised under many names in accounting to reduced detection, such as consultancy, agency, processing, interventions, special discounts, useful payments, additional assessments, extra costs, extraordinary expenses, tolls, or flowers.

Transparency has been advocated as a solution to corruption (Rose-Ackerman, 2004). The opening quote by US Supreme Court Justice Louis Brandeis, although not specifically directed at bribery but at corporate abuse of power in general, reflects the view that public knowledge of corporate misbehavior reduces it. The German corruption watchdog Transparency International included transparency in its name to highlight how talking about and uncovering corruption can help reduce it, and defined its

mission as “to stop corruption and promote transparency, accountability and integrity at all levels and across all sectors of society.”

In the agency analysis of corruption presented here, transparency takes the form of a reduction in the information asymmetries between principal and agent. This reduction in information asymmetries helps solve the agency problems of adverse selection and moral hazard, with different impacts across the three agency relationships.

In the firm manager–government official relationship, transparency transforms the corrupt relationship into a service relationship, albeit one that is illegal; the firm manager pays a bribe and gets a good from the government official. Transparency does not solve corruption because the incentives remain, but reduces the agency problems. The adverse selection problem is reduced with transparency as the firm manager knows whether a bribe is required to obtain the good or not. Thus, the firm manager may reject a request for a bribe if there is no need to pay for it. In addition, the firm manager will know which government official will ask for a bribe and which one will not. The firm manager can choose not to pay the bribe to one government official and get the services from other officials who do not demand a bribe, diminishing the ability of the corrupt official to engage in bribery. However, if the corrupt official is the only one who has the power to provide the good to the company, the firm manager may be forced to pay the bribe even if he does not want to.

In some instances, transparency can help increase corruption. If a government official is known to be corrupt, the firm manager may approach this official with a bribe to obtain a good (Bac, 2001). If a company is known to be offering bribes to obtain services, it may be subject to a series of demands not only from one official but from any official that has to deal with it. Although the company may find that the operation suffers reduced profitability because rents are siphoned by corrupt officials, if the firm becomes the exclusive provider of a particular good or service in the country, it can recover the bribes paid via monopolistic pricing.

In the citizens–government official relationship, transparency helps citizens control government official misbehavior. With transparency, the adverse selection problem is greatly diminished, as citizens know whether a government official will be corrupt and can avoid electing the official or can exercise pressure to avoid the potentially corrupt government official from being selected. The moral hazard problem is also reduced because with transparency citizens know whether the government official is requesting or accepting bribes, and whether the poor services received are the result of bribes rather than incompetence. They can then threaten to terminate the employment of the government official by not reelecting him. For those government officials who are selected, they can threaten to take them to court, especially when citizens are organized as a pressure group and there is a clear responsibility link (Potter and Tavits, 2011). However, in cases in which the government is undemocratic and controlled by one person or group, transparency may not succeed at curbing corruption. The government official may dismiss the pressures from citizens and may even not be subject to prosecution, because he simply creates laws that protect government officials from prosecution and controls the judicial system.

In the top management–firm manager relationship, transparency helps avoid the supply of bribes by firm managers. Transparency reduces the adverse selection problem because top managers can avoid hiring firm managers who may be prone to using bribes to succeed, thus avoiding future legal and reputational repercussions. Transparency also reduces the moral hazard problem as top managers can identify whether the firm manager has used bribes to succeed and can threaten to terminate employment or sue to avoid damage to firm reputation. This, however, does not work when the payment of bribes is done by the top managers, with bribery being the way in which the firm competes. In addition, top management may not control the payment of bribes by firm managers when such payment is not illegal and thus the firm has limited legal repercussions but much to gain, even if there are reputational repercussions. For example, in the United States it was not illegal to pay bribes abroad until the introduction of the Foreign Corrupt Practices Act of 1977 (US Congress, 1977), and the United States was the only country that forbid paying bribes abroad until the Organization for Economic Co-operation and Development (OECD) Convention on Combating Bribery of Foreign Public Officials in International Business Transactions induced OECD member countries to pass laws against bribery abroad (OECD, 1997). This convention also increased the effectiveness of the Foreign Corrupt Practices Act (FCPA) in deterring investment in corrupt countries (Cuervo-Cazurra, 2008). In many OECD countries, bribes paid abroad were even tax-deductible before 1996 (OECD, 1996).

15.5 COMPLEMENTARY MECHANISMS FOR THE EFFECTIVENESS OF TRANSPARENCY IN REDUCING CORRUPTION

Transparency is a necessary but insufficient condition for reducing corruption. Even in situations of full transparency, there is still room for corruption, as I hinted before. Thus, although transparency has been advocated as a solution for reducing corruption, there appears to be an optimal level of transparency (see Cornand and Heinemann [2008] for a review in other fields). Rather than full transparency in the relationships between company managers or individuals with government officials, a high but not full level of transparency may be optimal. On the one hand, this optimal level of transparency reduces information asymmetries and the associated agency costs, enabling firm managers and individuals to select government officials who are less likely to be corrupt and facilitating such relationships. On the other hand, the optimal level of transparency maintains a level of uncertainty necessary to keep corrupt individuals in check for fear that they may be denounced for attempting to engage in corruption.

However, even at such an optimal level of transparency, for transparency to work well in reducing corruption, a complementary system of controls and punishment is needed to change the incentives to engage in corruption. In agency relationships,

perfect information works only if there are implications for misbehavior on the part of the agent; the implications are usually the loss of the agency relationship and the associated monetary benefits. In the case of corrupt relationships, given not only the illegal nature of the relationship but also the externality that it imposes on other parties in the form of under-provision of services to citizens or increased costs to firms, the punishment needs to go beyond the loss of a job and have additional consequences such as the repayment of ill-gotten gains, fines and extensive prison time. Otherwise, the government official will still have the incentive to engage in bribery as long as the bribes are large enough to compensate for the future loss of a salary, while the firm manager may continue paying bribes as long as the benefits to his career are large enough to compensate for the future loss of employment.

In the firm manager–government official relationship, transparency helps reduce corruption when there are direct punishments for bribery thanks to an effective judicial system. The adverse selection problem needs not only transparency but also the explicit punishment of bribes, wherein an effective judicial system that prosecutes and punishes bribery acts as a deterrent to potential government officials from engaging in bribery. Otherwise, the government official may not be deterred from demanding bribes even if he is known to be corrupt. The moral hazard problem requires that the firm manager has access to a well-functioning judicial system that can quickly and efficiently punish the demand of bribes by government officials. In addition, competition among government officials can help reduce the ability of one government official to demand bribes. The request for a bribe by a corrupt official can be dealt with by going to a clean official for the firm manager's dealings with the government. Complementing this, a dual system of fees can be used to reduce the supply of bribes by firm managers. Those firm managers who value their time more or need a quick answer from the government official can pay a higher fee to have their request processed faster, with the higher fee being paid to the government rather than to the government official.

In the citizen–government official relationship, transparency needs a competitive political system with checks and balances to work effectively in reducing corruption. Transparency can help solve the adverse selection problem if the citizens are able to exclude the corrupt government official from election or selection. A democratic government with checks and balances and an effective rotation of political parties can help build into the government the monitoring and control mechanisms that prevent corruption (Kunicova, 2006). A competitive political system facilitates the introduction of controls in the state bureaucracy, as those in opposition have the incentive to identify and punish corruption by those in power and thus replace them. Hence, to reduce the opportunity for demanding a bribe, the government can limit an official's intervention and discretion, decentralizing decision making and actions. In addition, to increase the cost of engaging in corruption, and thus deter demanding a bribe, the government can increase the probability of being caught and the level of punishment if caught. The government can create an independent corruption investigator with the power and resources to start investigations at all levels, and can increase transparency in government–private sector interactions, with open bidding and hotlines for whistle blowers

(Recanatini, 2011). Beyond the political system, a free press and a robust civil society can help uncover acts of bribery and misbehavior by government officials and demand the prosecution of corrupt officials. Thus, in addition to a competing political system, an effective and independent judicial system is needed to effectively prosecute corrupt government officials and firm managers.

In the top management–firm manager relationship, transparency needs a separation of power and the establishment of controls within the firm. Although transparency reduces the adverse selection problem by identifying the potentially corrupt firm manager, this requires the implementation within the firm of policies that exclude the corrupt manager from being employed in the firm. If the top managers are the ones likely to engage in corruption, lower level managers have limited power to avoid being told to bribe. Moreover, the reduction in the moral hazard problem that accompanies transparency requires the effective use of controls over firm manager behavior. Anti-bribery policies need to be established by top managers, with periodic training of firm managers on how to spot corruption and to whom to report it, with a system of rewards for whistleblowers. Top managers can establish codes of conduct that clearly define the behavior expected from employees, banning the payment of bribes to achieve a business advantage. These codes of conduct can follow the guidelines provided by, for example, Transparency International, the United Nations' Global Compact, or the OECD principles for multinational enterprises. Top managers can establish controls over the flow of funds, the hiring of consultants, and the payment of funds that have no direct connection to the business. In addition, top managers can establish controls and practices that limit the ability of employees to misuse funds to pay for bribes, such as requiring permission for payments above certain levels, prohibiting potentially problematic payments such as donations to political parties, establishing reporting guidelines for tracking down payments and cash management, and providing procedures for bidding on government contracts that limit employee discretion. Sporadic and unannounced internal audits, especially of highly successful firm managers, may uncover success due to the payment of bribes.

15.6 CONCLUSION ON THE LINK BETWEEN TRANSPARENCY AND CORRUPTION

Corruption is a problem that exists everywhere. Transparency can help reduce corruption by exposing the corrupt relationships to public opprobrium and criminal prosecution. However, transparency needs to be implemented, and the parties potentially involved in a corrupt relationship do not always have the incentive to promote transparency even if there is no corruption involved. Sometimes government officials may avoid being transparent in their dealings with firms to avoid disclosing strategic information, such as information on national security or on procurement contracts

that could bias bidders. Sometimes firm managers may avoid being transparent in their dealings with the government to avoid disclosing the basis of their strategies to competitors. In other words, there might be an optimal level of transparency.

For transparency to work effectively, it needs a set of complementary mechanisms of control and punishment that impose costs on the corrupt government officials and firm managers. Transparency reduces the adverse selection and moral hazard problems of the corrupt agency relationship. However, there is also a need to solve the divergence in objectives and in risk attitudes of principals and agents. Effective controls, not only within the firm manager–government official relationship, but also in the citizen–government official and top management–firm manager relationships, help address these divergences by increasing the risk of misbehavior, helping transparency to effectively reduce corruption.

Corruption is known to reduce economic growth in the country by diverting investments to areas that are more prone to corruption, by inducing the creation of regulations that merely create opportunities for bribes, and by increasing the cost of operation of firms. Hence, transparency can help reduce corruption and redirect investments to productive activities, thereby helping the country grow (Forssbäck and Oxelheim, 2006). However, for transparency to facilitate a reduction in the nefarious impact of corruption on economic growth, a complementary set of institutions need to be in place; transparency alone is not sufficient to curb corruption because it only reduces information asymmetries and does not change incentives. Government officials who want to support the development of their country by creating mechanisms that increase transparency to reduce corruption will also need to create the complementary mechanisms that alter incentives. Hence, in addition to creating more open and transparent government purchasing contracts and disclosing the payments made by companies and the use of such payments, government officials need to improve the punishment of corrupt individuals with harsher laws against corruption and improve the implementation of such punishments with a more independent and efficient judicial system. Sunlight is a good disinfectant, but in combination with a good detergent it helps kill all parasites.

ACKNOWLEDGMENTS

I thank the Robert Morrison Fellowship at Northeastern University for financial support. All errors are mine.

REFERENCES

- Ades, A., and Di Tella, R. (1997). National champions and corruption: Some unpleasant interventionist arithmetic. *Economic Journal* 107, 1023–1043.

- Bac, M. (1996). Corruption, supervision and the structure of hierarchies. *Journal of Law Economics and Organization* 12, 277–298.
- Bac, M. (2001). Corruption, connections and transparency: Does a better screen imply a better scene? *Public Choice* 107, 87–96.
- Bardhan, P. (1997). Corruption and development: A review of issues. *Journal of Economic Literature* 35, 1320–1346.
- Brandeis, L. (1913). What publicity can do. *Harper's Weekly*, December 20, 10–13.
- Cornand, C., and Heinemann, F. (2008). Optimal degree of public information dissemination. *Economic Journal* 118, 718–742.
- Cuervo-Cazurra, A. (2006). Who cares about corruption? *Journal of International Business Studies* 37, 803–822.
- Cuervo-Cazurra, A. (2008). The effectiveness of laws against bribery abroad. *Journal of International Business Studies* 39, 634–651.
- Cuervo-Cazurra, A. (2014). Corruption. In *Wiley Encyclopedia of Management*, 3rd ed., ed. C. L. Cooper. Marblehead, MA: John Wiley & Sons.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (2002). The regulation of entry. *Quarterly Journal of Economics* 117, 1–37.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review* 14, 57–74.
- Elliot, K. (1997). Corruption as an international policy problem: Overview and recommendations. In *Corruption and the Global Economy*, ed. K. Elliot. Washington, DC: Institute for International Economics, 175–233.
- Forssbäck, J., and Oxelheim, L. (2006). Transparency, capital formation and economic growth. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim. Amsterdam: Elsevier, 1–45.
- Huntington, S. P. (1968). *Political Order in Changing Societies*. New Haven, CT: Yale University Press.
- Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3, 305–360.
- Kaufmann, D. (1997). Corruption: The facts. *Foreign Policy* 107, 114–131.
- Kunicova, J. (2006). Democratic institutions and corruption: Incentives and constraints in politics. In *International Handbook of the Economics of Corruption*, ed. Rose-Ackerman. Northampton, MA: Edward Elgar, 140–160.
- Lambsdorff, J. G. (2003). How corruption affects persistent capital flows. *Economics of Governance* 4, 229–243.
- Lui, F. T. (1985). An equilibrium queuing model of bribery. *Journal of Political Economy* 93, 760–781.
- Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics* 110, 681–712.
- Mauro, P. (1998). Corruption and the composition of government expenditure. *Journal of Public Economics* 69, 263–279.
- Mishra, A. (2006). Corruption, hierarchies and bureaucratic structure. In *International Handbook of the Economics of Corruption*, ed. S. Rose-Ackerman. Northampton, MA: Edward Elgar, 189–215.
- OECD. (1996). *Recommendation of the Council on the Tax Deductibility of Bribes to Foreign Public Officials*. Paris: Organization for Economic Co-operation and Development. <http://www.oecd.org/tax/taxandcrime/oecdrecommendationonthetaxdeductibilityofbribesto-foreignpublicofficials.htm>.

- OECD. (1997). *Convention on Combating Bribery of Foreign Public Officials in International Business Transactions*. Paris: Organization for Economic Co-operation and Development. www.oecd.org/dataoecd/4/18/38028044.pdf.
- Potter, J. D., and Tavits, M. (2011). Curbing corruption with political institutions. In *International Handbook of the Economics of Corruption*, Vol. Two, eds. S. Rose-Ackerman and T. Soreide. Northampton, MA: Edward Elgar, 52–78.
- Recanatini, F. (2011). Anti-corruption authorities: An effective tool to curb corruption? In *International Handbook of the Economics of Corruption*, Vol. Two, eds. S. Rose-Ackerman and T. Soreide. Northampton, MA: Edward Elgar, 528–569.
- Rodriguez, P., Uhlenbruck, K., and Eden, L. (2005). Government corruption and the entry strategies of multinationals. *Academy of Management Review* 30, 383–396.
- Rose-Ackerman, S. (1999). *Corruption and Government*. Cambridge, UK: Cambridge University Press.
- Rose-Ackerman, S. (2004). Governance and corruption. In *Global Crises, Global Solutions*, ed. B. Lomborg. Cambridge, UK: Cambridge University Press, 301–344.
- Rose-Ackerman, S. (2006). *International Handbook on the Economics of Corruption*. Northampton, MA: Edward Elgar.
- Rose-Ackerman, S., and Soreide, T. (2011). *International Handbook on the Economics of Corruption*, Vol. Two. Northampton, MA: Edward Elgar.
- Ross, S. A. (1973). The economic theory of agency: The principal's problem. *American Economic Review* 63, 134–139.
- Shleifer, A., and Vishny, R. W. (1993). Corruption. *Quarterly Journal of Economics* 108, 599–617.
- Svensson, J. (2005). Eight questions about corruption. *Journal of Economic Perspectives* 19, 19–42.
- Tanzi, V. (1998). Corruption around the world: Causes, consequences, scope, and cures. *IMF Staff Papers* 45(4), 559–594.
- Tillen, J. G., and Delman, S. M. (2010). Lost in translation: The language of bribery. *The Corporate Governance Advisor* 12(July/August), 12–17.
- Transparency International. (2012). *Corruption Perceptions Index*. <http://www.transparency.org/cpi2012/results>.
- US Congress (1977). The Foreign Corrupt Practices Act of 1977. Washington, DC: 95th US Congress. <http://www.justice.gov/criminal/fraud/fcpa/>.
- Wei, S. J. (2000). How taxing is corruption on international investors? *Review of Economic and Statistics* 82, 1–11.
- World Bank. (2012). *Worldwide Governance Indicators*. Washington, DC: World Bank. <http://info.worldbank.org/governance/wgi/index.asp>.

PART IV

**CORPORATE
TRANSPARENCY**

CHAPTER 16

MULTINATIONAL CORPORATIONS' RELATIONSHIP WITH POLITICAL ACTORS: TRANSPARENCY VERSUS OPACITY

PERVEZ N. GHAURI, AMJAD HADJIKHANI,
AND CECILIA PAHLBERG

16.1 INTRODUCTION

AFTER the pioneering study on corruption by Rose-Ackerman (1978), the rapidly growing access to information has increasingly directed the attention of business, society, and political actors toward the question of how the interaction between multinational companies (MNCs) and political units follows prevailing ethical norms. Within this context, there has been considerable emphasis on transparency and its impact on business performance (Hadjikhani and Ghauri, 2006). While transparent and legitimate actions strengthen a firm's market position, information on opaque (undisclosed) and illegitimate behavior may have severe negative consequences for a firm. The focus in this chapter is on the relation between business and political actors, building on the logic that we have transparent behavior if information about the interaction between MNCs and political units is openly available, and opaque behavior if the parties avoid disclosing information.

While earlier studies predominantly concern either transparency or opacity independently, the aim of this chapter is to propose a theoretical view where they are regarded as two ends of the same continuum. Underpinning the continuum of transparency/opacity is a view building on behavioral theory, which includes the conceptual elements of trust/distrust and legitimacy/illegitimacy in the relationship between the business and political actors. It considers the choice between transparency and opacity as an indispensable part of MNCs' management of their interaction with local and

foreign political organizations, which can strengthen or weaken the firms' market positions.

In recent years, problems related to information flows have captured the attention of a number of studies on transparency (Berton and Salanie, 2003) and opacity (Ackert et al., 2007; Hyytinen and Pajarinen, 2008). Whereas those in favor of corporate transparency and lobbying stress availability of information for market participants (see, e.g., Kirchsteiger and Prat, 2001; Berton and Salanie, 2003), those against argue that full transparency is an ideal condition far from political and business realities. In these contributions, information specificity and disequilibrium of knowledge among market and political actors is emphasized (Bushee and Noe, 2000; Johal and Ulph, 2002).

Among those who study opacity, researchers such as Putrevu et al. (2012) stress the impact of opacity on business performance (see also Brown and Dacin, 1997; Mohr and Webb, 2005; Treisman, 2007). Considering opacity and firms' behavior, researchers also point to the demands from the civil society for business information transparency and therefore there has been a growing interest in studies on the connection between democracy and transparency (Hollyer et al., 2011), corporate social responsibility (Putrevu et al., 2012), corporate governance (Hess, 2007), factors determining corporate transparency (Miller, 2004), and cross-national variations in corruption (Treisman, 2007). In these contributions, the impact of information transparency on behavioral aspects such as trust and legitimacy among involved actors has rarely been considered.

There is, however, some research focusing on the relationship between opacity and issues such as firm size (Hyytinen and Pajarinen, 2008), firms' financial reports (Dempsey et al. 2012), firm value, and corporate strategy (Duru et al., 2013), thus moving the analysis from an aggregate economic or financial view toward firm level and management theory. In these studies, the focus is either on transparency or opacity. They implicitly connect the issue to concepts such as values and trust. But the question of how these concepts are interrelated remains largely untouched. Because of this absence and in line with the call from researchers such as Koessler and Lambert-Mogiliansky (2013) and Su et al. (2011), we employ a behavioral view and argue that knowledge about transparent/opaque behavior is evaluated and judged by MNCs' surrounding units, that is, society, business, and political units. The surrounding units evaluate the activities of MNCs with respect to their legitimacy and trustworthiness, and this affects MNCs' market positions (Hadjikhani and Sharma, 1999). Hence, the theoretical discussion in this chapter connects transparency and opacity to the behavioral concepts of legitimacy and trust. The question addressed is how MNCs manage transparency in their interactions with political organizations to establish a legitimate and trusted position in the wider society.

While business research predominantly focuses on corporate and political transparency at an aggregated level (Berton and Salanie, 2003), our discussion follows studies such as Koessler and Lambert-Mogiliansky (2013) and Hadjikhani and Ghauri (2006) and stresses the importance of information asymmetries and business-political

relationship specificity. The reasoning is based on the following: (1) transparency/opacity is specific and is agenda-/issue-related; (2) transparency and opacity can coexist, that is, the same business agenda can be opaque for some units and transparent for other units; and, finally, (3) there is heterogeneity in values and norms prevailing in the home and foreign markets.

After a discussion on transparency and opacity in Section 16.2, we will in Sections 16.3–16.6 elaborate theoretical thoughts concerning the relationship between the three elements of trust, legitimacy, and transparency. These thoughts are also related to two short cases, illustrating activities in the two MNCs Ericsson and Teliasonera, which are presented in the appendix. Section 16.7 concludes the chapter.

16.2 TRANSPARENCY AND OPACITY

The term transparency has gained increased attention during the last three decades. In this development, Forssbaeck and Oxelheim (2006), for example, incorporate the idea of information availability and consider asymmetric distribution of information between different market actors. When defining transparency, some scholars refer to its broadest sense, consisting of all factors that affect the information flow (Street and Meister, 2004), while others such as Hadjikhani and Ghauri (2006) stress asymmetry in the flow of information and specifically connect it to the activities of business firms. Transparency is connected to what the firm is doing and what is revealed to others. In this chapter, transparency is understood as incorporating the evaluation of an action and the extent to which it is communicated (see also Ang et al., 2000). Transparency thus encompasses (1) actions undertaken by business and/or political actors, (2) availability of information about specific actions, and (3) closeness of the actions to the existing ethical values both locally and in foreign countries.

Because information availability includes evaluation, it can be argued that the matter of transparent/opaque behavior is embedded in a context holding the judgment of two or more actors. While internal transparency concerns the actions and exchange of information within a firm, external transparency incorporates how the actions (1) are in line with the social and ethical norms in the surrounding society and (2) are communicated to the actors in the surroundings. Hence, the definition encapsulates not only information flows, but also how the surroundings, local and international, regard the behavior of MNCs in light of prevailing values (Hadjikhani and Ghauri, 2006).

Transparent behavior can be defined as openness and availability of information allowing others to know what firms are doing. Opacity, on the other hand, is explained by the darkness, cloudiness, or dimness of information on actions of business units. Whereas transparent behavior is open and can be evaluated by others as legitimate, opaque behavior is not open or disclosed and is often considered illegitimate. Opacity occurs when outsiders cannot easily judge the actions of or determine the quality in the information provided by business firms.

There is extensive research to connect economic growth to the transparency in the society (Putrevu et al., 2012) or to corporate and institutional transparency (Oxelheim, 2006). While the majority connect transparency to financial outcomes, others relate transparency to social responsibility and ethical behavior, and some, such as Halter et al. (2009), relate it to business performance. Researchers in economics and finance have made important contributions to transparency/opacity and its operationalization. Recently there has been a growing interest in the role of transparency and opacity in monitoring and disciplining business firms. For instance, researchers studying banks (Mbarek and Hmaied, 2012), productivity (Riahi-Belkaoui, 2007), or firms' earnings (Riahi-Belkaoui and AlNajjar, 2006) and the degree of financial constraints (Hyytinen and Pajarinen, 2008) identify transparency/opacity as a determinant of firms' performance. There are also efforts to identify the determinants of opacity (Hyytinen and Pajarinen, 2008), and researchers such as Campbell and Kracaw (1980) explain opacity in terms of confidentiality. In these contributions, it is assumed that transparency/opacity can be measured.

However, the relationships between business firms and political organizations that display both transparent and opaque behavior have seldom captured the attention of researchers, despite the fact that political organizations and MNCs have the common interest of following the existing norms for gaining trust. It is not until the last few years that this field has received certain interest (Uhlenbruck et al., 2006; Treisman, 2007).

Transparency and opacity are not necessarily extreme opposites. An issue can be opaque but at the same time legitimate and ethical. For example, banks negotiate interest rates with each customer separately and the information is not available for other customers. As illustrated in the cases in the appendix, Ericsson's lobbying behavior follows prevailing ethical norms but is not exposed to the general public. Moreover, owing to differences in the political value systems or cultural differences between countries, an action can be recognized as opaque in one society and transparent in another. As the case of Teliasonera in this study shows, external organizations such as political units in different countries (Sweden and Uzbekistan) certainly have differences in the political rules and social values and also identify transparency in various ways.

Thus, transparency as well as opacity comprises the two crucial aspects of specificity and degree. For example, while a firm can be opaque in one specific issue, it can be more transparent in other issues. Diamond and Verrecchia (1991) argue that firms are more opaque toward external units such as political organizations than toward internal members of the firm. Morgan (2002) claims that opacity leads to disagreement between internal and external organizations. Besides specificity, there are also degrees/levels of opacity for each specific issue, in line with the argument of transparency and opacity following an ordinal measure exhibiting signs of less or more (Forza, 1995; Street and Meister, 2004). The extremes in transparency and opacity are interconnected and present competitive means to achieve certain goals. Hence, they stand at two extremes of a scale presenting different relationship behaviors that affect business performance. The extent of low and high opacity accordingly becomes connected to the degree of information availability about the firms' actions. Hence, transparency

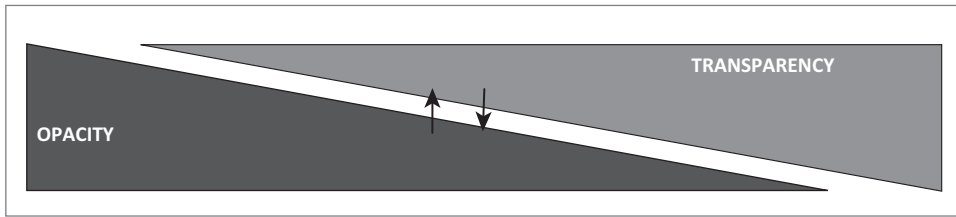


FIGURE 16.1 Degrees of opacity and transparency.

of information availability does not imply just yes or no responses. It rather depicts a degree or level of how much information is available. As discussed earlier, a continuum develops connecting transparency and opacity. Empirically, firms or political organizations are always challenged with the decision of what to say and what not to say and to whom. Generally, while low opacity is related to high transparency, high opacity is related to low transparency.

Figure 16.1 illustrates the scale for transparent/opaque behavior. As also Bryans et al. (2008) suggest, firms may choose both opaque and transparent behavior. As Figure 16.1 shows, transparency and opacity can exist side by side, because the level of information availability can be high for one unit and low for another. Moreover, one specific issue may have a degree of transparency and also a degree of opacity.

Ackert et al. (2007), when studying financial and credit risk, refer to the dependency in disclosure of information for specific business firms. Dennis et al. (2000) study firms' debt issues to provide evidence that debt contract terms are driven by asymmetric information on contracting cost and credit risk. The authors implicitly hold the view that the same action and information can have a degree of transparency and opacity at the same time, varying for different actors. As the case of Teliasonera shows, the complexity in the connection between opacity and transparency increases when MNCs' behavior is studied in foreign countries with a variety of cultures. The existing values are different and transparency/opacity is differently perceived. While the behavior of an MNC in one country is recognized as transparent, the same action can be considered as opaque in another country. In extreme cases of opacity, as Mehta and Jha (2012) argue, opacity and corruption become the same. But when the value systems in different countries are more similar, like the case of Ericsson in the European Union, lobbying behavior is recognized by all parties as transparent.

16.3 TRANSPARENCY, LEGITIMACY, AND TRUST

The values of the surroundings consist of judgments affecting the position of an actor. Thus transparent/opaque behavior includes the evaluation of an actor's actions by its

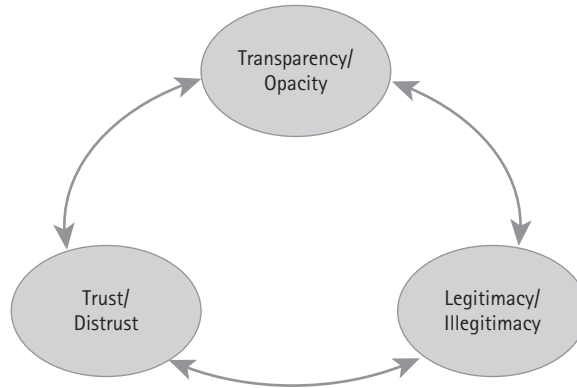


FIGURE 16.2 Theoretical view of the relationship among transparency, legitimacy, and trust.

surroundings. This reasoning relates the transparent/opaque behavior to the two interconnected concepts, trust and legitimacy, which are crucial for the MNCs' position in the foreign market (Hadjikhani and Ghauri, 2001, 2006). Defining MNCs' performance in foreign countries in terms of legitimacy and trust, the presumption is that the question of information availability is related not only to the matter of asymmetry in the information. It is also related to the surroundings' evaluation of the firms' actions, which can strengthen or weaken the position of the business actors, that is, the legitimacy of their position in the foreign market, and also how trustworthy their activities are and whether they follow the existing business, political, and social values. If not, distrust will develop. Accordingly, the theoretical view is composed of the three interconnected concepts of (1) transparency/opacity, (2) legitimacy/illegitimacy, and (3) trust/distrust (see Figure 16.2).

Similar to the discussion about the degree of opacity and transparency, trust and legitimacy also exist on a continuum. The element of trust encompasses a range from trust to distrust and the legitimacy continuum extends from legitimate to illegitimate behavior. The logic is that if, for example, business firms or political units want to keep or strengthen a position of legitimacy and trust, information about their actions has to be available for judgment by other actors. If the actions follow the existing values and are considered as trustworthy, then information availability strengthens the position. The rule of specificity applies also to legitimacy and trust. An action judged as legitimate in one country (even if the information is opaque) can be illegitimate and cause distrust in another country, as political, cultural, and economic values in different countries can be dissimilar.

16.4 TRANSPARENCY–LEGITIMACY

MNCs require supportive rules enacted by governments. Governments gain legitimacy and trust as these firms can create jobs and welfare that benefit voters and other

groups to whom they are responsible. The interaction between the two requires the resolution of conflicting interests, but also provides the condition for exploring options and sharing common values (Hult and Walcott, 1990). Both MNCs and political units are interdependent as they judge and evaluate the actions of each other. However, it is the information about actions that affects legitimacy and trust. While one aims to keep or strengthen its position in the business market, the other aims to strengthen its political position. Both MNCs and political units want to inform the surroundings that their actions are in line with prevailing values and are trustworthy. Insofar as activities are legitimate and transparent, the involved parties can strengthen their positions. But when some actors undertake actions that are illegitimate, the release of information harms the involved parties (Hadjikhani and Håkansson, 1996). This is to say that both business and political actors are seeking legitimacy (Eliassen and Kooiman, 1993) and incorporate values from different groups into their decisions to strengthen their position.

Because political units gain their legitimacy from the society, political actions such as supportive rules for foreign firms are assumed to follow values for those who are concerned. For example, specific actions encouraging favoritism are recognized as illegitimate and cause distrust when the action is transparent. Political organizations, in keeping their legitimate position and society's trust, can support or coerce specific MNCs. An actor like Teliasonera in Uzbekistan chose opacity when releasing information. This is dependent on the action's incompatibility with the prevailing ethical and value systems or because the action concerns a specific actor. Release of information on specific behavior that follows political and social values generates trust toward MNCs. Opacity about illegitimate actions has no effect on an MNC's position as long as it is not known. For example, insofar as cartel agreements are opaque, they pose no threat to the cartel members' positions—it is the disclosure that reveals the illegitimacy of their behavior and causes the harm (Siltaoja and Vehkaperä, 2010).

Studies that have paid attention to firms' management of political connections range from the presumption that management is a function of transparent response to the political environment (Egelhoff, 1988; Conner, 1991; Hadjikhani and Ghauri, 2001; Kogut, 1991; Korbin, 1982) to the design of coping strategies (Johnson, 1982; Ring et al., 1990). The coping strategies view is often dealt with as the management of risk (Miller, 1993) by transparent and legitimate actions. The complexity arises when an action is recognized as legitimate and transparent in one country but is illegitimate and opaque in another one.

Figure 16.3 illustrates a variety of combinations. For the sake of simplicity, the discussion that follows mainly concerns the four extreme conditions. As the CEO in Teliasonera after the release of information stated, "The company has no tolerance for corruption." A firm's opaque behavior, when it does not fit with the value system of a society and is recognized as unethical, will sometimes lead to such a statement when it is disclosed. As Figure 16.3 shows, opaque behavior can also be legitimate as it follows the existing ethical rules. However, opaque behavior is differentiated among actors, like lobbying behavior, in the case of Ericsson in the European Union, or banks that

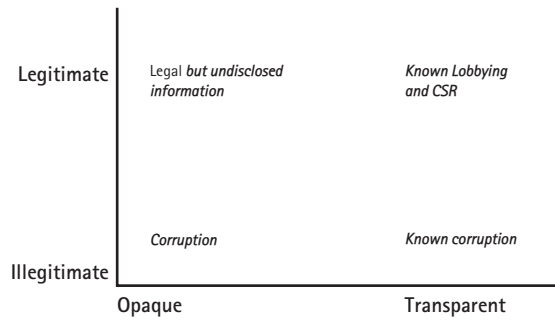


FIGURE 16.3 Degree of legitimacy and transparent behavior.

do not disclose information about how they treat different customers. Thus, opaque behavior, as Figure 16.3 shows, has a continuum ranging from illegitimate corrupt behavior to activities that are legitimate.

Closely connected to the inquiry of specificity and issue-related behavior (see also Figure 16.3) are lobbying activities (Austen-Smith, 1987; Potters, 1992; Andersen and Eliassen, 1996), bargaining (Crawford, 1982; Bolton, 1991), and bribery (Rose-Ackerman, 1978), which are concerned with the subject of legitimate/transparent and illegitimate/opaque behavior. In the studies by Andrews (1996) and Miller (1993), lobbying concerns marketing strategy, whereas other studies construe lobbying as the creation of specific pressure on political units for unique gains. But as Figure 16.3 shows, lobbyists' behavior is not always transparent for all parties. In the case of Ericsson, the lobbying behavior of the firm was legitimate but not disclosed in detail to the competitors. This is in line with the arguments from researchers such as Crane and Desmond (2002) and Hadjikhani (2000), who suggested the adoption of a relationship perspective in order to understand the interaction between informal units, states, and MNCs. Numerous studies have noted a lack of profound research concerning transparency and the mutual dependency between MNCs and politicians and lobbying organizations (Trim, 2001; Hadjikhani et al., 2008). In these contributions, lobbying is explained by relationship and influences, either by social groups with knowledge, or through networks of relationships with political agencies, or through cooperation with nonprofit organisations, such as those involved in Corporate Social Responsibility (CSR) activities that have a position of strong legitimacy in the society.

Figure 16.3 also shows the extreme condition of opaque illegitimate behavior, exemplified by the case of Teliasonera when signing a licensing contract with a small firm in Uzbekistan that became recognized in Sweden as corruption. Corruption in studies such as Burguet and Che (2004), Celentani and Ganuza (2002), and Compte et al. (2005) is defined as illegitimate actions that are against the prevailing economic, political, and social values. According to Uhlenbruck et al. (2006), corruption is the abuse of power for private benefit; for example, it is the decision of an actor to favor a business firm over others against the existing values and rules. Corruption and transparency are two connected issues in which the relationship between parties is corrupt when the

involved parties have undertaken illegitimate actions and the information is hidden from other parties (Kosenok and Lambert-Mogiliansky, 2009). Hence, management of political relationships can be (1) transparent and legitimate when knowledge about actions in the whole process is voluntarily disclosed to all parties, or (2) corrupt when activities are illegitimate and unethical and information is not disclosed.

The fields of corruption and transparency become more vital as international firms act in different countries with a variety of value systems and definitions of legitimate actions. Further, it is of interest how the actors follow the ethical values in different countries. In Europe, for example, firms' political activities do not necessarily aim to gain direct financial support from the political sphere but MNCs can strive for transparent influence that might ultimately subsidize the business activities (Alt and Chrystal, 1983; Boddewyn and Brewer, 1994). As in the case of Ericsson, political actors in Sweden gain legitimacy when they can inform the society that the cooperation with Ericsson has created new jobs and increased economic prosperity in Sweden. In many nondemocratic societies, such as Uzbekistan in the Teliasonera case, opacity and corruption underpin the society and are sometimes even considered normal behavior. However, although this behavior is accepted, it does not mean that the relationships are characterized by trust.

16.5 TRANSPARENCY–TRUST

Political units gain their legitimacy through transparent and trustworthy behavior (Hadjikhani and Sharma, 1999). Suspicions on the part of the civil society regarding opaque behavior, or a transparent illegitimate action, causes distrust—the expectation that others will not act in one's best interest (Govier, 1994) or negative expectations regarding the legitimacy of other's actions (Lewicki et al., 1998). As the case of Teliasonera reveals, it was the suspicions of the Swedish society about opaque illegitimate behavior that caused distrust. Trust can be regarded as an encoded knowledge value resulting from information about an actor's behavior. Any legitimate/illegitimate action will generate knowledge codes evaluating the trustworthiness of an actor. Researchers such as O'Higgins and Morgan (2006), Mobus (2005), and Warren (2003) refer to the concept of trust because the relationship between actors does not necessarily require exchange of monetary or technological resources. The logic of degree and specificity applies here too: opaque/transparent behavior can be legitimate and trustworthy for one issue and illegitimate and untrustworthy for another issue.

The beginning of the 21st century saw a number of major corporate scandals, such as Enron. These scandals not only have affected the trust relationships between MNCs and political organizations, but also civil society questioned the legitimacy of business actors, which spurred increasing public demands for tighter legal rules for businesses (Child, 2002; Siltaoja and Vehkaperä, 2010). Political rules are expected to establish the same guidelines for legitimate behavior for all business firms. When this is not

accomplished, it usually attracts significant media attention. The media, as a vehicle to make the actions of business firms and political units transparent, become an important factor when considering how specific organizational phenomena are constructed (see Alvarez et al., 2005; Mazza and Alvarez, 2000; Vaara et al., 2006; Vaara and Tienari, 2008; Siltaoja and Vehkaperä, 2010). Information released by the media about illegitimate actions often provokes distrust. Teliasonera became accused of hiding information and both political organizations and the society lost their trust. The government undertook legal measures to punish the illegitimate behavior.

Firms may exhibit opaque behavior to maintain the legitimacy of their position, but when the media make the actions more transparent, that can drive firms to disclose illegitimate behavior that might weaken the trust toward MNCs. In pushing for transparency, the media look for opaque behavior to strengthen their own legitimacy by developing distrust toward those acting illegitimately. The media can reach a large number of people, and may reveal controversial organizational and social practices to disclose illegal or unethical actions. The media make choices on how these kinds of actions are (re)presented and framed to the wider public, and this has political, social, and moral implications (Iyengar, 1991; Fairclough, 1995). Hadjikhani and Håkansson (1996) illustrate the impact of a consulting firm—an agent—in the contract between the Swedish MNC Bofors and the Indian government. Involvement of this agent led to an accusation of opacity, illegitimate corrupt behavior, and finally a lost contract, despite the fact that involvement of agents for business deals in India is normal and acknowledged as legitimate activity. But the opposition party in India used the media to inform people and arranged protests to challenge the Indian government. It is the struggle and complaints from different business actors, political actors, and the society that enforce the movement from high opacity to more transparent behavior. Alternatively it may be that business firms may treat a foreign customer in one way and the domestic one in another way.

16.6 LEGITIMACY–TRUST

Legitimacy is a perception or assumption that the actions of an entity are appropriate within a socially constructed system of values and beliefs (Schwarz and Schuman, 1997; Mobus, 2005). Accordingly, legitimacy is recognition by the surrounding actors and is constructed on the connection between MNCs' actions and the values developed in local and foreign countries. The closer the activities of an actor are perceived to be to the sociopolitical values, the higher the trust and the stronger the legitimacy of the actor. Legitimacy of an actor is constructed on the surrounding actors' knowledge on how an actor's performance preserves the rule of mutuality and maintains its own interest and that of others. While business legitimacy is composed primarily of evaluation by the actors with whom it has business exchange, political legitimacy relies on how business and social actors perceive the information about the actions of political actors (Hadjikhani and Sharma, 1999; Hadjikhani and Ghauri, 2001).

Trust is defined as the benevolence of the counterpart's actions toward the achievement of mutuality (Morgan and Hunt, 1994) between different individual actors, firms, political organizations, and society. Trust generally contains the nature of specificity, that is, it is related to a specific issue (Boersma et al., 2003). Trust in political relationships, beside the nature of specificity, can also have a general dimension that affects legitimacy. Any political action affects legitimacy as the actions are always evaluated by members in society and create an attitude, even among those who are not directly affected by the political decisions. The case of Teliasonera developed distrust among all members in the society forcing the Swedish government to manifest its concerns. Lobbying, even though its ultimate goal is to influence political units, is a well-known action in Western society (see the case of Ericsson). But if the same action involves agents (acting as lobbyists) they may be conceived as untrustworthy. However, the behavior of involving agents may be recognized as legitimate in other countries. This may have been one reason that people in Uzbekistan did not assess Teliasonera's behavior as illegitimate.

Distrust can be defined as the expectation that an actor will behave in a way that does not ensure the safety and security of another actor (Kramer, 1999), and is a negation of trust (Cofta, 2006). Illegitimate behavior, like the license contract in Uzbekistan, or even sometimes opacity in information disclosure (like the media's articles accusing Teliasonera of hiding information) can develop distrust not only toward a specific object, but also others sharing the same values. In other words, trust/distrust diffuses to others. The diffusion of distrust in the Teliasonera case from Swedish media to the political sphere and the general public is clear evidence of this logic. The explanation is that the willingness to trust is not only embedded in knowledge about the specific actions of one or two parties, it also encompasses information settings. Hence, distrust encompasses a context constructed on directly involved parties but also their connections to third parties. While Lewicki and Bunker (1995) identify transparent information about legitimate behavior as a source of trust/distrust, this study further extends the view and argues that opacity can also become a source of trust/distrust. Insofar as opacity concerns actions that are in line with prevailing values, trust is preserved, for example, in the lobbying case of Ericsson.

16.7 CONCLUDING REMARKS ON MNCs' RELATIONSHIP WITH POLITICAL ACTORS AS AN ISSUE OF TRANSPARENCY VERSUS OPACITY

A main point in this chapter is that political actors and MNCs, to maintain their legitimate position, must undertake measures to show the society transparent behavior because firms' opaque or corrupt behavior may call for actions affecting the

performance of the firms. The study contributes new knowledge by connecting transparency and opacity and the impact of such behavior on the relationship between MNCs and political actors. While earlier contributions concern opacity and transparency as disconnected phenomena, this chapter put forward the idea of a connection between the two. The theoretical view suggests (1) a continuum for transparency from low to high, (2) a continuum for opacity from high to low, and (3) the connection between the two. Further, the complexity in the connection between transparency and opacity is stressed and this is related to differences in values across countries. The lack of empirical studies calls for further research on these complexities.

Owing to the lack of attention in earlier research, a theoretical frame has been developed in this chapter for studying the impact of transparency/opacity on the relationship between MNCs and political actors. The theoretical view connects transparency/opacity to the behavioral elements of legitimacy and trust. In line with the continuum of transparency/opacity, continuums for trust/distrust and legitimacy/illegitimacy are introduced, which permits a deeper understanding of how MNCs become affected by their transparent/opaque behavior. To verify these conceptual elements, two cases in the appendix exemplify the validity of the theoretical view. However, more empirical case studies that examine these concepts and their connections are needed.

The interdependencies between the three elements contribute not only to a better understanding of the connections between transparent/opaque behavior in the relationship between MNCs and political actors, but also introduce the tools for studying how such behavior impacts on the values and judgment of others embedded with the firms. The interdependency between MNCs and political actors is concluded to be subjected to the surrounding actors' judgment. This network is constructed with ties holding values and rules in different countries. The activities of MNCs are valued not only by political actors but also by others in the local area and in foreign countries.

APPENDIX

TELIASONERA IN UZBEKISTAN

The Nordic telecom company Teliasonera is since 2012–2013 subject to allegations of corruption related to their expansion in the former Soviet republic of Uzbekistan. The company is headquartered in Sweden and the Swedish state is its largest shareholder, controlling 37%. In the last decade, Teliasonera has expanded rapidly in many emerging markets in Eurasia and the company profits have largely been attributed to success in these markets. In 2012, Swedish public broadcasting suddenly revealed that the acquisition of a licence in Uzbekistan in 2007 was suspicious, as the SEK 2.2 billion (about \$320 million) paid for getting the license went to a small firm with close connections to Gulnara Karimova, the daughter of the Uzbek president, Islam Karimov. This news received a great deal of media attention, and the anti-corruption unit of the

Swedish Prosecuting Authority initiated an investigation that has expanded to look at additional activities performed by Teliasonera in Uzbekistan.

The CEO, Lars Nyberg, denied in media interviews that the firm was involved in any money laundering and bribing activities, and he stated that the firm had very limited information about the small firm, Takilant, from which they acquired the license. Later documents, however, revealed that within the company there was substantial information about the connections between Takilant and Gulnara Karimova. The Swedish government reacted strongly and expressed worries for further loss in confidence in Teliasonera, and other important stakeholders demanded more openness and transparency. After considerable media attention, the CEO resigned in February 2013 and a new board was elected. In this process, the importance of an increased focus on ethics and anti-corruption work was stressed.

After the resignation, new documents have been published in the media, indicating that as recently as the summer of 2012, Teliasonera has had negotiations with Gulnara Karimova, for instance concerning money for getting access to a large number of new mobile-phone subscribers. There are also suspicions of bribes in exchange for protection from government agencies. The acting CEO at Teliasonera, Per-Arne Blomquist, said in an interview on Swedish Television ("Mission Investigation," May, 20, 2013) that the company has "zero tolerance for corruption." When asked about Teliasonera sponsoring a number of cultural and charity events linked to a charity fund headed by Gulnara Karimova, he said that "there is often a link between leading decision-makers and these kind of organisations."

The case illustrates how a company from a country considered as having a low degree of corruption becomes suspected of corrupt behavior when information about their entry and expansion into a completely different—but very profitable—market becomes public. Sweden is ranked as number 4 on Transparency International's corruption index 2012, while Uzbekistan is ranked 170 among 174 countries, and business practices in the two countries differ. What is considered unethical in one country might be normal/acceptable in the other. As pointed out by Hultén and Vanyushyn (2010), in highly corrupt countries, companies may be forced to pay bribes to be able to operate there. It is also common to use intermediaries to handle transactions that the firm wants to keep opaque because they can then deny that they have been involved in corrupt actions. Because the behavior of the company is evaluated by political actors, as well as society, it is important that it is in line with the values of these actors. When negative information about the activities becomes disclosed, legitimacy and trust are affected.

ERICSSON AND THEIR LOBBYING ACTIVITIES IN THE EUROPEAN UNION

Many large multinationals have established units in political centers to be able to gain knowledge and influence political decisions. Ericsson, the Swedish-based

telecommunication company, established such a unit in Brussels in the 1990s, at a time when the telecommunication market was liberalized and there was a need for synchronization of product standards. The manager in charge of this lobbying unit is responsible for developing relationships with political actors at different levels: the Commission via committees and industry associations, the Parliament via committees and also Swedish representatives. Further, it is important for the lobbying unit to mobilize resources within Ericsson when a political proposal or decision affecting the telecommunication industry is under consideration. Because the political actors lack specialized knowledge of the industry, they are dependent on knowledge from Ericsson and other firms in the field. Hence, the technical and market knowledge that these business actors have is vital for the politicians.

For each suggestion, the manager integrates the technical and law experts from Ericsson into the committee in the commission. In negotiations with the committee members, Ericsson has to convince the committee's political members, who subsequently deliver the issue to the Commission and thereby the Parliament, that the solution is appropriate for different groups in the market and society. Thus, to present a cogent argument for the proposal and convince the committee or the Commission, Ericsson's manager also needs to have knowledge about the political interdependency of all these groups.

When a political decision stands to benefit several companies, they act by means of ad hoc and/or industry associations. There are, for instance, cases when Ericsson and Siemens cooperate temporarily on political issues such as liberalisation and state subsidies. They establish an ad hoc committee to present and discuss the proposal in the committee and in the decision-making units. The case of ITA (Transatlantic Business Dialogue), for example, which aimed to eliminate customs' duties between the United States and the European Union for IT products, involved all of the competitors in Europe working together to influence politicians for new customs rules. A committee with 30 people from different countries was established. The committee engaged political groups, industry associations, and experts from firms such as Ericsson and Nokia. The results led to a political decision between the United States and the European Union for synchronization of the customs rules for IT products. The manager of Ericsson believed that this new rule benefits Ericsson. He explained that Ericsson's high technology and low production costs can improve its market activities not only in the United States, but also in countries within the European Union that had stricter customs' rules for firms from outside the country.

REFERENCES

- Ackert, L., Huang, R., and Ramirez, G. (2007). Information opacity, credit risk and the design of loan contracts for private firms. *Financial Markets, Institutions & Instruments* 16(5), 221–242.
- Alt, J. E., and Chrystal, K. A. (1983). *Political Economics*. Berkeley: University of California Press.

- Alvarez, J. L., Mazza, C., and Strandgaard Pedersen, J. (2005). The role of the mass media in the consumption of management knowledge. *Scandinavian Journal of Management* 21(2), 127–132.
- Andersen, S., and Eliassen, K. A. (1996). *The European Union: How Democratic Is It?* London: SAGE.
- Andrews, L. (1996). The relationship of political marketing to political lobbying: An examination of the Devonport campaign for the Trident refitting contract. *European Journal of Marketing* 30(10/11), 68–91.
- Ang, C.-L., Davies, M., and Finlay, P. N. (2000). Measures to assess the impact of information technology on quality management. *The International Journal of Quality & Reliability Management* 17(1), 42–66.
- Austen-Smith, D. (1987). Interest groups, campaign contributions, and probabilistic voting. *Public Choices* 54, 123–139.
- Berton, M. L., and Salanie, F. (2003). Lobbying under political uncertainty. *Journal of Public Economy* 87, 2589–2610.
- Boddeyn, J. J., and Brewer, T. L. (1994). International-business political behaviour: New theoretical directions. *Academy of Management Review* 19(1), 119–143.
- Boersma, M., Buckley, P., and Ghauri, P. N. (2003). Trust in international joint venture relationships. *Journal of Business Research* 56(12), 1031–1042.
- Bolton, G. (1991). A comparative model of bargaining: Theory and evidence. *American Economic Review* 81, 1096–1136.
- Brown, T. J., and Dacin, P. A. (1997). The company and the product: Corporate associations and consumer product responses. *Journal of Marketing* 61, 68–84.
- Bryans, J., Koutny, M., Mazaré, L., and Ryan, P. (2008). Opacity generalised to transition systems. *International Journal of Security* 7(6), 421–435.
- Burguet, R., and Che, Y. K. (2004). Competitive procurement with corruption. *The Rand Journal of Economics* 35, 50–68.
- Bushee, B., and Noe, C. (2000). Corporate disclosure practices, institutional investors and stock return volatility. *Journal of Accounting Research* 38, 171–202.
- Campbell, T., and Kracaw, T. (1980). Information production, market signalling, and the theory of intermediation. *Journal of Finance* 35, 863–882.
- Celentani, M., and Ganuza, J. (2002). Corruption and competition in procurement. *European Economic Review* 46(7), 1273–1303.
- Child, J. (2002). The international crisis of confidence in organizations. *Academy of Management Executive*, 16(3), 145–147.
- Cofta, P. (2006). Distrust. *Proceedings of the International Conference on Evolutionary Computation*. Fredericton, Canada, August 14–16, pp. 250–258.
- Compte, O., Lambert-Mogiliansky, A., and Verdier, T. (2005). Corruption and competition in procurement. *The Rand Journal of Economics* 36(1), 1–15.
- Conner, K. R. (1991). A historical comparison of resource-based theory and five schools of thoughts within industrial organization economics. *Journal of Management* 17, 121–154.
- Crane, A., and Desmond, J. (2002). Societal marketing and morality. *European Journal of Marketing*, 36(5/6), 548–569.
- Crawford, V. (1982). A theory of disagreement in bargaining. *Econometrica* 50, 607–637.
- Dempsey, S., Harrison, D., Luchtenberg, K., and Seiler, M. (2012). Financial opacity and firm performance: The readability of REIT annual reports. *The Journal of Real Estate Finance and Economics* 45, 450–470.

- Dennis, S., Nandy, D., and Sharpe, I. (2000). The determinants of contract terms in bank revolving credit agreements. *Journal of Financial and Quantitative Analysis* 35(1), 87–100.
- Diamond, D., and Verrecchia, R. (1991). Disclosure, liquidity, and the cost of capital. *Journal of Finance* 46(4), 1325–1359.
- Duru, A., Wang, D., and Zhao, Y. (2013). Staggered boards, corporate opacity and firm value. *Journal of Banking & Finance* 37, 341–360.
- Egelhoff, W. G. (1988). Strategy and structure in multinational corporations: A revision of the Stopford and Wells model. *Strategic Management Journal* 9, 1–14.
- Eliassen, K. A., and Kooiman, J. (1993). *Managing Public Organizations: Lessons from Contemporary European Experience*. London: SAGE.
- Fairclough, N. (1995). *Media Discourse*. London: Hodder Arnold.
- Forssbaeck, J., and Oxelheim, L. (2006). Transparency, capital formation, and economic growth. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim, pp. 1–45. Oxford: Elsevier.
- Forza, C. (1995). The impact of information systems on quality performance: An empirical study. *International Journal of Operations & Production Management* 15(6), 69–83.
- Govier, T. (1994). Is it a jungle out there? Trust, distrust and the construction of social reality. *Dialogue* 33, 237–252.
- Hadjikhani, A. (2000). The political behaviour of business actors: The case of Swedish MNCs and the EU. *International Studies of Management and Organization* 30(1), 93–117.
- Hadjikhani, A., and Ghauri, P. N. (2001). The behaviour of international firms in socio-political environments in the European Union. *Journal of Business Research* 52(3), 263–275.
- Hadjikhani, A., and Ghauri, P. N. (2006). Multinational enterprises and their lobbying activities in the European Union. In *Corporate and institutional transparency for economic growth in Europe*, ed. L. Oxelheim, pp. 371–397. Oxford: Elsevier.
- Hadjikhani, A., and Håkansson, H. (1996). Political actions in business networks: A Swedish case. *International Journal of Research in Marketing* 13(5), 431–447.
- Hadjikhani, A., Lee, J.-W., and Ghauri, P. N. (2008). Network view of MNCs' socio-political behaviour. *Journal of Business Research* 61(9), 912–924.
- Hadjikhani, A., and Sharma, D. (1999). A view on political and business actions. In *Advances in International Business and Marketing*, Vol. 9, eds. P. Ghauri, P. and A. Cavusgil, pp. 243–257. Bingley, UK: Emerald.
- Halter, M. V., Coutinho de Arruda, M. C., and Halter, R. B. (2009). Transparency to reduce corruption? *Journal of Business Ethics* 84, 373–385.
- Hess, D. (2007). Social reporting and new governance regulation: The prospects of achieving corporate accountability through transparency. *Business Ethics Quarterly* 17(3), 453–476.
- Hollier, J. R., Rosendorff, B. P., and Vreeland, J. R. (2011, October). Democracy and transparency. *The Journal of Politics* 73(4), 1191–1205.
- Hult, K. M., and Walcott, C. (1990). *Governing public organizations: Politics, structure and institutional design*. Pacific Grove, CA: Brooks/Cole.
- Hultén, P., and Vanyushyn, V. (2010). A new research paradigm to analyse the threats against fair competition in the global marketplace. *Competitiveness Review* 20(2), 182–193.
- Hyytinen, A., and Pajarinen, M. (2008). Opacity of young businesses: Evidence from rating disagreements. *Journal of Banking & Finance* 32, 1234–1241.
- Iyengar, S. (1991). *Is Anyone Responsible? How Television Frames Political Issues*. Chicago: University of Chicago Press.

- Johal, S., and Ulph, A. (2002). Globalization, lobbying and international environmental governance. *Review of International Economics* 10(3), 387–403.
- Johnson, C. (1982). *MITI and the Japanese Miracle: The Growth of Industrial Policy 1927–1975*. Stanford, CA: Stanford University Press.
- Julsrud, T., and Bakke, J. (2010). Building trust in networked environments: Understanding the importance of trust brokers. In *Leadership in the Digital Enterprise: Issues and Challenges*, ed. P. Yoong, pp. 251–272. Advances in Business Strategy and Competitive Advantage (ABSCA). IGI Global.
- Kirchsteiger, G., and Prat, A. (2001). Inefficient equilibria in lobbying. *Journal of Public Economics* 82(3), 349–375.
- Koessler, F., and Lambert-Mogiliansky, A. (2013). Committing to transparency to resist corruption. *Journal of Development Economics* 100, 117–126.
- Kogut, B. (1991). Country capabilities and the permeability of borders. *Strategic Management Journal* Summer Special Issue 12, 33–48.
- Korbin, S. (1982). *Managing Political Risk Assessment: Strategic Responses to Environmental Changes*. Berkeley, CA: University of California Press.
- Kosenok, G., and Lambert-Mogiliansky, A. (2009). Fine-tailored for the cartel—favoritism in procurement. *Review of Industrial Organisation* 35, 95–121.
- Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology* 50(1), 569–598.
- Lewicki, R., and Bunker, B. (1995). Trust in relationships: A model of trust development and decline. In *Conflict, Cooperation and Justice*, eds. B. Bunker and J. Z. Rubin, pp. 133–173. San Francisco: Jossey-Bass.
- Lewicki, R., McAllister, D., and Bies, R. (1998). Trust and distrust: New relationships and realities. *Academy of Management Review* 23(3), 438–458.
- Lippert, S. (2009). Trust in computer-mediated communications: Implications for individuals and organizations. In *Human Computer Interaction: Concepts, Methodologies, Tools, and Applications*, eds. C. and P. Zaphiris, pp. 2118–2131. Hershey, PA: Information Science Reference.
- Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics* 110(3), 681–713.
- Mazza, C., and Alvarez, J. L. (2000). Haute couture and prêt-à-porter: The popular press and the diffusion of management practices. *Organization Studies* 21(3), 567–588.
- Mbarek, L., and Hmaied, D. M. (2012). Bank informational opacity: Evidence from the Tunisian stock market. *Journal of Financial Regulation and Compliance* 20(3), 278–292.
- Mehta, A., and Jha, S. (2012). Corruption, food subsidies, and opacity: Evidence from the Philippines. *Economic Letters* 117, 708–711.
- Miller, K. (1993). Industry and country effects on managers' perceptions of environmental uncertainties. *Journal of International Business Studies* 24(4), 693–714.
- Miller, G. S. (2004). Discussion of what determines corporate transparency. *Journal of Accounting Research* 42(2), 253–268.
- Mobus, J. L. (2005). Mandatory environmental disclosures in a legitimacy theory context. *Accounting, Auditing & Accountability Journal* 18(4), 492–517.
- Mohr, L., and Webb, D. (2005). The effects of corporate social responsibility and price on consumer responses. *Journal of Consumer Affairs* 39(1), 121–147.
- Morgan, D. (2002). Rating banks: Risk and uncertainty in an opaque industry. *American Economic Review* 92(4), 874–888.

- Morgan, R., and Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing* 58 (3), 20–38.
- O'Higgins, E., and Morgan, J. (2006). Stakeholder salience and engagement in political organisations: Who and what really counts? *Society and Business Review* 1(1), 62–76.
- Oxelheim, L. (2006). *Corporate and Institutional Transparency for Economic Growth in Europe*. Oxford: Elsevier.
- Potters, J. (1992). *Lobbying and Pressure*. Amsterdam: Tinbergen Institute.
- Putrevu, S., McGuire, J., Siegel, D. S., and Smith, D. M. (2012). Corporate social responsibility, irresponsibility, and corruption: Introduction to the special section. *Journal of Business Research* 65, 1618–1621.
- Riahi-Belkaoui, A. (2007). Earnings opacity and the productivity of nations. *Review of Accounting and Finance* 3 (3), 131–144.
- Riahi-Belkaoui, A., and AlNajjar, F. (2006). Earnings opacity internationally and elements of social, economic and accounting order. *Review of Accounting and Finance* 5(3), 189–203.
- Ring, P. S., Lenway, S. A., and Govekar, M. (1990). Management of the political imperative in international business. *Strategic Management Journal* 11, 141–151.
- Rose-Ackerman, S. (1978). *Corruption*. New York: Academic Press.
- Schwarz, N., and Schuman, H. (1997). Political knowledge, attribution, and inferred interest in politics: The operation of buffer items. *International Journal of Public Opinion Research* 9(2), 191–195.
- Shapiro, S. (1987). The social control of impersonal trust. *American Journal of Sociology* 93(3), 623–658.
- Siltaoja, M., and Vehkaperä, M. (2010). Constructing illegitimacy? Cartels and cartel agreements in Finnish business media from critical discursive perspective. *Journal of Business Ethics* 92(4), 493–511.
- Street, C. T., and Meister, D. B. (2004). Small business growth and internal transparency: The role of information systems. *MIS Quarterly* 28(3), 473–506.
- Su, H. Y., Fang, S. C., and Young, C. S. (2011). Relationship transparency for partnership enhancement: An intellectual capital perspective. *Journal of Business & Industrial Marketing* 26(6), 456–468.
- Treisman, D. (2007). What have we learned about the causes of corruption from ten years of cross-national empirical research? *Annual Review of Political Science* 10, 211–244.
- Trim, P. (2001). Public-private partnerships in the defence industry and the extended corporate intelligence and national security model. *Strategic Change* 10(1) 49–58.
- Uhlenbruck, K., Rodriguez, P., Doh, J., and Eden, L. (2006). The impact of corruption on entry strategy: Evidence from telecommunication projects in emerging economies. *Organization Science* 17(3), 402–414.
- Vaara, E., and Tienari, J. (2008). A discursive perspective on legitimation strategies in multinational corporations. *Academy of Management Review* 33(4), 985–993.
- Vaara, E., Tienari, J., and Laurila, J. (2006). Pulp and paper fiction: On the discursive legitimation of global industrial restructuring. *Organization Studies* 27(6), 789–813.
- Warren, R. (2003). The evolution of business legitimacy. *European Business Review* 15(3), 153–163.
- Wong, L. (2009). Trust in E-commerce: Risk and trust building. In *Selected Readings on Electronic Commerce Technologies: Contemporary Applications*, ed. W. Hu, pp. 104–122. Hershey, PA: Information Science Reference.

CHAPTER 17

CORPORATE GOVERNANCE AND OPTIMAL TRANSPARENCY

TOM BERGLUND

17.1 INTRODUCTION

CORPORATE governance and transparency have both played a prominent role in the discussion of how to avoid the types of problems that led the world into the financial crisis in 2008–2009. Both concepts convey the impression that they stand for something desirable, something that a well functioning economic system should promote. However, it is an open question if good corporate governance automatically leads to higher transparency. Some researchers believe that they go hand in hand, so that by promoting one, the other objective will also be promoted, while other researchers see them as substitutes in the sense that lack of transparency will increase the returns on investments in better governance.

The relationship between corporate governance and transparency will naturally depend on how we define the two key concepts. Thus the definitions of these two concepts is discussed in Section 17.2. How these issues have been covered in previous literature is surveyed in Section 17.3. A stylized model that captures the most important aspects of the connection between corporate governance and transparency is presented in Section 17.4. Section 17.5 concludes the chapter.

17.2 THE KEY CONCEPTS

The concept corporate governance has a large number of different definitions. Shleifer et al. (2000), in a frequently cited article, refer to systems by which investors try to ensure that they will get a decent return on the money that they invest in a firm. According to this definition, the main role of the governance system is to reduce moral

hazard on behalf of management. Good governance will prevent managers from enriching themselves at the expense of shareholders. This view of corporate governance is frequently called the shareholders' interest view of corporate governance.

From a broader perspective corporate governance is socially valuable because it will contribute to efficient use of scarce resources in society, that is, achieves a distribution of some scarce resources that is superior to the solution that would arise without properly functioning corporate governance. The scarce resource that corporate governance targets is managerial talent. A good governance system thus makes the best use of available managerial talent.

Making the best use of managerial talent consists of three parts. First, the talent has to be selected from a universe of candidates. Second, the selected talent has to be guided so as to serve the interests of the surrounding society rather than the narrow self-interest of the talented person. Third, if the selected talent, for some reason, ceases to be the best choice for the firm, that is, the best fit with other resources at the firm's disposal, a replacement must be found and properly installed as rapidly as possible.

In any corporate governance system the corporate board holds a key position. Finding the right person for the top management job is the board's responsibility.¹ The main task of the board, however, is to get the most out of the top management in terms of value creation. This requires proper handling of a difficult balancing act: On one hand the management must be given freedom to pursue value increasing projects, which are seldom obviously so to outsiders, and on the other hand care must be taken so as not to allow management to use its talent to promote projects that are in the management's own personal interests, at the expense of shareholders. Finally, the board must ensure that a management team with a performance that has deteriorated is being replaced in a timely manner with a better alternative.

In the following it is, for simplicity, assumed that the board is there to promote value creation as the goal for the firm's activities, that is, to maximize the long-run value of the equity in the firm. As argued by, among others, Michael Jensen (2001), a firm that operates in the long-run interests of its shareholders will normally also act in a way that is consistent with other stakeholders' interests. Thus any attempts by a firm operating in competitive markets to exploit customers, employees, or other input providers will make these counterparts shun the firm in the future and will thus result in a loss for the firm and for its shareholders.

The other key concept in this chapter, transparency, is here defined as a state in which there is no information asymmetry; outsiders have a complete understanding of what is going on in the firm. Transparency will thus require full disclosure of all relevant information in a timely manner. The word *relevant* is crucial here. Just disclosing more

¹ A relatively tight control from the board is required in finding and selecting a new CEO, even if professional consultants usually are engaged in the process. The reason why the board remains important is to avoid moral hazard on behalf of the experts employed in the recruitment process. A close ally as CEO would most likely be good for the experts' own future business.

information does not necessarily add to transparency². An irrelevant piece of additional information may actually reduce transparency. Improved transparency, by this definition, makes it easier for outsiders to understand developments in the business that the firm is conducting.

The definition of transparency used in this chapter is different from the one that is commonly used in the literature, where transparency is generally taken as a synonym to full disclosure of information. The problem with full disclosure as a definition of transparency is that it doesn't recognize differences in the usefulness of the information that is being disclosed. By restricting "transparency" in this article to disclosure of "relevant" information this highly important dimension is explicitly taken into account. Considerable measurement issues concerning what information in practice should be classified as more or less relevant naturally remain.

17.3 RELATED LITERATURE

Earlier literature on the relationship between corporate governance and transparency has in most cases focused on the relationship between corporate governance and information disclosure. A large number of articles especially in accounting journals have been devoted to the relationship between various types information disclosure and different aspects of corporate governance.

In a simple model where information has no production effects, Diamond (1985) shows that information disclosure by the firm will increase the welfare of investors by reducing the total amount of resources that investors have to spend on information acquisition and by improving the risk allocation owing to better estimates of actual values. In the spirit of the main argument in the present chapter Diamond (1985, p. 1088) notes: "Firms release somewhat less information than the model predicts. In part, this reflects the proprietary nature of some information: releasing certain information may hurt the firm's competitive position."

The research on information disclosure can be divided into two groups: research on mandatory disclosure and research on voluntary disclosure. Because the society at large will benefit from more accessible information concerning the financial health of existing firms there is an externality in information disclosure that justifies organized cooperation and government involvement in standard setting and enforcement of existing disclosure standards.³

² A similar distinction is made in Braendle and Noll (2005).

³ For a discussion of the need for regulation of financial disclosure see Admati and Pfleiderer (2000). An overview of research on regulation of corporate information disclosure is included in Healy and Palepu (2001).

Because a commitment to voluntary disclosure, over and above what is mandated in the law, and by regulation, has the potential to further reduce information asymmetry between insiders and outside investors, commitment to additional voluntary disclosure is likely to benefit the firm in the form of a lower cost of capital. A number of results in support of that view have been published, for example, by Botosan (1997), and Dye (1985). Dye (1985) gives an adverse selection based argument in favor of voluntary release of information, what he calls the “disclosure principle”: if investors believe that a firm is withholding information they will infer that this information is worse than expected, as otherwise it would pay to release it. This inference by investors will drive down the price until it is worthwhile for the firm to release the information. However, as also noted by Dye (1985), investors may not be aware of the existence of the piece of negative information in the first place, or be unaware of the character of the information, and in those situations it could be worthwhile for the management to keep investors ignorant.

A great deal of research on information disclosure has been conducted assuming that the disclosed piece of information is exogenous (Verreccia, 2001). The value relevance of the specific type of information has then been studied by estimating the stock price response to the surprise component of the disclosed information. A practical challenge in this setup is to find an appropriate measure for investors’ expectations just before the release of the information. In liquid markets with a number of analysts that frequently publish forecasts the consensus forecast is a natural choice, even if the exact timing of the consensus forecast is subject to uncertainty.

Dye (2001), in a lengthy comment to the survey by Verreccia (2001), presents an insightful discussion of why information disclosure decisions should be treated as endogenous. In short, value relevant information will impact the firm’s business through different channels, and those who are making the disclosure decision will take this impact into account. This potential impact of the disclosed information will be a crucial part of the stylized model presented later in this chapter.

There are a number of relatively recent empirical studies on various data sets that look at the relationship between corporate governance and transparency. A good summary of the issues involved and a survey of interesting research can be found in Brown et al. (2011). Summarizing the empirical work on corporate governance and disclosure these authors conclude (p.142): “Despite the presumption from regulators that corporate governance leads to better disclosure practices, studies find opposing results, leaving the debate open as to whether corporate governance is a substitute for, or complementary to, a firm’s disclosure”.

The question whether corporate governance and transparency, here measured as frequency of information disclosure, are complements or substitutes can be restated as: does better corporate governance provide for more transparency (complements) or could it instead be that better governance pays off in cases where transparency is more difficult to achieve (substitutes)? If the latter holds true we would expect a negative correlation between transparency and proper governance quality in a cross section of firms, even if improved transparency for an individual firm is likely to go hand in hand with improved governance.

There is an obvious argument in support of the view that corporate governance and transparency are substitutes and that is that under complete transparency no corporate governance mechanisms would be required. Shareholders could, whenever they like, themselves check whether the top management acts or doesn't act in their best interests. The reason why costly governance systems are maintained is precisely because perfect transparency is not achievable. Lack of transparency is what creates scope for moral hazard. Obviously, investment in better corporate governance is justified, by its potential to reduce the incidence of this moral hazard, only in cases where transparency is not perfect. Looking at a cross section of different firms we would thus expect more transparent firms to invest less in corporate governance, which should show up as a negative correlation between investment in corporate governance and the prevailing level of transparency for that firm.

In a recent paper Hermalin and Weisbach (2012) set up a model for the bargaining process between the top management and the firm's owners where more disclosure is not necessarily in the best interests of the parties involved. The paper argues that if more disclosure is seen as costly by the top management, the top management will require a compensation for applying stricter disclosure rules. This compensation requirement can be higher than the benefits of the additional disclosure to shareholders. Hermalin and Weisbach (2012) conclude that regulation that requires more disclosure than owners find optimal will lead to value destruction since the cost of compensating for the disutility perceived by the top management will exceed the gain from reduced moral hazard.⁴

The approach in this chapter differs from the one in Hermalin and Weisbach (2012) in that this chapter strictly focuses on transparency and not on disclosure. There is an important difference between these concepts. Disclosure is a simpler concept that relates to specific pieces of information. Disclosure stands for the act of making such a piece of information available to the public. Transparency, on the other hand, is a concept that requires that we know who the user of the information is. At disclosure a specific piece of information may improve transparency of the firm for a sophisticated analyst while it, at same time, may reduce transparency for an amateur investor for whom the piece of new information may merely be confusing noise.

A distinction between what is properly regarded as transparency as what is merely information disclosure is made in a number of papers, for example, in the one by Bushman et al. (2004b), who write: "We conceptualize corporate transparency within a country as the joint output of a multifaceted system whose components collectively produce, gather, validate, and disseminate information to market participants outside the firm." Note that "market participants outside the firm" as recipients of the

⁴ The need for requiring disclosure to be stricter than shareholders would prefer must come from externalities. However, such externalities are not discussed in the Hermalin and Weisbach (2012) paper.

information are essential for this definition, which in other respects mainly describes the mechanisms by which transparency can be achieved in practice.

In the following we focus on transparency from an investor's, that is, a shareholder's, point of view and disregard existing differences in shareholders' ability to process various types of information. For any given level of shareholder effort to understand the firm improved transparency will provide a deeper understanding of the firm's business to that shareholder.

Given the preceding definition of transparency, the main reason why members of the top management personally might dislike more transparency would be reduced opportunities to cover up their moral hazard behavior at the expense of shareholders. It is not clear that paying a higher compensation to the management in exchange for improved transparency in this sense would be bad for shareholders. In optimum the marginal benefit to shareholders related to a reduction of moral hazard by management should equal the marginal increase in required compensation that shareholders have to pay.

The approach in this chapter builds on the conjecture that the negative impact on firm value from increased transparency comes from sources other than a potential increase in the CEO's required compensation, which in the Hermalin and Weisbach (2012) model is the main reason why more disclosure may destroy value.

For a specific firm, subject to incomplete transparency, more transparency should imply better governance. More transparency will make the board less inclined to behave in a way that would be inconsistent with shareholders' interests. The likelihood that the board will allow the management to sacrifice shareholder value in promoting personal interests will be reduced, other things equal, if transparency improves. In a time series for an individual firm we would thus expect a positive correlation between corporate governance quality and transparency.

The seeming contradiction between a negative cross-sectional correlation and a positive firm specific correlation between corporate governance quality and transparency is easily resolved when we take into account that the optimal level of transparency is related to the firm's business. Disclosing information of the firm's business is more costly for some firms than for other firms. Firms where disclosing information is more costly will be more opaque and in those firms the marginal return to investing in proper corporate governance will be higher. In opaque firms better governance is needed to discourage management from exploiting the prevailing relative opaqueness. In contrast, in firms where the business is intrinsically more transparent the marginal return to investing in corporate governance will be much lower and thus the cutoff point for additional profitable investments in corporate governance quality will be lower from the shareholders' point of view.

In line with the above argument Yu (2011), in a study based on data for 22 developed countries, observes that even if the stock price becomes more informative with most measures of corporate governance quality it doesn't hold for board-related governance. The board, of course, is the main instrument for non-transparency related corporate governance.

Beekes et al. (2012) on a data set covering 19 developed countries find that on an individual firm level corporate governance positively influences the level of firm disclosure but that firms with better corporate governance substitute governance for greater transparency. In a reverse causality setting this finding is easier to understand: Where greater transparency is more costly investment in better governance is worthwhile. Beekes et al. (2012) also find that firms with a greater proportion of closely held shares tend to have fewer disclosures and less timely price discovery, which is consistent with the present chapter because block holders with a strong incentive to monitor management are more useful in a situation where more transparency could be harmful for the firm for reasons related to the firm's business.

Gaio and Raposo (2013) in a study covering 537 non-financial firms in 35 countries "find a negative and statistically significant relation between corporate governance ratings and earnings quality rankings, suggesting that corporate governance and earnings quality are substitute mechanisms." They state that "the justification for this result would be the lesser need to invest in costly governance mechanisms for those firms that already offer high levels of earnings quality." This justification fits precisely into the formalized model presented in Section 17.4.

The main reason why more transparency may hurt a firm and its shareholders, once a certain level has been reached, is that firms almost universally operate in competitive environments. In such environments the firm's competitors will have a substantial interest for what is going on in the firm. More transparency, in particular concerning the firm's strategy, will most likely benefit these competitors and thus harm the firm's business.⁵ For evidence in support of the view that this is an important consideration see, for example, Harris (1998), who in a study on data from the United States in 1987–1991 concludes: "This suggests that the competitive harm cited as a disincentive to detailed segment reporting arises from a desire to protect abnormal profits and market share in less competitive industries" (p. 112). "Less competitive" in this sentence implies stronger threat from potential competitors.

More transparency may also reduce firm value because potential business partners improve their bargaining position when they have more precise knowledge regarding the management's likely reservation price in negotiating a deal with this firm. The reason for the potential negative impact of transparency on firm value is nicely summed up in Admati and Pfleiderer (2000, p. 480): "Since disclosure reveals information to competitors or others who interact strategically with the firm, it may cause the firm to lose competitive advantage or bargaining power in various contexts."⁶

⁵ From society's point of view the results are less clear-cut. More competition will reduce prices for the firm's customers in the short run and thus increase welfare. However, stiffer expected competition will reduce firms' incentives to invest in risky innovations and that may harm society in the long run by reducing beneficial economic growth.

⁶ An additional reason why more transparency may hurt firms in some countries is political risk. Governments with a populist agenda may find it tempting to try to expropriate some of the wealth of firms that are highly profitable. Bushman et al. (2004), in a study covering 46 countries, find that the role of the state in the economy has an important impact on firms' disclosure behavior. They

If the marginal cost of more transparency—in the form of reduced market value from lower margins due to stiffer competition—will increase with the level of transparency, while benefits will shrink—for example, because of lower impact on the likelihood of discovering attempts by the management to improve their own position at the owners' expense—there will be an optimal level of transparency. Below that level more transparency will add value for shareholders because expected costs of future moral hazard will go down, and funding costs may fall also because outside investors are able to assess the riskiness of the firm more accurately. Above that level dissemination of information that will benefit competitors and subcontractors dominate, and the market value will fall in response to additional transparency. In the next section this argument will be formalized.

17.4 THE MODEL

For simplicity we assume that corporate governance can add value to the firm in two different ways: either through measures that reduce monitoring costs via improved transparency or through other measures that are not linked to transparency. As an example of these other types of governance improvements we can take replacing a board that is too tolerant of management mistakes with one which is more willing to take radical decisions in response to bad performance.

Based on the logic in the Shapiro and Stiglitz (1984) efficiency wage model one can also claim that simply paying more in compensation to directors in firms with high marginal cost of increased transparency may make sense. The liberal compensation should motivate the director to put down more effort in his job as director so as not to give a reason for shareholders not to re elect him.⁷

To formalize the preceding arguments, the value of the firm can be written as an increasing function of the quality of its corporate governance but at the same time as a decreasing function of the level of transparency because more transparency will help competitors and hurt the firm's bargaining position.⁸ Thus the net value of the firm

conclude: "Financial transparency is higher in countries with low state ownership of enterprises, low state ownership of banks, and low risk of state expropriation of firms' wealth" (p. 244).

⁷ It is not clear whether the liberal compensation should be offered the chairperson exclusively or be extended to the whole board. One may argue that because the chairperson is in charge of the board's work it is most essential that he gets rewarded liberally enough to make it worthwhile for him to draw on the whole board's expertise.

⁸ Berger and Hann (2007, p. 869) make a closely related distinction from a manager's perspective. The topic of their paper is sector disclosure by firms. They write: "Managers face proprietary costs of segment disclosure if the revelation of a segment that earns high abnormal profits attract more competition and, hence, reduces the abnormal profits. Managers face agency costs of segment disclosure if the revelation of a segment that earns low abnormal profits reveals unresolved agency problems and, hence, leads to heightened external monitoring." The empirical results in Berger and Hann (2007) are consistent with the agency cost hypothesis, while the evidence for the proprietary

(NV), taking the expenditure on increased transparency (t) and the expenditure on other corporate governance enhancing measures (z) into account, is:

$$NV = V(g(t, z), t) - t - z \quad (17.1)$$

We know that $V^{(1,0)} > 0$, and $V^{(0,1)} < 0$, while $g^{(1,0)} > 0$, and $g^{(0,1)} > 0$, where the superscript (1, 0) in the parentheses denotes the partial derivative with respect to the first argument, and (0, 1) with respect to the second argument. We also assume that the marginal impact of investment into the two components of corporate governance will decrease, that is, $g^{(i,j)} < 0$ for $i, j = 2, 0$ and $0, 2$. The marginal impact of transparency on V will at least not diminish in strength as transparency improves, that is, $V^{(0,2)} \leq 0$, which means that the negative value impact will become more significant on the margin as more and more sensitive information must be released.

At the optimal combination of transparency, on one hand, and the governance that is not related to transparency on the other, the partial derivatives of the firm value in (17.1) with respect to t and z must be equal to zero:

$$V^{(1,0)}(g(t, z), t)g^{(1,0)}(t, z) + V^{(0,1)}(g(t, z), t) - 1 = 0 \quad (17.2)$$

$$V^{(1,0)}(g(t, z), t)g^{(0,1)}(t, z) - 1 = 0 \quad (17.3)$$

From (17.3),

$$V^{(1,0)}(g(t, z), t) = \frac{1}{g^{(0,1)}(t, z)}$$

Substituting into (17.2):

$$\frac{g^{(1,0)}(t, z)}{g^{(0,1)}(t, z)} = 1 - V^{(0,1)}(g(t, z), t) \quad (17.4)$$

Because the partial derivative of firm value with respect to increased transparency on the right-hand side of equation (17.4) is negative it has to be the case that

$$g^{(1,0)}(t, z) > g^{(0,1)}(t, z) \quad (17.5)$$

cost motive hypothesis is mixed. These results can partly be explained by the fact that they cover a change in the US reporting requirements in 1997, before the highly visible corporate governance scandals of Enron, WorldCom, Tyco, and so on.

in optimum. To make the marginal impact on the right hand side lower more should be invested into corporate governance that is not related to transparency than into corporate governance that improves transparency.

A closer look at (17.4) also indicates that if the negative value impact of more transparency—coming from its potential usefulness to competitors and subcontractors—is higher, the firm will invest more into non-transparency-related governance. The reason is that the marginal benefit from those investments in the numerator on the left-hand side is lower, requiring a higher level of expenditure on governance that is not related to transparency. Or as expressed by Bushman et al. (2004a, p. 167): “. . . limited transparency of firms’ operations to outside investors increases demands on governance systems to alleviate moral hazard problems.”

17.5 CONCLUSION ON OPTIMAL TRANSPARENCY AND CORPORATE GOVERNANCE

To understand the relationship between corporate governance and transparency it is crucial to have a clear view of what these concepts stand for. The analysis in this chapter is based on the fairly standard view of corporate governance as mechanisms by which shareholders try to ensure that the firm’s management acts in the owners’ interests. As for transparency in this chapter, complete transparency is taken to be the state that continues to exist if there always is timely disclosure of all relevant information about the firm. Obviously permanent transparency will never be achieved in practice. For any given firm improved transparency could thus make the firm’s business easier to understand for shareholders.

When trying to understand how corporate governance and corporate transparency, as defined previously, are related it is important to understand that corporate transparency is something that will impact not only investors and other stakeholders who do have a positive interest in the well-being of the firm. Improved transparency will also make it easier for competitors to forecast, and thus counteract, the firm’s future strategic moves. More transparency could also make it easier for subcontractors to extract a better deal from the firm. For these reasons more transparency above a certain critical level will not be in shareholders’ best interests.

Because firms differ with respect to how exposed their business is to competition, and also in their use of subcontractors, they will differ too with respect to their optimal combination of transparency and the use of governance mechanisms that are not related to transparency. Using a simple formalized framework, this chapter shows that an unusually high level of spending on non-transparency-related corporate governance is justified in firms where increased transparency would have a strong negative impact on firm value. For firms that happen to operate in an environment where the

threat from competitors is smaller, more emphasis should be put on improving transparency, and fewer resources on corporate governance, than for firms that operate in an industry subject to more aggressive competition.

For panel data studies of the relationship between quality of corporate governance mechanisms on one hand, and transparency on the other, the implications are clear. When differences in the environment in which firms operate are properly taken into account a positive relationship should result. This is likely to show up in fixed firm effect regressions because differences in the competitive environment of firms tend to be quite stable over time.

REFERENCES

- Admati, A. R., and Pfleiderer, P. (2000). Forcing firms to talk: Financial disclosure regulation and externalities. *Review of Financial Studies* 13(3), 479–519.
- Beekes, W., Brown, P., Zhan, W., and Zhang, Q. (2012). The relationship between disclosure, information timeliness and corporate governance: A cross country study. Working Paper. <http://ssrn.com/abstract=2139641>.
- Berger P. G., and Hann, R. N. (2007). Segment profitability and the proprietary and agency costs of disclosure. *Accounting Review* 82(4), 869–906.
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *Accounting Review* 72(3), 323–349.
- Braendle, U. C., and Noll, J. (2005). A fig leaf for the naked corporation. *Journal of Management and Governance* 9, 79–99.
- Brown, P., Beekes, W., and Verhoevend, P. (2011). Corporate governance, accounting and finance: A review. *Accounting and Finance* 51, 96–172.
- Bushman, R., Chen, Q., Engel, E., and Smith, A. (2004a). Financial accounting information, organizational complexity and corporate governance systems. *Journal of Accounting and Economics* 37, 167–201.
- Bushman, R., Piotroski, J., and Smith, A. (2004b). What determines corporate transparency? *Journal of Accounting Research* 32(2), 207–252.
- Diamond, D. W. (1985). Optimal release of information by firms. *Journal of Finance* 40(4), 1071–1094.
- Dye, R. A. (1985). Disclosure of nonproprietary information. *Journal of Accounting Research* 23(1), 123–145.
- Dye, R. A. (2001). An evaluation of essays on disclosure and the disclosure literature in accounting. *Journal of Accounting and Economics* 32(1–3), 181–235.
- Gaio, C., and C. Raposo, (2013), "Earnings Quality and Corporate Governance: International Evidence". Paper presented at FMA Annual Meeting, Chicago, October 19, 2013.
- Harris, M. S. (1998). The association between competition and managers' business segment reporting decisions. *Journal of Accounting Research* 36(1), 111–128.
- Healy, P. M., Hutton, A. M., and Palepu, K. G. (1999). Stock performance and intermedia-tion changes surrounding sustained increases in disclosure. *Contemporary Accounting Research* 16(3), 485–520.

- Healy, P. M., and Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31(1–3), 405–440.
- Hermalin, B. E., and Weisbach, M. S. (2012). Information disclosure and corporate governance. *Journal of Finance* 67(1), 195–233.
- Jensen, M. (2001). Value maximization and the corporate objective function. *European Financial Management* 7(3), 297–317.
- Shapiro, C., and Stiglitz, J. E. (1984). Equilibrium unemployment as a worker discipline device. *American Economic Review* 74, 433–444.
- Shleifer, A., La Porta, R., Lopez-de-Silanes, F., and Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics* 58, 3–27.
- Verrecchia, R. (2001). Essays on disclosure. *Journal of Accounting and Economics* 32, 97–180.
- Yu, J. (2011). Stock price informativeness and corporate governance: An international study. *International Review of Finance* 11(4), 477–514.

CHAPTER 18

TRANSPARENCY DIFFERENCES AT THE TOP OF THE ORGANIZATION: MARKET-PULL VERSUS STRATEGIC HOARDING FORCES

WINFRIED RUIGROK, DIMITRIOS GEORGAKAKIS,
AND PEDER GREVE

18.1 INTRODUCTION

GOVERNANCE transparency has been defined as the degree to which information about board of directors (BoD), top management team (TMT) members, and other corporate governance related features is available to external observers—such as shareholders, customers, investors, suppliers, and other stakeholders (Bushman et al., 2004). Past work in economics and finance has stressed the importance of governance transparency as a driver of economic growth (Bushman and Smith, 2003; Francis et al., 2003). The governance transparency literature often adopts a “market-pull perspective” of transparency, emphasizing the market-level motives that induce firms to report on their governance characteristics (Bushman and Smith, 2003; Wiseman et al., 2012).

While several studies have shed light on the market-level drivers and benefits of higher governance transparency levels (e.g., Bushman and Smith, 2003; Aerts et al. 2006), a few studies have focused on the disadvantages of governance transparency and the factors that deter transparent reporting on governance related issues (e.g., Admati and Pfleiderer, 2000; Hermalin and Weisbach, 2012). In addition, past research has not distinguished between transparency related to the BoD and the TMT. As BoDs and TMTs are corporate governance bodies with distinct roles in the organization (Daily and Schwenk, 1996), it is likely that there will be different rationales and implications of transparency related to each of these bodies.

In this chapter, we examine the market factors that encourage transparency, as well as the strategic factors that may deter transparency at the top of organizations. We introduce a new perspective that we refer to as the “strategic hoarding perspective” of BoD and TMT transparency. In contrast with the *market-pull perspective*, the *strategic hoarding perspective* emphasizes the strategic and human capital attrition factors that discourage companies from being transparent about BoD and TMT members’ experience, skills, and characteristics. This perspective highlights the notion that high levels of governance transparency may be accompanied by high levels of human capital attrition. Based on a combination of market-pull and strategic hoarding perspectives, we build propositions about organizations’ relative transparency preferences in terms of BoD and TMT characteristics.

The chapter proceeds as follows. In Sections 18.2 and 18.3 we describe the two opposing views of governance transparency and develop propositions about transparency pertaining to BoD and TMT characteristics. Using a sample of the 208 largest firms headquartered in Switzerland, the Netherlands, and the United Kingdom over the period 2005–2009, in Sections 18.4 and 18.5 we provide evidence of governance transparency patterns and trends in the selected European countries. In Section 18.6 we discuss and explain how most firms have become increasingly willing to report information about BoD and TMT demographic characteristics over time, whereas the willingness to provide information about BoD and TMT members’ experience related attributes and education has, in some cases, decreased. Implications for policymakers, business practitioners, and academic scholars are discussed together with directions for further research.

18.2 THEORY DEVELOPMENT

18.2.1 The Market-pull Perspective

The market-pull perspective emphasizes the market level factors that drive firms toward greater levels of governance transparency. At least two market level drivers of governance transparency can be identified. First, institutional forces push firms to become increasingly transparent about BoD and TMT characteristics. DiMaggio and Powell (1983) argued that “isomorphic” institutional pressures, such as regulatory or normative expectations at the market level, drive organizations that operate within the same institutional environment to adopt common corporate reporting practices. Indeed, studies have shown that governance transparency is often a consequence of legal, normative, and mimetic institutional forces that shape organizations in similar ways (Khanna et al., 2004; Aerts et al., 2006). An example of institutional factors that affect BoD and TMT transparency are the quotas and requirements that several European countries have recently introduced regarding demographic and gender diversity at the BoD level (EU Commission, 2012). Such standards induce companies

to report information about the composition and characteristics of their BoDs to show their degree of compliance with institutional expectations regarding BoD diversity.

Second, past research has highlighted the agency factors that compel firms to make information about the characteristics of their BoD and TMT members available to the market. Agency theory upholds that a higher level of governance transparency is associated with lower agency costs and higher market effectiveness (Malkiel, 2003; Bushman et al., 2004; Lazear and Shaw, 2007). By reporting on the characteristics of their BoD and TMT members, firms reduce information asymmetry and signal to the market whether their central corporate governance bodies are equipped with skills and attributes that are a best-fit to the firm's internal and external contingencies (Miller and Triana, 2009; Connelly et al., 2011). For instance, higher levels of governance transparency reduce information asymmetries between principals (e.g., investors or shareholders) and agents (directors) about the ability of the latter to perform their assigned duties.

In summary, the market-pull perspective refers to the institutional and agency factors that increase transparency with regard to BoD and TMT composition. The governance transparency implications of this perspective are expected to be stronger for BoDs than for TMTs because of the former's key role in linking the firm to its external environment and in ensuring that effective corporate governance is in place to protect the interests of various stakeholders.

Proposition 1: Market-pull factors increase the level of governance transparency. These factors have a stronger effect on transparency of BoD characteristics and a weaker effect on transparency of TMT characteristics.

18.2.2 The Strategic Hoarding Perspective

In a recent study, Hermalin and Weisbach (2012, p. 196) characterized corporate transparency as a "two-edged sword" that can offer both costs and benefits to the organization. In this part, we outline how high levels of governance transparency may be associated with human capital attrition costs. Though the market-pull perspective highlights the drivers and benefits of BoD and TMT transparency, it fails to consider the strategic human capital factors that discourage reporting of information about BoD and TMT characteristics. We therefore propose that, in parallel with market-pull forces, strategic hoarding forces affect governance transparency. The strategic hoarding perspective suggests that transparency is associated with rent creation and rent loss in organizations. Makadok (2001) identified two key rent creation strategic mechanisms: (1) resource-picking and (2) capability-building. The former refers to the situation in which a firm's core strategy is to "gather information to outsmart the market in picking resources," while the latter refers to the intrafirm mechanisms that organizations use to develop their core strategic capabilities in-house and outperform their competitors (Makadok, 2001, p. 387).

Extant literature underscores the importance of attracting, selecting, and retaining individuals with valuable human capital in their TMTs and BoDs (Hambrick and

Mason, 1984; Hillman and Dalziel, 2003; Hambrick, 2007). There are two paths organizations can take to effectively compose their BoDs and TMTs. On the one hand, firms can follow a *resource-picking* strategy by identifying, attracting, and hiring directors from the external labor market. On the other hand, firms can develop their capabilities internally (i.e., a *capability-building* strategy) by training, grooming, and promoting suitable individuals from the internal ranks of the firm into the upper tiers of management. Such investment in internal development and human capital implies costs and effort for the organization (Becker, 1964; Straubhaar and Wolter, 1997). This cost and effort will pay off only if internally groomed and trained individuals can be retained within the organization until the firm has reaped benefits that correspond with its human capital investments (Tsui et al., 1997).

To avoid losses on their human capital investments, firms that follow a *capability-building* strategy will be reluctant to provide information to the market about the characteristics and skills of their executive directors. Detailed information about executives' skills, characteristics, and education will allow competitors that follow a *resource-picking* strategy to identify, attract, and take over a company's most valuable talent. To counteract the potential loss of talented directors, firms will prefer to report less information about their competencies, skills, and other characteristics.

Therefore, based on the strategic hoarding perspective, we propose that firm-level capability-building and investments in the human capital of the internal managerial talent pool discourage corporate transparency pertaining to the skills and characteristics of BoD and TMT members. As the TMT is the central strategic unit responsible for shaping organizational strategy, defining the boundaries of the firm, and navigating the firm's external environment (Hambrick, 2007), we propose that the strategic hoarding perspective has stronger governance transparency implications for TMTs and somewhat weaker implications for BoDs.

Proposition 2: Strategic hoarding factors at the firm level contribute to lower levels of TMT and BoD transparency. These factors have a strong effect on transparency in terms of TMT characteristics and a weaker effect on transparency in terms of BoD characteristics.

18.3 DISTINGUISHING TYPES OF BoD AND TMT TRANSPARENCY

To further conceptualize the market-pull and strategic hoarding perspectives, we separate director's characteristics into three main categories: (1) demographics, (2) educational, and (3) experience-related characteristics. To illustrate how BoD and TMT transparency in these three types of characteristics are materially different, we develop a three-layer "onion model" of governance transparency. As illustrated in Figure 18.1, the outer layer of this model refers to demographic information about directors. This

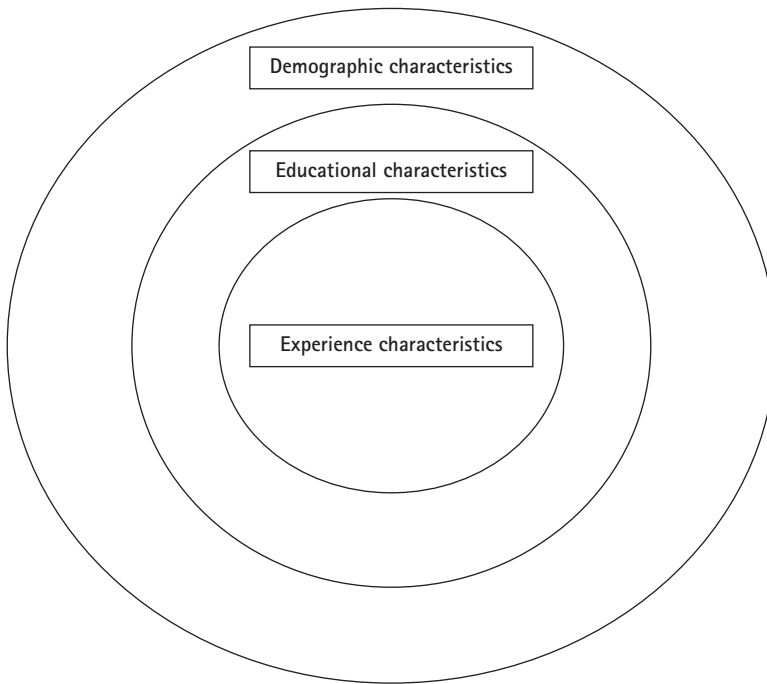


FIGURE 18.1 The onion model of BoD and TMT transparency.

information is relatively easy to observe, yet of limited value from both a market-pull and a strategic hoarding perspective. Demographic attributes do not provide information to the external market about the skills and managerial abilities of a firm's directors that can be utilized to identify and pick a company's most talented top managers.

The second layer refers to transparency in terms of educational characteristics such as field and level of education. According to human capital theory, education is a generic skill that is transferable across firms and industries (Becker, 1964; Castanias and Helfat, 1991). Educational characteristics are more closely related to human capital than demographic characteristics (Becker, 1964). Thus, compared to demographic characteristics, we can attribute higher value to educational characteristics from both a strategic hoarding and a market-pull perspective.

The layer at the core of the model refers to experience-related characteristics, that is, skills and experiences that directors have acquired throughout their careers, such as international experience and firm tenure. These characteristics constitute the inner layer of the transparency onion as they are highly job relevant and of high value to the market. These characteristics are direct indicators of an individual's ability to provide access to scarce resources and to perform specific managerial tasks (Castanias and Helfat, 1991). Therefore, transparency in terms of experiential characteristics is arguably more valuable than information about educational and demographic attributes. In Table 18.1, we outline how the market-pull and the strategic hoarding perspectives

Table 18.1 Advantages and Disadvantages of BoD and TMT Transparency: Market–pull versus Strategic Hoarding Perspective

	Definition	Advantages for the firm (market-pull perspective)	Disadvantages for the firm (strategic hoarding perspective)
Transparency in BoD and TMT demographic attributes	Demographic characteristics (e.g., age, gender, nationality)	<ul style="list-style-type: none"> • Signals compliance or lack of compliance with social norms and values about diversity and demographic composition. 	<ul style="list-style-type: none"> • Allows competitors to acquire information about the demographic composition of the focal firms' upper tiers of management.
Transparency in BoD and TMT educational attributes	Educational background (e.g. level of education and field of education)	<ul style="list-style-type: none"> • Signals to the external environment the educational qualification and specialization of BoD and TMT members. • Reduces information asymmetry between principals (stakeholders) and agents about the latters' educational background. 	<ul style="list-style-type: none"> • Allows competitors to gather information about the amount of generic/transferable skills that executives possess. • Promotes greater external mobility of highly educated executives and may cause losses in human capital to the focal organization.
Transparency in BoD and TMT experience	Experience related attributes (e.g., company tenure, international experience, career length)	<ul style="list-style-type: none"> • Signals to the external environment the experiential background of BoD and TMT members. • Reduces information asymmetry between principals (stakeholders) and agents about the latters' ability and managerial potential. 	<ul style="list-style-type: none"> • Increases the ability of other firms to identify and target executive members with valuable human capital. • Drives firms to move from an internal capability-building strategy (internal promotion) to a resource-picking strategy (external hiring).

have different governance transparency implications and discuss the advantages and disadvantages of transparency in each type of characteristics based on the market-pull and strategic hoarding perspectives, respectively.

18.3.1 Types of BoD and TMT Transparency: The Market-pull Perspective

From an institutional point of view, transparency about directors' demographic profiles signals to stakeholders whether the focal company complies with social norms and regulatory pressures concerning the presence of underrepresented demographic groups at the BoD and TMT (Miller and Triana, 2009; Connelly et al., 2011). However, transparency in BoD and TMT demographic characteristics offers fewer agency and signaling related benefits compared to transparency in educational and experience characteristics (see Table 18.1). Whereas demographics are less job-related attributes that are not directly associated with an individual's human capital (Becker, 1964; Pelled et al., 1999), education and experiences are of higher value to external observers. Thus, we expect that to reduce information asymmetries at the market level and signal managerial ability to the external environment, large companies will tend to emphasize the availability of BoD and TMT educational and experience-related attributes rather than demographic characteristics.

Furthermore, transparency of BoD and TMT educational characteristics allows firms to signal to their stakeholders the amount of generic skills in their upper management ranks. At the same time, BoD and TMT educational characteristics are less job specific than experience-related attributes. Transparency in BoD and TMT experience characteristics such as firm tenure and international experience provide more precise information about BoD and TMT members' ability to deal effectively with specific managerial tasks based on their prior work experience. Transparency in BoD and TMT experiential characteristics will therefore reduce information asymmetries more effectively than transparency regarding educational and demographic attributes. From a market-pull perspective, we therefore expect that to reduce information asymmetries at the market level and signal managerial ability to the external market, firms will be more likely to make information available about experience-related attributes rather than educational and demographic characteristics.

Overall, the market-pull perspective suggests that BoD and TMT transparency in terms of demographic, educational, and experience-related attributes is associated with advantages such as lower information asymmetries and signaling of reputation to the market. These agency and signaling advantages are more pronounced when firms are transparent about experience and educational characteristics rather than demographic attributes. Based on this perspective we propose that transparency in terms of BoD and TMT experiential and educational characteristics offer greater benefits to the market than transparency in terms of BoD and TMT demographic attributes.

Proposition 3: The market values transparency in terms of BoD and TMT experience and education higher than transparency about BoD and TMT demographic characteristics.

18.3.2 Types of BoD and TMT Transparency: The Strategic Hoarding Perspective

On the other hand, the strategic hoarding perspective suggests that information availability about BoD and TMT experiential and educational characteristics will be more disadvantageous for firms than transparency in demographic characteristics (see Table 18.1). As demographics are not directly job related (Pelled et al., 1999), transparency in this type of characteristics does not provide particularly valuable information to competitors about BoD and TMT human capital.

Meanwhile, transparency in terms of BoD and TMT educational characteristics is more likely to be disadvantageous from a strategic hoarding perspective. This is likely to offer valuable information to competitors about the focal firm's generic managerial human capital and thereby promote interfirm mobility of educated executives (Murphy and Zabochnik, 2007; Bidwell, 2011). High levels of transparency in educational characteristics provide information to the market that may affect a company's ability to retain its most valuable human capital over time (see Table 18.1).

Similarly, transparency in terms of BoD and TMT members' experience characteristics increases the likelihood of interfirm mobility. Costly investments in training and grooming of managerial talent will produce a net positive return to the company only if these individuals can subsequently be retained within the organization (Becker, 1964; Schneider, 1987). As human capital at the TMT level is a resource that organizations compete intensively for, high levels of transparency in terms of BoD and TMT experience may impede the focal firm's ability to remain competitive by failing to retain valuable human capital in-house (see Table 18.1).

Based on the preceding, the strategic hoarding perspective suggests that firms will be willing to make information available about BoD and TMT demographic characteristics. On the other hand, they will be reluctant to make information available about BoD and TMT educational attributes and, in particular, BoD and TMT experiential backgrounds (see Figure 18.2). This is not only because demographic attributes are more readily detectable compared to educational and experience-related characteristics, but also because information about demographic attributes is least useful for competitors who attempt to identify and pick the most highly qualified individuals in the external labor market.

Proposition 4: Transparency of BoD and TMT experience characteristics and education is more costly to the firm than transparency of BoD and TMT demographic characteristics.

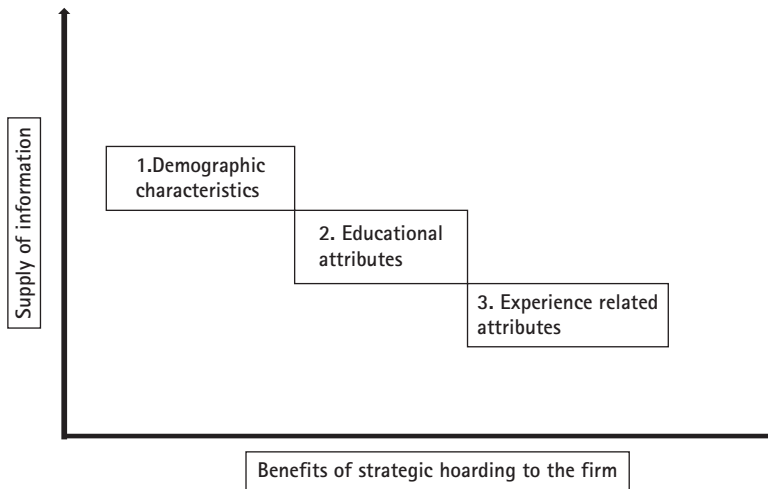


FIGURE 18.2 Transparency of different types of BoD and TMT characteristics: The strategic hoarding perspective.

18.4 DATA AND METHODS

18.4.1 Sample

Our sample consists of the largest stock-listed firms headquartered in three Western European countries with different corporate governance systems: (1) Switzerland, (2) the Netherlands, and (3) the United Kingdom, for the years 2005 and 2009 (see Table 18.2). To select the largest listed firms headquartered in the three countries, we first ranked all publicly listed companies in these countries based on their market capitalization at the end of the years 2005 and 2009 and then the 100 largest firms from each country were included in our sample provided that they fulfilled the following two criteria: (1) they were not classified as small and medium-sized enterprises (SMEs) based on the European Union's SME classification (i.e., fewer than 250 employees and less than €50 million annual revenues) (EU Commission 2012), and (2) they did not cease operation and were present in the list of the 100 largest firms in both 2005 and 2009. After this filtering procedure, our final sample comprised 208 large European companies headquartered in the three countries. At the company level our final sample consists of 81 Swiss, 59 Dutch, and 68 British companies.

18.4.2 Variables and Measures

To conduct our analyses, we developed three main categories of BoD and TMT characteristics: (1) demographic characteristics, (2) educational characteristics, and (3) experience-related characteristics (see Table 18.3). First, transparency in

Table 18.2 Corporate Governance in Switzerland, the Netherlands, and the United Kingdom

	Legal system	Governance code	Board structure
Switzerland	Germanic civil law	Swiss Code of Best Practice for Corporate Governance (Economiesuisse, 2007)	Swiss firms can adopt either one-tier or two-tier structure. For banks a two-tier structure is obligatory.
The Netherlands	French civil law	Dutch CG Code (2008)	Typically two-tier; from January 2013 firms can adopt a one-tier structure.
The United Kingdom	Common law	The UK Corporate Governance Code (FRC, 2012)	One-tier structure

demographic characteristics is defined as the proportion of information available in terms of three components: (1) age, (2) gender, and (3) nationality. Second, transparency in educational attributes is defined as the proportion of information in terms of two components: (1) level of education and (2) field of education. Finally, transparency in experience related attributes is defined as the proportion of information in terms of five components: (1) team tenure, (2) firm tenure, (3) number of countries that an individual has worked in the past, (4) years that an individual has spent in each country, and (5) career length.

Note that the transparency levels reported in this study go beyond the information reported by the companies themselves. Besides information that is made available directly by the company through corporate websites, annual reports, and press releases, there is a wide range of other possible information sources about corporate managers and directors in the public domain. All such information sources in the public domain have been exhausted to gather profile information about BoD and TMT members in this study. This means that the transparency levels presented in this study refer to the availability of information in the public domain as a whole, and not only to the information provided directly by the company itself. By adopting this method, we get a balanced view of the market-pull and strategic hoarding forces that affect the availability of director-specific information in the public domain.

18.5 TRANSPARENCY PATTERNS AT EUROPEAN BoDs AND TMTs

18.5.1 Demographic Characteristics

As shown in Table 18.3, the highest level of information availability was found for directors' demographic attributes. Such information is available more frequently than BoD

Year	Switzerland				The Netherlands				The United Kingdom			
	TMTs		BoDs		TMTs		BoDs		TMTs		BoDs	
	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009
Demographic transparency ^a	0.99	0.99	0.99	0.99	0.94	0.96	0.99	0.99	0.94	0.90	0.98	0.98
Education transparency ^a	0.97	0.96	0.97	0.93	0.69	0.77	0.74	0.79	0.51	0.56	0.54	0.68
Experience transparency ^a	0.82	0.80	0.88	0.84	0.67	0.70	0.67	0.75	0.65	0.55	0.71	0.67
<i>N</i> Individual level ^b	542	559	681	685	209	236	331	335	526	520	802	754
<i>N</i> Company level ^c	81	81	81	81	59	59	59	59	68	68	68	68

^a Numbers indicate proportional information availability for each type of transparency. Proportions are at the individual level.

^b At the individual level *N* represents the number of TMT and BoD members, respectively. Note that the lower Dutch *N* is due to the fact that Dutch TMTs and BoDs are considerably smaller compared to Switzerland and the United Kingdom.

^c At the company level *N* represents the number of companies studied in each country.

and TMT educational and experience-related characteristics. This pattern holds for both BoDs and TMTs, even though information about the demographic characteristics of BoD members is even more frequently available compared to TMT members. One explanation may be that demographic characteristics are more directly and easily observable than experience- and education-related attributes, as illustrated in Figure 18.1. However, a second reason may be that information about BoD and TMT demographic attributes does not release evidence of directors' human capital and is therefore associated with less human capital attrition risks and potential costs for the firm than information about directors' education and experience.

18.5.2 Educational Characteristics

Transparency patterns in terms of directors' educational attributes are also provided in Table 18.3. Overall, information about the educational characteristics of directors and top managers is less frequently available than details of demographic attributes but more frequently available than information about experience-related attributes, as predicted by the strategic hoarding perspective (see Figure 18.2).

There is also more information available about the educational backgrounds of BoD members compared to TMTs. This is in line with Propositions 1 and 2 and may be attributable to the stronger signaling role of BoDs to external observers. By providing information about the educational credentials of BoD members, firms can gain organizational legitimacy. Meanwhile, information about the educational backgrounds of TMT members is less widely available in the public domain. This is in line with the strategic hoarding perspective, as TMT members represent the key human capital resource of the firm. Detailed information in the public domain about these individuals' educational credentials increases the likelihood that educated directors will be poached by competitors, thereby risking a loss on the focal company's human capital investments. Thus, we find a greater reluctance to provide educational information to external observers to reduce the risk of losing the company's key human capital to the external labor market.

18.5.3 Experience Characteristics

Table 18.3 shows that demographic and educational characteristics about BoD and TMT members are more frequently available than experience-related characteristics. The lower levels of information availability regarding directors' and executives' experiential backgrounds may be due to the high potential value of such information to other companies in their quest to identify the strongest candidate profiles in the external labor market. As illustrated in Figure 18.1, transparency in experience-related attributes provides the most valuable information to competitors about executives' skills and experiences, and is therefore likely to trigger human capital attrition costs for the

focal organization. Therefore, firms tend to be more reluctant in providing information about this type of characteristics compared to education and demographic attributes.

Furthermore, information about experience-related characteristics of BoD members is more frequently available than for TMT members. As the TMT is the main governance body that shapes firm strategy and performance through the experience of its members (Hambrick, 2007), firms are more reluctant in providing information about the experiential characteristics of the TMT compared to the BoD.

18.6 CONCLUDING DISCUSSION ON TRANSPARENCY DIFFERENCES AT BoDs AND TMTs

This chapter contributes to the extant governance transparency literature in the following ways. First, we propose two countervailing mechanisms that jointly determine the levels of BoD and TMT transparency that we observe in this study. Based on the strategic hoarding perspective we explain why there is reluctance from firms to make information available in the public domain about directors' and managers' backgrounds. As firms are primarily concerned with the potential loss of key human capital to the external labor market, they are particularly hesitant to provide detailed information about top managers' experience-related attributes, followed by their educational characteristics and demographic traits.

Second, our data highlight differences in governance transparency between two key yet distinct governance bodies—the BoD and the TMT. Specifically, our data show that more information is available about the characteristics of BoD members compared to TMT members. Based on a simultaneous consideration of the market-pull and strategic hoarding perspectives of governance transparency, the observed differences between BoDs and TMTs are attributable to the different roles played by these two units in the governance of firms. Whereas the BoD's primary role is to link the firm with its external environment, the TMT's primary role is to acquire, build, and combine the firm's resources and capabilities, including the human capital held within the TMT itself. As a result, firms allow more information to be available about BoD members' characteristics to reduce market level information asymmetries, whereas they are more reluctant to divulge information about TMT members' backgrounds to external observers due to the human capital attrition risk and the need to retain capabilities built within the firm over time.

Third, this chapter examines governance transparency in terms of different types of BoD and TMT characteristics. We show that more information is available in the public domain about the demographic characteristics of BoD and TMT members than about education and experience characteristics. This observation can be partially attributed to the notion that demographic attributes are less job related and human

capital oriented than educational and experience-related characteristics. At the same time, European firms currently face substantial institutional pressure to increase demographic diversity and to transparently communicate their diversity and human resource policy commitments. Thus, we observe that firms are increasingly likely to pay attention to demographic attributes in their reporting. Under these circumstances, the proposition of the strategic hoarding perspective that education and experience will be less frequently reported than demographic attributes appears plausible.

Fourth, our theory and results challenge the notion that BoD and TMT transparency levels tend to continuously increase and converge across European countries over time. Instead, our data suggests that these trends are distinct and follow different paths in each country (see Table 18.3). While the transparency levels in Switzerland were relatively stable for nearly all three types of characteristics between 2005 and 2009, there was a significant increase in transparency levels in the Netherlands during the same period. In the United Kingdom, transparency levels decreased for experience related attributes between 2005 and 2009. A preliminary conclusion from this study is therefore that corporate transparency across large firms in these three European countries has rather been diverging than converging in recent years, and depends on the type of characteristics (i.e., demographics vs. education vs. experience characteristics). Despite recent efforts to lay down common standards for BoD and TMT composition in Europe, actual convergence of such practices across Europe is likely to take longer than some may expect.

The arguments and findings of this chapter offer several implications that are relevant for academics, business practitioners, and policymakers. First, while the advantages and drivers of increasing governance transparency have been well documented in the prior literature, the human capital attrition disadvantages of BoD and TMT transparency have yet to be extensively discussed. Therefore, further research in the area of governance transparency should focus not only on the market-pull factors of higher transparency, but also on the strategy- and competitiveness-related factors that make many firms reluctant toward growing transparency levels. While the overarching policy objective is likely to continue to focus on raising corporate transparency levels, it will nevertheless be useful to incorporate the company perspective into future models to obtain a full understanding of the overall economic and societal costs and benefits of rising transparency levels.

Though BoD and TMT transparency undoubtedly offer several market and firm level benefits, our model suggests that high levels of governance transparency may also produce some important unwanted consequences. High levels of transparency are beneficial in reducing information asymmetries at the market level, but can also put the sources of a firm's competitive strengths (i.e., its most valuable human capital) at risk. Thus, when requiring firms to adopt higher levels of governance transparency, policymakers should also take into account the potential disadvantages that high levels of transparency may entail.

Finally, recent studies have shown how firms that pursue internal development programs and capability-building strategies are more likely to attain higher performance

outcomes in the long run (e.g., Bidwell, 2011). Other studies suggest that these internal development programs will pay off only if valuable human capital is retained in the focal organization over time (Tsui et al., 1997). As our strategic hoarding perspective suggests, high levels of TMT experience and education transparency will increasingly promote external mobility of executives, thereby allowing competitors to identify and poach key managerial talent. An interesting avenue for further research would be to test whether firms that openly report the detailed experiential and educational backgrounds of their BoD and TMT members experience difficulties in retaining their key talent in-house, and thereby struggle to remain competitive over time.

ACKNOWLEDGMENTS

The development of this chapter was partially funded by the Swiss National Science Foundation (SNSF) research grant 100018_140455.

REFERENCES

- Admati, A. R., and Pfleiderer, P. (2000). Forcing firms to talk: Financial disclosure regulation and externalities. *The Review of Financial Studies* 13, 479–519.
- Aerts, W., Cormier, D., and Magnan, M. (2006). Intra-industry imitation in corporate environmental reporting: An international perspective. *Journal of Accounting and Public Policy* 25, 299–331.
- Becker, G. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Chicago: University of Chicago Press.
- Bidwell, M. (2011). Paying more get less: The effects of external hiring versus internal mobility. *Administrative Science Quarterly* 56, 369–407.
- Bushman, R. M., Piotroski, J. D., and Smith, A. J. (2004). What determines corporate transparency? *Journal of Accounting Research* 42, 207–252.
- Bushman, R. M., and Smith, A. J. (2003). Transparency, financial accounting information and corporate governance. *Economic Policy Review* 9, 65–87.
- Castanias, R. P., and Helfat, C. E. (1991). Managerial resources and rents. *Journal of Management* 17, 155–171.
- Connelly, B. L., Certo, T. S., Ireland, D. R., and Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management* 37, 39–67.
- Daily, C. M., and Schwenk, C. (1996). Chief executive officers, top management teams and boards of directors: Congruent or countervailing forces? *Journal of Management* 22, 185–208.
- DiMaggio, P. J., and Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48, 147–160.
- Dutch CG Code. (2008). *Corporate Governance Codes and Principles*. http://www.ecgi.org/codes/code.php?code_id=251

- Economiesuisse. (2007). *Swiss Code of Best Practice for Corporate Governance*. http://www.economiesuisse.ch/de/PDF%20Download%20Files/pospap_swiss-code_corp-govern_20080221_de.pdf
- EU Commission. (2012). Enterprise and industry. http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?item_id=6113&lang=en
- Francis, J. R., Khurana, I. K., and Pereira, R. (2003). Investor protection laws, accounting and auditing around the world. *Asia Pacific Journal of Accounting and Economics* 10, 1–30.
- FRC. (2012). *The UK Corporate Governance Code*. <http://www.nonexecutivedirector.co.uk/images/files/UK%20Corporate%20Governance%20Code%20September%202012.pdf>
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review* 32, 334–343.
- Hambrick, D. C., and Mason, P. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Journal* 15, 514–535.
- Hermalin, B. E., and Weisbach, M. S. (2012). Information disclosure and corporate governance. *Journal of Finance* 67, 195–233.
- Hillman, A. J., and Dalziel, T. (2003). Board of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review* 28, 383–396.
- Khanna, T., Palepu, K. G., and Srinivasan, S. (2004). Disclosure practices of companies interacting with U.S. Markets. *Journal of Accounting Research* 42, 475–507.
- Lazear, E. P., and Shaw, C. L. (2007). Personnel economics: The economist's view of human resources. *Journal of Economic Perspectives* 21, 91–114.
- Makadok, R. (2001). Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal* 22, 387–401.
- Malkiel, B. G. (2003). The efficient market hypothesis and its critics. *Journal of Economic Perspectives* 17, 59–82.
- Miller, T., and Triana, M. (2009). Demographic diversity in the boardroom: Mediators of the board diversity-firm performance relationship. *Journal of Management Studies* 46, 755–786.
- Murphy, K. J., and Zabochnik, J. (2007). CEO pay and appointments: A market based explanation for recent trends. *American Economic Review* 94, 192–196.
- Pelled, L. H., Eisenhardt, K. M., and Xin, K. P. (1999). Exploring the black box: An analysis of work group diversity, conflict and performance. *Administrative Science Quarterly* 44, 1–28.
- Schneider, B. (1987). The people make the place. *Personnel Psychology* 40, 437–453.
- Straubhaar, T., and Wolter, A. (1997). Globalization, internal labor markets and the migration of highly skilled. *Intereconomics* 32, 174–180.
- Tsui, A. S., Pearce, J. L., Porter, L., and Tripoli, A. M. (1997). Alternative approaches to the employee-organization relationship: Does investments in employees pay-off? *Academy of Management Journal* 40, 1089–1121.
- Wiseman, R. M., Rodriguez, G., and Gomez-Mejia, L. R. (2012). Towards a social theory of agency. *Journal of Management Studies* 49, 202–222.

CHAPTER 19

GOVERNANCE TRANSPARENCY AND THE INSTITUTIONS OF CAPITALISM

Implications for Finance

RAJ AGGARWAL AND JOHN W. GOODELL

19.1 INTRODUCTION

THIS chapter reviews the state of the art with regard to governance transparency across the world. Governance transparency is important for a number of reasons including its positive influence on business trust and financial efficiency. We consider governance transparency in a country to have two major components: disclosure regarding ultimate corporate ownership and disclosure regarding self-dealing. There is much international variation in the laws and regulations regarding these two types of disclosure. Unfortunately, in spite of their importance, there are few international efforts to regulate these disclosures, and improving governance transparency remains mostly a national effort. Nations are generally favorable to higher levels of governance transparency; as such transparency generally leads to more efficient and more effective systems of capitalism. However, progress in this regard is often limited as in each country there are many private interest groups that benefit from poor governance transparency and so oppose efforts to improve it. In addition to domestic interest groups opposed to greater governance transparency, multinational corporations may also oppose greater governance transparency internationally as they can and do arbitrage international variations in such transparency.

As an example, international variations in disclosure laws and regulations regarding corporate ownership can and is increasingly used advantageously by many multinational companies to provide anonymity and, for example, avoid taxes and leverage control through holding companies. One reason for the accumulation of over a \$1 trillion in cash by large US multinational companies is the fear of paying US income taxes if the cash is repatriated to the United States. There is a growing consensus that large multinational companies ought to pay higher taxes and they should avoid using tax

havens with inadequate laws regarding ownership disclosure. As an example, this was the call made by the G-20 finance ministers at their recent 2013 meeting. The lack of ownership disclosure is also at the heart of the pyramidal ownership structures used to control many large European and Asian conglomerates with small amounts of beneficial ownership in holding companies.

Similar to this lack of regulations requiring disclosure of beneficial corporate ownership is surprisingly the lack of laws and regulations requiring the disclosure of self-dealing in business transactions. As noted in the extensive literature on transaction costs, such lack of self-dealing disclosure allows many instances of opportunistic behavior where a business or an individual may be a party on both sides of a transaction, giving this individual or firm the ability to take unfair advantage of third parties in such a deal who are often unaware of self-dealing by the other party.

Often a country with poor self-dealing disclosure also has poor corporate ownership disclosure. Doing business is very hazardous in such countries. Poor disclosure regarding both self-dealing and corporate ownership is also often a critical factor facilitating corruption and crony capitalism. The lack of laws and regulations regarding these disclosures has been a major factor in the failure of many formerly socialist countries to transition to capitalism successfully. Indeed, for capitalism to function efficiently there must be adequate laws and regulations regarding disclosure of self-dealing and corporate ownership. There must be good governance transparency.

Poor governance transparency reduces economic growth rates as it reduces the efficacy of market signals useful for capital allocation in an economy. For one reason, lack of governance transparency influences the nature and efficiency of financial intermediation and capital markets, equity participation, and the cost of equity in a country. Clearly, governance transparency is an important matter and each country should endeavor to increase it.

This chapter is organized as follows. Section 19.2 examines how governance transparency affects some of the fundamental mechanisms of capitalism, that is, how governance transparency influences transaction costs and the institutions of business exchange. In Section 19.3 we present some evidence of the importance of governance transparency in the structure of a nation's capital markets. In Section 19.3 we also review how governance transparency is measured and finally in Section 19.4 we conclude with some overall comments.

19.2 GOVERNANCE TRANSPARENCY AND CAPITALISM

19.2.1 Asymmetric Information and Transaction Costs

According to North (1990), the costliness of information needed for measurement and enforcement of exchanges creates "transaction costs." Especially since the

publication of Williamson's book (1975), the transaction cost approach to the study of firms and other governance structures has become recognized as a major theory. As noted by Williamson (1988) and others more recently (e.g., Aggarwal and Goodell, 2009a; Aggarwal and Zhao, 2009), Transaction Cost Economics (TCE) suggests that the overall costs of market exchange have a significant impact on respective financial systems. Hart (2001) and Hart (1995) recognize that no contract can be perfect in practice and the primary transaction costs of market exchanges stem from the residual uncertainties in contracts. Of course, as noted by Coase (1960), in a theoretically ideal financial system it would make no difference whether financial intermediation was done privately through banks or publicly through markets.

However, in reality other factors must also be considered. According to North (1990), transaction costs involve costs of defining property rights and costs of enforcing contracts—including costs of information. "Transformation costs" are the costs associated with using technology and the efficiency of factor and product markets and are also reflected in transaction costs. Whether institutions lower or raise overall transaction costs has to do in part with the ability of participants to be informed and to understand the nature of the particular institutional environment. This includes not just understanding the nature of contracts and their enforceability, but also the temperament and motivations of other participants.

Hart (2001) and Hart (1995) recognize that from the point of view of the equity investor, as an example of contracting, obtaining reliable information about firms is to some degree fallible and innately costly. These costs are shared with the supplier of equity, causing equity financing to be more costly for the firm. This view is supported by Bhattacharya and Thakor (1993), who suggest that a unifying thread among a great number of papers on banking is that "intermediation is a response to the inability of market-mediated mechanisms to efficiently resolve informational problems."

In addition, central to the need for resolving asymmetric information is identifying that there is a genuine pecuniary cost to not resolving uncertainties. Since Williamson (1975), opportunistic behavior of individuals has been identified as an important and fundamental component of transaction costs. Williamson (1975, pp. 47–48) suggests that under conditions of imperfect information, all transactions are affected by the problem of "self-interest seeking with guile." He later offered the alternative definition of opportunistic behavior as the "incomplete or distorted disclosure of information, especially calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse." What is meant by this is that, given the opportunity, agents are likely to serve their own interests rather than those of the other party to the contract (see also Jensen and Meckling, 1976; Fama, 1980).

Therefore, the potential for opportunistic behavior is inherently a primary cause of a need to reconcile the asymmetric information central to contracts. It is then the subsequent cost of reconciling asymmetric information that is the central cost of contracting (Hart, 1995, 2001). Absent the likelihood of opportunistic behavior there would be little consequent pecuniary need to expensive information gathering.

We consider that governance transparency in both forms of identifying actual ownership and identifying opportunities for self-dealing are central to the disclosure of the potential opportunistic behavior. In this chapter, we examine the determinants of laws that mandate disclosure of potential opportunistic behavior. In so doing, we address governance transparency as a fundamental determinant of transaction costs in respective financial systems.

19.2.2 Governance Transparency and Institutional Structure

As noted by Modigliani and Perotti (2000), and earlier by Rajan (1992), weak contract enforcement means that collateral is emphasized, leading to an advantage for bank financing. However, Rajan (1992) notes that a higher emphasis on collateral can lead to such an informational advantage for banks such that they can charge excessively high interest rates, which can weaken economic development. Underlying Rajan and Zingales (1998) is the notion that when reliable information about firms is too difficult or costly for the general public, banks provide delegated monitoring (see Diamond, 1984).

The quality and transparency of financial statements and financial disclosure by firms is an important factor influencing the costs of resolving asymmetric information in financial intermediation. After all, if firms are more forthcoming and honest in the disclosure of their respective circumstances, investors will require less effort to ascertain the validity of contracts with that firm. Interestingly, Bushman et al. (2004) undertake an investigation of the determinants of corporate financing. They find that across nations that corporate transparency is largely determined by judicial and legal regimes and political economic factors.

These results are consistent with the many writings of Nobel laureate Douglass North and others that transaction costs and institutional quality are deeply interlinked. For instance, North (1992) notes it was Coase (1960) who first observed that markets are efficient only in the absence of transaction costs. When there are transaction costs then institutions matter. Viewed from the other way then, institutional quality affects transaction costs as institutions affect the rules of the game that are employed to resolve incomplete contracts Hart (2001).

As observed by North (1992), transaction costs are costs incurred, not through production, but from operating in the economic system. Actors directly involved with transaction costs include lawyers, financial analysts, bankers, accountants, politicians, and many others. Institutions determine the rules of the game and so profoundly shape transaction costs. For instance, does the quality of political institutions affect the transaction costs of markets? We would argue yes. If there is a legal dispute with a firm, the quality of the judicial system will matter. The quality of the judicial system will be partially determined in no small way by the quality of political institutions. Indeed even the potential for disputes is widely shaped by political institutions. For instance, the capacity for firms to tunnel resources to insiders and other preferred entities is largely shaped by political actors (Johnson et al., 2002).

Of more direct concern for this chapter, if we accept the notion of North (1992) that institutional quality and transaction costs are intrinsically bound, then it is a quick extension to realize that the issue of transparency in transaction costs expands to the very broad and comprehensive issue of transparency of institutions. The transparency of market transaction costs in a particular society is inherently connected to the quality of transparency in the full sweep of all institutions in a respective society. Because the full gamut of institutions in a respective society is normally very wide, the range of contexts of transparency of transaction costs is likely to be very broad. This would include the transparency of political institutions and of the political process, of the judiciary, and of regulation, to mention just a few. It is therefore imposing for the average or even the highly informed investor to assess the transparency of transaction costs.

Recently a number of scholars have suggested that societies do not just need a relative supply of law, regulation, transparency, contract complexity, and other related measures that affect transaction costs, but also have respective levels of demand for these laws and institutional qualities. For instance, Milhaupt and Pistor (2008) argue that societies have both a supply and a demand for “law.” In this sense then, Milhaupt and Pistor (2008) suggest that law is not a politically neutral endowment but rather a result of a complex history of human interaction involving both the supply and demand for law. It is reasonable to consider that many factors enhancing the demand for law in the framework of Milhaupt and Pistor (2008) would also affect the demand for contract complexity in the framework of Eggleston et al. (2000), as well as the demand and supply of other qualities such as transparency.

Although complexity of contracts and quality of law are potentially very different dimensions, Eggleston et al. (2000) note that standard economic models of contracts imply that contracts are normally highly “complex,” by which they mean “1) rich in the expected number of payoff-relevant contingencies; 2) variable in the magnitude of payoffs contracted to flow between parties; and 3) severe in the cognitive load necessary to understand the contract.” Indeed, as a result of this complexity, Hart (2001) and others have contended that all contracts in practice are necessarily and optimally incomplete. Eggleston et al. (2000) and others (e.g., Fukuyama, 1995; Milhaupt and Pistor, 2008) suggest that a demand for law, or alternatively a demand for complexity of contracts, or levels of transparency, is assuaged partly by not just the complexity of contracting but also by other factors such as social trust, reputation, and faith in the institutional environment.

This is a reasonable view given that all contracts are subject to interpretation (Posner, 2004), and broader levels of social cooperation would lead to less need for complexity. Drawing on the notion of Milhaupt and Pistor (2008) and others that there is a demand for law, we suggest that, with regard to the culture of equity in societies, a greater emphasis on market financing will engender a demand for laws regarding transparency. Given that the transparency of transaction costs is intertwined with the transparency of the great variety of institutions in respective societies, it is not surprising that many have suggested that national culture and national social trust have a vital role in determining transaction costs.

19.3 IMPORTANCE OF GOVERNANCE TRANSPARENCY

Governance transparency is fundamentally important for financial development, and more generally for the institutions of capitalism, because such transparency influences the extent of opportunistic behavior and the formation of trust in business exchange. In this section we show how governance transparency influences the culture of equity, the cost of equity, stock market participation, and the nature of financial architecture in a country.

19.3.1 Governance Transparency and the Culture of Equity

In this section we highlight the importance to capital markets of a particular form of transparency: governance transparency. We discuss the role of governance transparency within the context of capital markets involving contracts that are incomplete and the need to resolve asymmetric information. We also discuss the transparency–transactions cost paradigm within the context of the institutional structure determining the rules of the game. In addition, we discuss the role of national culture and social trust in augmenting and mitigating the need and demand for governance transparency in respective societies.

Transparency reduces information asymmetry and residual agency costs and so the severity of information asymmetry and agency conflicts in a firm depends greatly on corporate transparency and the information disclosure environment in a country. In turn, the severity of agency costs and information asymmetry among managers, shareholders, and creditors, determines a firm's access to and cost of capital as well as its choice between debt and equity. Thus, national transparency regimes are likely to influence the cost and mix of capital used by firms.

Nations differ greatly in their equity culture. We consider a nation's "culture of equity" as the collective level of participation and comfort with equity markets. This can include (1) the cost of equity financing; (2) the preference for financing with equity over debt financing; and (3) the breadth of stock market participation. If nations are more comfortable with equity financing they will have lower costs of equity (or lower equity premia) as participants in the equity markets will have lower need to demand an expected return for involvement in the stock market. Further, if societies are more comfortable with equity markets there will be more of a preference for market financing over bank financing, as shown perhaps by a higher ratio of stock market capitalization to the size of deposit money banks. In addition, if a society is more comfortable with equity there will be greater participation of the population in the stock market.

Previous literature has identified all three of these aspects of equity culture with the quality of information and the costs of obtaining information. For instance, among

many papers, Hail and Leuz (2006) find nations' costs of equity associated with the quality of information and governance; similarly Aggarwal and Goodell (2011) find an association of information quality with nations' *ex ante* equity risk premia. Regarding financing choices, Aggarwal and Goodell (2009a), Aggarwal and Goodell (2009b), Kwok and Tadesse (2006), and others find that a preference for equity market financing over debt financing is enhanced by lower costs of obtaining investor-required levels of information. Further, Bertraut (1998) and others find costs of information are very important in determining breadth of stock market participation. In sum, transparency is critical to nations' cultures of equity.

As surveyed by Levine (2005), a large body of literature has shown that efficient financial systems and easy access to finance are important for economic development. Further, Beck and Demirguc-Kunt (2008) note that there are other broad social benefits to an efficient financial system. For instance, Beck et al. (2007) find that nations with better developed financial systems and easier access to finance not only have faster economic growth but also have reduced economic inequality (and greater benefits for the poorer population).

Overall we suggest that, with regard to various forms of transparency, governance transparency, or the transparency of political, judicial, and governance institutions, is of particular importance to capital markets. From one perspective, governance transparency relates closely to the "potential of opportunistic behavior," which Williamson (1975) notes, is central to transaction costs. From another perspective, North (1990) and others have noted the importance of institutions to transaction costs as they determine the "rules of the game."

19.3.2 Governance Transparency and the Cost of Equity

Ibbotson et al. (2006) suggest that capital market sizes are set by the supply and demand for capital. They suggest, from the viewpoint of the supplier of capital (an investor), that there is a supply and demand for returns and that returns are priced in the marketplace. They further suggest that in most countries because of many obstacles and limitations, the supply and demand for equity may not respond to market forces, as would be expected from a theoretical view of efficient markets. For example, the supply of equity may be restricted by bureaucratic rules, and regulations may deter the formation and market listing of corporate shares. Similarly, owing to uncertain property rights and the unreliability of public information on potential investments, the demand for equity may also be limited. In fact, a lack of transparency regarding a broad array of public information impedes the demand for equity.

Similarly, the demand for equity returns is likely to be influenced also by a great variety of factors that influence the risk level of equity and society's perceptions or tolerance of equity risk. The nature of legal protection for investors, disclosure requirements, the level of social trust, and the political stability of a country certainly are relevant factors. But underlying these factors is the need for transparency in the understanding and assessment of these risks and uncertainties.

Corporate transparency may also influence capital structure and equity risks. Controlling for firm and national variables previously known to influence corporate capital structure, Aggarwal and Kyaw (2006) document that international variations in transparency levels significantly influence corporate capital structures. They further document that transparency that reduces owner–manager agency costs such as higher levels of analysts following is associated with lower corporate debt levels. In contrast, transparency that reduces owner–creditor agency costs and helps creditors control business risks (and wealth transfers from creditors to owners), such as disclosure timeliness, institutional trading activities, and enforcement of anti-insider trading laws, is associated with higher corporate debt levels. Other transparency measures such as financial disclosures and governance disclosures are negatively associated with debt ratios and higher levels of audit intensity, and accounting disclosures are positively associated with debt ratios. Transparency factors play a more important role for large firms, which require more outside financing and for firms in services and high technology, where the agency issues are likely to be more severe.

19.3.3 Governance Transparency and Stock Market Participation

Though not extensively examined in prior literature, there is also evidence that transparency has a large impact on overall participation in the stock market among respective societies. At least since Bertraut (1998), costs of information have been found to be very important in determining breadth of stock market participation. From a similar perspective, Grout et al. (2009) look at stock market participation over a broad sample of countries. They find that legal origin is a “very strong” determinant of stock market participation. As a common-law legal origin and transparency are often well correlated, this points toward an association of transparency and overall institutional quality with more breadth of stock market participation.¹

Therefore, as legal origin and transparency are closely related, transparency is likely an important factor with regard to the participation of populations in respective equity markets. Guiso et al. (2005) examine the role of social trust with regard to stock market participation. They conclude that social trust is an important determinant of cross-national differences in stock market participation. As we discuss in this chapter, trust and transparency are closely linked in forming the transaction costs of resolving

¹ Legal Origins Theory (La Porta et al., 1998) posits that legal origin is exogenous as countries received their legal origins through endowments or colonization. In this chapter we express legal origin empirically as a dummy variable that is assigned “1” if the country has a common law legal tradition and “0” otherwise. Common law is considered by many (see, for instance, Johnson et al., 2002) to provide better investor protection owing to greater discretionary authority of judges to determine duty of care and process of contention between the parties of prosecution and defense.

the asymmetric information inherent in financial transactions. Guiso et al. (2005) point toward the importance of transparency to stock market participation.

19.3.4 Governance Transparency and Financial Architecture

Transparency also plays an important role in determining the size of market financing relative to the size of bank financing in a country or the “financial architecture” of societies. The channeling of funds from savers to investors, or financial intermediation, is a necessary function in all countries and is generally undertaken primarily through financial institutions and/or through financial markets. Either financing channel must resolve the issues of asymmetric information, adverse selection, and agency costs in financing contracts that cover the monitoring and collection of funds provided by savers to investors.

Given that all optimal contracts are incomplete, the efficacy and efficiency of overcoming contracting costs depends on the ability and willingness of the contracting parties to try and take advantage of each other. This ability and willingness for opportunistic behavior depends not only on industrial structure and the legal environment, but also on ethical and other informal conventions that depend on social and cultural values. As these differ from country to country, and given that institutions and markets differ in how they enforce incomplete contracts, financial institutions may be optimal in some combinations of ethical, cultural, and social conditions while financial markets may be optimal in other conditions and financial institutions may be favored in some countries while financial markets are favored in other countries. Recent research notes that national preferences for market financing increase with political stability, societal openness, economic inequality, and equity market concentration, and decreases with regulatory quality and ambiguity aversion (e.g., Modigliani and Perotti, 2000; Ergungor, 2004; Kwok and Tadesse, 2006; Aggarwal and Goodell, 2009a).

Modigliani and Perotti (2000) theorize that when societies’ enforcement regimes are not adequate, bank financing is favored. In such cases the binding of transactions is based on relationships and becomes more private than public. Such private binding is concomitant with firms having long-term relationships with banks. Modigliani and Perotti (2000) suggest that when the rights of minority (or outside) investors are not adequate, less equity investment will be available for new enterprises (see Myers, 1977). According to Modigliani and Perotti (2000), in such societies, there will be more bank lending instead of financing with public equity.

Modigliani and Perotti (2000) also suggest that banks, because of an emphasis on collateral, are less likely or able to differentiate firms with good future prospects versus those with poor future prospects. Alternatively, markets with good governance are better able to distinguish between these types of firms, a view supported by recent literature. For instance, Shirai (2004) reports that, because of improvements in official oversight for the period 1997–2001, Indian capital markets improved significantly in being able to differentiate high-quality firms from low-quality firms.

As noted by Williamson (1988) and others (e.g., Aggarwal and Zhao, 2009), TCE suggests that the costs involved with resolving the asymmetric information inherent in arms-length market contracts have a direct bearing on firm's cost of financing. In support, Bhattacharya and Thakor (1993, p. 14) suggest that a unifying thread among a great number of papers on banking is that "intermediation is a response to the inability of market-mediated mechanisms to efficiently resolve informational problems." Given the central role of opportunistic behavior in transaction costs, the transparency of self-dealing can be expected to be an important determinant of such transaction costs.

Consequently, when the costs of market exchange are sufficiently high and the transparency of self-dealing is low, firms can obtain cheaper financing through some other means, for example, through some sort of a prescribed relationship arrangement, such as a bank loan or, more broadly, some transfer of resources through a horizontal or vertical network. It has been widely documented that the mix of bank and market financing in a country varies widely across nations (e.g., Ergungor, 2004; Kwok and Tadesse, 2006; Aggarwal and Goodell, 2009a; Aggarwal and Goodell, 2010). Because the choice of financing channels involve a consideration of which channel is less expensive, all else equal, greater transparency of transaction costs lowers the costs of market financing. It is expected that greater transparency of transaction costs lowers the cost of market financing by lowering the transaction costs of resolving asymmetric information (e.g., Ergungor, 2004; Kwok and Tadesse, 2006; Aggarwal and Goodell, 2009a; Aggarwal and Goodell, 2010). Overall, we suggest that transparency is analogous to knowledge while trust is analogous to faith. More faith (trust) lessens the utility of more knowledge (transparency). The need for transparency therefore will be less in more trust worthy social environments.

19.3.5 Demand for Governance Transparency

As we noted briefly earlier, Milhaupt and Pistor (2008) and others suggest that there is a demand for law. Fukuyama (1995) suggest that a demand for law, or alternatively a demand for complexity of contracts, or levels of transparency, is determined by not just the cost of contracting but also by other factors such as levels of social trust and reputation and faith in the institutional environments.² This is a reasonable view given that all contracts are subject to interpretation (Posner, 2004), and broader levels of social cooperation would lead to less need for complexity. We consider, therefore, with regard to the culture of equity in societies, that a greater emphasis on market financing will engender a demand for laws regarding transparency.

² Recently, related to this Aghion et al. (2010) document a very strong correlation between mistrust and the level of regulation. They suggest that there is a substitution between social capital and regulation.

19.4 MEASURING GOVERNANCE TRANSPARENCY

19.4.1 Anti-Self-Dealing Index

In our view, Djankov et al. (2008), by developing a measure of opportunities for self-dealing among individuals and firms, offer an exceptionally parsimonious measure of the laws requiring disclosure of the potential for opportunistic behavior. The construction of this index is outlined in the text that follows and also described in detail in Djankov et al. (2008). Djankov et al. (2008) create a contextually parsimonious measure of disclosure of what is required to be disclosed regarding relationships between buyer and seller within the context of corporate self-dealing. This context is of particular relevance to shareholders. The parsimonious nature of the assessment avoids the obvious debate or pitfall of considering more information, across contexts, to equate to more transparency.

Djankov et al. (2008) present a hypothetical self-dealing transaction between two firms, “Buyer” and “Seller.” “Mr. James” owns 90% of Seller and 60% of Buyer, and Buyer is a publicly traded. Mr. James is a director of Buyer and also has appointed two directors to Buyer’s five-member board. Mr. Buyer’s son is the CEO of Buyer. As established by Djankov et al. (2008), Seller runs a series of retail hardware stores. Some stores in Seller’s chain have recently been closed. James proposes that Buyer purchase idle trucks of Seller for the cash equivalent of 10% of the assets of Buyer. James argues that these extra trucks will have significant utility for Buyer. All required approvals and disclosures ensue. The crux of the situation from a self-dealing perspective is that Mr. James is on both sides of the transaction, as he owns portions of both Buyer and Seller. The case is constructed so that Mr. James will benefit if Buyer overpays for the trucks. The hypothetical case is constructed so that Mr. James has the deciding vote with regard to Buyer and casts his vote in favor of the transaction.

Djankov et al. (2008) subsequently ask attorneys from the Lex Mundi law firm in 102 countries to describe the legal process with which each respective country regulates this hypothetical transaction. From the detailed answers to questions, numerical measures of the intensity of regulation of self-dealing are constructed. We consider in this chapter that this hypothetical scenario that illustrates the potential for a self-dealing transaction is closely illustrative of the potential for opportunistic behavior as abstractly put by Williamson (1975). By focusing on a simple self-dealing transaction, Djankov et al. (2008) focus directly on the possibilities for opportunistic behavior.

19.4.2 Governance Transparency of Djankov et al. (2008)

In this section, drawing heavily from Djankov et al. (2008), we describe in detail the variables used in forming the index of anti-self-dealing. The index of anti-self-dealing

is built from other indices that capture *ex ante* and *ex post* disclosure and the quality of enforcement. According to Djankov et al. (2008), the “Disclosures by Buyer” is an “index of disclosures that are required before the transaction may be approved.” This ranges from 0 to 1.

“One-third point if each of the following items must be disclosed by Buyer to the public or its shareholders before the transaction is approved: (1) Mr. James owns 60% of Buyer; (2) Mr. James owns 90% of Seller; and either (3) all material facts or the following three items: (a) description of the assets; (b) nature and amount of consideration; and (c) explanation for the price.” “Disclosures by Mr. James” is an index of disclosures that Mr. James must make before the transaction may be approved. This index ranges from 0 to 1 and is assigned “0” if no disclosure is required. It is assigned “0.5” if only the existence of a conflict of interest must be disclosed, without details. The index is assigned “1” if all material facts must be disclosed. “Independent Review” is an index that is assigned “1” if a positive review by a financial expert or independent auditor is required before the transaction may be approved and “0” otherwise. According to Djankov et al. (2008), Ex Ante Disclosure is the arithmetic average of “Disclosures by Buyer,” “Disclosures by Mr. James,” and “Independent Review.”

“Approval by Disinterested Shareholders” is an index that is assigned “1” if the transaction must be approved by disinterested shareholders and “0” otherwise. “Ex Ante Disclosure of Self-Dealing” is an index formed as the arithmetic average of Ex Ante Disclosure and Approval by Disinterested Shareholders. “Disclosures Required in Periodic Filings” ranges from 0 to 1. 0.20 point is granted for each of the following items: “1) Mr. James owns 60% of stake in Buyer; 2) Mr. James owns 90% of Seller; 3) shares held beneficially by Mr. James (i.e., shares held and/or managed via a nominee account, trust, brokerage firm or bank); 4) shares held indirectly by Mr. James (e.g., via a subsidiary company or holding); and either 5) all material facts about the transaction or the following three items: (a) description of the assets; (b) nature and amount of consideration; and (c) explanation for the price.” According to Djankov et al. (2008), Standing to Sue is assigned “1” if a 10% shareholder may sue derivatively Mr. James or the approving bodies or both for damages that the firm suffered as a result of the transaction, and “0” otherwise.

“Ease in Rescinding the Transaction” ranges from 0 to 1. It is assigned “0” when rescission is unavailable or available only in case of bad faith, or when the transaction is unreasonable or causes disproportionate damage. It is assigned 0.5 when rescission is available when the transaction is oppressive or prejudicial. It is assigned “1” when rescission is available when the transaction is unfair or entails a conflict of interest. According to Djankov et al. (2008), “Ease in Holding Mr. James Liable for Civil Damages” ranges from 0 to 1. It is assigned “0” when the interested director is either not liable or liable in case of bad faith, intent, or gross negligence. It is assigned “0.5” when the interested director is liable if he/she either influenced the approval or was negligent. And it is assigned “1” if the interested director is liable if the transaction is unfair, oppressive, or prejudicial.

According to Djankov et al. (2008, p. 434), “Ease in Holding Members of the Approving Body Liable for Civil Damages” ranges from 0 to 1. It is assigned “0” when

members of the approving body are either not liable or liable in case of intent, bad faith, or gross negligence. It is assigned “0.5” when members of the approving body are liable if they acted negligently. It is assigned “1” if members of the approving body are liable if the transaction is unfair, oppressive, or prejudicial. “Index of Access to Evidence” ranges from 0 to 1. One quarter point is added to the measure for each of the following four rights: “1) a shareholder owning at least 10% of the shares can request that the Court appoint an inspector to investigate Buyer’s affairs; 2) the plaintiff can request any documents relevant to the case from the defendant (without specifying which ones); 3) the plaintiff may examine the defendant without the court approving the questions in advance; and 4) the plaintiff may examine non-parties without the court approving the questions in advance.” One-eighth point is added to the measure for each of the following two rights: “1) the plaintiff may examine the defendant but questions require prior court approval; and 2) the plaintiff may examine directly the non-parties but questions require prior court approval.”

“Ease of Proving Wrongdoing” is the arithmetic average of Standing to Sue, Ease in Rescinding the Transaction, Index of the Ease in Holding Mr. James Liable for Civil Damages, Index of the Ease in Holding Members of the Approving Body Liable for Civil Damages, and Access to Evidence. “Ex-post Private Control of Self-Dealing” is the arithmetic average of Disclosure in Periodic Filings and Ease of Proving Wrongdoing. Finally, the “Anti-Self-Dealing Index” is the arithmetic average of Ex-Ante Private Control of Self-Dealing and Ex-Post Private Control of Self-Dealing.

19.4.3 Constructing the Governance Transparency Index of Bushman et al. (2004)

In this section we describe another highly respected estimate of transparency that is closely linked to transaction costs. Bushman et al. (2004) examine corporate transparency by amalgamating a variety of measures. Ultimately Bushman et al. (2004) develop a measure of “financial transparency” as well as a measure of “governance transparency.” As we explain in the text that follows, the Governance Transparency Index portion of Bushman et al. (2004) highlights the aspect of governance transparency relating to disclosure of actual ownership and control of firms.

Financial transparency is developed from (1) “DISCL,” which is the average ranking regarding disclosure of research and development, capital expenditures, subsidiaries, product segmentation, geographic segmentation, and accounting policy; (2) “TIME,” which is the average ranking regarding frequency of reports, count of disclosed items, and consolidation of interim reports; (3) “NANALYSTS,” number of analysts following 30 largest companies in each country; and (4) “MEDIA,” which is the average ranking of the country’s media development. Overall, “financial transparency” is about the “intensity and timeliness of financial disclosures by firms, analysts and the media.”

19.4.4 Descriptive Statistics and Comparison of Two Governance Transparency Measures

In comparison and in contrast within the framework of Bushman et al. (2004), governance transparency is formed from the average disclosure ranking regarding range of shareholders, major shareholders, management information, list of board members and their affiliations, remuneration of directors and officers, and shares owned by directors and employees. According to Bushman et al. (2004), governance transparency is about “who is governing the firm, how their incentives are structured and how and where managers have invested firm’s financial resources.”

Table 19.1 lists the Financial Transparency and Governance Transparency measures of Bushman et al. (2004), along with values of the Anti-Self-Dealing Index for those countries that have reported values for both Bushman et al. (2004) and Djankov et al. (2008). We also show values of other related variables that are defined and described in this chapter: financial architecture, social trust, trust formation, the cost of equity, and percent of population participating in the stock market. We also report an average or composite governance transparency score. This is created by first standardizing the Anti-Self-Dealing Index and the Governance Transparency Index of Bushman et al. (2004) and then taking the arithmetic average.

Examining Table 19.1, with regard to the Anti-Self-Dealing Index, Singapore is estimated as having the best governance transparency (1.00). The United Kingdom (0.95), Malaysia (0.95), and New Zealand (0.95) also rate high. On the low end, Mexico (0.17), Philippines (0.22), Greece (0.22), and Brazil (0.29), as well as the developed countries Austria (0.21) and Germany (0.28) rate as having relatively poor governance transparency.

With regard to the Ownership (Governance) Transparency Index of Bushman et al. (2004), Singapore is again the best (1.33), with Malaysia (1.24), South Africa (1.13), Sweden (1.06), Ireland (1.04), and the United Kingdom (1.03) also rated highly. Greece (−1.02), Brazil (−0.87), Peru (−0.84) Thailand (−0.82), and Mexico (−0.81) have poor governance transparency with regard to this measure of ownership transparency. Thailand has the largest difference between the measures of Djankov et al. (2008) and Bushman et al. (2004). Thailand has a relatively good rating with regard to anti-self-dealing transparency (0.81) but poor ownership transparency (−0.82).

With regard to our composite index of governance transparency, Singapore rates the best (2.00), with the United Kingdom (1.69), South Africa (1.46), Australia (1.32), New Zealand (1.77), and Malaysia (1.83) being also highly rated. Brazil (−1.00), Mexico (−1.17), and Greece (−1.20) have particularly poor governance transparency based on our composite measure. Interestingly, the United States has an overall governance transparency score of 0.16, which is well below the mean of 0.85.

For our sample of countries that have both the Anti-Self-Dealing-Index of Djankov et al. (2008) and the financial and governance transparencies of Bushman et al. (2004), the correlation of the Anti-Self-Dealing Index with the *financial* transparency index

Table 19.1 Disclosure Variables from Bushman et al. (2004) and Djankov et al. (2008) for Countries That Have Both Reported

Country	1	2	3	4	5	6	7	8	9
	Financial Transparency of Bushman et al. (2004)	Ownership Transparency of Bushman et al. (2004)	Anti-Self-Dealing of Djankov et al. (2008)	Governance transparency overall average	Social trust	Behavioral trust formation	Financial architecture	Cost of equity	Equity participation
Australia	0.36	1.08	0.76	1.32	46.10	-46	0.75	10.01	19.51
Austria	-0.11	-0.08	0.21	-0.61	31.30	-20	0.25	10.49	2.96
Belgium	0.50	-0.07	0.54	0.10	29.40	-25	0.42	10.28	7.23
Brazil	0.10	-0.87	0.29	1.00	9.40	-42	0.25	18.55	0.24
Canada	1.17	-0.57	0.64	-0.01	42.80	-43	0.92	10.04	—
Chile	-0.09	0.21	0.63	0.47	12.60	-5	0.58	12.15	4.24
Denmark	0.48	-0.08	0.46	-0.08	64.10	-11	0.58	10.30	13.39
Finland	0.56	0.75	0.46	0.46	58.90	0.00	0.50	12.60	13.73
France	1.27	-0.63	0.38	-0.61	18.80	-25	0.75	9.86	10.97
Germany	1.62	-0.38	0.28	-0.66	36.80	-36	0.42	9.62	4.32
Greece	-0.87	-1.02	0.22	-1.20	20.50	-5	0.33	10.80	8.36
India	-0.64	0.04	0.58	0.26	23.30	-93	0.92	14.01	0.69
Ireland	-0.18	1.05	0.79	1.36	35.20	-61	0.67	12.32	3.44
Italy	1.16	-0.58	0.42	-0.49	29.20	-45	0.67	9.92	2.39
Japan	0.68	0.36	0.50	0.29	39.10	-57	0.75	6.48	30.75
Korea	-0.49	-0.25	0.47	-0.17	28.40	-14	0.75	14.29	9.30
Malaysia	0.23	1.24	0.95	1.83	8.80	-118	0.92	9.75	6.27
Mexico	0.39	-0.81	0.17	-1.17	15.60	-68	0.58	14.82	—
New Zealand	-0.03	1.16	0.95	1.77	51.20	-31	0.67	10.55	17.10
Norway	0.28	0.55	0.42	0.25	74.20	11.00	0.58	12.51	7.30
Pakistan	-1.39	0.89	0.41	0.45	28.20	-35	0.58	17.21	0.01
Peru	-0.64	-0.84	0.45	-0.59	6.30	-19	0.33	15.93	—
Philippines	-0.12	-0.62	0.22	-0.94	7.30	-114	0.83	12.99	—
Portugal	-0.26	-0.34	0.44	-0.29	10.80	10.00	0.42	9.95	1.50

(Continued)

Table 19.1 (Continued)

	1	2	3	4	5	6	7	8	9
Country	Financial Transparency of Bushman et al. (2004)	Ownership Transparency of Bushman et al. (2004)	Anti-Self-Dealing of Djankov et al. (2008)	Governance transparency overall average	Social trust	Behavioral trust formation	Financial architecture	Cost of equity	Equity participation
Singapore	0.46	1.34	1.00	2.00	16.70	-114	1.00	9.35	11.97
South Africa	-0.41	1.13	0.81	1.46	18.80	-63	0.83	15.86	—
Spain	0.88	0.15	0.37	-0.12	20.00	-13	0.50	10.18	2.22
Sweden	0.80	1.06	0.33	0.39	68.00	-7	0.58	11.52	19.70
Thailand	-0.36	-0.82	0.81	0.19	41.50	-34	0.92	12.17	—
Turkey	-0.79	-0.78	0.43	-0.60	4.90	-26	0.50	—	5.90
United Kingdom	0.75	1.03	0.95	1.69	30.50	-66	0.83	10.15	15.09
United States	1.59	-0.34	0.65	0.16	39.30	-56	1.00	9.75	12.60
Mean	0.21	0.09	0.53	0.85	30.24	7.00	0.64	11.76	8.89
Standard Deviation	0.73	0.77	0.24	0.70	18.95	6.08	0.22	2.65	7.42

Social trust is the percent of respondents to the World Values Survey answering "yes" to the question of whether most people can be trusted. Behavioral trust formation is formed from the cultural dimensions of Hofstede (2001) as UAI–MAS–PDI. Financial architecture is the ratio of the size of stock market capitalization to the size of deposit money banks from Beck et al. (2000) (updated). Cost of equity is the ex ante cost of equity values estimated by Hail and Leuz (2006). Equity participation is the percent of the population owning stock from Grout et al. (2009). Column 4 is created by first standardizing Columns 1 and 2 and then taking their arithmetic average.

of Bushman et al. (2004) is practically zero. On the other hand, the correlation of the Anti-Self-Dealing Index with the governance transparency index of Bushman et al. (2004) is high at about 0.63.³ This suggests that the financial transparency index is capturing a very different quality of transparency with regard to transaction costs than the governance transparency of Bushman et al. (2004) or the Anti-Self-Dealing Index of Djankov et al. (2008). It also suggests that the two measures of governance transparency we highlight in this chapter are highly correlated or are in many ways measuring similar qualities. Certainly there is overlap in the characteristics that form the construction of the two indices.

In the preceding text we have described the construction of the Anti-Self-Dealing Index in detail. In measuring the disclosure of self-dealing, levels of ownership of buyer and seller are important component of transparency, and so aspects of the transparency of self-dealing naturally overlap the transparency of ownership. However, the Anti-Self-Dealing Index is focused on the ownerships in acquiring and target firms of both buyer and seller, while the Governance Index of Bushman et al. (2004) is focused on the disclosure of actual and de facto (in terms of management control) ownership of firms. In addition, the measure of Djankov et al. (2008) includes an important enforcement-related component and is not just limited to de jure aspects of disclosure.

19.4.5 Governance Transparency and Social Trust

At first it might seem reasonable, given the concept of a demand for law, that social trust likely mitigates the need for transparency in societies. It is intuitively sensible to conclude that if there is more trust (i.e., a belief that one is going to be treated legally and fairly) then there is less impetus to invest the costs of obtaining knowledge about the degree that one is being treated fairly. However, summarily concluding that laws promoting transparency and social trust are inversely related with trust (belief) is a substitute for transparency (knowledge) ignores the possibility that trust may be partially engendered by laws promoting transparency. In such a case, consider the possibility of a positive association of trust and transparency—or perhaps no relation between trust and transparency if various effects cancel each other.

Prior literature points toward social trust as a key lynchpin in determining the amount of effort people demand or are willing to invest in assessing transaction costs. Fukuyama (1995) notes that in environments of less social trust, people naturally demand more information to feel confident about contracts (see Hart, 2001). According to Fukuyama (1995), therefore, a lack of social trust acts as a general tax on the respective population. Resolving asymmetric information through social trust is obviously a quicker process than gathering and processing large amounts of information.

³ Cohen (1988) suggests that a correlation of 0.5 is large, 0.3 is moderate, and 0.1 is small (Cohen, 1988).

Therefore, the notion of social trust (when justified of course) as a shorter and more cost effective way of resolving asymmetric information relates closely to the notion of slow and fast thinking of Kahneman and Tversky (2011). Kahneman and Tversky's (2011) central thesis is there is a dichotomy between two modes of thought: "System 1" is fast, instinctive, and emotional, while "System 2" is slower, more deliberative, and more logical.

If social trust, therefore, is a critical factor in identifying transaction costs, then factors that impact trust are also important. And with regard to the transparency of transaction costs, the transparency of such factors is important. A potential complicating aspect is that factors noted above, such as quality of governance, political stability, and control of corruption could conceivably influence national trust. However, it is generally the view that deep-seated cultural values generally predate institutional qualities. But they clearly have an important role in forming institutions. Other factors identified with influencing trust are forms of societal fractionalization. This includes the fractionalization due to different ethnic groups in a nation (Alesina et al., 2003) and economic fractionalization due to high wealth inequality (Bjornskov, 2008).

In Figure 19.1, we graph governance transparency against social trust for various countries. As for other figures, we construct an average of the Anti-Self-Dealing Index of Djankov et al. (2008) and the governance transparency index of Bushman et al. (2004). To do this we first standardize each index and then take the arithmetic average of the standardized variables. Social trust is the percent of respondents to the World Values Survey who answered "yes" to the question of whether most people can be trusted. Figure 19.1 shows a clear positive trend line. This suggests a strong positive relation between transparency and social trust. More trusting societies are also more transparent, or, alternatively, more governance transparency engenders greater trust.

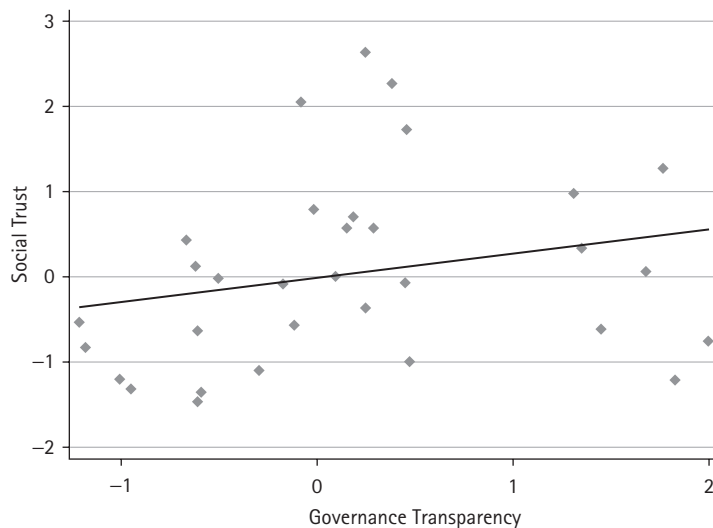


FIGURE 19.1 The association between governance transparency and social trust.

19.4.6 Governance Transparency and Trust Formation

Next we discuss not the association of transparency with social trust *per se* but rather the association of governance transparency with the nature in which society forms trust. Doney et al. (1998) explore the mechanisms of how national culture may affect the development of social trust. They note that trust can be formed by factors that influence the reliability of “prediction” and “intentionality” of human behavior. According to Doney et al. (1998), variability in a counterparty’s performance is undesirable, and a relatively high value is placed on predictability in relationships. We consider prediction in the context of this chapter as referring to the equity investor’s ability to forecast the behavior of the entity seeking equity financing.

Doney et al. (1998) suggest that under conditions of high uncertainty avoidance, low masculinity, and low power distance, trust is developed predominantly by processes of prediction based on intentionality.⁴ Forming trust through intentionality entails assuming that people value relationships based on mutual and comparable dependence and group affiliation. Prediction in the context of Doney et al. (1998) in the context of this chapter refers to the equity investor’s ability to forecast the re-payment behavior of the firm undertaking equity financing. For equity investors, establishing trust through intentionality entails establishing the motivation and intention of firms to honor contracts. Thus, trust building through intentionality corresponds with the short-cut approach or fast-thinking approach of Kahneman and Tversky (2011). An example of this is the assumption (see Yunus, 2003) that generally women are more trustworthy with regard to repaying microfinance loans. Such trust building through assumptions regarding intentions is also closely aligned with the social psychology literature such as Deutsch (1960) and Lewicki and Bunker (1995).

In contrast, Doney et al. (1998) suggest that in environments of low uncertainty avoidance, high masculinity, and high power distance, investor trust is more likely formed through a process of calculation and capability. Trust building by means of a capability process involves an investor’s willingness to trust based on an assessment of the firms’ ability to honor its contracts and the legal constraints placed on the firm. Establishing trust through a calculative process involves an analysis of the extent that the benefits of cheating do not exceed the costs of being caught. The investor infers that it would be contrary to the firm’s best interest to cheat; therefore the firm can be trusted. As noted by Doney et al. (1998), this calculative view of trust formation is

⁴ Hofstede (2001) offers a set of cultural dimensions derived from factor analysis that describes the effects of a society’s culture on the values of its members, and how these values relate to behavior. The cultural dimensions of Hofstede (2001) have been used in thousands of research studies (Kirkman et al., 2006). Originally, Hofstede (2001) proposed four dimensions along which cultural values could be analyzed: individualism–collectivism, uncertainty avoidance; power distance (social hierarchy) and masculinity–femininity (gender differentiation as well as competitiveness and task orientation vs. person-orientation). Since Hofstede’s pioneering research, other measures of national culture have also been developed with varying degrees of acceptance in the scholarly community.

consistent with the economics literature, for instance, with the theory of coordination within TCE of Williamson (1985) (see also Akerlof, 1970), as well as with the international business literature, for instance, with regard to theories of mutual forbearance in the cooperation of joint ventures (Buckley and Casson, 2002).

As this brief discussion indicates, Doney et al. (1998) indicate that social trust can be formed in two ways. In some countries where culture is characterized by high “uncertainty avoidance,” low “masculinity,” and low “power distance,” social trust is primarily *behavioral* with a large role for social pressure. In this context, “uncertainty avoidance,” “masculinity,” and “power distance” refer to the quantified measures of cultural dimensions of Hofstede (2001). These measures respectively refer to the degree of discomfort with ambiguity, the separation of gender roles along with the degree of competitiveness, and the amount of societal hierarchy.

In other countries, according to Doney et al. (1998), where culture is characterized by low uncertainty avoidance, high masculinity, and high power distance, social trust is primarily *economic* and repayment depends on more formal enforcement. It is likely that in societies more in keeping with this latter category of trust formation transparency will play a much larger role, while in countries where social trust is primarily behavioral, transparency will play a lesser role.

In Figure 19.2, we graph governance transparency against behavioral trust formation. As explained earlier, the behavioral trust formation measure is formed from the cultural dimensions of Hofstede (2001) as the standardized value of uncertainty avoidance (UAI) minus masculinity (MAS) minus power distance (PDI). As expected from the discussion above, the graph suggests a strong negative cross-country relation between governance transparency and behavioral social trust. In countries with low governance transparency, social trust is primarily behavioral.

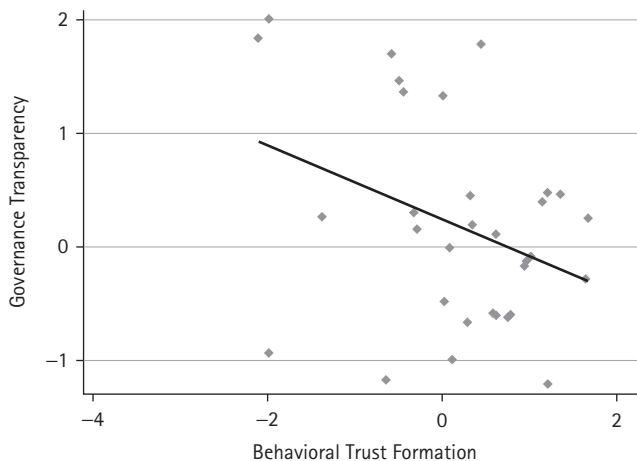


FIGURE 19.2 The association between governance transparency and behavioral trust formation.

19.5 EVIDENCE OF THE IMPORTANCE OF GOVERNANCE TRANSPARENCY

As we have noted earlier, governance transparency influences the culture of equity, particularly equity participation, cost of equity, and financial architecture. Indeed, there is empirical cross-country evidence of these relationships. In this section we present preliminary bivariate relationships among these variables. With regard to governance transparency for these relationships, we construct a simple average of the Anti-Self-Deal Index of Djankov et al. (2008) and the governance transparency index of Bushman et al. (2004). To do this we first standardize each index and then take the arithmetic average of the standardized variables.

In Figure 19.3, we display governance transparency against equity market participation. Equity participation is the percent of the national population owning corporate equity of any kind, taken from Grout et al. (2009). Figure 19.3 shows a clear positive trend line. This is consistent with greater governance transparency in a country facilitating greater demand for owning equities.

In Figure 19.4, we display governance transparency against the cost of equity. The cost of equity is represented by ex ante cost of the equity premium from Aggarwal and Goodell (2011). Figure 19.4 shows a clear negative trend line. This is consistent with the cost of equity declining with increasing governance transparency.

In Figure 19.5, we graph governance transparency against financial architecture. Following Aggarwal and Goodell (2009a), financial architecture is modeled as the ratio of stock market capitalization to the size of domestic assets of deposit money banks from Beck et al. (2000) (updated). Figure 19.5 shows a clear positive trend line. This is consistent with greater governance transparency facilitating equity financing more than debt financing.

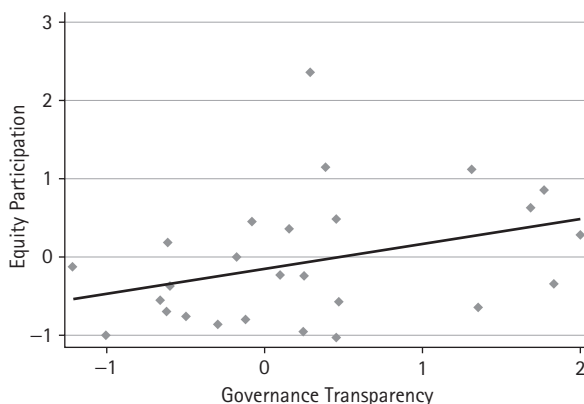


FIGURE 19.3 The association between governance transparency and equity participation.



FIGURE 19.4 The association between governance transparency and cost of equity.



FIGURE 19.5 The association between governance transparency and financial architecture.

Here we have presented simple bivariate relationships between governance transparency and various measures of financial market development such as financial architecture, equity participation, and cost of equity. We have also very briefly explored the relationship between governance transparency and social trust and further with behavioral social trust. However, we note these issues and relationships need further exploration and confirmation. We leave it to others to explore these relationships in greater detail. A better understanding of these relationships will contribute greatly to a better understanding of the nature of financial and economic development and the role of institutions in such development. Such knowledge should be of much interest to policymakers, scholars, and managers.

19.6 CONCLUSION ON THE LINK BETWEEN GOVERNANCE TRANSPARENCY AND INSTITUTIONS OF CAPITALISM

In this chapter we outline the importance of governance transparency for the overall health of capitalism. In spite of its importance, governance transparency has not been well examined in prior literature. We note that differences in governance transparency have a large effect on the size of nations' equity premia and the relative preference that societies have for markets over banking. Within this analysis we suggest that transparency of the potential for opportunistic behavior is of central importance for the transaction costs involved with resolving asymmetric information, agency costs, and the nature and shape of organizations. Governance transparency is integral to the functioning of contracts-based finance.

Governance transparency has two components: ownership transparency and self-dealing transparency. We highlight two measures of disclosure, the Anti-Self-Dealing Index of Djankov et al. (2008) and the ownership transparency estimates of Bushman et al. (2004) as state-of-the-art approaches to developing a composite index of governance transparency. We maintain that governance transparency is central to the lowering of transaction costs in financial markets because, as noted by Williamson (1985) and others, the potential for opportunistic behavior is central to transaction costs.

Governance transparency is vital at a basic level to well functioning financial systems. It reduces the transaction costs involved in resolving incomplete contracts and is vital to well-functioning public policy. It is important to consider that there is a demand for transparency that is potentially influenced by the amount of emphasis societies place on market finance, as well as the level of trust in societies and the nature of how trust is formed. While we present some preliminary evidence of the importance of governance transparency for equity participation, cost of equity, and financial architecture, we leave it to others to explore these and other empirical relationships more fully.

Governance transparency has major implications for multinational company managers, policymakers, and scholars. For example, managers of multinational companies need to assess national institutional and national cultural tendencies when developing subsidiary self-dealing disclosure policies and levels of transparency. Similarly, national trust and financial architecture must be considered by policy makers when developing national regulations with regard to self-dealing transparency. Finally, scholars of international business may want to reexamine work that depends on international variations in transaction costs. Factors related to governance transparency have clear implications for the international variation and role of opportunistic behavior and the level of transaction costs. Thus, it may be useful to reexamine much of international business research based on the relationship between governance transparency, its components, and transaction costs.

REFERENCES

- Aggarwal, R., and Aung Kyaw, N. (2006). Transparency and capital structure in Europe: Evidence of firm, industry, and national institutional influences. In *Corporate and Institutional Transparency for Economic Growth in Europe*, ed. L. Oxelheim. Oxford: Elsevier, chapter 12, 335–411.
- Aggarwal, R., and Goodell, J. W. (2009a). Markets and institutions in financial intermediation: National characteristics as determinants. *Journal of Banking and Finance* 33(10), 1770–1780.
- Aggarwal, R., and Goodell, J. W. (2009b). Markets versus institutions in developing countries: National attributes as determinants. *Emerging Markets Review* 10 (1), 51–66.
- Aggarwal, R., and Goodell, J. W. (2010). Financial markets versus institutions in European countries: Influence of culture and other national characteristics. *International Business Review* 19(5), 502–520.
- Aggarwal, R., and Goodell, J. W. (2011). International variations in expected equity premia: Role of financial architecture and governance. *Journal of Banking and Finance* 35(11), 3090–3100.
- Aggarwal, R., and Zhao, S. (2009). The diversification discount puzzle: Empirical evidence for a transactions cost resolution. *Financial Review* 44(1), 113–135.
- Aghion, P., Algan, Y., Caluc, P., and Shleifer, A. (2010). Regulation and distrust. *Quarterly Journal of Economics* 125(3), 1015–1049.
- Akerlof, G. A. (1970). The market for lemons: Quality uncertainty and the market mechanism. *Journal of Economics* 84(3), 488–500.
- Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., and Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth* 8(2), 155–194.
- Beck, T., and Demirguc-Kunt, A. (2008). Access to finance: An unfinished agenda. *World Bank Economic Review* 22(3), 383–396.
- Beck, T., Demirguc-Kunt, A., and Levine, R. (2000). A new database on financial development and structure. *World Bank Economic Review* 14(3), 597–605.
- Beck, T., Demirguc-Kunt, A., and Levine, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth* 12(1), 27–49.
- Bertraut, C. (1998). Stockholding behavior of U.S. households: Evidence from the 1983–1989 survey of consumer finances. *Review of Economics and Statistics* 80(2), 263–275.
- Bhattacharya, S., and Thakor, A. V. (1993). Contemporary banking theory. *Journal of Financial Intermediation* 3(1), 2–50.
- Bjornskov, C. (2008). Social trust and fractionalization: A possible reinterpretation. *European Sociological Review* 24(3), 271–283.
- Buckley, P. J., and Casson, M. (2002). A theory of cooperation in international business. In *Cooperative Strategies and Alliances in International Business: Joint Ventures & Technology Partnership*, eds. F. J. Contractor and P. Lorange. London: Pergamon, 49–67.
- Bushman, R. M., Piotoski, J. D., and Smith, A. J. (2004). What determines corporate transparency? *Journal of Accounting Research* 42(2), 207–252.
- Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics* 3(1), 1–44.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. Mahwah, NJ: Lawrence Erlbaum.
- Deutsch, M. (1960). The effect of motivational orientation upon trust and suspicion. *Human Relations* 13(2), 123–139.

- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies* 51(3), 393–414.
- Djankov, S., La Porta, R., Lopez-de-Silvanes, F., and Shleifer, A. (2008). The law and economics of self-dealing. *Journal of Financial Economics* 88(3), 430–465.
- Doney, P. M., Cannon, J. P., and Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. *Academy of Management Review* 23(3), 601–620.
- Eggleson, K., Posner, E. A., and Zeckhauser, R. (2000). The design and interpretation of contracts: Why complexity matters. *Northwestern University Law Review* 95(1), 91–132.
- Ergungor, O. E. (2004). Market- vs. bank-based financial systems: Do rights and regulations really matter? *Journal of Banking and Finance* 28(12), 2869–2887.
- Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economics* 88(2), 288–307.
- Fukuyama, F. (1995). *Trust: The Social Virtues and the Creation of Prosperity*. New York: Free Press.
- Grout, P., Megginson, W. L., and Zalewska, A. (2009). One half billion shareholders and counting: Determinants of individual share ownership around the world. *Working Paper*.
- Guiso, L., Sapienza, P., and Zingales, L. (2005). Trusting the stock market. *Journal of Finance* 63(6), 2557–2600.
- Hail, L., and Leuz, C. (2006). International differences in the cost of equity capital: Do legal institutions and securities regulation matter? *Journal of Accounting Research* 44(3), 485–531.
- Hart, O. D. (1995). *Firms, Contracts, and Financial Structure*. New York: Oxford University Press.
- Hart, O. D. (2001). “Financial contracting.” *Journal of Economic Literature* 39(4), 1079–1100.
- Hofstede, G. (2001). *Culture’s Consequences*. London: SAGE.
- Ibbotson, R. G., Diermeier, J. J., and Siegel, L. B. (2006). The demand for capital market returns: A new equilibrium theory. In *The Equity Risk Premium*, W. N. Goetzmann and R. G. Ibbotson. Oxford: Oxford University Press, chapter 7, 184–200.
- Jensen, M., and Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3(4), 305–360.
- Johnson, S., La Porta, R., Lopez-de-Silvanes, F., and Shleifer, A. (2002). “Tunneling.” In *Capital Markets and Company Law*, ed. K. J. Hopt. Oxford: Oxford University Press, Chapter 8.3.
- Kahneman, D., and Tversky, A. (2011). *Thinking Fast and Slow*. New York: Farrar, Straus and Giroux.
- Kirkman, B. L., Lowe, K. B., and Gibson, C. B. (2006). A quarter century of Culture’s Consequences: A review of empirical research incorporating Hofstede’s cultural values framework. *Journal of International Business Studies* 37(3), 285–320.
- Kwok, C., and Tadesse, S. (2006). National culture and financial systems. *Journal of International Business Studies* 37(2), 227–247.
- La Porta, R., Lopez-de-Silvanes, F., Shleifer, A., and Vishny, R. W. (1998). Law and finance. *Journal of Political Economy* 106(6), 1113–1155.
- Levine, R. (2005). Finance and growth: Theory and Evidence. *Handbook of Economic Growth*, eds. P. Aghion and S. N. Durlauf. Amsterdam: Elsevier, 865–934.
- Lewicki, R. J., and Bunker, B. B. (1995). Trust in relationships: A model of development and decline. In *Conflict, Cooperation, and Justice*, B. B. Bunker and J. Z. Rubin. San Francisco: Jossey-Bass, 133–173.
- Milhaupt, C. J., and Pistor, K. (2008). *Law & Capitalism*. Chicago: University of Chicago Press.

- Modigliani, F., and Perotti, E. (2000). Security markets versus bank finance: Legal enforcement and investor protection. *International Review of Finance* 1(2), 81–96.
- Myers, S. (1977). The determinants of corporate borrowing. *Journal of Financial Economics* 5(2), 147–175.
- North, D. C. (1990). *Institutions, Institutional Change, and Economic Performance*. Cambridge, UK: Cambridge University Press.
- North, D. C. (1992). Transactions costs, institutions, and economic performance. Occasional Paper No. 30. San Francisco, CA: International Center for Economic Growth.
- Posner, E. A. (2004). The law and economics of contract interpretation. John M. Olin Law and Economics Working Paper No. 229.
- Rajan, R. G. (1992). Insiders and outsiders: The choice between informed and arm's length debt. *Journal of Finance* 47(4), 1367–1400.
- Rajan, R. G., and Zingales, L. (1998). Which capitalism? Lessons from the East Asian crisis. *Journal of Applied Corporate Finance* 11(3), 40–48.
- Shirai, S. (2004). Assessing the impact of financial and capital market reforms on firms' corporate financing patterns in India. *South Asia Economic Journal* 5(2), 189–208.
- Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. New York: Free Press.
- Williamson, O. E. (1988). Corporate finance and corporate governance. *Journal of Finance* 43(3), 567–592.
- Yunus, M. (2003). *Banker to the Poor*. New York: PublicAffairs.

CHAPTER 20

TRANSPARENCY AND EXECUTIVE COMPENSATION

RAGHAVENDRA RAU

20.1 INTRODUCTION

THE optimal design of executive compensation is one of the primary issues in the area of corporate governance and has been investigated in considerable detail in the academic literature over the past two decades. The underlying assumption behind the design of optimal compensation schemes is that the executives of the firm have more information on the firm's projects and cash flows than the shareholders. In the presence of symmetric information, because the shareholders can completely distinguish the executive's effort from bad luck or other extraneous factors, there is little need to motivate the executive beyond a flat salary. In the presence of asymmetric information, the shareholder faces two problems: first to select the right type of agent (the adverse selection problem) and second, to motivate the agent to work hard once selected (the moral hazard problem). All executive compensation schemes represent tradeoffs between these two agency problems.

Increasing transparency of the executive contracting mechanism is one particular solution to the two agency problems. In this chapter, I define transparency as any mechanism that reduces asymmetric information between executives and investors. For example, reporting how pay is contracted ex ante and the level and composition of actual ex post pay to executives decreases investor uncertainty on precisely why the executive was offered an ex ante contract (was it meant to solve an adverse selection problem?) or the amount the executive was eventually paid (did it solve the moral hazard problem?).

However, better transparency also exacerbates other problems. Both investors and executives are part of a wider market. For example, the executive's level and composition of pay provides information on the type of executive. It can signal, for example, whether the executive is a hard worker or a shirker. Hence, clearly revealing the

executive's ability to the market increases the risk to the executive's human capital. Similarly, firms and executives do not usually know the optimal level of compensation for a given effort level. In the absence of outside information, they contract on particular levels of compensation for effort. Increasing the transparency of executive incentive schemes increases the information available to executives and firms on the pay levels set at other comparable firms (with presumably comparable levels of executive effort). Consequently, an increase in pay at one firm leads to an increase in pay across comparable firms, a negative externality for the shareholders at any of the comparable firms.

In this chapter, I discuss in Section 20.2 how incentive pay is typically structured and how the structure of incentive schemes influences the executive's behavior in controlling the moral hazard and adverse selection problems. I then discuss in Section 20.3 changes in regulations on executive pay and transparency. In Section 20.4 I examine how increasing the transparency of these schemes affects the pay level and performance relationship to the executives and in Section 20.5 how executives modify their behavior to affect transparency as a result of their pay structure. Section 20.6 concludes the chapter.

20.2 THE STRUCTURE OF INCENTIVE PAY

Because most of the academic research has focused on executive compensation granted to the chief executive officer (CEO) in the United States, this chapter also largely concentrates on the relationship between CEO compensation in particular and transparency in the United States. CEOs and top executive officers are typically in the top 1% of the pay distribution, and regulating top executive pay is widely seen as a mechanism to reduce income inequality. Hence most US regulation focuses on the highest paid officers of the firm. However, as I note in the text that follows, in recent years, the pay market is globalizing, and regulatory proposals similar to those in the United States are being enacted worldwide, implying that conclusions drawn from US data are increasingly likely to apply globally.

The popular press typically reports that the United States is an outlier in terms of executive compensation. It has both the highest levels of and fastest growth in overall CEO pay. Using data from the Execucomp database, Mishel and Sabadish (2013) document, for example, that from 1978 to 2012, overall CEO pay increased by about 875% as compared to a 5% growth rate for the typical worker over the period. The CEO/worker compensation ratio was around 275 in 2012 relative to 20 in 1965. Conyon and Murphy (2000) find that in 1997, US CEOs earned 45% higher cash compensation and 190% higher total compensation than CEOs in the United Kingdom. However, the difference between the United States and other countries has shrunk over time. Fernandes et al. (2013) use CEO pay data across 14 countries with mandated pay disclosures, and show that the US pay premium is small in economic terms. The premium primarily reflects the performance-based pay demanded by institutional shareholders and independent

boards. They find no significant difference in either level of CEO pay or the use of equity-based pay between US and non-US firms exposed to international and US capital, product, and labor markets and show that US and non-US CEO pay has largely converged in the 2000s.

An executive's incentive contract typically contains a cash component (salary and bonus), an equity-based component (stock and options), and a severance pay component. It is important to note that the large majority of academic studies does not examine whether this structure is successful in attracting the right type of agent, the adverse selection problem. They are mostly concerned with whether this structure of incentive pay motivates the executive to work hard once selected, the moral hazard problem. In particular, the two primary incentives related to moral hazard are incentives to increase the stock price (i.e., portfolio delta) and incentives to take risk (i.e., vega).

The variation in the cash and bonus component of executive incentive contracts in the United States is typically small. Rose and Wolfram (2002) argue that this is largely because of Section 162(m) of the Internal Revenue Code, which limits the corporate tax deduction for compensation paid to the CEO and the next four highest paid executives to \$1 million per person. However, the section includes an exemption for qualified performance-based compensation and firms may continue to claim tax deductions in excess of \$1 million for compensation if they link pay to measures of firm performance and administer these plans through a committee of outside directors. Because salary payments are non-performance based (they are unrelated to the evolution of the firm's stock price), they are subject to the cap. Therefore, variations in the cash component of pay are unlikely to be large enough to provide adequate incentives to increase either the stock price or risk. The incentives are typically provided by the other two components of incentive contracts—equity and severance pay.

The theoretical relation between equity pay and delta (performance-pay sensitivity) and vega (risk) is typically derived from agency theory (e.g., Holmström, 1979, or Grossman and Hart, 1983). According to these models, compensation plans should be designed to solve the moral hazard problem in aligning the interests of risk-averse self-interested executives with those of shareholders. Ex post payouts depend on the likelihood that the desired actions were in fact taken. The performance-pay sensitivity should be weaker for more risk averse executives, and should also be weaker the greater the uncontrollable noise in firm value. Subsequent empirical research built on these models by examining the relation between performance and ex post payouts. These studies take the level of incentives as given and measure their effect on performance. But given the topic of this chapter—on how pay structure and transparency influence each other—it is perhaps more natural to ask how firms set the level of incentives in the first place.

There are two major streams of literature that address this question. The first argues that firms design optimal incentive schemes that carefully balance the proportions of cash, equity-based incentives, and severance pay to address the moral hazard problem. The second argues that managers have a great deal of power in setting their own incentives and salary, paying themselves excessive amounts that are unrelated to incentives.

As an example of the first approach, Core and Guay (1999) find that firms use annual grants of options and restricted stock to CEOs to manage the optimal level of equity incentives. They first model the *ex ante* optimal equity incentive levels for CEOs as a function of firm size, idiosyncratic risk, book-to-market ratio, CEO tenure, free cash flow, and industry controls. They then use the residuals from this model to measure deviations between CEOs' holdings of equity incentives and optimal levels. They find that grants of new incentives from options and restricted stock are negatively related to these deviations, suggesting that firms set optimal equity incentive levels and grant new equity incentives in a manner that is consistent with economic theory. Along similar lines, Core et al. (1999) show that measures of board and ownership structure explain a significant amount of cross-sectional variation in CEO compensation, after controlling for standard economic determinants of pay. In addition, the signs of the coefficients on the board and ownership structure variables suggest that CEOs earn greater compensation when governance structures are less effective. Finally, they show that the predicted component of compensation arising from these characteristics of board and ownership structure is significantly negatively related to subsequent firm operating and stock return performance and argue that firms with weaker governance structures have greater agency problems, that CEOs at firms with greater agency problems receive greater compensation, and that firms with greater agency problems perform worse.

Yermack (1995) exemplifies the second approach in arguing that agency or financial contracting theories have little explanatory power for patterns of CEO stock option awards. He analyzes stock option awards to CEOs of 792 US public corporations between 1984 and 1991 and tests whether stock options' performance incentives have significant associations with explanatory variables related to agency cost reduction. Bebchuk and Fried (2003) survey the theory and empirical evidence for a "managerial power" approach to executive compensation. They argue that executive compensation is not only an instrument for addressing the agency problem between managers and shareholders but can also serve as part of the agency problem itself. Boards of publicly traded companies with dispersed ownership do not bargain at arm's length with managers. As a result, managers wield substantial influence over their own pay arrangements, and they have an interest in reducing the saliency of the amount of their pay and the extent to which that pay is decoupled from managers' performance.

These two approaches to compensation mechanisms also characterize the third component of executive pay: severance pay arrangements. Rau and Xu (2013) argue that severance pay complements the incentives provided by options in the optimal compensation contract. This is because the risk-taking incentives generated from the executive's option holdings can be mitigated by the possibility of job termination when performance is poor. For example, when the adverse consequences from job termination are extremely large, the executive will not want to take on additional risk even with large option holdings. Therefore, severance pay should be used by the firm as a supplementary incentive device to motivate risk taking.

Rau and Xu (2013) examine severance pay arrangements to executives of a wide range of ranks, including the CEO, CFO, COO, and other executives in a comprehensive sample of 3688 ex ante explicit severance contracts offered by 808 firms. They document that firms appear to set optimal incentive levels and grant severance agreements along rational economic principles. Younger executives, especially CEOs, are more likely to receive explicit contracts and better terms. Incumbent CEOs at firms with high distress risk and high return volatility are significantly more likely to enter into new or revised severance contracts.

In contrast, Yermack (2006) and Goldman and Huang (2014) document that in several cases, CEOs obtain separation pay even though they do not have severance agreements or the pay is in excess of their contracted amounts. For these CEOs, this excess separation pay is, on average, \$8 million, which amounts to close to 242% of a CEO's annual compensation. Goldman and Huang (2014) interpret their results as being driven by weak external governance, increasing both severance levels and excess severance pay.

Overall, there is no consensus on how firms set executive compensation. It is important that these two contrasting approaches to compensation, firms setting compensation practices to address moral hazard and adverse selection problems or managers setting excessive pay for themselves, are not inconsistent. Different types of firms are likely to be influenced to different extents by these two mechanisms. It is also plausible that the influence of each mechanism changes over time for each firm. These issues have been recognized and studied in an extensive body of literature. However, for the purpose of this chapter, I use these two mechanisms merely to form the organizing framework on how transparency affects incentive pay and vice versa.

20.3 REGULATIONS ON TRANSPARENCY OF EXECUTIVE COMPENSATION

Quinn and Brown (2013) distinguish three types of regulations on executive compensation: laws/policies that provide for the public disclosure of (and a shareholder vote relating to) executive compensation, laws allowing firms to recover compensation previously awarded (clawbacks), and laws establishing executive compensation parameters. In this chapter, I largely focus on the first.

The Securities and Exchange Commission (SEC) mandated its first executive and director compensation disclosure rules for proxy statements in 1938 (Release 34-1823). The extent of mandatory disclosure of executive compensation has increased nearly uniformly from 1938 onwards (with the exception of the period from 1983 to 1992) with the SEC adopting rules on tabular disclosure in 1942 (Release 34-3347), introducing separate tables for pensions and deferred remuneration in 1952 (Release 34-4775), and expanding tabular disclosure to all forms of compensation in 1978 (Release 33-6003).

While the 1983 reforms reduced disclosure significantly to reduce compliance burdens, requirements were tightened again subsequently.

In the last two decades, four significant developments have widened the breadth of US disclosure laws significantly. The first was the enhanced compensation disclosure requirement mandated by the Securities and Exchange Commission (SEC) in 1993. Specifically, the SEC required enhanced disclosure on executive compensation and Congress enacted tax legislation (Internal Revenue Code Section 162(m)) limiting the deductibility of non-performance related compensation over one million dollars. The second was the Sarbanes–Oxley Act (SOX) enacted in 2002 that set enhanced standards of disclosure for all US public company boards and management. SOX required executives to reimburse incentive-based compensation and trading profits following accounting misstatements even if the executives were not directly involved in the misstatement and even if the executives exercised all reasonable care in instituting controls (Section 304). The third was the change in disclosure format enacted by the SEC in 2006. The 2006 disclosure rules eliminated the Compensation Committee Report on Executive Compensation and replaced it with the Compensation, Discussion, and Analysis (CD&A) section. The CD&A section was meant to provide transparency on the decision-making process behind executive compensation, in addition to providing greater detail on the compensation itself. For example, it required firms to provide details on the peer groups firms used in setting compensation, and the names of compensation consultants the firms employed. Finally, the last major development was the Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd–Frank), passed in 2010. Dodd–Frank required US public firms to allow, at least once every three years, shareholders a nonbinding vote on the compensation of the company’s named executive officers in the proxy statement. Firms are also required to allow shareholders to vote at least once every six years on whether the say-on-pay-vote will be annual, biennial, or triennial.

To a varying extent, these types of rules are also common in other countries around the world. For example, in the United Kingdom, the Greenbury Report was issued by a panel set up by the confederation of British Industry in 1995. It recommended that boards provide shareholders a detailed report on executive pay every year. In 2003, the UK government enacted a regulation mandating a nonbinding say-on-pay vote at the annual general meeting (AGM) of shareholders. In addition, it published proposed regulations on executive compensation disclosure to take effect from October 2013. The regulation requires two reports, one on actual compensation paid in the last year subject to the nonbinding shareholder vote (the implementation report) and one on forward-looking compensation policy subject to a binding shareholder vote at least every three years (the policy report). The implementation report must provide a single total figure for each executive, setting out total salary and fees, taxable benefits, pension related benefits, termination payments, a graph comparing share performance with a broad equity index, and the maximum potential performance-related payment for the CEO in money or shares. The policy report must contain a description of each component part of the remuneration package for executives, and discuss how each

component supports the company's strategic objectives; explain whether there are any provisions for clawback; the approach adopted to deciding various components of a package, including the maximum level of variable pay that may be granted; and the policy on severance pay. Germany and Canada also have nonbinding say-on-pay votes. In contrast, the Netherlands, Sweden, and Norway have binding shareholder votes on compensation policies while Switzerland is in the process of transition from a voluntary to a binding annual vote on CEO compensation. In 2013, a majority of Swiss voters also approved the prohibition of golden parachutes and other types of severance pay. Australia has an unusual two-strike rule wherein if the remuneration report receives two separate no votes of 25% or more of shareholders, the members of the company's board must be put up for reelection within 90 days. Quinn and Brown (2013) note that more than 100 Australian firms received a first strike (one no-vote) and to avoid the second strike, a large number of these firms increased the disclosure to shareholders to justify the remuneration or reduced the pay and bonuses to the executives.

Beyond say-on-pay, regulatory authorities are also increasing mandatory disclosure on relative pay levels. Section 953 of Dodd-Frank also requires the SEC to issue rules requiring disclosure on the ratio between CEO total compensation and the median total compensation for all other employees, though these rules have not yet been issued at the moment of writing. During his campaign, the French president Francois Holland promised to limit CEO pay of state-owned French companies to 20 times the average of the lowest salaries in those companies (though these decrees have not yet been implemented). The policy report in the United Kingdom requires a description of how pay and employment conditions of other employees in the company were taken into account, including whether employees were consulted and any pay comparison measurements used.

20.4 HOW DOES TRANSPARENCY AFFECT PAY?

The answer to this question is not straightforward. The most significant empirical concern is endogeneity. For example, it is plausible that well-governed firms are both transparent and pay their executives appropriately. Then the observed relation between transparency and pay is indirect in that both are driven by firm governance. The two most common ways to avoid the problem of endogeneity is to use either natural experiments or plausibly exogenous instrumental variables.

One natural experiment is the 1964 Securities Acts Amendment that extended the mandatory disclosure requirements that had applied to listed firms since 1934 to large firms traded over-the-counter (OTC). Greenstone et al. (2006) show that the OTC firms that were likely to be affected by the mandated increase in disclosure earned significant excess returns, both between when the legislation was initially proposed and

when it went into force, and in the weeks around the announcement that the firms had begun complying with the new regulation. They argue that their results are consistent with the hypothesis that investors value increased disclosure. However, their results cannot explain the mechanism through which value is created, specifically whether it is created by reducing future agency problems at the firm or whether it is a wealth transfer from insiders to shareholders.

A second natural experiment is the change in compensation disclosure requirements mandated by the Securities and Exchange Commission (SEC) in 1993 discussed previously. Rose and Wolfram (2002) argue that this change created a focal point for salary compensation around the \$1 million cap but find little evidence that overall compensation was affected. Perry and Zenner (2001) find a stronger effect, noting that many large firms reduced salaries in response to 162(m) and that salary growth rates declined post-1993 for the firms most likely to be affected by the regulations. They go on to document that bonus and total compensation payouts are increasingly sensitive to stock returns after 1993, especially for firms with million-dollar pay packages. Finally they show that, once other factors affecting CEO incentives are controlled for, the pay-performance sensitivity of the CEO's wealth increases for firms with CEOs near or above the million dollar compensation level. Overall, they argue that their results are consistent with the hypothesis that mandatory caps on pay lead some firms to reduce pay. More importantly, they show that regulation has also had the effect of shifting pay toward equity-based incentives. Specifically, the pay for performance sensitivity, measured using total annual compensation and firm-related CEO wealth, has increased for firms likely to be affected by 162(m).

While not a natural experiment based study (their data is entirely after 1993), Cooper et al. (2013) document that CEO pay is negatively related to future stock returns for periods up to three years after sorting on pay. Firms that pay their CEOs in the top 10% of excess pay earn negative abnormal returns over the next three years of approximately -8%. The effect is stronger for CEOs who receive higher incentive pay relative to their peers. Their results point to a potential unintended influence of the 1993 regulatory change. I noted earlier that most compensation schemes are set to address the moral hazard problem of making managers work hard once they join the firm. Tilting the structure of pay toward options and other equity-based incentives may also exacerbate the adverse selection problem in that firms may attract managers that are potentially too risk-seeking. While they do not directly discuss the adverse selection issue, the results of Cooper et al. appear consistent with firms paying option-based compensation attracting risk-seeking managers who subsequently destroy value.

A third natural experiment was the passage of SOX. Cohen et al. (2013) use the passage of SOX to show how changes in transparency influenced real policy decisions for firms by changing corporate investment strategies. They document that the passage of SOX was followed by significant declines in both delta and vega in CEO compensation contracts. They further relate changes in compensation contracts to a decline in investments, including research and development expenditures, capital investments, and acquisitions. Moreover, consistent with the rules in SOX directly affecting CEOs'

incentives to take risk, they find that the decline in investments exceeds the amount that would be expected from changes in compensation packages alone. Finally, Cohen et al. also show that the changes in investments are related to lower operating performances of firms, suggesting that these changes were costly to investors.

A fourth natural experiment is the passing of say-on-pay regulations, which typically allow nonbinding shareholder votes on CEO compensation. Cai and Walkling (2011) examine the effect on firms after the House of Representatives passed the Say-on-Pay Bill in the United States in April 2007. They document that firms with independent-minded shareholders willing to vote against management are likely to face more pressure if say-on-pay is implemented. Specifically, abnormal returns are higher for firms with a higher fraction of mutual fund shareholders that often vote against management. They also find a more favorable reaction to the bill for a subset of firms that have previously responded to shareholder dissatisfaction as expressed in director elections. Ferri and Maber (2013) examine the effect of the introduction of the Directors' Remuneration Report Regulations 2002 (DRR) in the United Kingdom that mandates an annual, advisory say-on-pay vote on CEO compensation. They show that UK firms responded to negative say-on-pay voting outcomes by removing controversial CEO pay practices (such as generous severance contracts) and increasing the sensitivity of pay to performance. Conyon and Sadler (2010) show that very few shareholders (fewer than 10%) abstain or vote against the DRR. However, this evidence is not inconsistent with Ferri and Maber (2013) if firms are increasingly likely to remove controversial pay practices ahead of the report.

However, because the number of natural experiments is limited (the Dodd-Frank Act has not yet been implemented), other studies try to find alternative ways to examine the effect of transparency on pay. Cai and Walkling (2011) also examine a sample of say-on-pay shareholder proposals between 2006 and 2008 and find that the firms targeted are simply large firms, not firms whose CEOs are overpaid or who have poor governance. Shareholders appear to see through these proposals however. Ertimur et al. (2011) show that most vote-no campaigns in the United States between 1997 and 2007 were sponsored by union pension funds. While activists target firms with high CEO pay (whether this pay is excessive or not), shareholders offer voting support for these proposals only at firms with excess CEO pay. They also show that firms with excess pay targeted by vote-no campaigns experience significant reductions in CEO pay.

Overall, these studies show that exogenous mandated increases in transparency usually affect the structure of incentive pay. Firms respond to regulatory changes by restructuring pay appropriately. It is not clear that these always increase value for shareholders. Restricting tax deductibility of pay above \$1 million in the United States did not affect total pay but the structure of pay. Allowing say-on-pay votes does not mean that shareholders will use them to vote. Vote resolutions seem more likely to be called by special interests. Shareholders appear to be able to distinguish value-increasing resolutions (those targeting excess pay) but they do not appear to use the mechanism themselves. Firms are affected by losing votes on pay and restructure

executive pay appropriately. I next turn to the channels through which firms restructure executive pay.

20.4.1 Channels Affecting Executive Pay: Boards

Who actually modifies the incentives paid to executives? One of the most important channels is the firm's board of directors. Increasing transparency helps boards do a better job in monitoring and rewarding managers. De Franco et al. (2013) use management guidance as their empirical proxy for disclosure. Management guidance is used by managers to reduce information asymmetry between managers and investors and to preempt litigation concerns. It is voluntary and typically includes a forecast on firms' expected earnings and additional qualitative disclosures. De Franco et al. document that firms that issue management guidance have a higher sensitivity of CEO compensation to performance (both accounting and stock returns) than firms that do not. The standard concern with their results is the endogeneity of management's decision to issue guidance. They show, however, that their results are robust to examining a subsample of firms that initiate guidance in 2001 (after the passage of Reg FD in 2000). They argue that this change in guidance is likely to be exogenous to the pay-performance relation.

However, boards also affect the level of disclosure, which in turn affects pay. Reeb and Zhao (2013) argue that high-quality boards are more likely to increase corporate disclosure quality to allow the market to distinguish luck from skill. They hand-collect data on director attributes at industrial firms in the United States in 2003, 2005, and 2007 and use factor analysis to identify factors that proxy for the networking, educational, and experience capital of the board. They find that board capital is positively related to disclosure quality. Again the key issue here is endogeneity, with the alternative hypothesis being that high-quality directors are more likely to accept positions at more transparent firms. Reeb and Zhao use the distance between corporate headquarters and the nearest metropolitan airport as an instrumental variable to proxy for director capital. They argue that this is an effective instrument because busy (and presumably high-quality) directors face greater opportunity costs in traveling to distant headquarters. As they acknowledge, however, this is not a perfect instrument, so the jury is still out on whether boards increase disclosure.

The evidence on how boards affect transparency and pay is skimpier outside the United States. Using a proprietary database for the largest 158 companies in 12 European countries during 1999–2004, Muslu (2010) finds that firms with a greater proportion of top executives serving as company directors and with dual CEO and board chairs also are more transparent on executive pay disclosures and display a higher pay-performance sensitivity. He argues that his evidence supports the optimal contracting argument over the rent-seeking argument. Specifically, companies mitigate agency costs associated with the existence of company executives on boards through transparent pay disclosures and incentive compensation. However, Muslu also finds that his

results strengthen in countries with more protection for outside shareholders, presumably countries where firms do not need to signal to outside shareholders that they are well managed. His findings also hold only when insiders do not dominate the board of directors and when managers are unlikely to be entrenched. Finally, Muslu uses the firm's legal origin as an instrument to address the endogeneity between board composition and incentive compensation, though this is not convincing because over the time period studied by Muslu, European Union regulations are likely to dominate country specific determinants of transparency and pay.

Offering a sharp contrast to the optimal contracting literature that argues that boards set transparency and pay to monitor and reward managers optimally, Bebchuk et al. (2002) argue that boards do not operate at arm's length in devising executive compensation arrangements. They argue that executives have power to influence their own pay, and they use that power to extract rents. Furthermore, the desire to camouflage rent extraction might lead to the use of inefficient pay arrangements that provide suboptimal incentives and thereby hurt shareholder value. Bebchuk and Fried (2004) argue boards have been able to camouflage large amounts of executive compensation through the use of retirement benefits and payments.

Overall, though it is clear that there is a relationship among board composition, pay, and transparency, the direction of this relationship remains unclear. Moreover, the economic mechanism through which this relationship operates is also undefined at the moment.

20.4.2 Channels Affecting Executive Pay: The Executives

A second channel that affects executive compensation through a change in transparency is the executives themselves. Specifically, firms and executives do not usually know what is the optimal level of compensation for a given effort level. In the absence of outside information, they contract on particular levels of compensation for effort. Increasing the transparency of executive incentive schemes increases the information available to executives and firms on the pay levels set at other comparable firms (with presumably comparable levels of executive effort). Consequently, an increase in pay at one firm leads to an increase in pay across comparable firms, a negative externality for the shareholders at any of the comparable firms. Hayes and Schaefer (2009) argue that this "Lake Wobegon Effect" may be a cause for rising CEO pay. The Lake Wobegon effect occurs because no firm wants to admit to having a CEO who is below average, and so no firm allows its CEO's pay package to lag market expectations. In their game-theoretic model, a CEO's wage may serve as a signal of match surplus (the difference between the parties' output when working together and when pursuing their outside options), and therefore affect the value of the firm. They derive conditions under which firms will distort pay upwards to affect market perceptions of firm value. This effect is also tied with issues of fairness. Increasing transparency of compensation also increases the availability of information on the dispersion of pay across different executive levels in the firm. Firms

with high levels of pay dispersion may also experience negative effects on employee morale and consequent effects on profits and shareholder value. Empirically, Park et al. (2001) study how executive pay changed after the Ontario Securities Commission required that Canadian firms traded on the Toronto Stock Exchange disclose the individual amounts and composition of pay for the five highest paid executives in the firm. They document an increase in total pay for the open disclosure period, which they argue is related to increased price competition for managerial talent.

Executives can also affect compensation through the appropriate selection of peer groups. Faulkender and Yang (2010) and Bizjak et al. (2011) both take advantage of the 2006 mandated change in disclosure format by the SEC to examine how firms pick benchmark firms. Bizjak et al. note that companies can potentially inflate pay by choosing peers that are larger, choosing a high target pay percentile, or choosing peer firms with high pay. Prior to 2006, firms rarely reported the composition of their peer groups. The 2006 regulatory change made the process of setting CEO compensation more transparent with greater disclosure of compensation peer group members. Faulkender and Yang show that the selection of compensation peer groups appears to play a significant role in explaining variations in CEO compensation beyond that of other benchmarks such as industry-size peers. They argue that firms appear to select highly paid peers to justify their CEO compensation and this effect is stronger in firms where the compensation peer group is smaller, where the CEO is the chairman of the board of directors, where the CEO has longer tenure, and where directors are busier serving on multiple boards. Although peers are largely selected based on characteristics that reflect the labor market for managerial talent, Bizjak et al. find that peer groups are constructed in a manner that biases compensation upward, particularly in firms outside the Standard & Poor's (S&P) 500. Pay increases close only about one-third of the gap between the pay of the CEO and of the peer group, however, suggesting that boards exercise discretion in adjusting compensation.

Increasing transparency of pay disclosure obviously facilitates easy construction of high-paid peer groups. However, it is also plausible that the 2006 regulatory requirement of disclosing compensation peers mitigated firms' opportunistic peer selection activities. Faulkender and Yang (2013) find, however, that strategic peer benchmarking did not disappear after enhanced disclosure. In fact, they show that it intensified at firms with low institutional ownership, low director ownership, low CEO ownership, busy boards, large boards, and non-intensive monitoring boards, and at firms with shareholders complaining about compensation practices. Finally they found that the effect was also stronger at firms with new CEOs. They argue that their findings call into question whether disclosure regulation can remedy potential problems in compensation practices.

20.4.3 Channels Affecting Executive Pay: Compensation Consultants

Murphy and Sandino (2010) and Cadman et al. (2010) examine yet another channel that affects pay—compensation consultants. Executive compensation consultants

face potential conflicts of interest that can lead to higher recommended levels of CEO pay, including the desires to cross-sell services and to secure repeat business. Waxman (2007) alleges that these incentives lead consultants to bias their advice to secure greater revenues from their clients. As with papers mentioned in the previous subsection, they also use the 2006 enhanced disclosure requirement as a natural experiment. This requirement mandated the disclosure of compensation consultants in the United States from 2006 onwards though it did not require firms to disclose non-compensation-related services or the fees charged by the consultants for non-compensation-related services. In addition, Murphy and Sandino also analyze a sample of Canadian companies. Canadian disclosure rules took effect in early 2005 and required firms to identify not only their compensation consultants but also the nature of other services the consultant provides. Murphy and Sandino find evidence that CEO pay is higher in companies in both countries where the consultant provides other services, and that pay is higher in Canadian firms when the fees paid to consultants for other services are large relative to the fees for executive-compensation services. Contrary to expectations, they also find that pay is higher in US firms where the consultant works for the board rather than for management. Interestingly, Cadman et al. do not find widespread evidence of higher levels of pay or lower pay-performance sensitivities for clients of consultants with potentially greater conflicts of interest. Overall, they conclude that there is little evidence that potential conflicts of interest between the firm and its consultant are a primary driver of excessive CEO pay. The contrasting results between Murphy and Sandino and Cadman et al. are likely driven by the fact that because US firms do not typically supply information on the proportion of non-compensation-related services, both studies use different proxies for the level of non-compensation-related proxies. Hence, it is still unclear whether compensation consultants bias their compensation-related advice to firms to seek greater revenues.

In addition, these studies do not shed much light on the mechanism affecting pay. Though compensation consultants might suggest high levels of pay, ultimately the responsibility for setting actual pay levels is driven by the board of directors. Armstrong et al. (2012) investigate whether the quality of corporate governance at the firm explains the higher pay found in firms using compensation consultants. Using proxy statement disclosures from firms filing in 2006–2007, they show that CEO pay is higher in firms with weaker governance and that firms with weaker governance are more likely to use compensation consultants. CEO pay remains higher in clients of consulting firms even after controlling for economic determinants of compensation. However, when consultant users and non-users are matched on both economic and governance characteristics, differences in pay levels are not statistically significant, indicating that governance differences explain much of the higher pay in clients of compensation consultants. As before, their main limitation is that they do not have information on the non-compensation services consultants provide. In addition, their analysis is cross-sectional—they cannot analyze whether changes in consultants influenced pay levels.

Outside the United States, however, data on changes in consultants are available. Goh and Gupta (2010) use the 2002 DRR regulatory change in the United Kingdom

as a natural experiment to analyze a sample of FTSE 350 firms in the United Kingdom that switched compensation consultants between 2002 and 2008. They show that CEOs and executives of firms that switch their main consultant receive higher salary increments in the year of the switch (both absolute and adjusted for median peer levels) and a less risky compensation package, through a higher proportion of bonus and a lower proportion of equity pay. They do not find that executives of firms that increase their number of consultants have higher increases in compensation than non-increasing firms. They argue that their results are consistent with the hypothesis that companies successfully engage in opinion-shopping between consultants for more favorable compensation packages for CEOs and executives.

Overall, the role that compensation consultants play in setting executive compensation is still a nascent area of research. Presumably, as more data becomes available on the types of firms that use consultants, the mechanism through which consultants affect pay will also become clearer.

20.4.4 Executive Pay in Other Institutions: Mutual Funds and Brokerages

How is executive pay set at other types of institutions? Edelen et al. (2012) address the role of disclosure in resolving agency conflicts in mutual funds in the United States. They note that for certain expenditures, fund managers have alternative means of payment that differ greatly in their opacity: payments can be expensed (relatively transparent) or bundled with brokerage commissions (relatively opaque). They hypothesize that greater transparency in operating expenditures results in lower agency costs and hence leads to better return performance. Consistent with this hypothesis, they find that opaque payments have a significantly more negative impact on returns than that of transparent payments. To control for endogeneity, they use an SEC ruling change in December 2004 that prohibited the use of commission bundling to pay for distribution expenditures as a natural experiment. Moreover, they find that investors appear oblivious to the detrimental impact of bundling in that investor flows are more positively related to bundled payments than transparent payments.

Inderst and Ottaviani (2012) model the compensation structure for brokers who advise customers regarding the suitability of financial products. In their model, customers differ in their understanding of the advisers' conflicts of interest. When customers are wary of the advisers' incentives, contingent commissions can be an effective incentive tool to induce advisers to learn which specialized product is most suitable for the specific needs of customers. If, instead, customers naively believe they receive unbiased advice, high product prices and correspondingly high commissions allow brokers to exploit investors. Inderst and Ottaviani (2012) argue that policy intervention that mandates disclosure of commissions can protect naive consumers and increase welfare. However, prohibiting or capping commissions may have the unintended consequence of stifling the adviser's incentive to acquire information. More

vigorous competition benefits consumers and reduces exploitation, but firms have limited incentives to educate naive customers.

Phillips et al. (2014) show how uninformative advertising and the form of disclosure affects investor fund flows into mutual funds. In the disclosure form mandated by the SEC, changes in disclosed performance are influenced both by previously reported stale and new returns. Investors appear unable to differentiate between the two, reacting with equal strength to both new and stale return information. Fund managers exploit this behavior by preferentially timing fee increases to align with periods of heightened investor demand resulting from stale performance chasing. These findings suggest that investors misinterpret or are misled by fund disclosures, failing to appreciate the influence of time and disclosure form on reported performance.

Overall, these results are consistent with other studies on financial intermediaries that show that economically important information appears absent from standard disclosures. The literature, however, provides only limited inferences on how increasing transparency might reduce the nature and magnitude of agency conflicts at these institutions.

20.5 HOW DOES PAY AFFECT TRANSPARENCY?

Increasing the transparency of executive pay can lead to both positive and negative effects. As argued earlier, they can provide boards with more information to set optimal incentive schemes to address the moral hazard problem. However, also as noted earlier, they can also provide executives (and compensation committees) a basis for a ratchet effect on pay—pay increasing through a general increase in pay across all firms.

A second effect of increasing transparency is that it can motivate managers to manipulate firm performance to reach agreed performance levels. Goldman and Slezak (2006) develop a theoretical agency model in which stock-based compensation has two opposing effects—it induces managers to exert productive effort but also induces them to divert valuable firm resources to misrepresent performance. They show that the potential for manipulation lowers the equilibrium level of pay-for-performance sensitivity. They also show that policy changes that are intended to reduce the level of information manipulation (by increasing transparency for example) can increase the level of information manipulation. For example, when the external regulatory agency increases the penalty for manipulation, this reduces the need for internal incentive contracts to misrepresent performance. As a result, the principal focuses on the moral hazard problem and increases pay performance sensitivity, which in turn increases the managers' incentives to misrepresent performance. Consequently, regulatory changes such as the Sarbanes–Oxley Act of 2002 can end up reducing firm value or increasing the upward bias in manipulated disclosures. In a similar model, Laux and

Stocken (2012) examine how the threat of litigation affects an entrepreneur's reporting behavior when the entrepreneur can misrepresent his privately observed information, and is optimistic about the firm's prospects relative to investors. They find that higher expected legal penalties imposed on the culpable entrepreneur do not always cause the entrepreneur to be more cautious but instead can increase misreporting. They note that this relation depends crucially on the extent of entrepreneurial over-optimism, legal frictions, and the internal control environment.

Empirically, Nagar et al. (2003) examine the relation between managers' disclosure activities and their stock price-based incentives. Managers are privy to information that investors demand and are reluctant to publicly disseminate it unless provided appropriate incentives. They argue that managers who are compensated through equity-based compensation and share ownership are less affected by disclosure agency problem. They measure the amount of firm disclosure by management earnings forecast frequency and analysts' subjective ratings of disclosure practice, and find that disclosure is positively related to the proportion of CEO compensation affected by stock price and the value of shares held by the CEO.

Burns and Kedia (2006) note, however, that options are different from equity-based compensation in that the payoff is asymmetric. The convexity in CEO wealth introduced by stock options limits the downside risk on the detection of the mispricing. They examine S&P 1500 firms that announce a restatement of financial statements over the period 1995–2002 and find that the sensitivity of the CEO's unexercised options to stock price is significantly positively related to the firm's propensity to misreport. Efendi et al. (2007) show that the effect also appears when the equity of the firm is substantially overvalued such as the period after the dotcom bubble in 2001–2002. In these situations, equity-based compensation and option holdings also add to the likelihood of misstatement. Consequently, regulatory changes such as the 1993 regulatory changes that capped the tax deductibility of CEO salaries at \$1 million and shifted CEO pay toward equity-based compensation may have resulted in a decrease of transparency at affected firms.

Adut et al. (2013) argue that firms do not manage earnings only to reduce the transparency of financial cash flows. They distinguish between predictive and opportunistic earnings management: if the firm is predictably managing its earnings, discretionary accruals should be positively related to future cash flows. If it is opportunistic, the relationship is negative. Adut et al. find that CEO compensation levels (measured by salary, bonus, and other forms of compensation) are positively related to predictive earnings management and negatively related to opportunistic earnings management. In addition, predictive earnings management appears positively associated with future returns, while opportunistic earnings management is negatively associated with future returns. Overall, they argue that firms provide more incentives if their earnings are also more informative.

A third effect of increasing transparency on compensation is that managers also have incentives to misstate their compensation. Lie (2005) documents that firms earn negative abnormal stock returns before unscheduled executive option awards and these returns turn positive afterward. He shows that this return pattern has intensified over time, suggesting that executives have gradually become more effective at timing awards to their advantage. Moreover, he documents that predicted returns

are abnormally low before the awards and abnormally high afterward. Unless executives possess an extraordinary ability to forecast the future marketwide movements that drive these predicted returns, his results suggest that at least some of the option awards to executives were timed retroactively. Heron and Lie (2007) go further than Lie's (2005) conclusion. They show that this return pattern (stock returns are abnormally negative before executive option grants and abnormally positive afterward) is much weaker since August 2002, when the Securities and Exchange Commission required that option grants must be reported within two business days. Furthermore, in those cases in which grants are reported within one day of the grant date, the pattern vanished completely, but it continues to exist for grants reported with longer lags, and its magnitude tends to increase with the reporting delay. Heron and Lie interpret their findings as evidence that most of the abnormal return pattern around option grants is attributable to backdating of option grant dates.

Finally, the composition of executive pay also influences corporate transparency by affecting the informativeness of other signals firms might employ. For example, it is widely argued that dividends act as a signal while repurchases don't. Fenn and Liang (2001) examine how corporate payout policy is affected by managerial stock incentives. They find that firms with the lowest levels of management stock ownership and few investment opportunities or high free cash flow pay out more. They argue that these are firms with potentially the greatest agency problems. Fenn and Liang also find that management stock options are related to the composition of payouts. Specifically, they find a strong negative relationship between dividends and management stock options, and a positive relationship between repurchases and management stock options. Their results suggest that the growth in stock options may help to explain the rise in repurchases at the expense of dividends.

Similarly, Brockman et al. (2008) argue that managers increase the frequency and magnitude of bad news announcements during the month prior to repurchasing shares. To a milder extent, managers also increase the frequency and magnitude of good news announcements during the month following their repurchases. These results are consistent with Barclay and Smith's (1988) conjecture that share repurchases, unlike dividends, create incentives for managers to manipulate information flows. They further show that managers provide downward-biased earnings forecasts before repurchases and that managers' propensity to alter information flows prior to share repurchases increases with their ownership interest in the firm.

20.6 CONCLUSION ON TRANSPARENCY OF EXECUTIVE COMPENSATION

The academic literature typically treats the optimal design of executive compensation as the solution to an information asymmetry problem. In the presence of symmetric information, there is little need to motivate the executive beyond a flat salary.

In the presence of asymmetric information, the shareholder faces an adverse selection problem and a moral hazard problem. The adverse selection problem involves selecting the right type of agent while the moral hazard problem motivates the agent to work hard once selected. Increasing transparency of the executive contracting mechanism is one particular solution to the two agency problems. I define transparency as any mechanism that reduces asymmetric information between executives and investors.

The major problem with analyzing how transparency affects executive compensation is endogeneity. The academic literature that studies these effects usually relies on natural experiments arising from changes in regulation or on instrumental variables that affect either transparency or compensation but not both. The broad findings from these studies are that exogenous mandated increases in transparency usually affect the structure of incentive pay. Firms respond to regulatory changes by restructuring pay appropriately. It is not clear that these always increase value for shareholders. Restricting tax deductibility of pay above \$1 million in the United States did not affect total pay but the structure of pay. Allowing say on pay votes does not mean that shareholders will use them to vote. The broad channels through which executive pay is affected by transparency include the board, the executives themselves, and compensation consultants. However, in most cases, though it is clear there is a relationship between these channels, pay, and transparency, the direction of this relationship remains unclear. Moreover, we still do not clearly understand the economic mechanism through which this relationship operates.

Finally, the relationship between transparency and pay is two-way. The structure of pay affects management's incentives to manipulate transparency. They are motivated to misreport earnings, misstate their compensation mechanisms, or manipulate their benchmarks. Overall, the current state of the art on executive compensation and transparency can best be described as evolving. A number of recent regulatory changes in mandated disclosure offer opportunities for new natural experiments to deepen our understanding of the relationship between transparency and pay.

REFERENCES

- Adut, D., Holder, A. D., and Robin, A. (2013). Predictive versus opportunistic earnings management, executive compensation, and firm performance. *Journal of Accounting and Public Policy* 32, 126–146.
- Armstrong, C. S., Ittner, C. D., and Larcker, D. F. (2012). Corporate governance, compensation consultants, and CEO pay levels. *Review of Accounting Studies* 17, 322–351.
- Barclay, M. J. and Smith, C. W. Jr. (1988). Corporate payout policy: Cash dividends versus open-market repurchases. *Journal of Financial Economics* 22, 61–82.
- Bebchuk, L. A., and Fried, J. M. (2003). Executive compensation as an agency problem. *Journal of Economic Perspectives* 17, 71–92.
- Bebchuk, L. A., and Fried, J. M. (2004). Stealth compensation via retirement benefits. *Berkeley Business Law Journal* 1, 291–326.

- Bebchuk, L. A., Fried, J. M., and Walker, D. I. (2002). Managerial power and rent extraction in the design of executive compensation. *University of Chicago Law Review* 69, 751–846.
- Bizjak, J., Lemmon, M., and Nguyen, Y. (2011). Are all CEOs above average? An empirical analysis of compensation peer groups and pay design. *Journal of Financial Economics* 100, 538–555.
- Brockman, P., Khurana, I. K., and Martin, X. (2008). Voluntary disclosures around share repurchases. *Journal of Financial Economics* 89, 175–191.
- Burns, N., and Kedia, S. (2006). The impact of performance-based compensation on misreporting. *Journal of Financial Economics* 79, 35–67.
- Cadman, B., Carter, M. E., and Hillegeist, S. (2010). The incentives of compensation consultants and CEO pay. *Journal of Accounting and Economics* 49, 263–280.
- Cai, J., and Walkling, R. A. (2011). Shareholders' say on pay: Does it create value? *Journal of Financial and Quantitative Analysis* 46, 299–339.
- Cohen, D. A., Dey, A., and Lys, T. Z. (2013). Corporate governance reform and executive incentives: Implications for investments and risk taking. *Contemporary Accounting Research* 30, 1296–1332.
- Conyon, M. J., and Murphy, K. (2000). The prince and the pauper? CEO pay in the US and UK. *Economic Journal* 110, 640–671.
- Conyon, M. J., and Sadler, G. (2010). Shareholder voting and directors' remuneration report legislation: Say on pay in the UK. *Corporate Governance: An International Review* 18, 296–312.
- Cooper, M. J., Gulen, H., and Rau, P. R. (2013). Performance for pay? The relation between CEO incentive compensation and future stock price performance. Working Paper, University of Cambridge.
- Core, J. E., and Guay, W. R. (1999). The use of equity grants to manage optimal equity incentive levels. *Journal of Accounting and Economics* 28, 151–184.
- Core, J. E., Holthausen, R. W., and Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics* 51, 371–406.
- De Franco, G., Hope, O.-K., and Larocque, S. A. (2012). The effect of disclosure on the pay-performance relation. *Journal of Accounting and Public Policy* 32, 319–341.
- Edelen, R. M., Evans, R. B., and Kadlec, G. B. (2012). Disclosure and agency conflict: Evidence from mutual fund commission bundling. *Journal of Financial Economics* 103, 308–326.
- Efendi, J., Srivastava, A., and Swanson, E. P. (2007). Why do corporate managers misstate financial statements? The role of in-the-money options and other incentives. *Journal of Financial Economics* 85, 667–708.
- Ertimur, Y., Ferri, F., and Muslu, V. (2011). Shareholder activism and CEO pay. *Review of Financial Studies* 24, 535–592.
- Faulkender, M., and Yang, J. (2010). Inside the black box: The role and composition of compensation peer groups. *Journal of Financial Economics* 96, 257–270.
- Faulkender, M., and Yang, J. (2013). Is disclosure an effective cleansing mechanism? The dynamics of compensation peer benchmarking. *Review of Financial Studies* 26, 806–839.
- Fenn, G. W., and Liang, N. (2001). Corporate payout policy and managerial stock incentives. *Journal of Financial Economics* 60, 45–72.
- Fernandes, N., Ferreira, M. A., Matos, P., and Murphy, K. J. (2013). Are U.S. CEOs paid more? New international evidence. *Review of Financial Studies* 26, 323–367.
- Ferri, F., and Maber, D. (2013). Say on pay votes and CEO compensation: Evidence from the UK. *Review of Finance* 17, 527–563.

- Goh, L., and Gupta, A. (2010). Executive compensation, compensation consultants, and shopping for opinion: Evidence from the UK. *Journal of Accounting, Auditing and Finance* 25, 607–643.
- Goldman, E., and Huang, P. (2014). Contractual versus actual severance pay following CEO turnover. *Management Science*, forthcoming.
- Goldman, E., and Slezak, S. L. (2006). An equilibrium model of incentive contracts in the presence of information manipulation. *Journal of Financial Economics* 80, 603–626.
- Greenstone, M., Oyer, P., and Vissing-Jorgensen, A. (2006). Mandated disclosure, stock returns, and the 1964 Securities Acts amendments. *Quarterly Journal of Economics* 121, 399–460.
- Grossman, S. J., and Hart, O. D. (1983). An analysis of the principal-agent problem. *Econometrica* 51, 7–45.
- Hayes, R. M., and Schaefer, S. (2009). CEO pay and the Lake Wobegon effect. *Journal of Financial Economics* 94, 280–290.
- Heron, R. A., and Lie, E. (2007). Does backdating explain the stock price pattern around executive stock option grants? *Journal of Financial Economics* 83, 271–295.
- Holmström, B. (1979). Moral hazard and observability. *Bell Journal of Economics* 10, 74–91.
- Inderst, R., and Ottaviani, M. (2012). How (not) to pay for advice: A framework for consumer financial protection. *Journal of Financial Economics* 105, 393–411.
- Laux, V., and Stocken, P. C. (2012). Managerial reporting, overoptimism, and litigation risk. *Journal of Accounting and Economics* 53, 577–591.
- Lie, E. (2005). On the timing of CEO stock option awards. *Management Science* 51, 802–812.
- Mishel, L., and Sabadish, N. (2013). CEO pay in 2012 was extraordinarily high relative to typical workers and other high earners. Mimeo, Economic Policy Institute, Washington DC.
- Murphy, K. J., and Sandino, T. (2010). Executive pay and “independent” compensation consultants. *Journal of Accounting and Economics* 49, 247–262.
- Muslu, V. (2010). Executive directors, pay disclosures, and incentive compensation in large European companies. *Journal of Accounting, Auditing and Finance* 25, 569–605.
- Nagar, V., Nanda, D., and Wysocki, P. (2003). Discretionary disclosure and stock-based incentives. *Journal of Accounting and Economics* 34, 283–309.
- Park, Y. W., Nelson, T., and Huson, M. R. (2001). Executive pay and the disclosure environment: Canadian evidence. *Journal of Financial Research* 24, 347.
- Perry, T., and Zenner, M. (2001). Pay for performance? Government regulation and the structure of compensation contracts. *Journal of Financial Economics* 62, 453–488.
- Phillips, B., Pukthuanthong, K., and Rau, P. R. (2014). Do mutual fund investors chase stale returns? Working Paper, University of Cambridge.
- Quinn, C. L., and Brown, A. E. (2013). Executive compensation around the world: Need for robust disclosure and accountability in the 2013 proxy season. *Pension & Benefits Daily*, 45 PDB, 03/07/2013.
- Rau, P. R., and Xu, J. (2013). How do ex ante severance pay contracts fit into optimal executive incentive schemes? *Journal of Accounting Research* 51, 631–671.
- Reeb, D. M., and Zhao, W. (2013). Director capital and corporate disclosure quality. *Journal of Accounting and Public Policy* 32, 191–212.
- Rose, N. L., and Wolfram, C. (2002). Regulating executive pay: Using the tax code to influence chief executive officer compensation. *Journal of Labor Economics* 20, S138–S175.

- Waxman, H. (2007, December). Executive pay: Conflicts of interest among compensation consultants. United States House of Representatives Committee on Oversight and Government Reform Majority Staff.
- Yermack, D. (1995). Do corporations award CEO stock options effectively? *Journal of Financial Economics* 39, 237–269.
- Yermack, D. (2006). Golden handshakes: Separation pay for retired and dismissed CEOs. *Journal of Accounting and Economics* 41, 237–256.

CHAPTER 21

TRANSPARENCY AND DISCLOSURE IN THE GLOBAL MICROFINANCE INDUSTRY

LEIF ATLE BEISLAND, ROY MERSLAND,
AND TROND RANDØY

21.1 INTRODUCTION

In this chapter, we discuss transparency challenges in the global microfinance industry. The issue of transparency not only is on the agenda of listed companies and regulated banks in mature markets but is also hotly debated in regard to firms operating in emerging markets and development agencies. Moreover, several actors in the microfinance industry have recently been accused for having low standards of transparency (Pocantico, 2008). Thus, we argue that the issue of transparency in the global microfinance industry serves as an interesting case with both theoretical and practical implications.

Microfinance is the provision of financial services, such as savings, insurance, and loans, to micro-entrepreneurs and low-income families. The growth of the microfinance market has been remarkable. Soon, the microfinance sector will become the world's largest banking market in terms of number of customers. It is estimated that microfinance institutions (MFIs) serve more than 200 million loan customers (Maes and Reed, 2012). Furthermore, more than 500 million poor families have savings accounts (Christen et al., 2004), and 135 million poor families have some type of micro insurance policy (Lloyd's, 2012).

Within the microfinance industry, the issue of transparency and disclosure of information is important because MFIs operate in a market with many extremes. First, the financial clients are typically poorly educated and demand financial services in small increments, commonly with deposits of a few dollars or loans ranging from US\$50 to \$1000. Second, these clients often live in areas with poor infrastructures in low-income

countries that have national financial authorities with weak regulatory capacity (Armendariz and Morduch, 2010). Third, the industry has a short history; the average age of its institutions is approximately nine years (in the global data set of Mersland et al., 2011), and a significant portion of the founders are still active (Randøy et al., 2015). This lack of professionalism limits the industry's ability to provide information. Fourth, the industry has received an abundance of international attention (www.cgap.org) and international investments (Mersland et al., 2011), which have helped in the creation of policies and institutions that facilitate better disclosure of information, such as dedicated rating agencies specialized in assessing MFIs.

It is notable that MFIs represent a type of financial institution with an unusual number of common characteristics across a large number of countries. In this chapter, we discuss how the microfinance industry has been shaped by various issues concerning transparency. Specifically, we discuss how the supply and demand of information works in relation to the key stakeholders in the microfinance industry: customers, donors, and owners.

The chapter is organized in the following way. In Section 21.2 we discuss transparency and disclosure among the different stakeholders in microfinance. In Section 21.3 we turn to regulations and ratings. Section 21.4 brings up challenges and suggestions for future development. Section 21.5 concludes the chapter.

21.2 TRANSPARENCY AND DISCLOSURE AMONG MICROFINANCE STAKEHOLDERS

The word transparency is widely used in the microfinance industry, but it has different meanings to the various stakeholders in the industry. We argue that the extent to which transparency has become a buzzword in microfinance has made it politically impossible for stakeholders to make rational arguments about the optimal level of transparency and the costs of disclosing information (by actors such as MFIs, rating agencies, or capital providers). In this chapter, we adopt a more rational approach to this issue by considering both the costs and the benefits of transparency and disclosures.

One reason for the significant interest in transparency in the microfinance industry concerns the donors, a stakeholder group usually absent in other financial industries. Because access to microfinance is believed to have a positive developmental effect on the customers (Morduch, 1999), MFIs often receive subsidies in the form of grants, services, or low-interest loans. This characteristic of the industry complicates the measurement of financial performance. Moreover, the possibility that managers of MFIs are capable of influencing reported donations and loan-default levels has led donors and investors to question the financial reporting of MFIs (Manos and Yaron, 2009). The social performance dimension of MFIs is even more complicated to measure. In fact, because a large number of industry reports have supported the claim, for

example, of Morduch (1999), that access to microfinance has a positive effect on customers (Goldberg, 2005; Odell, 2010), it has been difficult to prove large positive effects when rigorous evaluation methodologies are applied (Duvendack et al., 2011).

21.2.1 The Economic Foundation

The optimal level of transparency in the microfinance industry, as with any other industry, can be found in the economics of information. On one hand, the demand for information indicates the significance that various stakeholders attach to transparency. On the other hand, the supply of information, the actual information disclosed by MFIs and their stakeholders, reflects their willingness to provide such information. Economically, there is an equilibrium when the target transparency level (the demand for information and the corresponding willingness to pay) matches the disclosure of information (the supply of information at a certain price). The transparency debate often implicitly assumes that more disclosure is always “better”; however, throughout this chapter, it is important to keep in mind that information disclosure is costly and that infinite transparency is never optimal.

A number of market inefficiencies can result from a suboptimal level of transparency in the microfinance industry. First, there might be free-riding problems given that the users of information (such as customers, donors, and investors) are unlikely to share equally the cost of generating this information. Second, there might be externalities given that some of the main beneficiaries of microfinance activities may be stakeholders that do not directly interact with the industry, such as other local businesses (increased demand following increased supply of microfinance) and the local government (a wider tax base).

One solution to the free-riding problem could be some type of industry-based solution (e.g., the pooling of information on defaulting customers in establishments known in the microfinance industry as “credit bureaus”) that allows for the sharing of benefits and costs. To address externalities such as underinvestment due to a lack of transparency, national, or multilateral organizations (such as the World Bank) can fund information collection and enforce disclosure standards among microfinance providers.

21.2.2 The Key Stakeholders of the Industry

A distinctive feature of the microfinance industry is its unique combination of stakeholders. Mori (2010) highlights six stakeholder groups: customers, owners, donors, creditors, employees, and the government. In this chapter, we focus on what we consider the main stakeholder groups: the customers, owners, and donors. However, the discussion will also cover the requirements of creditors because the combined information demands of donors and owners are expected to be sufficient for the creditors.

Microfinance customers are characterized by a low socioeconomic status, which makes them vulnerable to economic exploitation. In fact, exploitation by money lenders has been part of the motivation behind the origin of modern microfinance since the 1970s (Armendariz and Morduch, 2010). A large proportion of these customers are illiterate, and in general, many have a low level of knowledge concerning financial services. These aspects suggest that transparency is more important for MFI customers than for customers in other financial industries.

Although MFIs have different ownership forms, business practices are relatively similar across MFI types and legal contexts (Mersland and Strøm, 2008). Modern microfinance was first initiated by socially oriented development organizations. Nongovernmental organizations (NGOs), which are nonprofit organizations, still represent the largest group of organizations in the microfinance industry. Other important organizations are member-based cooperatives and shareholder-owned MFIs; the latter MFIs are often considered the for-profit entities of the microfinance industry. However, the difference between for-profit and nonprofit MFIs is not straightforward given that most MFIs consider social performance an important part of their mission and because shareholders in for-profit MFIs are often owned and controlled by NGOs (Armendariz and Morduch, 2010). We argue that the variation in ownership types creates variation in the demand for transparency, which in turn affects MFIs' willingness to disclose information. For instance, one can expect that owners of for-profit MFIs would give more importance to financial performance information, and NGO boards would demand a stronger emphasis on social performance, in line with their stated mission.

The history of microfinance is closely intertwined with that of serving a social mission. According to Hudon and Nawaz (2011), approximately 14% of the average MFI loan portfolio is financed by donations in the form of revenue grants, equity grants, or the difference between market rates and subsidized rates on concessionary loans. For example, the establishment of the Grameen Bank by Muhammad Yunus in 1983 provides an excellent case of the importance of a social mission and the associated donors. There are two major donor groups: private donors and public/institutional donors. The first group consists of individuals who typically donate small (often monthly) amounts and request information on how they are helping (i.e., "good stories") and/or other indications of social performance. The public or institutional donors can be individual governments, multilateral organizations (e.g., World Bank, UN), or donor organizations, such as the Bill & Melinda Gates Foundation. Such organizations have lately been much more specific in their demand for social impact information and transparency on financial issues, which has forced the microfinance industry toward developing measures of social impact and financial sustainability.¹

¹ Two of the co-authors are board members of MFIs and have experienced firsthand the tough demands that some professional donors require.

21.2.3 An Overview of Issues

Table 21.1 presents an overview of the key transparency and disclosure issues. For the first group of stakeholders, the customers, it can be seen that potential customers need to know that microfinance services are *available* before considering the *contents* of these services. Assuming that this information is provided, one can expect that knowing the true cost of a financial service is a key issue. In fact, the issue is most likely more relevant in developing countries than in developed ones. First, in the developing world, interest rates (and inflation) are usually higher and more volatile than in developed countries. Second, there is less competition among microfinance providers in less developed countries than in the financial markets of the developed world.

Unfortunately, informing customers about the actual costs of providing microfinance is a huge challenge. For example “the time value of money” is a rather demanding concept to the average microfinance customer. MFIs can respond to the need for transparency by disclosing comprehensible information about the financial services they offer and allowing third parties to assess their services. To bridge the gap

Table 21.1 Transparency and Disclosure in Relation to Key Stakeholders				
Key stakeholders	Demand for information: Transparency	Supply of information: Disclosure	Current market failure?	Need for change in public policy?
Customers	True cost of service, market information	Transparent contracts, market information by third party	Financial illiteracy, few suppliers	Better customer education, facilitate more competition in industry, prudent regulation
Donors	Social impact	Indications of social impact: mostly the number of customers	Severe measurement challenges for social performance, important to include costs also as a social indicator, difficult to compare the social impact between suppliers	Microbanks should supply better social impact measures, need for industry-wide standards, need for lower costs in MFIs
Owners	Financial returns, sustainability	Financial statements, rating reports	No standard for performance measurement, some large investors cannot enter the industry	Yes, by means of more integration with local and global capital markets

between the customers' need for information and information they can actually comprehend and apply, different types of financial literacy programs are gradually being promoted. Furthermore, having more competition in the industry would help to ease the proportional strong market power some MFIs possess in relation to their poor customers. In fact, competition is one of the most important means to guarantee that costs of financial services are kept at a reasonable level.² Moreover, MFIs mobilizing deposits need to be prudently regulated to protect customers' savings. With respect to regulation, the challenge is ensuring prudent regulation without substantially increasing the MFIs' costs.

We can assume that donors are motivated by the social impact of microfinance activities, such as a reduction in poverty and enhanced economic opportunities for MFIs' customers. Historically, this social mission has been "sold" to donors without rigorous facts other than the number of customers served and anecdotal evidence on the impact in poverty reduction. We argue that this lack of evidence on social impact has made it difficult to distinguish between successful and less successful MFIs in this regard. Lately, institutional donors have demanded more specific indicators of social impact. This gap between the disclosed information and the need for transparency has pushed the industry toward higher standards of social impact reporting³. We argue that the establishment of industry standards on social impact reporting is necessary if the industry wants to maintain its donor support. In addition we highlight the importance of reducing MFIs' costs, which in relative terms are typically five to ten times higher than those of commercial banks operating in emerging markets. After all, as argued by Mersland and Strøm (2010), it is the high costs of MFIs that force them to drift away from the poorest customer segments and to charge high interest rates. Thus, the costs of the MFI influence not only its financial performance but also its social impact.

Owners and boards of MFIs need to monitor their institutions. Without such monitoring, the top management or other stakeholder groups could potentially weaken the performance of an MFI and dilute its original mission. Owners also need to assess whether the institution is sufficiently capitalized with equity or in need of additional funding. In particular, the capitalization of NGOs is a challenging issue given that they do not have any ownership to "sell." However, in practice, several of the larger NGOs in the microfinance industry (e.g., Opportunity International and Accion International) operate through subsidiaries that are separate for-profit entities so that part ownership can be sold to obtain outside funding if needed.

Financial monitoring by existing owners or boards as well as potential new owners (outside investors) requires information about financial returns and financial

² Although we recommend enabling more competition in the industry, we are fully aware of possible negative effects caused by micro-lending if customers become over-indebted as a consequence of MFIs competing for customers (McIntosh and Wydick, 2005).

³ For example, most of the rating agencies discussed in the text that follows now offer specific assessments of the social impact and social dimensions of MFIs.

sustainability. To enable the continued flow of professionally managed capital into the industry, there is a need for industry-wide standards of performance. Rating agencies (see later) have been important providers of such industry-wide information, but it is still difficult to disentangle the financial and social performance of MFIs.

With an increasing number of private investors seeking to profit from participating in the microfinance industry, one might wonder if there really is an *investor* market failure in microfinance. However, given the long-term growth prospects of the industry (Mersland, 2014) and the resulting need for large amounts of external funding, the fact that some of the world's larger capital providers, such as CALPERS of California and the Norwegian sovereign wealth fund, have restrictions on where and how to invest significantly reduces and limits the universe of potential investors. Moreover, the fact that most shareholders of MFIs are international and not national investors illustrates the importance of better integration also with the local capital markets. After all, if the industry is to reach its potential it cannot continue being dependent on specialized international microfinance investment funds (Mersland and Urgeghe, 2013).

21.3 REGULATION AND RATING

Public regulation and third-party ratings are measures commonly discussed in the debate on transparency in the microfinance industry. In this section, we present recent developments on these issues and discuss their relevance for transparency in the industry.

21.3.1 Regulation of the Microfinance Industry

Banks and financial institutions are regulated because failures generate negative externalities for their customers, particularly depositors (Freixas and Rochet, 1997; Inter-American Development Bank, 2004). Moreover, it is widely recognized that there is a public need to protect a country's payment system and, more generally, the financial system (Inter-American Development Bank, 2004). An additional objective for the regulation of the microfinance industry is increasing MFIs' outreach, sustainability, and, as a result, contribution to poverty reduction (McGuire, 1999; Satta, 2004; Arun, 2005). Freixas and Rochet (1997) list six types of regulatory instruments used in the banking industry: lending rate ceilings; entry, branching, network, and merger restrictions; portfolio restrictions, including reserve requirements; deposit insurance; capital requirements; and regulatory monitoring (p. 259).

Several studies discuss how to optimize the regulation of MFIs given their special characteristics (see Hardy, et al., 2003). Basically, there can be both too much and too little regulation. It should be noted that regulation, in both microfinance and

traditional financial industries, is controversial essentially because it may prevent competition and increase the possibilities for creating and extracting rents (Stigler, 1971). However, traditional banking regulations do not typically cover microfinance activities (Hartarska and Nadolnyak, 2008); separate regulations are used for the microfinance industry. Appropriate MFI regulation depends on country-specific characteristics, such as the level of development and institutional capacities (Hardy et al., 2003; Arun, 2005), which complicate uniformly regulating MFIs across countries (McGuire, 1999).

Microfinance regulations can include rules governing MFI formation and operation, consumer protection, fraud prevention, the establishment of credit information services, secured transactions, interest rate limits, foreign ownership limits, and tax issues (Cull et al., 2009). However, the majority of MFIs are not regulated at all. The level of regulation varies extensively by country. In many countries, some MFIs are regulated by a national authority, whereas other are exempt even when they operate in the same national markets and follow similar business models (Mersland and Strøm, 2009). Typically, regulation is limited to MFIs that accept deposits, due to the vulnerability of these customers (Hartarska, 2009). Because banking regulations are not standard for MFIs, a “hot” topic in the microfinance industry is whether mandatory regulation should be imposed. Unfortunately, research on the consequences of microfinance regulation is rather limited (Hartarska, 2009).

The existence of microfinance regulations may have a positive influence on the quality of governance and control in an MFI (Beisland et al., 2015). Thus, microfinance regulations may have an indirect effect on transparency and disclosure in the industry. Moreover, the regulation of MFIs may also have a more direct effect by including provisions for performance measurements and financial accounting (McGuire, 1999; Cull et al., 2009).

21.3.2 Global Risk Assessments: The MFI Ratings

Faced with a complex business model and the typical dual objectives of financial sustainability and social impact, the microfinance industry developed an interesting innovation: a special type of MFI rating assessment. Microfinance ratings should not be understood as traditional credit ratings because they are more extensive and claim to measure MFIs’ ability to reach multiple sets of objectives (Reille et al., 2002). In addition to creditworthiness, the microfinance rating assessments measure issues such as trustworthiness and excellence in microfinance (www.ratinginitiative.org). Reille et al. (2002) state that the rating grades seek to answer the question “Is this a good organization?” rather than the traditional rating question “How likely am I to be repaid in full and on time?”

The purpose of rating reports is to present independent information that stakeholders (i.e., lenders, donors, owners, boards, or managers) can use to make

informed decisions. Thus, the main focus of an MFI rating is to offer a transparent third-party opinion about the rated MFI. Donors have welcomed the rating initiative and, since 2001, sponsored MFIs willing to be rated and publish the results. Large multilateral donors, such as the Consultative Group to Assist the Poor (CGAP) (a branch of the World Bank) and the Inter-American Development Bank (IDB), have been supportive of MFI ratings (see www.ratinginitiative.org and www.ratingfund2.org). According to Mitra et al. (2008), there are approximately 16 rating agencies active in microfinance. The major rating agencies are the US-based Microrate, the Italian-based Microfinanza, the French-based Planet Rating, and the Indian-based M-CRIL and Crisil.

Different rating agencies have different rating scales, in the same manner as credit raters such as Standard & Poor's and Moody's. However, the scales can be standardized. Beisland and Mersland (2012) identify the major factors influencing the rating grade assigned to an MFI. Their empirical study shows that the information embedded in microfinance rating grades is very similar to that of traditional credit ratings among listed firms in developed economies. Although the rating agencies claim that they assess the totality of the MFI and its regulatory and competitive environment, in reality, the major factors influencing the assigned grade are firm size, risk, and profitability (Beisland and Mersland, 2012), which is very similar to traditional credit ratings (see Kaplan and Urwitz, 1979). However, Beisland and Mersland (2012) indicate that the grade itself is not necessarily the most important outcome of the rating process. Comprehensive reports about MFIs' operation, management, performance, markets, governance, and regulatory environment provide stakeholders such as lenders and donors with valuable insights into the true state of MFIs.

Sinha (2002) maintains that many MFI operations are a "black box" to outsiders and that this creates questions about their true performance. Thus, from a transparency point of view, the creation of rating assessments has been of vital importance. Mixmarket is a Web platform (www.mixmarket.org) where MFIs can present their profiles to international donors and investors and other industry actors. Mixmarket in itself is an important transparency initiative. It has established a diamond system, with a maximum score of five diamonds given to MFIs that present an external rating report that supports the information provided to Mixmarket. Consequently, external ratings have become a necessity for many MFIs, especially to those in need of international funding (Beisland and Mersland, 2012).

The rating assessments also have the potential to influence the strategy and behavior of MFIs. So far, research on the impact of MFIs ratings is scarce. For instance, using an Eastern European sample, Hartaska (2005) reports that rating an MFI appears to have no influence on MFI performance. However, the possible impacts of ratings are difficult to measure empirically. Despite the limited research, it can be expected that MFIs with lower rating scores will find it relatively more challenging to fund their operations; potential capital providers may demand higher returns (payment to investors and debt providers) or may not provide access to funds at all (donors withdraw).

21.4 TRANSPARENCY AND DISCLOSURE: THE CURRENT SITUATION, CHALLENGES, AND SOME SUGGESTIONS FOR FUTURE DEVELOPMENT

In this section, we focus on the main transparency and disclosure issues identified in Table 21.1. We continue to focus on the customers, donors, and owners, describing the current situation of the industry, the challenges it faces, and the possibilities for policy improvements.

21.4.1 Market Information and the True Costs of Services

As highlighted in Table 21.1, having access to information on the actual interest rates and, in general, the true cost of services is, or at least it should be, a major concern to microfinance customers. Donors and socially conscious investors also have an interest in knowing that the service conditions (level of interest rates, etc.) offered by MFIs can be considered acceptable. Since the 1980s, the high interest rates charged by some MFIs have been a public concern. However, it was not until the highly profitable Mexican MFI Compartamos became a publically listed firm on the Mexican stock exchange in 2007 that high interest rates in microfinance became known to the general public (Rosenberg, 2007). Prior to this event, the argument for high interest rates was the high cost involved in micro lending. Many naïve stakeholders had never considered the possibility that some MFIs were in the business to make generous profits for their for-profit investors, as such investors had started to enter the industry (Rosenberg, 2007).

Some of the major microfinance innovations, such as lending small amounts to poorly educated women (and some men), requesting frequent installments, organizing borrowers in groups and not requesting collateral, are expensive. Mersland and Strøm (2013) report average and median operating costs of 33.1% and 23.8%, respectively (as a percent of the total loan portfolio); these levels are 5–10 times higher than those in commercial banks in developing countries and 20 times higher than those in efficient banks in Europe. In addition to high operating costs, many MFIs have high financial costs as well. However because MFIs still receive considerable subsidies, Mersland and Strøm (2013) report average financial costs of only 7.6% of the total loan portfolio (with a median of 6.5%). Write-offs must also be added to the total cost. Adding together the operating costs, financial costs, and write-offs, it is easy to see why microfinance lending rates are high. Indeed, Mersland and Strøm (2013) report that the average lending rate for microfinance customers is 40% (the median is slightly lower at 35.5%). Compared with interest rates in developed countries, microfinance rates are comparable to the interest rate levels of small consumer or credit card loans, which often

range between 15% and 40% (although, in some extreme cases, effective interest rates of 9245% were reported on phone-based loans in Norway; cf. Dagens Næringsliv, May 31, 2013). Nonetheless, there are large differences within the global microfinance industry. For example, larger MFIs can enjoy economies of scale (Hartarska et al., 2013), which when combined with “best practice” operations, allow financially sustainable MFIs to lend at rates below 20%, which is now common, for instance, in Bolivia.

Policymakers have asserted that the lack of “truth in pricing” in the microfinance industry is a major transparency problem, an argument strongly supported by Chuch Waterfield (the founder of Microfinance Transparency; see later in this section). It can even be difficult for financial experts to understand microcredit contracts, which are often filled with conditions, obligations, and commissions that substantially increase the real cost of borrowing. The following examples illustrate these issues. Interest rates are often calculated not on declining balances but on original loan amounts. Commissions are added for paperwork, installments and monitoring. Mandatory insurance policies, such as life insurance, are often included. In a similar manner, mandatory savings are often part of the contract and, in some cases, at a ratio of 2:1 (need to save \$1 to obtain \$2 in loans). Thus, on a declining balance, in practice and on average, the customer is borrowing her or his own money and nothing else during the loan period.

The Microfinance Transparency initiative is interesting and could serve as an example for transparency initiatives, even outside the microfinance industry. The purpose of this initiative is to help microfinance customers and stakeholders understand the real cost of borrowing. First, it demonstrates the influence of different commissions and mandatory services being included in microfinance contracts on the effective interest rate. An easy-to-use calculator has been designed; users can see how an interest rate sold at, for example, 25% easily results in an effective rate of 75% or higher. Second and more importantly, Microfinance Transparency discloses real interest rates for most microfinance providers in 17 countries, including Bolivia, Kenya, India, and Ecuador. For example, for the MFI FODEMI in Ecuador, although the institution claims to offer loans at 20–22% to its individual borrowers, the real interest rate is 27–30%. Other examples include ASA in Ghana, which claims to offer business loans at 3% per month, but after studying their loan contracts, Microfinance Transparency concluded that the effective annual interest rate is in the range of 64–82%. In a similar manner, the MFI Kwasha in Malawi offers business loans at 5% per month; however, according to Microfinance Transparency, the effective interest rate is between 109% and 133%.

Surprisingly, even though participation by MFIs in Microfinance Transparency is voluntary, in practice, nearly all MFIs situated in countries covered by this initiative do participate. An explanation for the high participation rates is most likely that the MFIs themselves would like to offer more transparent contracts, especially if all MFIs in the same market reveal the same information. Another explanation is that donors may force MFIs to participate. If donors are pulling out of microfinance, there is a risk that MFIs will stop participating in this important initiative.

21.4.2 Social Performance and Customer Impact

In Table 21.1, we identified the social impact as the major concern for donors. Therefore, transparency and disclosure on the social performance of an MFI are of vital importance for this group of stakeholders.

Microfinance providers are likely to claim that they pursue both financial and social objectives—the so-called “double bottom line” (Rhyne, 1998). In general, if financial performance can be difficult to measure (see later in this section), social performance is even more difficult. In fact, it is even a challenge for researchers to agree on the meaning of the concept of social performance in the microfinance industry. Zeller et al. (2003, p. 4) state that “The social performance of an organization (whether a private-for-profit firm, cooperative, or NGO) comprises the relations of the organization with its clients and with other stakeholder groups.” In the microfinance industry, several initiatives have been launched to generate good social performance measurements for MFIs. Some of the indicators covered are the type of customers served (gender, poverty levels, age, rural vs. urban, business type, etc.), consumer protection systems, the empowerment of customers, the amount of taxes paid, the degree to which the MFI’s activities hinder child labor among borrowers, customers’ influence on the environment, the working climate, and the human resource policies of the MFI (Zeller et al., 2003; IFAD, 2006; Hashemi, 2007).

The first initiatives for a more accurate measurement of social performance came in the early 2000s. Until then, most had taken for granted that providing loans to poor people would improve their lives and that MFIs were more or less altruistic organizations primarily serving the needs of their customers. When critical voices started to surface “Truth in advertising” (Hashemi, 2007) became a buzzword in relation to the interaction with donors. In fact, it became evident that MFIs were not very different from other organizations with respect to the need for professional and appropriate staff incentives. Although workers, managers, board members, and owners can be motivated by the good cause of microfinance (Besley and Ghatak, 2005), they are also “self-servers” protecting their own interests. In the same manner, stakeholders such as lenders and suppliers are not necessarily concerned about the general well-being of MFI customers. The SMART campaign (www.smartcampaign.org) is a recent initiative to ensure that clients are kept first in microfinance. By certifying MFIs that fulfil some minimum standards the SMART campaign aims on regaining the prestige of the microfinance industry.

Schreiner (2002) proposes a conceptual framework to be applied when discussing the social benefits of microfinance for its customers. Specifically, he suggests six aspects of (potential) social benefits from participating in microfinance: cost, depth, breadth, length, scope, and worth. These six aspects can be considered performance dimensions of MFIs. Mersland and Strøm (2008) use the framework to analyze performance differences between nongovernmental MFIs and shareholder MFIs. Surprisingly, they find that the MFIs’ performance along the six dimensions is independent from the form of ownership. Mersland and Strøm (2008) summarize the dimensions as follows:

Cost is [defined] as the sum of monetary costs and transaction costs to customers, Depth is defined as customers' poverty level or other social preferences like for instance the percentage of women reached, Breadth is defined as the number of customers served, Length is defined as the time frame of the supply of services and Scope is defined as number of types of financial contracts supplied. Worth estimates to what degree the customers value the services. (Mersland and Strøm, 2008, p. 599)

"Worth" is subjective and, according to Schreiner (2002), difficult to define and measure, although customer retention rates should give some indication on whether the services are valued by the customers. The other performance dimensions are easily accessible in an MFI. Leaving out transaction costs, the real interest rate paid on loans represents the "Costs." "Breadth" is simply the number of customers served. "Scope" can be proxied by the number of services offered. Standard financial performance and risk measures (e.g., profitability metrics and liquidity and solvency ratios) should give some indication of whether the MFI will stay in a business over time ("Length"), although it is preferable to include governance measures as well. Measuring "Depth" is most likely what practitioners and researchers debate the most. Typically, average loan size is the most used measure, but this measure is very crude, especially because an increasing number of MFIs have expanded their missions and now serve larger customers alongside many small customers. Thus, with less homogeneous loan portfolios, it becomes difficult to proxy depth with the average loan balance. Moreover, poorer customers are not the only people who take small loans. Nevertheless, average loan size, which is sometimes coupled with the percentage of female customers and outreach to rural areas (Mersland and Strøm, 2010), is the most used depth proxy in microfinance research and, in fact, also the most used proxies by donors and funders when monitoring MFIs' social performance. Indices with several depth dimensions have been used as well (Mersland et al., 2011).

A challenge when measuring overall social performance is that there is a tradeoff between the different performance dimensions. Schreiner's (2002) underlying assumption is that "socially oriented MFIs can trade-off narrow breadth, short length and limited scope with greater depth, while less socially oriented MFIs compensate shallow depth with wide breadth, long length and ample scope" (Mersland and Strøm, 2008, p. 599). We find Schreiner's framework helpful because it incorporates the fact that strong performances on all dimensions cannot be expected. Moreover, it illustrates that social and financial performances are interrelated. Empirical research (e.g., Hermes et al., 2011) has demonstrated that there is indeed a tradeoff between overall social and financial performance in MFIs. Thus, the microfinance transparency debate would most likely be more balanced if observers and stakeholders were better informed and more realistic.

Because social performance indicators are typically relatively crude measures of customer impact, Zeller et al. (2003) suggest that the terms social performance and customer impact should not be mixed. An MFI manager can influence the performance, but whether the services will benefit the customer depends to a great extent on several

exogenous factors. Thus, even in cases where social performance indicators are actually transparent, robust inferences on customer impact cannot necessarily be drawn. MFIs often use anecdotal evidence on the impact of their activities, but more rigorous academic research is most likely a more efficient and necessary tool to improve transparency in this area.

Based on knowledge about entrepreneurship from other areas of business (Shane and Venkataraman, 2000), it has generally been accepted that by injecting capital into micro-enterprises, such businesses will grow and improve productivity on average. Thus, through greater economic output, the owners of microfinance-supported businesses can help provide improved nutrition levels for themselves and their families, as well as more schooling and better access to health services.

Indeed, using cross-country data, Levine (2005) finds a connection between access to finance and economic development. In the same manner, Imai et al. (2012) find an association between countries with high levels of microfinance loan portfolios per capita and lower levels of poverty indicators. However, the microcredit effect may be difficult to isolate for individual households and small enterprises. First, the loans from MFIs are often not used as agreed for enterprise purposes but are instead used for consumption smoothing (Collins et al., 2009). Second, the welfare impacts of such consumption smoothing are difficult to estimate empirically.

In the microfinance industry, the image given to donors, politicians, and the public is that poverty can be eradicated with the help of small loans. Nobel laureate Muhammad Yunus even claimed in his Nobel lecture that poverty can be relegated to a museum with the help of microfinance. Until recently, most studies concluded that access to microfinance, whether loans or savings, had a positive impact on poor people's economic activities and lives (Goldberg, 2005; Odell, 2010). Recently, however, the evidence has been inconclusive, especially from studies based on social experiments with carefully designed randomized control trials (RCT), where some villagers (or villages) receive the treatment (a loan) and others serve as the control group (see Rosenberg [2010] for an overview). In general, access to savings appears to be beneficial, but whether access to credit has a positive effect depends on several personal and environmental factors. Access to credit alone is no longer a quick poverty fix, and donors such as the Norwegian government are gradually avoiding support to microfinance initiatives in developing countries. However, microfinance impact RCTs are typically performed over short periods of time, usually one year. It is often claimed that effects from access to capital should be measured over longer time spans and include indirect consequences, such as the increased economic activity of the local community. The use of such methodologies in social sciences is new, and we can expect considerable advances in the future.

Overall, many of the effects from microfinance are far beyond the level of the individual and appear at the country level, as suggested by Imai et al. (2012). A general increase in access to credit can "move" through society in apparently unpredictable ways. For example, a loan given to a woman in the city may easily end up in the hands of her father in a remote village. In any case, for the microfinance industry, who has

portrayed the image of a woman buying a sewing machine as a means of escaping poverty, the complicated issues involved in measuring impact have become a major transparency problem. Given the measurement challenges, Mersland and Strøm (2010) suggest that MFIs looking for poverty impacts should mainly reduce their costs, which will allow them to reduce their lending rates. Lower lending rates will, in all cases, be beneficial to both micro entrepreneurs and individuals taking on loans for consumption smoothing.

21.4.3 Sustainability and Financial Performance

As highlighted in Table 21.1, from an owner's perspective, the transparency debate should focus on the financial performance of the MFIs' dual bottom line. Nonetheless, financial performance should be of interest to the donors as well, given that they are usually reluctant to become involved in entities that are not financially sustainable and require continued support to survive. In general, both investors and donors rely on financial reports in their due diligence before contracting with an MFI and later when monitoring their investments. Financial sustainability is, in principle, also of interest to customers, at least when deposits are involved, but in practice, few customers will devote much attention to this issue. Trussel (2002) concludes that whether an organization is susceptible to financial problems is a concern of all stakeholders of the organization "because financial problems might not allow an organization to continue to meet its objectives and provide services" (Trussel, 2002, p. 17).

As described by Beisland and Mersland (2013), prospective investors in exchange-listed companies typically have access to large amounts of financial performance information, which they can investigate before making a decision about whether to invest in a company. In contrast, the owners (or, more generally, the capital providers) of MFIs often have limited knowledge about the companies in which they want to invest. Decisions are often based on rather scarce and poorly standardized financial information (Gutierrez-Nieto and Serrano-Cinca, 2007). Over the past decades, one of the main transparency issues in microfinance has been the trustworthiness of MFIs' financial reports. In the accounting literature, there is an abundance of research suggesting that the accounting quality (which can be viewed as a collective term for the accounting information's trustworthiness, usefulness, and relevance) is of vital importance (for an overview see Dechow et al. [2010]); high-quality accounting information decreases risk and is associated with increased fundraising possibilities and a lower cost of capital.

However, in the microfinance industry, some suggest that bottom-line earnings are almost useless for measuring the performance of an MFI (see Bruett et al., 2005; Manos and Yaron, 2009). Thus, some policymakers serving the microfinance industry have issued guidelines and tools on how to measure financial performance in the industry (such as the United Nations Capital Development Fund, US Agency for International Development [USAID], and Consultative Group to Assist the Poor [CGAP]). Because

of the large proportion of donations and subsidies in the microfinance industry, the policy guidelines of such major organizations are closely monitored. These policy guidelines include methods of computing subsidy-adjusted earnings metrics, a much used alternative to bottom-line earnings.

The microfinance industry⁴ has also elaborated other financial performance measures, such as Operational Self Sufficiency (OSS), Financial Self Sufficiency (FSS), and Subsidy Dependency Index (SDI). Although all of these alternative measurements are interesting and add important information, they also make understanding the industry more difficult for outsiders. Our view is that transparency in microfinance would be improved by the industry merely presenting itself in a more comprehensible manner using indicators similar to those disclosed in other firms.

Many observers have focused on the potential challenges in measuring the financial performance of MFIs, but Beisland and Mersland (2013) have taken a different angle. Rooted in the accounting literature, they explain that there is a critical focus on the quality of accounting numbers in all industries, not just microfinance. Even for highly professional MFIs, various managerial incentives may reduce the trustworthiness of financial reporting. Moreover, possible outright manipulation aside, other aspects, such as conservative accounting procedures or volatile business conditions, may reduce the usefulness of the reported accounting numbers in any firm.

Beisland and Mersland (2013) apply standard methods used in the accounting literature to study the earnings quality of MFIs' official financial reports. They find that the quality of reported earnings in the microfinance industry seems to differ little from that of other industries. Although there is no established "normal" level of earnings quality, the scores on earnings attributes, such as stability and predictability, are very similar to the values reported for listed companies in the United States. Moreover, they find no evidence of more widespread earnings manipulation in microfinance than in other industries. They also check whether the adjusted earnings numbers are superior to reported earnings as far as earnings quality is concerned. Again, surprisingly, reported earnings generally achieve scores at least as high on earnings quality metrics as adjusted earnings. They conclude that the microfinance industry, at least in regard to accounting numbers, may not be as different from other industries as many observers seem to believe.

⁴ The following three types of adjustments to bottom-line earnings are typically conducted: adjustment for inflation, adjustment for subsidies, and adjustment for loan provisions and write-offs (see www.ratingfund2.org for more details). Manos and Yaron (2009) describe these adjustments as follows: "The adjustment for inflation is to account for the fact that inflation decreases the value of net monetary assets. The adjustment for subsidies accounts for three types of subsidies: concessionary borrowings, cash donations and in-kind subsidies. The adjustment for loan loss provisions and write-offs is to account for variation in the recognition of delinquencies and the writing off of bad loans" (p. 5). Bruett et al. (2005) state that the adjustments are made to reflect the true performance of MFIs, to measure MFIs' ability to maintain their level of operations over the long term and to enable benchmarking across a wide range of institutions.

It should be noted that the findings in Beisland and Mersland's (2013) study do not necessarily mean that MFIs' reported earnings can always be trusted or that they provide the "correct" level of profitability for all entities in the industry. First, the finding that earnings quality scores, on average, appear to be similar to those of other industries is no guarantee that an MFI's accounting numbers are exact representations of the underlying economics of the entities; accounting is not perfect in any industry. Second, the earnings quality literature focuses largely on the degree to which earnings numbers repeat themselves; if earnings numbers are stable and predictable, they are said to be high quality, even if subsidies and donations disturb the correct performance measurement. Therefore, it is most likely advantageous to supplement reported earnings numbers with alternative performance measures, such as adjusted earnings. Nonetheless, Beisland and Mersland's (2013) study strongly indicates that important and relevant information is embedded in the reported accounting information, and it seems to be premature to characterize the financial reporting information of MFIs as useless or invalid.

In principle, microfinance regulations may contain provisions on financial reporting. However, so far, regulations have played a limited role in regard to improving the financial reporting of the industry. Still, Beisland et al. (2015) find that the accounting quality of regulated MFIs exceeds that of unregulated MFIs. This finding is attributed to regulations being an additional governance mechanism; consistent with prior research (Francis et al., 2006), improved governance is associated with increased financial reporting trustworthiness and usefulness. Moreover, empirical findings suggest that the transparency of smaller and less professional MFIs might be lower, at least when measured through accounting quality indicators (Beisland et al., 2015).

As for the rating agencies, it is our opinion that they serve an important role in increasing the transparency of MFIs' financial performance. First, they publish a large amount of accounting information and supplementary financial performance measures. Second, they provide assessments and discussions of the reported figures. Third, they compute alternative earnings and financial performance measures, for example, the adjusted earnings metric discussed above. It should also be noted that financial performance is one of the most influential determinants of an MFI's rating score (Beisland and Mersland, 2013). Thus, from a transparency perspective, it is important to continue efforts to increase the proportion of MFIs being rated.

21.5 CONCLUSION ON TRANSPARENCY IN THE GLOBAL MICROFINANCE INDUSTRY

Over the last couple of decades, the microfinance industry has enjoyed considerable positive public attention; however, more recently, the industry has been criticized for not really "helping the poor" and practicing low standards of transparency (Pocantico,

2008). The gap between microfinance expectations and microfinance realities today is one of the industry's greatest challenges. Thus, in this chapter, we discuss the microfinance market and the transparency challenges related to the major stakeholder groups of customers, donors, and owners.

Transparency can be regarded as particularly important in the microfinance industry. First, the customers are more vulnerable than in most traditional financial industries. Second, the capital providers are often less professional than in other industries. Third, the activities are often financed by means of donations and subsidies—from individuals, organizations, and governments—and the entities typically have explicit social objectives in addition to a financial sustainability objective. These characteristics separate the microfinance industry from other financial industries.

Over the last 10 years, the need for transparency in the microfinance industry has become more evident. Owing to public pressure and the self-interest of many MFIs, we argue that as of 2013, the level of transparency is substantially higher than it was only a few years ago. An important component in this recent development is the existence of specialized rating agencies, which provide objective third-party information to stakeholders, such as donors and owners. The fact that MFIs are under the scrutiny of rating agencies is one reason rating activity is most likely more important than the rating grade itself. Moreover, increased media attention has contributed to increasing the overall level of transparency in the industry, particularly for donors.

This study highlights several areas where there is a mismatch between the demand for transparency among the stakeholders and the supply of disclosure of information (e.g., market failure). For example, customer illiteracy could be alleviated through better customer education by MFIs and a better education system at large. Likewise, the lack of competition among microfinance suppliers makes it necessary to push for lower barriers to entry in the industry, for example, by promoting the entry of larger international operators. However, policymakers should be aware of the risk of customer over-indebtedness and loan default in highly competitive microfinance markets (McIntosh and Wydick, 2005). Thus, increased competition should be followed by credit bureaus where MFIs can interchange information about defaulting customers.

The existence of donors sets the microfinance industry apart from other parts of the financial industry. Donors are concerned with MFIs' social impact; however, hard scientific evidence of such an impact is limited, which makes it difficult for donors to know the true impact of their donations and to compare social impact across MFIs. If the industry is to continue receiving donations, the level of transparency on this issue has to be improved, which can be accomplished by individual MFIs providing better measurements of impact and, most of all, by industry-wide agencies providing comparative numbers on the impact across a number of institutions.

The microfinance industry is characterized by a number of ownership forms, both for-profit and nonprofit. For these to coexist, the playing field needs to be equal so that capital providers, small and large, national and international, are allowed into the industry. Better integrating the microfinance into the global financial market as well as the local capital markets will also help the industry grow, become more cost focused,

and offer its poor customers less expensive financial products. Likewise, from a transparency view, we see a need for public regulators to treat microfinance similarly to other financial firms, with public scrutiny of solvency and the ability to absorb financial shocks. This could have the positive indirect effect of professionalizing microfinance providers, which again can help to channel new investors into this high-growth industry and thus reduce the long-term cost of capital.

We conclude this analysis with a caveat. In our view, when discussing improved microfinance transparency, it is important to keep in mind that there are costs associated with increased levels of transparency. Thus, policymakers and others should seek economically optimal levels of transparency. For instance, when designing customer education programs and public regulations, policymakers should keep costs in mind. Thus, research is needed on the economics of microfinance transparency.

REFERENCES

- Armendariz, B., and Morduch, J. (2010). *The Economics of Microfinance*, 2nd ed. London: MIT Press.
- Arun, T. (2005). Regulating for development: The case of microfinance. *Quarterly Review of Economics and Finance* 45(2–3), 346–357.
- Beisland, L. A., and Mersland, R. (2012). An analysis of the drivers of microfinance rating assessments. *Nonprofit and Voluntary Sector Quarterly* 41(2), 213–231.
- Beisland, L. A., and Mersland, R. (2013). Earnings quality in the microfinance industry. In *Microfinance in Developing and Developed Countries: Issues, Policies and Performance Evaluation*, eds. J. P. Gueyie, R. Manos, and J. Yaron. London: Palgrave Macmillan, chapter 5, 83–106.
- Beisland, L. A., Mersland, R. & Randøy, T. (2015). Earnings Quality and Regulation: Evidence from the Microfinance Industry. In *Microfinance Institutions: Financial and Social Performance*, eds. R. Mersland and R. Ø. Strøm. Houndmills, Hampshire, UK: Palgrave Macmillan.
- Besley, T., and Ghatak, M. (2005). Competition and incentives with motivated agents. *American Economic Review* 95(3), 616–636.
- Bruett, T., Barres, I., Curran, L., Escalona, A., Nelson, E. P., Norell, D., and Sheldon, T. (2005). *Measuring Performance of Microfinance Institutions*. Washington, DC: SEEP Network.
- Christen, R. P., Rosenberg, R., and Jayadeva, V. (2004). Financial institutions with a “double bottom line”: Implications for the future of microfinance. Occasional Paper No. 8, Washington, DC: Consultative Group to Assist the Poor.
- Collins, D., Morduch, J., Rutherford, S., and Ruthven, R. (2009). *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. Princeton, NJ: Princeton University Press.
- Cull, R., Demirguc-Kunt, A., and Murdoch, J. (2009). Does regulatory supervision curtail microfinance profitability and outreach. Policy Research Working Paper No. 4948. Washington, DC: World Bank.
- Dechow, P. M., Ge, W., and Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics* 50(2), 344–401.

- Duvendack, M., Palmer-Jones, R., Copestake, C. G., Hooper, L., Loke, Y., and Rao, N. (2011). What is the evidence of the impact of microfinance on the well-being of poor people? London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Francis, J., Olsson, P., and Schipper, K. (2006). Earnings quality. *Foundations and Trends in Accounting* 1(4), 259–340.
- Freixas, X., and Rochet, J. C. (1997). *Microeconomics of Banking*. Cambridge, MA: MIT Press.
- Goldberg, N. (2005). *Measuring the Impact of Microfinance: Taking Stock of What We Know*. Washington, DC: Grameen Foundation USA Publication Series.
- Gutiérrez-Nieto, B., and Serrano-Cinca, C. (2007). Factors explaining the rating of microfinance institutions. *Nonprofit and Voluntary Sector Quarterly* 36(3), 439–464.
- Hardy, D. C., Holden, P., and Prokopenko, V. (2003). Microfinance institutions and public policy. *Policy Reform* 6(3), 147–158.
- Hartarska, V. (2005). Governance and performance of microfinance institutions in Central and Eastern Europe and the newly independent states. *World Development* 33(10), 1627–1643.
- Hartarska, V. (2009). The impact of outside control in microfinance. *Managerial Finance*, 35(12), 975–989.
- Hartarska, V., and Nadolnyak, D. (2008). Does rating help microfinance institutions raise funds? Cross-country evidence. *International Review of Economics and Finance* 17(4), 558–571.
- Hartarska, V., Shen, X., and Mersland, R. (2013). Scale economies and input price elasticities in microfinance institutions. *Journal of Banking and Finance* 37, 261–313.
- Hashemi, S. (2007). *Beyond Good Intentions: Measuring the Social Performance of Microfinance Institutions*. Washington, DC: Consultative Group to Assist the Poor.
- Hermes, N., Lensink, R., and Meesters, A. (2011). Outreach and efficiency of microfinance institutions. *World Development* 39(6), 938–948.
- Hudon, M., and Ahmad, N. (2011). Efficiency and public policy in microfinance: Which kinds of subsidies matter? Conference paper presented at the 2nd European Research Conference on Microfinance, June 16–18, Groningen, The Netherlands.
- IFAD. (2006). Assessing and managing social performance in microfinance. Report. Rome: International Fund for Agricultural Development.
- Imai, K. S., Gaiha, R., Thapa, G., and Annim, S. K. (2012). Microfinance and poverty—A macro perspective. *World Development* 40(8), 1675–1689.
- Inter-American Development Bank. (2004). *Unlocking Credit: The Quest for Deep and Stable Bank Lending*. Baltimore: Johns Hopkins University Press.
- Kaplan, R. S., and Urwitz, G. (1979). Statistical models of bond ratings: A methodological inquiry. *Journal of Business* 52, 231–261.
- Levine, R. (2005). Finance and growth: Theory and evidence. In *Handbook of Economic Growth*, eds. P. Aghion and S. N. Durlauf. Amsterdam: Elsevier North-Holland, chapter 12, 865–934.
- Lloyd's. (2012). Insurance in low-income countries: Exploring opportunities in microinsurance. *Lloyd's 360° Risk Insight*. London: Lloyd's Insurance.
- Maes, J. P., and Reed, L. R. (2012). *State of the Microcredit Summit Campaign Report 2012*. Washington, DC: Microcredit Summit Campaign.
- Manos, R., and Yaron, J. (2009). Key issues in assessing the performance of microfinance institutions. *Canadian Journal of Development Studies* 29(1–2), 101–122.

- McGuire, P. M. (1999). Policy and regulation for sustainable microfinance: Country experiences in Asia. *Journal of International Development* 11, 717–729.
- McIntosh, C., and Wydick, B. (2005). Competition and microfinance. *Journal of Development Economics* 78(2), 271–298.
- Mersland, R. (2013). Microfinance market opportunities. *Enterprise Development and Microfinance* 24(4), 282–294.
- Mersland, R., Randøy, T., and Strøm, R. Ø. (2011). The impact of international influence on microbanks' performance: A global survey. *International Business Review* 20(2), 163–176.
- Mersland, R., and Strøm, R. Ø. (2008). Performance and trade-offs in microfinance organisations—does ownership matter? *Journal of International Development* 20(5), 598–612.
- Mersland, R. & Strøm, R. Ø. (2009). "Performance and Governance in Microfinance Institutions", *Journal of Banking and Finance* 33(4), 662–669.
- Mersland, R., and Strøm, R. Ø. (2010). Microfinance mission drift? *World Development* 38(1), 28–36.
- Mersland, R., and Strøm, R. Ø. (2012). The past and future of microfinance innovations. In *Oxford Handbook of Entrepreneurial Finance*, ed. Cumming D. New York: Oxford University Press, chapter 27, 859–891.
- Mersland, R., and Urgeghe, L. (2013). Performance and international investments in microfinance institutions. *Strategic Change: Briefings in Entrepreneurial Finance* 22(1–2), 17–29.
- Mitra, S. K., Ranjan, R., and Negi, S. (2008). An analysis of microfinance rating models. *Vilakshan XIMB Journal of Management* 5(1), 7–28.
- Mori, N. (2010). Roles of stakeholders in strategic decision-making of microfinance organizations. *International Business and Economics Research Journal* 9(7), 12–22.
- Morduch, J. (1999). The microfinance promise. *Journal of Economic Literature* 37(4), 1569–1614.
- Odell, K. (2010). *Measuring the Impact of Microfinance: Taking Another Look*. Washington, DC: Grameen Foundation USA Publication Series.
- Pocantico, D. (2008). The Pocantico declaration. Microfinance leaders' retreat, April 21–23, New York.
- Randøy, T., Mersland, R., and Strøm, R. Ø. (2015). The impact of founder-CEOs in microbanks: A global survey. *Entrepreneurship Theory and Practice*. 39(4).
- Reille, X., Sananikone, O., and Helms, B. (2002). Comparing microfinance assessment methodologies. *Small Enterprise Development* 13(12), 10–19.
- Rhyne, E. (1998). The yin and yang of microfinance: Reaching the poor and sustainability. *MicroBanking Bulletin* 2(1), 6–8.
- Rosenberg, R. (2007). CGAP reflections on the Compartamos initial public offering: A case study on microfinance interest rates and profits. Focus Note 42. Washington, DC: Consultative Group to Assist the Poor.
- Rosenberg, R. (2010). Does microcredit really help poor people? Focus Note 59. Washington, DC: Consultative Group to Assist the Poor.
- Satta, T. A. (2004). Microfinance regulation influence on small firms' financing in Tanzania. *Journal of Financial Regulation and Compliance* 12(1), 64–74.
- Schreiner, M. (2002). Aspects of outreach: A framework for discussion of the social benefits of microfinance. *Journal of International Development* 14(5), 591–603.
- Shane, S., and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review* 25(1), 217–226.
- Sinha, S. (2002). The performance of rated microfinance institutions in South Asia. *Small Enterprise Development* 13(2), 20–28.

- Stigler, G. (1971). The theory of economic regulation. *Bell Journal of Economics and Management Science* 2, 3–21.
- Trussel, J. M. (2002). Revisiting the prediction of financial vulnerability. *Nonprofit Management and Leadership* 13(1), 17–31.
- Zeller, M., Lapenu, C., and Greely, M. (2003). Social Performance Indicators Initiative (SPI) Final report to Argidius Foundation and CGAP. CERISE, France.

CHAPTER 22

ACCOUNTING TRANSPARENCY AND INTERNATIONAL STANDARD SETTING

SIDNEY J. GRAY AND HELEN KANG

22.1 INTRODUCTION

In the aftermath of the 2008 global financial crisis, there has been an increasing interest in, and demand for, accounting transparency relating to the financial circumstances of corporations. The increasing demand for transparent accounting information stems, in part, from the perception that a lack of public transparency has exacerbated, if not caused, a series of accounting and financial scandals: for example, the Asian financial crisis in 1997, the demise of Enron and WorldCom in 2002, and the global financial crisis in 2008. Though there is no doubt that accounting transparency is highly sought after by outside investors and other interested stakeholders, the issues around defining, measuring, and reporting transparent accounting information have not been easy to resolve in today's global markets. In addition, there also seems to be a different perception between those who supply and those who demand accounting information in regard to what constitutes "transparency" in accounting, in terms of both the quality and quantity of accounting information being reported.

In this chapter, we aim to explain why accounting transparency is considered to be one of the most important aspects of corporate accountability. We also consider why there is so much debate from both the supply (providers of accounting information) and demand (users of accounting information) sides on how to define, measure, and report transparent accounting information. In addition, we review and evaluate the roles of international standard-setting bodies in promoting accounting transparency.

The chapter is outlined as follows. In Section 22.2 we define accounting transparency. Section 22.3 deals with how to measure accounting transparency. In Section 22.4 we discuss different factors that influence accounting transparency. Accounting transparency standards are then discussed in Section 22.5. Concluding remarks are given

in Section 22.6 together with a discussion about the future of international accounting standard setting.

22.2 DEFINING ACCOUNTING TRANSPARENCY

Despite acknowledgment of the necessity of transparent accounting information, there is no consensus on what accounting transparency actually means. *Corporate* transparency, which is considered to have a broader perspective, has been defined as “the availability of firm-specific information to those outside publicly traded firms” (Bushman et al., 2004, p. 208). In addition, from a financial reporting perspective, Barth and Schipper (2008, p. 174) define *financial reporting* transparency as “the extent to which financial reports reveal an entity’s underlying economics in a way that is readily understandable by those using the financial reports.” Following these definitions, we define *accounting* transparency as the public availability of accounting information about the financial circumstances of a corporation to external stakeholders including investors, creditors, customers, and governments. For such accounting information to be transparent, it has to be seen as relevant, reliable, and understandable, which means that the policies and methods used in compiling the information need to be fully disclosed by the corporation.

In essence, accounting information is demanded by the stakeholders of the corporation. The corporation, in return, supplies accounting information in financial reports, prepared in accordance with accounting standards and regulations. Stakeholders are individuals or groups, who have an interest in a corporation’s ability to deliver intended results and maintain the viability of its products and services (Carpenter and Sanders, 2009). For example, investors, creditors, customers, governments, and the general public all have stakes respectively in corporations. To protect their stakes, they demand relevant and reliable accounting information that can be used in their financial decision-making processes. Given different stakes in the corporation, each stakeholder group may demand some different types of accounting information.

That is, from the supply side of accounting information, there has always been an issue regarding how to satisfy the different demands of accounting information from each stakeholder group. The response has been to engage in the production of General Purpose Financial Reports (GPFR), the objective of which is to provide information to meet the common information needs of users who are unable to command the preparation of reports tailored to their particular information needs (AASB SAC 2 para. 7). One main example of such reports is the corporate annual report, which comprises financial statements and other relevant accounting information, and is publicly available. As such, accounting transparency is often referred to as the availability of

accounting information in the annual report, though this can be extended to cover more frequent reporting, such as quarterly reports and financial communications in the context of, for example, mergers and acquisitions.

The need for accounting transparency is also based on the fact that there is a separation of management from ownership in the corporation that can cause an agency problem. This agency problem, recognized as far back as in the 18th century by Adam Smith in *The Wealth of Nations*, assumes that there is an information asymmetry between managers (preparers of financial reports and, thus, suppliers of accounting information) and owners (users of financial reports who demand accounting information). Therefore, providing transparent accounting information as part of corporate financial reporting can decrease such information asymmetry. For accounting information to be transparent, financial reporting must be of high quality and reflect economic reality. This, in turn, requires high-quality accounting or financial reporting standards; these standards must, however, be regulated and enforced to ensure that the subsequent disclosures do indeed provide high levels of transparency for outside investors and other external stakeholders of the corporation.

In summary, at the conceptual level, accounting transparency requires the regular public disclosure of accounting information; that is, disclosure of relevant and reliable information about a corporation's financial circumstances in annual and other reports is likely to enhance accounting transparency. Accounting transparency by the corporation in practice, however, is also influenced by the principles and rules governing the information being disclosed, by the accounting standards used, and by the ways in which standards are enforced by the relevant regulatory agencies as well as a variety of other factors that we discuss in the following sections.

Given the preceding complexities around the nature and definition of accounting transparency, it is not surprising to see that the measurement of accounting transparency is also a contentious issue. The next section reviews the existing measures of accounting transparency, both at the country-level and the firm-level.

22.3 MEASURING ACCOUNTING TRANSPARENCY

Accounting transparency can be assessed from both the country-level and the firm-level. At the country-level, transparency can be measured as the degree of transparency, required by the market or regulatory bodies, of accounting information as part of a corporation's financial reporting. At the firm-level, transparency of accounting information is usually proxied by disclosure levels, both mandatory and voluntary, or by market-based measures. The following sections consider some of the issues associated with measuring accounting transparency.

22.3.1 Country-level Proxies of Accounting Transparency

Measuring accounting transparency at the country-level usually involves third parties (e.g., nongovernmental organizations [NGOs] and ratings agencies, such as Transparency International and the World Bank) that rank or rate each country based on each country's characteristics. Some of these characteristics include the legal systems and enforcement in place, and the perceived level of each country's accountability and responsibility toward maintaining a transparent economic and political landscape.

For example, PricewaterhouseCoopers (PwC), one of the Big 4 accounting firms, published the Opacity Index in 2001, which measures the impact of business, economic, legal, and ethical opacity on the cost of capital. It considers the risk-based cost of doing business around the world by looking at five "CLEAR" factors: Conflict/corruption levels, Legal practices, Economic factors, Accounting practices, and Regulatory practices, and assigns a score for each country. That is, the higher the opacity, the lower the degree of accounting transparency, and therefore the higher the cost of capital. Inherently, there is an assumption that corporations originating from countries with a high level of opacity are likely to disclose less and lower quality accounting information and, therefore, have lower accounting transparency. The Opacity Index, since its initial publication, has been regularly updated and published by the Kurtzman Group, with research support from the Milken Institute.

Another popular country-based proxy of transparency is the Corruption Perceptions Index (CPI), an annual publication since 1995 by Transparency International, an independent NGO. It views transparency as allowing "those affected by administrative decisions, business transactions, or charitable work to know not only the basic facts and figures, but also the mechanisms and processes" (www.transparency.org). That is, transparency is associated with visibility, predictability, and understandability—from a country-level perspective. Transparency can be proxied by a *perceived* level of corruption in a country's public sector, as corruption generally comprises illegal activities, which are deliberately hidden, as opposed to transparent. Generally speaking, perceived corruption can be associated with a lack of accountability, a precondition for assigning responsibility (Barth and Schipper, 2008); that is, corruption is negatively associated with accounting transparency at the country-level.

Because there is no meaningful way to assess absolute levels of corruption, the CPI is therefore based on perceived levels of corruption in each country as determined by expert assessments and opinion surveys. Examples of data sources used to construct the CPI include the World Bank—Country Policy and Institutional Assessment and the World Economic Forum Executive Opinion Survey (refer to Transparency International website for detailed descriptions on data sources: http://cpi.transparency.org/cpi2012/in_detail/).

These country-level proxies of accounting transparency, however, do not take into account that individual corporations will try to "overcome" the perceived lack of accounting transparency based on their country of origin. That is, these corporations

may supply additional disclosures of accounting information to satisfy the demand of users. As such, more detailed measures of accounting transparency may be made at the firm-level, where each corporation's disclosure of accounting information is considered individually, notwithstanding, or in spite of, its country of origin.

22.3.2 Firm-level Proxies of Accounting Transparency

Firm-level transparency is, however, argued to be inherently difficult to measure owing to various factors that can influence transparency (Lang and Maffett, 2011). In addition, information asymmetry between management and owners may impact negatively on the availability of accounting information required to measure transparency, which, in turn, can exacerbate already existing information asymmetry. As such, several indicators are usually needed to measure accounting transparency at the corporate level. Broadly speaking, firm-level transparency can be measured by looking at the process of disseminating accounting information (i.e., disclosure practices of individual firms) or by looking at the outcome of providing such information (i.e., market reactions to corporations providing such information). Again, these proxies are based on the notion that providing transparent accounting information can be beneficial to stakeholders by reducing information asymmetry, which can then be reflected in appropriate market reactions.

22.3.3 Disclosure Level as a Measure of Accounting Transparency

Previous studies have used *disclosure indices* to measure the level of disclosures made by individual companies about their operations to enhance transparency. These disclosures can either be mandatory or voluntary, the former measuring the level of compliance with financial reporting standards, and the latter, the level of disclosures often provided in addition to the financial statements that are not specifically required by accounting standards.

The level of mandatory disclosures at the firm-level can be measured by going through a checklist of disclosure requirements listed as part of the financial reporting standards and the degree to which each company follows each standard. That is, the higher the compliance level, the higher is the transparency. In some situations, mandatory disclosures are the minimum transparency level that is expected of each corporation—and having internationally converged accounting standards means that the minimum transparency level should be consistent regardless of which country (and therefore culture, legal systems, corporate financing, and tax systems) each corporation originates from.

Voluntary disclosures, on the other hand, are based on the notion that, even in an efficient capital market where information is rapidly absorbed, managers have superior information to outside investors; that is, information asymmetry exists regardless

of market efficiency. Corporations engage in voluntary disclosures of accounting and financial information to differentiate themselves by providing more transparent information that can help investors and other stakeholders understand the company better (Levinsohn, 2001). The level of voluntary disclosure is then measured using a checklist comprising items such as corporate strategy, future prospects, human resources and other intangible assets, and whether these items are disclosed as part of the corporate annual report.

Again, the idea behind using disclosure levels to measure accounting transparency is based on the notion that firms engaging in higher levels of disclosures are perceived to be transparent and thereby reducing information asymmetry. For example, Botosan (1997) and Botosan and Plumlee (2002) provide evidence that the cost of capital is negatively related to the level of voluntary disclosures based on analyst perceptions (see also Francis et al., 2008; Leuz and Verrecchia, 2000).

One potential issue regarding both mandatory and voluntary disclosures is that there is always a possibility that information, which may not be relevant, can also be disclosed, resulting in information overload. That is, high levels of accounting transparency may not necessarily mean high-quality accounting information. It may be that the drive for transparency has gone too far—to a point that there have been some calls recently to reduce the amount of accounting information available to the public in order to eliminate “clutter” (see the 2011 Financial Reporting Council report) and to lose “excess baggage” (see Institute of Chartered Accountants of Scotland/New Zealand Institute of Chartered Accountants, 2011) in annual reports.

Another concern is whether the existing corporate reporting framework is adequate in reflecting the wide range of factors that affect corporate performance. That is, the current focus on accounting transparency and financial reporting can sometimes overlook other important aspects of corporate value, such as people, natural resources, and energy security. As a result, the concept of Integrated Reporting, a process that results in communication about value creation over time, has been introduced and is now promoted by the International Integrated Reporting Council (IIRC). The role of the IIRC is to create a reporting framework that will enable corporations to communicate with stakeholders more effectively without increasing the reporting burden on corporations (IIRC, 2013). In other words, the IIRC also recognizes that quality matters when it comes to information disclosures.

22.3.4 Market Reactions as Measures of Accounting Transparency

In the previous section, accounting transparency was defined as the public availability of accounting information to investors and other stakeholders. Though the level of disclosure, both mandatory and voluntary, can proxy accounting transparency, it can also be measured by how the market and stakeholders react to such information. The demand for accounting transparency is based on the notion that it will decrease

information asymmetry and, therefore, result in *benefits* to stakeholders such as lowering the cost of capital (Easley and O'Hara, 2004), improving stock price synchronicity (Fan et al., 2013), enhancing accounting quality by limiting earnings smoothing (Biddle and Hilary, 2006) and promoting analyst forecast accuracy (Lang and Maffett, 2011).

Table 22.1 reports the most common market proxies of accounting transparency considered in the previous literature. The relationship between market reaction and accounting transparency is based on the assumption that the market and various stakeholders react favorably if they perceive accounting information to be transparent.

A common market proxy of accounting transparency is usually based on the outcome of how available accounting information has been utilized by stakeholders—that is, how relevant, as well as material, is the information to those who demanded accounting information? That is, from the demand side of accounting information, transparency is considered ideal and sought after, only if it results in a favorable outcome for the individual stakeholder.

Previous studies have considered whether these proxies of accounting transparency are associated with lower information asymmetry and, therefore, whether the benefits stemming from the relationship are realized. For example, Lang and Maffett (2011) find firms with greater transparency experience less liquidity volatility, especially during financial crises. Yu (2005) finds accounting transparency is associated with lower credit spreads, while Biddle and Hilary (2006) find higher accounting quality enhances investment efficiency.

However, while the benefits stemming from lowering information asymmetry via improving accounting transparency are important, accounting transparency is also

Table 22.1 Market Proxies of Accounting Transparency

Proxies	Relation to accounting transparency
Forecast Dispersion	Forecast standard deviation across all analysts following the same firm in the same year. The smaller the deviation, the higher the accounting transparency.
Forecast Error	Absolute value of the difference between the actual annual earnings per share (EPS) and the mean of analyst forecasts. The smaller the difference, the higher the accounting transparency.
Revision Volatility	Standard deviation of the changes over the fiscal year in the median forecast from the preceding month. The smaller the deviation, higher the accounting transparency.
Stock Price Synchronicity	Counting the number of stocks that move in the same direction during a given time period or accounting for the portion of stock returns explained by the market. The higher the number of stocks, the higher the accounting transparency.
Earnings Smoothing	The lower the earnings management, the higher the accounting transparency.

impacted by other factors. The next section considers the nature of factors that can influence accounting transparency.

22.4 FACTORS INFLUENCING ACCOUNTING TRANSPARENCY

There are several firm- and country-specific factors that are associated with the disclosure of accounting information and other determinants of the level of accounting transparency (see Table 22.2). At the firm-level, factors such as size, profitability, leverage, and other accounting ratios can be associated with accounting transparency, as these variables are usually linked to the disclosure practices of individual firms. For example, size is perhaps the most explored firm-specific accounting variable that is positively associated with voluntary disclosure levels (Haniffa and Cooke, 2005; Boesso and Kumar, 2007; Wang and Claiborne, 2008). Other common firm-level variables that have been examined with a varying degree of association include profitability (Haniffa and Cooke, 2005; Alsaeed 2006) and leverage (Bujaki and McConomy, 2002; Hope, 2003; Clarkson et al., 2008).

In addition, managerial motivations, including compensation, and concerns about competitive disadvantage can also play a large part in determining which accounting

Table 22.2 Factors Associated with Accounting Transparency

Factors	Measures
<i>Firm-specific variables</i>	
Size	Firm size
Profitability	Return on assets (ROA); net profit; sales growth
Leverage	Debt to equity
Managerial motivations	Management compensation, corporate governance variables
Shareholder activisms	Ownership concentration
Ownership structure	Proportion of institutional investors, insiders, and family shareholders
Auditor	Big 4 vs. non-Big 4 firms
<i>Country-specific variables</i>	
Culture	Individualism (collectivism); power distance; uncertainty avoidance; masculinity (femininity)
Legal System	Common law; code law
Corporate Financing	Equity (capital) market systems; credit (government/financial institutions) systems
Tax System	Separate accounting and tax rules; tax-dominating accounting
Enforcement levels	Rule of law
Accounting standards	Quality of accounting standards—IFRS vs. local GAAP

information is to be made publicly available. Managerial behavior, in turn, can be influenced by the market and the media, as well as by shareholder activism (Nurunnabi et al., 2011). Further, ownership structure and corporate governance mechanisms, including auditor type, can also influence the quality of accounting information disclosed by firms and, therefore, can affect accounting transparency (Patel et al., 2002; Eng and Mak, 2003; Wang and Claiborne, 2008).

Country-level factors such as culture, legal systems, corporate financing, and tax systems can also influence the level of accounting transparency. The reporting of accounting information certainly is affected by its environment, including the culture of the country in which it operates. Hofstede (1980) developed a model of culture based on four basic dimensions: individualism versus collectivism; large versus small power distance; strong versus weak uncertainty avoidance; and masculinity versus femininity. Nobes and Parker (2012) point out that culture contains the most basic value that an individual may hold, and consequently it affects the way that individuals would like their society to be structured and how they interact with its subculture, such as accounting.

Building on Hofstede's work, Gray (1988, p. 5) argues that, "... the value systems or attitudes of accountants may be expected to be related to and derived from societal values with special reference to work related values. Accounting 'values' will in turn impact on accounting systems." These cultural differences can be applied to explain international differences in the accountants' behavior and the nature of accounting practices. Gray (1988) argues that a country with relatively high uncertainty avoidance and low individualism will be more likely to adopt a conservative approach to the measurement of income and will prefer to limit disclosures and resist pressures for accounting transparency, for example, some Asian and Latin American countries. On the other hand, a country with relatively low uncertainty avoidance and high individualism will be more likely to adopt an optimistic approach to the measurement of income and prefer a more open approach to outsiders, for example, some Anglo-Saxon and northern European countries.

Subsequent studies have examined the impact of culture on individual firms, speculating whether it influences their disclosure practices (Bhur and Freedman, 2001), and more often than not finding a positive association between levels of disclosure and more open cultures (Archambault and Archambault, 2003; Hope, 2003; Williams, 2004).

Other country-level factors with direct potential to influence accounting transparency include legal systems, corporate financing, and tax systems. For example, it is widely accepted that corporations originating from common law countries, where there is more focus on the property rights of individuals, engage in more transparent reporting practices than those from code law countries. In addition, types of corporate financing systems can also influence transparency in accounting—corporations financed by equity capital markets would provide higher levels of disclosure in response to investor pressures, compared to those with credit-based government or financial institution financing systems. That is, corporations originating in common

law countries with strong equity markets (and therefore a larger outside shareholder base) are expected to adopt higher levels of accounting transparency.

In recent years, the quality of accounting standards being adopted and implemented by countries has been shown to be one of the most important factors that can increase the quality of accounting information and transparency. It can thus be argued that the higher the quality of financial reporting standards, the higher is the level of accounting transparency. In addition, it is also reasonable to believe that this relationship is likely to exist only if these standards are enforced and supported by the accounting profession and regulatory bodies. That is, formal disclosure requirements are not going to improve accounting transparency unless their compliance is monitored, professionals held accountable, and strict enforcement regimes are exercised both by institutions and regulatory agencies (see, e.g., Kim, 2005; Guedhami et al., 2009; Elliott et al., 2010; Nurunnabi et al., 2011).

Developing and maintaining high-quality financial reporting standards is likely to be expensive. Countries with highly developed securities markets incur substantial expense to produce and regulate the application of extensive accounting and disclosure rules that publicly traded firms are required to follow. These costs are not only financial, but also include opportunity costs associated with the engagement of highly educated people, including accountants, lawyers, academicians, and politicians (Bushman and Smith, 2003).

It is perhaps owing to the aforementioned reasons that the demand for global accounting transparency standards has resulted in the push for international harmonization of accounting standards. Such standards are also considered as the solution to country differences in how they approach accounting transparency.

The call for convergence, or harmonization, of accounting standards stems from the increased global integration of markets where there is an increasing demand for better comparability of financial information. It has been suggested that the convergence of accounting standards is a matter of strategic importance with particular reference to the future of global capital markets (PwC, 2007). In essence, accounting standards should address the needs of stakeholders worldwide and provide a comprehensive overview of financial information. These issues are discussed in the following sections in some detail.

22.5 ACCOUNTING TRANSPARENCY STANDARDS

Pressures for higher levels of accounting transparency have been growing internationally along with the globalization of trade and investment. Improvements in accounting transparency and also the comparability of the information disclosed are perceived to facilitate more informed comparisons of corporate performance and prospects, with consequent economic benefits.

22.5.1 The Development of International Accounting Standards

The international harmonization of accounting standards has been a process that has in fact been taking place since the early 1970s, with many parties involved including governments, intergovernmental organizations such as UNCTAD, the Organisation for Economic Co-operation and Development (OECD) and the European Union (EU), and professional accountancy bodies (Radebaugh et al., 2006). Though national governments have the power ultimately to decide whether to implement international agreements on accounting standards it would seem that they are being influenced increasingly by global organizations such as the International Financial Reporting Standards Foundation, which is responsible for the issuance of International Financial Reporting Standards (IFRS).

The origins of IFRS can be traced back to the establishment of the International Accounting Standards Committee (IASC) in 1973 by leading professional accounting organizations in Australia, Canada, Germany, Ireland, Japan, Mexico, the Netherlands, the United Kingdom, and the United States. As of 2000, the IASC had a membership of 143 professional organizations from 104 countries and had made significant progress in the context of the growing globalization of the 1990s, with the support of the International Organization of Securities Commissions (IOSCO), toward its goal of achieving worldwide agreement on accounting standards. This was a substantial achievement given the diverse traditions and cultures from which accounting practices had evolved over the centuries (Radebaugh et al., 2006).

Despite this it was clear that the IASC's membership was nevertheless limited and bounded by the existence at national level of a professional organization, something outside the normal experience of socialist and many emerging economies. It was also felt by the IASC at that time that there was a need to restructure itself to become more independent of professional accounting organizations in order to be able to work more closely with a wider range of national standard setters, both public and private. Given that accounting standards could work only if accepted and enforced by national regulators it was imperative that standards be seen to be developed to serve the wider public interest and to be able to provide greater assurance that this was the case than hitherto. Accordingly, during 2000/2001, the IASC was restructured and reconstituted as the International Accounting Standards Board (IASB) and empowered to issue IFRS under the auspices of an independent IFRS Foundation.

22.5.2 International Financial Reporting Standards

The stated objectives of the IFRS Foundation, which is an independent, not-for-profit private sector organization, are:

... to develop a single set of high quality, understandable, enforceable and globally accepted International Financial Reporting Standards (IFRSs) through its

standard-setting body, the International Accounting Standards Board (IASB); to promote the use and rigorous application of those standards; to take account of the financial reporting needs of emerging economies and small and medium-sized entities (SMEs); and to promote and facilitate adoption of IFRSs, being the standards and interpretations issued by the IASB, through the convergence of national accounting standards and IFRS. (IFRS Foundation, 2014)

The IFRS Foundation is accountable to its Trustees. The Trustees are responsible for safeguarding the independence of the IASB and also ensuring its financing. The Trustees are also accountable to a Monitoring Board of public capital market authorities. The governance structure around standard setting by the IASB is shown in Figure 22.1.

The IASB (currently comprising 15 members) took up responsibility in 2001 for international standard setting and, since then, has issued 13 IFRS as well as adopting (and in some cases revising) existing International Accounting Standards (IAS)—as listed in Table 22.3. The IASB is also responsible for approving interpretations of IFRS as developed by the IFRS Interpretations Committee. The work of the IASB and all of its meetings follow an open and transparent due process involving wide-ranging consultations with relevant stakeholders around the world.

The IASB has revised many of the original IAS including most importantly IAS1 on *Presentation of Financial Statements*, which sets out the requirements as to how financial statements should be structured, the minimum information content required, and the key concepts to be followed such as going concern and the accrual basis of accounting. The financial statements required comprise a statement of financial

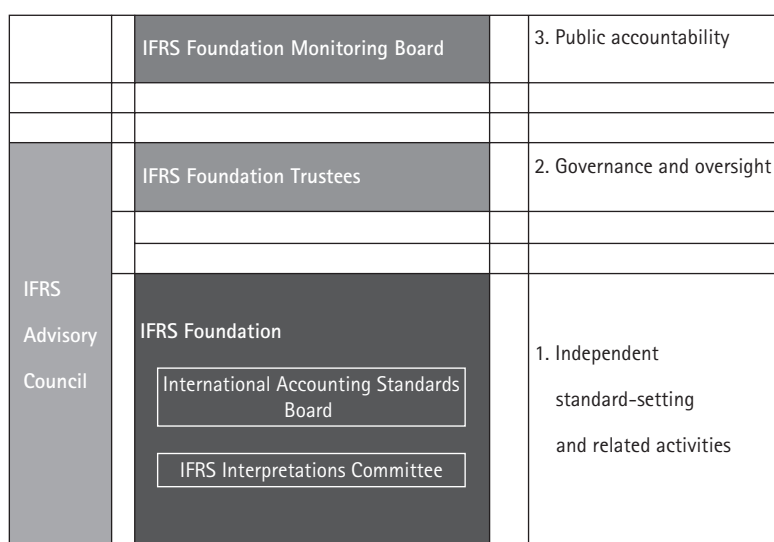


FIGURE 22.1 IASB's governance structure.

Source: IFRS Foundation (2013a).

Table 22.3 Accounting Standards Issued by the IASB as of August 2013

No.	Name	Issued
<i>International Financial Reporting Standards (IFRS)</i>		
IFRS 1	First-time Adoption of International Financial Standards	2008 ^a
IFRS 2	Share-based Payment	2004
IFRS 3	Business Combinations	2008 ^a
IFRS 4	Insurance Contracts	2004
IFRS 5	Non-current Assets Held for Sale and Discontinued Operations	2004
IFRS 6	Exploration for and Evaluation of Mineral Assets	2004
IFRS 7	Financial Instruments: Disclosures	2005
IFRS 8	Operating Segments	2006
IFRS 9	Financial Instruments	2010 ^a
IFRS 10	Consolidated Financial Statements	2011
IFRS 11	Joint Arrangements	2011
IFRS 12	Disclosure of Interests in Other Entities	2011
IFRS 13	Fair Value Measurement	2011
<i>International Accounting Standards (IAS)</i>		
IAS 1	Presentation of Financial Statements	2007 ^a
IAS 2	Inventories	2005 ^a
IAS 3	Consolidated Financial Statements <i>Superseded in 1989 by IAS 27 and IAS 28</i>	1976
IAS 4	Depreciation Accounting <i>Withdrawn in 1999</i>	
IAS 5	Information to Be Disclosed in Financial Statements <i>Superseded by IAS 1 effective July 1, 1998</i>	1976
IAS 6	Accounting Responses to Changing Prices <i>Superseded by IAS 15, which was withdrawn December 2003</i>	
IAS 7	Statement of Cash Flows	1992
IAS 8	Accounting Policies, Changes in Accounting Estimates and Errors	2003
IAS 9	Accounting for Research and Development Activities <i>Superseded by IAS 39 effective July 1, 1999</i>	
IAS 10	Events After the Reporting Period	2003
IAS 11	Construction Contracts	1993
IAS 12	Income Taxes	1996 ^a
IAS 13	Presentation of Current Assets and Current Liabilities <i>Superseded by IAS 39 effective July 1, 1998</i>	
IAS 14	Segment Reporting <i>Superseded by IFRS 8 effective January 1, 2009</i>	1997
IAS 15	Information Reflecting the Effects of Changing Prices <i>Withdrawn December 2003</i>	2003
IAS 16	Property, Plant and Equipment	2003 ^a
IAS 17	Leases	2003 ^a
IAS 18	Revenue	1993 ^a
IAS 19	Employee Benefits <i>Superseded by IAS 19 (2011) effective January 1, 2013</i>	1998
IAS 19	Employee Benefits (2011)	2011 ^a

(Continued)

Table 22.3 (Continued)

No.	Name	Issued
IAS 20	Accounting for Government Grants and Disclosure of Government Assistance	1983
IAS 21	The Effects of Changes in Foreign Exchange Rates	2003 ^a
IAS 22	Business Combinations	1998 ^a
	<i>Superseded by IFRS 3 effective March 31, 2004</i>	
IAS 23	Borrowing Costs	2007 ^a
IAS 24	Related Party Disclosures	2009 ^a
IAS 25	Accounting for Investments	
	<i>Superseded by IAS 39 and IAS 40 effective 2001</i>	
IAS 26	Accounting and Reporting by Retirement Benefit Plans	1987
IAS 27	Separate Financial Statements (2011)	2011
IAS 27	Consolidated and Separate Financial Statements	2003
	<i>Superseded by IFRS 10, IFRS 12 and IAS 27 (2011) effective January 1, 2013</i>	
IAS 28	Investments in Associates and Joint Ventures (2011)	2011
IAS 28	Investments in Associates	2003
	<i>Superseded by IAS 28 (2011) and IFRS 12 effective January 1, 2013</i>	
IAS 29	Financial Reporting in Hyperinflationary Economies	1989
IAS 30	Disclosures in the Financial Statements of Banks and Similar Financial Institutions	1990
	<i>Superseded by IFRS 7 effective January 1, 2007</i>	
IAS 31	Interests In Joint Ventures	2003 ^a
	<i>Superseded by IFRS 11 and IFRS 12 effective January 1, 2013</i>	
IAS 32	Financial Instruments: Presentation	2003 ^a
IAS 33	Earnings Per Share	2003 ^a
IAS 34	Interim Financial Reporting	1998
IAS 35	Discontinuing Operations	1998
	<i>Superseded by IFRS 5 effective January 1, 2005</i>	
IAS 36	Impairment of Assets	2004 ^a
IAS 37	Provisions, Contingent Liabilities and Contingent Assets	1998
IAS 38	Intangible Assets	2004 ^a
IAS 39	Financial Instruments: Recognition and Measurement	2003 ^a
	<i>Superseded by IFRS 9 effective January 1, 2015</i>	
IAS 40	Investment Property	2003 ^a
IAS 41	Agriculture	2001

^aDate pronouncement revised.

Source: <http://www.iasplus.com/en/standards> (2014).

position, a statement of profit or loss and other comprehensive income, a statement of changes in equity, and a statement of cash flows. The IFRSs introduced from 2001 onwards have covered a wide range of major issues such as business combinations, consolidated financial statements, share-based payments, operating segments, financial instruments, and fair value measurement. For a detailed discussion on fair value measurement and its impact on transparency in financial reporting, see Chapter 23 by

Eberhartinger and Lee in this volume. In summary, these IFRSs have extended significantly the accountability and transparency of listed corporations in countries that have adopted IFRSs.

The principles-based approach to accounting is critical to all IFRSs and a guide to this is the IFRS Conceptual Framework, which describes the basic concepts that underlie the preparation and presentation of financial statements for external users. The IFRS Conceptual Framework is the basis for the development of future IFRS and helps to resolve accounting issues outside existing IFRS. In the absence of a Standard or an Interpretation that is specifically relevant to a transaction, management must make judgments as to how they develop and apply an accounting policy, with the aim of providing information that is relevant and reliable. In making judgments, management needs to take account of the definitions, recognition criteria, and measurement concepts for assets, liabilities, income, and expenses that are included in the IFRS Framework. The IFRS Conceptual Framework is currently under review, with the latest Discussion Paper published in July 2013 (IASB, 2013b), and is a crucial element in the debate between those that prefer a more flexible principles-based approach to accounting measurement and transparency as opposed to the more rules-based approach in the United States.

The IASB also issued the IFRS for SMEs, in 2009, which has been designed to meet the needs of unlisted small and medium-sized entities, which comprise the vast majority of companies around the world, and as such is less complex than full IFRS. The standard can be adopted by any country irrespective of whether it has decided to adopt full IFRS. To the extent that SMEs are required to adopt this standard at national level, there is no doubt that accounting transparency will be enhanced worldwide.

With respect to the accounting transparency of large listed corporations, it is fair to say that the IASB has been successful to a significant degree to date in building on the foundations established by the IASC and winning acceptance of its standards in many major economies around the world though notably not yet in China, India, Japan, and the United States. The most important breakthrough for IFRS was the regulation issued in 2002 by the European Union requiring all listed companies in its member countries to prepare their consolidated financial statements using EU-endorsed IFRSs effective 2005. The European Union was followed by Australia, Hong Kong, South Africa, and Turkey (also in 2005), and more recently by Brazil (2010), Canada, and Republic of Korea (2011) and Argentina, Mexico, and Russia (2012).

Support for the adoption of IFRS in the major economies of the world, that is, the group of 20, has thus been growing, and in part spurred by the 2008 global financial crisis, but this has been by no means overwhelming (see Table 22.4). Rather, it has been a gradual process of international convergence to which most countries are committed though with varying timelines and in some cases with major obstacles still to be overcome.

In China, for example, while the use of IFRS by domestic companies is not permitted, Chinese accounting standards issued in 2006 were substantially converged with IFRS and it was agreed by the Ministry of Finance in 2010 that further convergence

Table 22.4 World's Major Economies (G-20) and the Adoption of IFRS

Country	Status for listed companies as of August 2013
Argentina	Required for fiscal years beginning on or after January 1, 2012
Australia	Required for all private sector reporting entities and as the basis for public sector reporting since 2005
Brazil	Required for consolidated financial statements of banks and listed companies from December 31, 2010 and for individual company accounts progressively since January 2008
Canada	Required from January 1, 2011 for all listed companies and permitted for private sector companies including not-for-profit organizations
China	Substantially converged national standards
European Union	All member states of the EU are required to use IFRS as adopted by the EU for listed companies since 2005
France	Required via EU adoption and implementation process since 2005
Germany	Required via EU adoption and implementation process since 2005
India	India is converging with IFRS at a date to be announced soon
Indonesia	Convergence process ongoing; a decision about a target date for full compliance with IFRS is expected soon
Italy	Required via EU adoption and implementation process since 2005
Japan	Permitted from 2010 for a number of listed international companies; a decision about mandatory adoption is expected soon
Mexico	Required from 2012
South Korea	Required from 2011
Russia	Required from 2012 for listed companies
Saudi Arabia	Required for banking and insurance companies. Full convergence with IFRS currently in process of transition
South Africa	Required for listed companies since 2005
Turkey	Required for listed companies since 2005
United Kingdom	Required via EU adoption and implementation process since 2005
United States	Permitted for foreign issuers since 2007; awaiting decision regarding use of IFRS for domestic companies

Source: Adapted from IFRS Foundation (2013b).

would continue to take place that would also reflect improvements and additions to IFRS on an ongoing basis.

In India, although Indian accounting standards that are converged with IFRS have been issued, their application has been deferred without any future date being notified. The Ministry of Corporate Affairs in India has announced that this will be decided only after consideration has been given to the effect of IFRS-based standards on income taxation and other legal regulations already in place. Currently, Indian listed companies have the option, given by the Securities and Exchange Board of India (SEBI) in 2010, of providing consolidated financial statements prepared according to IFRS.

In Japan, listed international companies are permitted (effective from 2010) to provide IFRS-based consolidated financial statements. The IASB and the Accounting

Standards Board of Japan (ASBJ) have been working closely together for some years to converge to IFRS, in accordance with the Tokyo Agreement of 2007. No decision, however, has been taken as yet as to whether IFRS will be required and, if so, by what date. This decision seems likely to be determined very much by what transpires in the United States as discussed in Section 22.5.3.

22.5.3 Obstacles to IFRS Adoption and Global Accounting Convergence

In practice, regulators such as national securities commissions individually determine whether or not to adopt IFRS and in the case of the United States, which is home to the world's largest capital market, a decision has still to be made by the US Securities and Exchange Commission (SEC) on whether and, if so, when and how adoption will take place. Without US adoption of IFRS it would seem that the global comparability of accounting transparency would be likely undermined though the United States clearly sets a high standard internationally in its own right.

The Financial Accounting Standards Board (FASB) in the United States has been working with the IASB on convergence projects for some years and, in 2007, the SEC removed the requirement for foreign issuers complying with IFRS to reconcile their financial statements to US Generally Accepted Accounting Principles (GAAP). But some significant differences, for example, inventory valuation, still exist between US GAAP and IFRS nevertheless. Further, it seems there are concerns about the loss of national autonomy and problems around the process and cost of implementation. Similar concerns would seem to be present in the case of India and Japan, which have yet to make a final commitment to full IFRS adoption. In China, although substantial convergence has taken place, IFRS have still not yet been formally adopted reflecting also national autonomy concerns.

One major issue for the United States that is still to be resolved concerns the use of the IASB's principles-based standards as opposed to the traditional US rules-based approach. However, the FASB appears committed to convergence on the grounds that this will lead to increased efficiency of capital markets globally through increased comparability and transparency across countries, that the administrative burden on US multinationals from reconciling financial statements prepared using different methods will be reduced, and that US companies will be better able to access international sources of capital.

22.5.4 IFRS and US GAAP Differences

Given the importance of the US capital market, resolving differences between IFRS and US GAAP would seem to be of paramount concern if IFRS is to be recognized

as a truly global set of standards. In 2011, reports were issued by staff of the SEC that focused on the global application of IFRS and significant differences between the two reporting regimes (Erchinger, 2012). The SEC staff analyzed differences with the criteria in mind as to whether IFRS are “high quality” and “sufficiently comprehensive.” It was concluded that IFRS have broad principles to account for transactions but with limited industry guidance whereas US GAAP provides significant guidance for industries and specific situations. Naturally, US GAAP is also focused on compliance with the US legal and regulatory environment. Differences in the conceptual frameworks used were of particular importance in terms of the definition and recognition of assets and liabilities. While the FASB has been working closely on projects to converge IFRS and US GAAP, areas where this work has yet to be completed include leases, revenue recognition, and financial instruments. Resolving these issues is becoming a matter of some urgency with the recent call by the G-20 group of countries to finalize all convergence projects.

22.6 THE FUTURE OF INTERNATIONAL ACCOUNTING TRANSPARENCY AND STANDARD SETTING

Considerable challenges remain for the IASB in its quest for global accounting comparability and transparency. In particular, it will be important for the IASB to manage its relationship with the United States once a decision has been made on IFRS adoption. If it is a negative decision, then there will need to be some international coordination of standards moving forward if the global credibility of the IASB is to be maintained. If it is a positive decision, then it is likely that the SEC will require some process of local incorporation of IFRS into US GAAP by the SEC with the possibility of modifications to IFRS along the way (Zeff, 2012). The SEC is also likely to insist on more localized implementation procedures and more detailed rules consistent with its rules-based tradition. It seems likely the SEC will also adopt an “endorsement” approach, not too dissimilar from the EU process, whereby the FASB would assess IFRS and determine how to implement and incorporate these into US GAAP (Street, 2012).

Similarly, the IASB will be likely subject to ongoing pressures to modify IFRS by countries such as China, India, and Japan as well as the United States according to institutional differences in regulation and the development of capital markets, along with differences in culture and business practices. If national jurisdictions are permitted to tailor IFRS more to suit their own local needs then the question arises as to whether this is likely to promote or undermine global comparability. Zeff (2012) also raises the specter of the IASB becoming unable to set standards at all if the widespread demands that it should slow down and consult ever more widely with its growing community of stakeholders become too overwhelming.

In addition, the IASB has also recognized that the drive for transparency may have resulted in “clutter” in annual reports as referred to earlier; thus together with the regulators and preparers of accounting information, the IASB is actively involved in promoting disclosure of high-quality, rather than high-quantity accounting information. One of the IASB’s ongoing initiatives is to consider how those applying IFRS can improve and simplify disclosures within the existing framework. The latest outcome of the project is the Feedback Statement *Discussion Forum—Financial Reporting Disclosure*, which was released by the IASB on May 28, 2013 (IASB, 2013a).

The IASB is also working closely with the IIRC, as discussed earlier, in recognition of their common interest in improving the overall quality and consistency of global corporate reporting to deliver value to investors and the wider community (IIRC, 2013).

In spite of such ongoing issues, however, the positive aspect of more than a decade of active efforts around the world by the IASB to achieve a more standardized approach to accounting transparency is that a higher level of accounting harmonization and an improved understanding of accounting differences has been achieved. As the world economy continues to globalize, it seems likely that firm accounting transparency practices will continue to converge internationally regardless of the global/regional/national standard setting agencies involved in regulatory activities.

REFERENCES

- Alsaeed, K. (2006). The association between firm-specific characteristics and disclosure: The case of Saudi Arabia. *Managerial Auditing Journal* 21(5), 476–496.
- Archambault, J. J., and Archambault, M. E. (2003). A multinational test of determinants of corporate disclosure. *International Journal of Accounting* 38, 173–194.
- Australian Accounting Standards Board (AASB) (1990). Statements of accounting concepts (SAC) 2: Objective of general purpose financial reporting. <http://www.aasb.gov.au/Pronouncements/Statements-of-accounting-concepts.aspx>.
- Barth, M. E., and Schipper, K. (2008). Financial reporting transparency. *Journal of Accounting, Auditing & Finance* 23, 173–190.
- Bhur, N., and Freedman, M. (2001). Culture, institutional factors and differences in environmental disclosure between Canada and the United States. *Critical Perspectives on Accounting* 12, 293–322.
- Biddle, G. C., and Hilary, G. (2006). Accounting quality and firm-level capital investment. *Accounting Review* 81(5), 963–982.
- Boesso, G., and Kumar, K. (2007). Drivers of corporate voluntary disclosure: A framework and empirical evidence from Italy and the United States. *Accounting, Auditing & Accountability Journal* 20(2), 269–296.
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *Accounting Review* 72, 323–349.
- Botosan, C. A., and Plumlee, M. A. (2002). A re-examination of disclosure level and expected cost of equity capital. *Journal of Accounting Research* 40, 21–40.
- Bujaki, M., and McConomy, B. J. (2002). Corporate governance: Factors influencing voluntary disclosure by publicly traded Canadian firms. *Canadian Accounting Perspectives* 1(2), 105–139.

- Bushman, R. M., Piotroski, J. D., and Smith, A. J. (2004). What determines corporate transparency? *Journal of Accounting Research* 42(2), 207–252.
- Bushman, R. M., and Smith, A. J. (2003). Transparency, financial accounting information, and corporate governance. *FEBNY Economic Policy Review* April, 65–87.
- Carpenter, M. A., and Sanders, W. G. (2009). *Strategic Management: A Dynamic Perspective*. 2nd ed. Upper Saddle River, NJ: Pearson Prentice Hall.
- Clarkson, P. M., Li, Y., Richardson, G. D., and Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society* 33(4), 303–327.
- Easley, D., and O'Hara, M. (2004). Information and the cost of capital. *Journal of Finance* 59, 1553–1583.
- Elliott, W. B., Krsche, S. D., and Peecher, M. E. (2010). Expected mispricing: The joint influence of accounting transparency and investor base. *Journal of Accounting Research* 48(2), 343–381.
- Eng, L. L., and Mak, Y. T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy* 22, 325–345.
- Erchinger, H. (2012). IFRS in the United States—Developments and current status. *Australian Accounting Review* 22(3), 248–256.
- Fan, J. P. H., Gillan, S. L., and Yu, X. (2013). Property rights, R&D spillovers, and corporate accounting transparency in China. *Emerging Markets Review* 15, 34–56.
- Financial Reporting Council (FRC) Report (2011). Cutting clutter: Combating clutter in annual reports. <http://www.frc.org.uk/Our-Work/Publications/FRC-Board/Cutting-Clutter-Combating-clutter-in-annual-report.aspx>.
- Francis, J., Nanda, D., and Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. *Journal of Accounting Research* 46(1), 53–99.
- Gray, S. J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus* 24(1), 1–15.
- Guedhami, O., and Pittman, J. A. (2011). The choice between private and public capital markets: The importance of disclosure standards and auditor discipline to countries divesting state-owned enterprises. *Journal of Accounting and Public Policy* 30, 395–430.
- Guedhami, O., Pittman, J. A., and Saffar, W. (2009). Auditor choice in privatized firms: Empirical evidence on the role of state and foreign owners. *Journal of Accounting and Economics* 48, 151–171.
- Haniffa, R. M., and Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy* 24, 391–430.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-related Values*. Beverly Hills, CA: SAGE.
- Hope, O.-K. (2003). Firm-level disclosures and the relative roles of culture and legal origin. *Journal of International Financial Management and Accounting* 14(3), 218–248.
- IASB. (2013a). *Feedback statement: Discussion Forum—Financial Reporting Disclosure*. <http://www.ifrs.org/Alerts/PressRelease/Pages/IASB-publishes-Feedback-Statement-on-Disclosure-Forum.aspx>.
- IASB. (2013b). A review of the conceptual framework for financial reporting. Discussion PaperDP/2013/1. International Accounting Standards Board (IASB).
- IFRS Foundation. (2013a). How we are structured. <http://www.ifrs.org/The-organisation/Pages/How-we-are-structured.aspx>.
- IFRS Foundation. (2013b). IFRS application around the world. <http://www.ifrs.org/Use-around-the-world/Pages/Jurisdiction-profiles.aspx>.

- IFRS Foundation (2014). Objectives of IFRS. <http://www.ifrs.org/The-organisation/Pages/IFRS-Foundation-and-the-IASB.aspx>.
- IIRC. (2013). Integrated reporting. <http://www.theiirc.org/>.
- Institute of Chartered Accountants of Scotland/New Zealand Institute of Chartered Accountants (2011). Losing the excess baggage—Reducing disclosures in financial statements to what's important. <http://www.nzica.com/reducingdisclosures.aspx>.
- Kim, J. (2005). Accounting transparency of Korean firms: Measurement and determinant analysis. *Journal of American Academy of Business* 2, 222–229.
- Lang, M., and Maffett, M. (2011). Transparency and liquidity uncertainty in crisis periods. *Journal of Accounting and Economics* 52, 101–125.
- Leuz, C., and Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of Accounting Research* 38, 91–124.
- Levinsohn, A. (2001, March). FASB weights the value of voluntary disclosure. *Strategic Finance* 72–74.
- Nobes, C., and Parker, R. (2012). *Comparative International Accounting*. 12th ed. Essex, UK: Pearson Education.
- Nurunnabi, M., Karim, A. K. M. W., and Norton, S. (2011). The perceived need for and impediments to achieving accounting transparency in developing countries: A field investigation on Bangladesh. *International Journal of Managerial and Financial Accounting* 3(1), 32–54.
- Patel, S. A., Balic, A., and Bwakira, L. (2002). Measuring transparency and disclosure at firm-level in emerging markets. *Emerging Markets Review* 3, 325–337.
- PricewaterhouseCoopers (PwC) (2007). Convergence of IFRS and US GAAP. http://www.pwc.com/gx/en/ifrs-reporting-services/pdf/viewpoint_convergence.pdf.
- Radebaugh, L. H., Gray, S. J., and Black, E. L. (2006). *International Accounting and Multinational Enterprises*. Hoboken, NJ: John Wiley & Sons.
- Street, D. L. (2012). IFRS in the United States: If, when and how. *Australian Accounting Review* 22(3), 257–274.
- Wang, K., Sewon, O., and Claiborne, M. C. (2008). Determinants and consequences of voluntary disclosure in an emerging market: Evidence from China. *Journal of International Accounting, Auditing and Taxation* 17(1), 14–30.
- Williams, S. M. (2004). An international investigation of associations between social variables and the amount of disclosure on information technology and communication problems: The case of Y2K. *International Journal of Accounting* 39, 71–92.
- Yu, F. (2005). Accounting transparency and the term structure of credit spreads. *Journal of Financial Economics* 75, 53–84.
- Zeff, S. A. (2012). The evolution of the IASC into the IASB, and the challenges it faces. *Accounting Review* 87(3), 807–837.

CHAPTER 23

TRANSPARENCY OF FAIR VALUE ACCOUNTING AND TAX

EVA EBERHARTINGER AND SOOJIN LEE

23.1 INTRODUCTION

TRANSPARENCY plays a major role in the field of financial reporting. One of the main purposes of financial statements is to provide outsiders with information and insight into the financial and economic state of the entity. In Chapter 22 of this volume, Gray and Kang define accounting transparency as “the public availability of accounting information about the financial circumstances of a corporation to external stakeholders such as investors, creditors, customers, and governments.” Other definitions in the literature, for example, by Barth and Schipper (2008) and by Blanchet (2002), are along similar lines.

The conceptual framework set out by the International Accounting Standard Board (IASB), before and after the restatement of that framework, is in line with the underlying concepts in the preceding definitions. The framework stresses the primary objective of financial reporting, namely to provide information about an entity’s economic resources, claims against the entity, changes in resources and claims, along with qualitative features of timeliness and understandability (IASB, 2010). From the perspective of market regulators, transparency is understood as unbiased, given that financial reports are supposed to represent a complete and understandable picture of a company’s financial position, thereby minimizing market uncertainty (SEC, 2008). In particular, the 2008 US Securities and Exchange Commission (SEC) testimony concerning transparency in accounting highlighted the strong commitment of the SEC to enhancing transparency in financial information. The testimony relates to transparency in financial reporting as the extent to which the reporting enables users to make informed decisions, based on an entity’s performance results and disclosures; as such, efficient capital allocation is achieved (SEC, 2008), or hoped for. The benefits of transparency are briefly described as reducing an entity’s cost of capital, increasing the

entity's value, and thus enhancing the capital market. Several empirical studies, mainly from the United States, confirm these benefits.¹

However, there are also doubts as to whether these benefits are really observable. Methodological issues, theoretical considerations, and questions regarding the transferability of the empirical results to non-US economies arise. In addition, the concern of information overflow is mentioned. Though there is consensus that transparency is created by disclosure, additional disclosure does not necessarily add to transparency. On the contrary, inappropriate disclosure (i.e., disclosure that is immaterial, irrelevant, unreliable, not comparable, overloaded, biased or even wrong, for example) could prevent transparency. In Tom Berglund analyzes this in Chapter 17 on transparency and corporate governance in this book.

Notwithstanding these considerations, the enormous role of transparency in financial reporting can be reflected in a simple word search. Even though reference to transparency is not explicit in the framework itself, searching the IASB website for the term yields approximately 2800 results (as compared to the four qualitative characteristics: understandability, 1100; relevance, 3000; reliability, 2100; and comparability, 5000).² A closer look at the usage reveals that reference is mostly to "enhancing" transparency, "improving," "ensuring," "promoting," "increasing," "strengthening," and the like.

Consequently, new standards are frequently based, among other things, on the need for (more) transparency. For example, International Financial Reporting Standards (IFRS) 1, First-time Adoption of International Financial Reporting Standards, names transparency of the information as the objective of the standard;³ in its introduction, IFRS 7 Financial Instruments: Disclosures refers the greater transparency regarding risks;⁴ and IFRS 10 Consolidated Financial Statements,⁵ as well as IFRS 12 Disclosure of Interests in Other Entities,⁶ remark on the regrettable lack of transparency during the financial crisis.

In this chapter, the analysis is based particularly on Chapter 22 by Sidney Gray and Helen Kang, as well as Chapter 17 by Tom Berglund, and focuses on one of the most intensely discussed aspects of accounting transparency, namely fair value accounting.

¹ Compare, for example, Leuz and Verrecchia (2000), Leuz and Wysocki (2008), and Leuz and Schrand (2009), each with further discussion and references; compare the preceding chapter of Gray and Kang.

² Search performed May 2013.

³ IFRS 1: "The objective of this IFRS is to ensure that an entity's first IFRS financial statements, and its interim financial reports [...] contain high quality information that is transparent for users and comparable over all periods presented."

⁴ IFRS 7 (IN2): "Greater transparency regarding those risks allows users to make more informed judgements about risk and return."

⁵ IFRS 10 (IN5): "The global financial crisis that started in 2007 highlighted the lack of transparency about the risks to which investors were exposed [...]."

⁶ IFRS 12 (IN5): "The global financial crisis that started in 2007 also highlighted a lack of transparency about the risks to which a reporting entity was exposed [...]."

Fair value measurement and reporting were promoted to provide more relevant information and thus more transparency in financial statements. At the same time, the increasing use of fair values requires even more disclosure both on the face of the financial statements and in the notes, to safeguard the transparency that was sought.

The purpose of this chapter therefore is to discuss and analyze the transparency that fair value accounting (measurement, presentation, additional disclosure) seeks to achieve. With regard to the latter, special emphasis is placed on tax disclosure and on the presentation of fair values in the statement of other comprehensive income. The reason for such emphasis lies in the fact that the issue of the usefulness of tax disclosure and of other comprehensive income is contentious, in spite of the fact that both are being considered relevant by the standard setter. Following the international relevance of IFRS, as outlined by Gray and Kang, the focus here will be on international standard setting.

The remainder of the chapter is organized as follows: Section 23.2 provides background information about fair value accounting in the context of accounting standards; Sections 23.3, 23.4 and 23.5 review prior research and discuss whether fair value accounting promotes accounting transparency, with particular attention to measurement and presentation (Section 23.3), disclosure in other comprehensive income (Section 23.4), and disclosure of tax effects (Section 23.5). Section 6 concludes the chapter.

23.2 FAIR VALUE ACCOUNTING

The fair value of an asset or a liability is defined in IFRS 13 Fair Value Measurement as the price that would be received to sell an asset or paid to transfer a liability (exit price) in an orderly transaction (not a forced sale) between market participants (market-based view) at the measurement date (current price). This definition emphasizes that fair value measurement is market based, and not entity specific. Consequently, the entity's intention to hold an asset or to settle or otherwise fulfill a liability is not relevant when measuring fair value. The market participants are assumed to be fully informed and willing to perform the transfer.

The fair value is used to measure the value of specifically defined assets and liabilities on the balance sheet of the annual financial statements. These particularly include financial assets and liabilities, derivatives and hedges, biological assets, investment property, and plan assets of pension plans.⁷

Any changes in fair value measurement that occur between two subsequent balance sheet dates are reflected in the statement of comprehensive income. That statement

⁷ Other assets such as property, plant, and equipment or inventory are usually measured at cost or at other defined values.

is divided into two sections: the income statement (profit and loss statement), which includes all income, gains, expenses, and losses (net profit),⁸ and the statement of other comprehensive income,⁹ which includes such income and expenses that cannot be considered part of “normal” net profit. Other comprehensive income rather reflects changes in equity, resulting from specifics in pension accounting, in fair value accounting and in currency translation. Changes in fair value measurement can be included in both sections of the statement of comprehensive income, depending on the nature of the underlying asset or liability, and the reason for the change in value.

Fair value measurement can be contrasted with historical cost accounting, under which assets (and liabilities) are measured at the historical cost on acquisition or production of the asset (minus depreciation, amortization, and impairment). The value of historical cost may not be exceeded in later years, even if the market price has risen over time. Thus, historical cost may be several years or decades “old,” and coincides, if at all, only accidentally with the actual value. Historical cost is a very reliable measure, but its relevance may be questionable.

Fair value instead is meant to relate to relevant (fair) market values, perhaps at the expense of reliability. In times of inflation, fair value accounting frequently leads to assets measured at values above historical cost. As any increase in measurement is considered to be a gain in the statement of comprehensive income, gains that are not yet realized (but seem realizable) may become part of profit. Thus, in spite of higher relevance, fair values may lack market realization, and therefore reliability, in particular when based on model calculations subject to management’s judgment and perceptions. More simply, fair values may provide a less prudent but likely more up to date measurement than historical cost.

The debate as to which of the measures is more appropriate is as old as bookkeeping itself. The use of fair values in financial reporting has increased considerably during the past 20 years in international accounting.¹⁰ Previously, historical cost was the benchmark (and in large parts of financial statement measurement, still is). The reason for the increased use of fair value accounting can be found in the search for more accounting transparency, to provide more information to increase decision usefulness.

During the financial crisis, fair value accounting was heavily criticized, in particular for the banking industry. As a result of booming financial asset values in earlier years, the crisis led to the need for larger write-downs once the values were impaired. In addition, the determination of fair market value became increasingly difficult as markets became inactive and financial instruments were no longer marketable. These losses added to the problems of liquidity and profitability, and it was assumed that this served to deepen the crisis (Allen and Carletti, 2008; Sapra and Shin, 2008; Adrian and Shin, 2010). However, research does not fully support that notion.¹¹

⁸ Also known as “clean surplus.”

⁹ Also known as “dirty surplus.”

¹⁰ Still, the actual use of fair values, unless mandatory, is limited; see Cairns et al. (2011).

¹¹ See discussion in the text that follows.

The financial crisis led to amendments to the IASB's measurement rules. Furthermore, the need for more disclosure on fair value accounting increased. To enhance transparency and to respond to conceptual criticism (e.g., Hitz, 2007), IFRS 13, a recent standard effective from January 1, 2013, provides for comprehensive measurement and disclosure of fair values across all asset and liability categories. In particular, information on the degree of reliability of the fair value measurement is now better disclosed in the notes. The standard differentiates between three different levels of fair value measurement. The higher the level, the less reliable the measurement basis and the more disclosure is required. In short, Level 1 includes measurement on the basis of observable market prices for the asset or liability (e.g., measurement for shares in corporations listed on a stock exchange). Level 2 includes measurement on the basis of observable market prices for comparable assets or liabilities (e.g., measurement of raw material that is not listed on an exchange, but similar raw materials with similar pricing and volatility are used as a basis for measurement¹²). Level 3 includes the least reliable basis for measurement, and consequently calls for even more additional disclosures. Measurement is based on nonobservable (private) data or on models of which examples are suggested in the standard itself, that is, internal data for discounted cash flow calculations such as weighted average cost of capital, long-term revenue growth rates, control premiums, or EBITDA-multiples.¹³

Apart from IFRS 13, additional issues of disclosure on fair value accounting arise as follows:

Other comprehensive income: On the face of the statements, changes in fair value measurement between two measurement dates (normally within a year) of specific assets and liabilities that are not part of the net result (i.e., not reported in the profit and loss statement), are shown in the statement of other comprehensive income, as described previously. Loosely speaking, these items relate to the specific accounting treatment of pension accounting, fair value accounting, and currency translation. The respective amendment of IAS 1 Presentation of Financial Statements serves the purpose of better disclosing fair value changes, which were previously reflected directly in equity only.

Tax: IAS 12 on accounting for income taxes was amended to provide more detailed disclosure regarding the tax consequences of fair value measurement. Fair value accounting normally leads to book-tax differences, as tax accounting in most jurisdictions normally does not include fair values to their full extent. From this, temporary differences, and perhaps also permanent differences between taxable income and book income arise. These must be accounted for under IAS 12 in the

¹² For example, British Petroleum (BP) explained how its natural gas and power forward contracts are reclassified under the fair value hierarchy from Level 3 to Level 2 upon the availability of market observable prices (BP Annual Report 2012, p. 231).

¹³ EBITDA: earnings before interest, taxes, depreciation, and amortization.

income statement. Because, as noted previously, not only the income statement, but also the statement of other comprehensive income now includes gains and losses from fair value accounting, the respective tax consequences must be disclosed as well. Consequently, IAS 12 now also calls for disclosure of deferred taxes on fair values included in other comprehensive income. Such disclosure may be included in the statement of other comprehensive income, or in the notes.

As a result, the question arises as to whether fair value accounting adds to accounting transparency. In an ideal economy, the answer to such question is supposedly “yes,” or “should do.” Just as any device of economic convention is designed to achieve its expected aims, fair value accounting is meant to foster economic transparency. In reality, however, such a belief might not hold true under imperfect economy and market conditions (Whittington, 2008). And even if transparency were promoted by fair value accounting, it is still open to debate as to whether such transparency is really useful for users of financial statements. Several studies have analyzed the effects of fair value accounting on users and decision usefulness.

23.3 TRANSPARENCY OF FAIR VALUE ACCOUNTING: MEASUREMENT AND PRESENTATION

23.3.1 Relevance and Reliability

The question as to whether fair value accounting provides relevant information and is useful to investors has been intensely debated. One way to answer the question is the use of value-relevance studies, which seek to determine whether fair value accounting is relevant for share value. Barth et al. (2001) point out that value relevance does not necessarily coincide with decision relevance: “In particular, accounting information can be value relevant but not decision relevant if it is superseded by more timely information” (p. 80). For the purpose of this chapter, however, the distinction between value relevance and decision relevance is of lesser importance. In both cases, the information on fair value accounting that will promote transparency is relevant.

Numerous studies on value relevance and fair value have been carried out. The majority of research results support the value relevance of fair value accounting. Barth et al. (2001, pp. 83–86) identify several lines of research. A first set of studies relates to fair values of debt and equity securities (e.g., Barth, 1994a,b; Ahmed and Takeda, 1995; Bernard et al., 1995; Petroni and Wahlen, 1995; Barth et al., 1996; Eccher et al., 1996; Nelson, 1996; Barth and Clinch, 1998). These studies generally find a higher value relevance of fair value measurement as compared to historical cost measurement. A more recent study confirms that value relevance is lower for fair values that

are based on models and on nonobservable data (Level 3) and that are thus less reliable (Song et al., 2010).

In a second set of research on fair value accounting for bank loans and the role of managerial judgment, the value relevance of the fair value on the one hand, which is on the other hand reduced by the exercise of a manager's discretion is shown (Barth et al., 1996; cf. Beaver et al., 1989; Eccher et al., 1996; Nelson, 1996; Beaver and Venkatachalam, 2003). With regard to fair value accounting for derivatives—an area that is still developing, results on value relevance are mixed (Venkatachalam, 1996; Wong, 2000). Also with regard to fair value information on tangible and intangible assets, several research results support its value relevance, and such relevance is reduced by a manager's discretion (Danbolt and Rees, 2008; see Barth et al., 2001, p. 85 for further references and more detailed discussion). As a result, the statement that fair value accounting is relevant, and that therefore transparency on fair value accounting is important for users, seems well supported in particular for securities traded on highly liquid markets.

However, the benefits of value-relevance studies, in particular for standard setting, are viewed critically (Holthausen and Watts, 2001). Value-relevance studies are based on the assumption of market equilibria. Further, they are usually based on data that include both types of information—fair value and historical cost—so that an isolation of the effect of fair value accounting is difficult.

The empirical results are not always supported by theory. Hitz (2007) confirms in his theoretical analysis the decision usefulness of fair value information as long as the fair value is taken from liquid markets. However, for model-based fair value measurement and for nonfinancial assets in the contrary case, he finds conceptual deficiencies. These may now be partly reduced by IFRS 13, but not fully. Wagenhofer (2008), also from a theoretical perspective, doubts the benefits of fair value accounting with regard to decision usefulness and to exercising behavioral control (e.g., for contracting).

Experimental studies show a very unfavorable view of fair value accounting. One concern relates to whether users understand fair value accounting, in particular the distinction between realized and unrealized gains or losses. Focusing on volatility caused by fair value accounting, Bloomfield et al. (2006) conducted an experimental study and tested the price dynamics model. They found a positive correlation between the volatility of the market price and earnings, depending on investors' recognition of the unrealized gains or losses from fair value accounting, which are presented in the statement of comprehensive income. This positive relationship can be interpreted such that investors' misperception of unrealized gains or losses can lead to investment inefficiency and to an increased volatility in share prices and earnings. Brousseau et al. (2013) conducted another experiment in which participants were provided with financial statements in which held-for-trading securities were reported at fair value versus historical cost. They found that despite higher earnings volatility and marginally heavier trading under fair value accounting, three distinct measures of market price volatility were not systematically different. Another experimental study by Koonce et al. (2011) tested whether investors consider fair value as providing information about

forgone opportunities, which would influence investors' judgments as to fair value relevance. The results are mixed, depending on the kind of information provided.

Acknowledging the insufficient transparency in information regarding asset securitization and derivatives, Barth and Landsman (2010) call for more disaggregated information and disclosure about the sensitivity of the fair values of derivatives to changes in market risk variables. They claim that such enhanced disclosures regarding fair value accounting would better assist investors in assessing the values and riskiness of banks by providing a clear understanding of the leverage in derivatives. The IASB has recently included such additional disclosure in IFRS 13. Similarly, Landsman (2007) extends the discussion of the informative role of fair value accounting in terms of reliability and relevance by reviewing capital market research.¹⁴ He concludes that disclosed and recognized fair value is informative to investors, and comments that "the level of informativeness is affected by the amount of measurement error and source of the estimate—management or external appraisers" (p. 20).

23.3.2 Measurement and Earnings Management

Because fair value accounting affords discretion to managers in defining fair values (in particular non-market-based fair values), the discussion of transparency and fair value accounting extends to the issue of earnings management, such as whether managers would take advantage of accounting benefits. For example Aboody et al. (2006) show the extensive use of such leeway for measurement to the benefit of the entity for stock option-based compensation, which emphasizes the limits on the reliability of fair value measurement. Barth et al. (2012) confirm earnings management with available-for-sale securities, which are measured at fair value, using comprehensive data from US commercial banks and bank holding companies. Dechow and Shakespear (2009) address this concern by reviewing 11,218 securitization transactions for the period from 1979 to 2005. Given that accounting standards regarding fair value accounting require an entity to separately disclose securitization transactions, they infer that "gain on sale" provides managers with potential accounting benefits such as reducing leverage, increasing operating cash flows and improving efficiency—all of which can be utilized to manage earnings. They find that entities strategically use the gains and losses on marketable securities to meet earnings targets. Their results suggest that fair value accounting would potentially lead to window-dressing of the financial statements.

To rebut the study of Dechow and Shakespear (2009), Barth and Taylor (2010) reexamined the testing models used by Dechow and Shakespear (2009) and note that Dechow and Shakespear (2009) fail to provide sufficient evidence to show the direct relationship between the role of discretion in fair value estimates and the propensity of

¹⁴ For the detail contents of the empirical literature reviewed, see Landsman (2007), pp. 22–25.

managers to manage earnings. To add further support, Barlev and Haddad (2003) indicate their positive views on the role of fair value accounting in the context of agency theory and management of the entity. They argue that the increasing demand for detailed disclosure under the fair value accounting regime brings much more awareness of shareholders to the value of their equity and thus alerts managers to a function of stewardship. In their view, fair value accounting is believed to be in line with transparency, as it positively stimulates managers to change their perception of their duties.

23.3.3 Procyclicality and the Crisis

As mentioned, fair value accounting and procyclical effects have been heavily discussed during the crisis (Davies, 2008; Nixon, 2010). Wallison (2009) holds skeptical views on fair value accounting, he critically notes that fair value accounting lacks counter-cyclical functions that mitigate substantial effects on the financial statements due to rapid changes in values. As a reflection of the 2008 financial crisis, he argues that “if we retain fair value accounting in its current form after the current crisis is behind us, we will always be living on the edge of another financial abyss” (p. 7). In this regard, Plantin et al. (2008) test the banking and insurance sectors by applying the framework model and explain how market-driven value volatility would aggravate the informative role of price and thus result in economic inefficiencies. As the title of the study indicates, their cautionary remarks can be summarized as stating that fair value accounting is a Pandora’s box rather than a panacea in the economy.

Adrian and Shin (2010) investigate the banks’ balance sheet decisions, as well as balance sheet changes of financial intermediaries and major US investment banks for the period from 1997 to 2008 to ascertain the relationship between balance sheet size and leverage for security brokers. Their findings show that mark-to-market leverage under fair value accounting is strongly procyclical, and such is leverage for financial intermediaries. Given the observation that dealer balance sheet changes mainly predict the degree of volatility of risk-premium, Adrian and Shin (2010) explain that financial market liquidity is affected by the aggregated consequences of procyclical leverage. This arguably became more serious during the financial crisis. Enria et al. (2004) similarly conclude that fair value accounting might affect volatility of income and increase the procyclicality of lending. At the same time, they recognize that fair value accounting would have a positive effect on the ability of stakeholders to take corrective action and ensure the safety and soundness of financial institutions.

Novoa et al. (2009) suggest a different view on the relationship between fair value accounting and procyclicality by empirically examining US and European bank balance sheets through business cycle simulation models. They conclude that, despite the inevitable downside in its methodology, fair value accounting is still a desirable framework for financial institutions. To alleviate unintended procyclicality caused by fair value accounting, they emphasize the importance of capital buffers, forward-looking provisions and more enhanced disclosures. Similarly, Heaton, Lucas and McDonald

(2010) suggest linking fair value accounting to capital requirements, which should be adjusted accordingly. They base their conclusions on an analysis that shows that problems from fair value accounting are not due to the accounting rule in itself, but rather a result of the interaction of fair value accounting and the definition of capital requirements.

In opposition to the desirable perception of fair value accounting, Allen and Carletti (2008) present a different view on the adoption of fair value accounting by financial institutions. Using simulation models to analyze crisis and systemic risk, they explain the collapse of the market value of bank assets as a consequence of the shock in the insurance sector. The evidence in their study shows that the bank market value of the net assets decreases significantly during the financial crisis; as a result, the bank becomes insolvent. They conclude that evaluating the solvency of financial institutions through market value is not recommendable, given that the capital market turned illiquid during the financial crisis.

Defending fair value accounting against the conviction of the financial crisis, Bonaci et al. (2010) assert that opposing views on fair value accounting are merely “shooting the messenger,” and Véron (2008) argues that fair value accounting is “the wrong scapegoat” for the crisis. To add empirical evidence to their claims, Laux and Leuz (2009a) examine the SEC filings of major US investment banks and large bank holding companies¹⁵ for the period from 2007 to 2009. They find no causal relationship between fair value accounting and excessive write-downs of bank assets, and suggest that there is little evidence that fair value accounting leads to downward spirals or asset fire sales. From this evidence, the aforementioned authors conclude that the recent financial crisis is hardly attributable to fair value accounting in a major way; instead, they raise a greater concern that the lack of transparency in a bank’s solvency potentially creates much more severe problems than the contagious adverse effects caused by fair value accounting.¹⁶

To summarize, the evidence on fair value accounting as aggravating the crisis is mixed. Studies which support this claim can be found just as readily as studies rejecting it.

23.4 TRANSPARENCY OF FAIR VALUE ACCOUNTING: DISCLOSURE IN OTHER COMPREHENSIVE INCOME

As described previously, the statement of other comprehensive income mirrors unrealized gains and losses in fair value that are reported directly in equity, as well as the

¹⁵ The sample includes 27 banks of large bank holding companies and the five largest bank holding companies, including Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers, and Bear Stearns (Laux and Leuz, 2009a, pp. 37–40).

¹⁶ See similarly Laux and Leuz (2009b) and Laux (2012).

related tax effects. In other words, the statement of other comprehensive income aims at providing further transparency on fair value accounting, among other things. Whether such disclosure really adds to transparency can best be understood by testing the usefulness of other comprehensive income, and the fair value information therein, as studies analyzing the value relevance of comprehensive income do. The results of these studies are mixed. Most confirm the value relevance of such additional disclosure and thus the benefits of increased transparency. Some studies are more skeptical about the usefulness of information provided in other comprehensive income.

An early study of Dhaliwal et al. (1999) shows that comprehensive income does not have a better correlation with future operating cash flows, future income stock returns, and stock price, as compared to net income. The predictive value is therefore limited. Still, they further find that the only component of other comprehensive income that improves the association between income and returns is the marketable securities adjustment, which is an element of fair value accounting. This study reveals the importance of fair value accounting. However, it is not designed to reveal the effect of separate disclosure of fair value accounting in other comprehensive income.

Kanagaretnam et al. (2009) go into more detail: they use a sample of 78 Canadian entities cross-listed in the United States for the period from 1998 to 2003, and analyze the link between the separate components of other comprehensive income and an entity's market return and price. One of the results focuses on fair value accounting: they found evidence that two major items of fair value accounting in other comprehensive income (available-for-sale and cash flow hedges) are significantly associated with price and market returns. This result supports the notion that transparency on fair value accounting in other comprehensive income matters. They too found that the predictive value of comprehensive income is low.

There is further evidence on the value-relevance of comprehensive income in terms of explaining stock returns. Using 2001 through 2009 data of Japanese public entities, Kubota et al. (2011) explain the effects of information contents of other comprehensive income on investor assessment of entities' future stock returns. They found that other comprehensive income items contain significant information based on the incremental information content test, and conclude that such information is worth disclosing. This is particularly true for fair value accounting (the relative importance of available for sale securities, measured at fair value). The result supports the aforementioned results of Kanagaretnam et al. (2009) and Dhaliwal et al. (1999). Also, Biddle and Choi (2006) support the decision usefulness of other comprehensive income and its components. They study information content, predictive ability, and executive compensation contracting. According to their results, comprehensive income dominates (among other things) net income in explaining equity returns, but not in explaining executive compensation.

In predictive ability, no definition clearly dominates. With regard to income components, the separate disclosure of specific other comprehensive income components, which includes fair value accounting, is useful. Chambers et al. (2007) evaluate

comprehensive income disclosure after adopting SFAS 130¹⁷ with 1994 through 2003 data of S&P 500 US entities. By separating data into pre- and post-SFAS 130 adoption, they document that the comprehensive income disclosure for the post-SFAS 130 period has a higher correlation with a return-earnings regression model. Their results also confirm that investors price total other comprehensive income, including the fair value accounting components of unrealized gains/losses on available-for-sale securities.

The decision usefulness of fair value accounting in other comprehensive income is also confirmed by Hirst and Hopkins (1998). In their experimental setting, they manipulated an entity's net income through its available-for-sale marketable securities portfolio, which is also a key factor in fair value accounting. Their results suggest that a clear presentation of comprehensive income and its components in the income statement enables analysts to notice the realized marketable securities gains under the earnings management condition. From their findings, it can be stated that a clearer articulation of comprehensive income components effectively communicates value-relevant information and thus enhances analysts' valuation judgments.

Several studies come to a different conclusion, in particular Cheng et al. (1993) and Cahan et al. (2000). In an early study, Cheng et al. (1993) examined the usefulness of different earning definitions, namely operating income, net income, and comprehensive income. They test the explanatory power of relative and incremental information content, applying a goodness-of-fit-test. With regard to fair value accounting, they found not only that comprehensive income (as a result of the other comprehensive income) is dominated by the other income definitions, and that there is no incremental information content of those items that lead from net income to comprehensive income, which includes fair value accounting. This result can be interpreted such that fair value accounting in other comprehensive income does not offer any value-relevance or decision usefulness to investors.

Similarly, Cahan et al. (2000) found no evidence that the separate disclosure of individual other comprehensive income items provides information that is incrementally value relevant. They used 1992 through 1997 data of 237 firm-year observations from New Zealand. One of the items of other comprehensive accounts included in their study is fixed asset revaluation increments, which are closely related to fair value accounting. Their separate disclosure is, in the present authors' opinion, unnecessary. Similarly, a study by O'Hanlon and Pope (1999) on a sample of UK companies found little evidence of incremental information content for other comprehensive income items. They empirically tested the relationship between stock returns and other comprehensive income components. Their findings suggest that extraordinary items in other comprehensive income appear to be value-relevant based on a long-interval test;

¹⁷ Statement of Financial Accounting Standards (SFAS) No. 130 Reporting Comprehensive Income is set forth by the US Financial Accounting Standards Board (FASB) and is effective for fiscal years beginning after December 15, 1997. It requires a company to report comprehensive income and its components in a full set of financial statements, including separate items on fair value accounting.

however, other comprehensive income items show insignificant correlation with stock return and are thus value-irrelevant.

Other studies focus on other specific items of other comprehensive income, such as Pinto (2005) and Mitra and Hossain (2009). Even though not closely related to fair value accounting, disaggregated and itemized information in other comprehensive income on foreign currency translation (Pinto, 2005) and on pension transition adjustments (Mitra and Hossain, 2009) is value relevant.

To summarize, the results are mixed. Several research results on fair value accounting in other comprehensive income confirm that the figure of comprehensive income (as compared to net income) may not always be relevant. Those research results further confirm that detailed information on specific other comprehensive income items, in particular on fair value accounting, tends to be relevant. Thus, the additional disclosure requirements on fair value accounting in other comprehensive income seem to be understood and used by investors, and add to transparency. Still, some other studies do not find evidence on the decision usefulness of fair value accounting in other comprehensive income, and concluded that the incremental information does not help in forming a view on the firm.

23.5 TRANSPARENCY OF FAIR VALUE ACCOUNTING: ADDITIONAL INFORMATION ON TAX EFFECTS

Fair value accounting not only leads to volatility of profits, but it also has significant tax implications. Income tax is normally levied on realized income. Fair value accounting relates, in contrast, not only to realized income (presented in the income statement), but also to unrealized income (mostly presented in the statement of other comprehensive income). The temporary difference in taxation, resulting from a deferral of profits for tax purposes (taxed eventually once realized), leads to accounting for deferred tax. Deferred tax expense and deferred tax income can be found in the income statement or in the statement of other comprehensive income, and detailed additional information is disclosed in the notes.

In this context the question arises whether such tax information and disclosures, complementing fair value accounting, are useful for enhancing transparency, in particular understandability and interpretability. Though there is extensive research on the decision usefulness of (deferred) tax information from a general perspective, there is, to the best of the authors' knowledge, little research that relates specifically to tax information in other comprehensive income or on fair value accounting specifically.

Transparency that is offered by deferred tax accounting in general seems not to support investors in their decision-making process. A majority of studies come to the conclusion that such deferred tax information is not (very) useful or is incomprehensible

(e.g., Huss and Zhao, 1991; Chattopadhyay et al., 1997; Carnahan and Novack, 2002; Beechy, 2007; Chluddek, 2011; a positive effect is found by Ayers, 1998 and Lev and Nissim, 2004). However, some research also supports a positive correlation between the deferred tax valuation allowance (as one specific element of deferred tax accounting), and earnings management (Schrand and Wong, 2003; Christensen et al., 2008; more skeptical, Bauman et al., 2001). Also, the predictive ability of income tax information has been confirmed (McAnally et al., 2010; Atwood et al., 2011).

These results indicate that the usefulness of deferred tax information seems to be limited. This implication can be cautiously applied to the deferred tax information on fair value accounting in other comprehensive income. As deferred tax information seems to matter little, such information on fair value accounting might be of limited relevance, as well. In a current research project, yet unpublished, the authors of this chapter carried out a controlled experiment which indicates that the usefulness of deferred tax information in other comprehensive income to financial statement users cannot be confirmed. Their understanding of the entity does not vary depending on whether or not such information was given.

23.6 CONCLUSION ON TRANSPARENCY OF FAIR VALUE ACCOUNTING

Even though fair value accounting is viewed with skepticism by some, and even though, also to the acknowledgment of its supporters, fair value accounting is strained by the weaker reliability of the measurement, research generally supports the notion that fair value accounting adds additional, relevant information and thus enhances transparency in accounting. Research results are mixed with regard to the procyclical effects of fair value accounting and its role during the financial crisis. While the procyclicality is mostly confirmed, the resulting detrimental effects are mostly not confirmed.

Fair value accounting calls for additional disclosure in order to provide transparency with regard to the measurement of the fair value and its effects. This additional information includes, on the one hand, disclosure in the notes on levels, sensitivities, and underlying assumptions. On the other hand, specific fair value changes and their tax effects must be disclosed in other comprehensive income. The decision usefulness of such disclosure in other comprehensive income is still unclear and is doubted by many. However, research on other comprehensive income will further advance, given that the disclosure of other comprehensive income is rather recent. Also, the decision usefulness of deferred tax disclosure on fair values is still under discussion. Several papers do not confirm the adequateness of the existing disclosure requirements and thus transparency.

To summarize, one can maybe state that though fair value accounting itself adds to transparency, the disclosures surrounding fair values still lack transparency.

REFERENCES

- Aboody, D., Barth, M. E., and Kasznik, R. (2006). Do firms understate stock option-based compensation expense disclosed under SFAS 123? *Review of Accounting Studies* 11 (4), 429–461.
- Adrian, T., and Shin, H. S. (2010). Liquidity and leverage. *Journal of Financial Intermediation* 19(3), 418–437.
- Ahmed, A. S., and Takeda, C. (1995). Stock market valuation of gains and losses on commercial banks' investment securities: An empirical analysis. *Journal of Accounting and Economics* 20 (2), 207–225.
- Allen, F., and Carletti, E. (2008). Mark-to-market accounting and liquidity pricing. *Journal of Accounting and Economics* 45(2), 358–378.
- Atwood, T. J., Cao, Y., Drake, M. S., and Myers, L. A. (2011). Do earnings reported under IFRS tell us more about future earnings and cash flows? *Journal of Accounting and Public Policy* 30(2), 103–121.
- Ayers, B. C. (1998). Deferred tax accounting under SFAS No. 109: An empirical investigation of its incremental value-relevance relative to APB No. 11. *Accounting Review*, 195–212.
- Barlev, B., and Haddad, J. R. (2003). Fair value accounting and the management of the firm. *Critical Perspectives on Accounting* 14 (4), 383–415.
- Barth, M. E. (1994). Fair value accounting: Evidence from investment securities and the market valuation of banks. *Accounting Review* 69(1), 1–25.
- Barth, M. E., Beaver, W. H., and Landsman, W. R. (1996). Value-relevance of banks' fair value disclosures under SFAS No. 107. *Accounting Review* 71(4), 513–537.
- Barth, M. E., Beaver, W. H., and Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics* 31(1), 77–104.
- Barth, M. E., Beaver, W. H., and Wolfson, M. (1994). Fair-value accounting for banks' investment securities: What do bank share prices tell us? *Bank Accounting and Finance* 7(1), 13–23.
- Barth, M. E., and Clinch, G. (1998). Revalued financial, tangible, and intangible assets: Associations with share prices and non-market-based value estimates. *Journal of Accounting Research* 36, 199–233.
- Barth, M. E., Gómez-Biscarri, J., Kasznik, R., and López-Espinosa, G. (2012). *Fair Value Accounting, Earnings Management and the Use of Available-for-sale Instruments by Bank Managers* No. 05/12. School of Economics and Business Administration, University of Navarra.
- Barth, M. E., and Landsman, W. R. (2010). How did financial reporting contribute to the financial crisis? *European Accounting Review* 19(3), 399–423.
- Barth, M., and Taylor, D. (2010). In defense of fair value: Weighing the evidence on earnings management and asset securitizations. *Journal of Accounting and Economics* 49(1), 26–33.
- Barth, M. E., and Schipper, K. (2008). Financial reporting transparency. *Journal of Accounting, Auditing & Finance* 23(2), 173–190.
- Bauman, C. C., Bauman, M. P., and Halsey, R. F. (2001). Do firms use the deferred tax asset valuation allowance to manage earnings? *Journal of the American Taxation Association* 23(1), 27–48.
- Beaver, W., Eger, C., Ryan, S., and Wolfson, M. (1989). Financial reporting, supplemental disclosures, and bank share prices. *Journal of Accounting Research* 27(2), 157–178.

- Beaver, W. H., and Venkatachalam, M. (2003). Differential pricing of components of bank loan fair values. *Journal of Accounting, Auditing & Finance* 18(1), 41–68.
- Beechy, T. H. (2007). The make-believe world of future income taxes/l'univers fictif des impôts futurs. *Accounting Perspectives* 6(3), 221–229.
- Bernard, V. L., Merton, R. C., and Palepu, K. G. (1995). Mark-to-market accounting for banks and thrifts: Lessons from the Danish experience. *Journal of Accounting Research* 33(1), 1–32.
- Biddle, G. C., and Choi, J. H. (2006). Is comprehensive income useful? *Journal of Contemporary Accounting & Economics* 2(1), 1–32.
- Blanchet, J. (2002). Global standards offer opportunity. *Financial Executive* 18(2), 28–30.
- Bloomfield, R. J., Nelson, M. W., and Smith, S. D. (2006). Feedback loops, fair value accounting and correlated investments. *Review of Accounting Studies* 11(2–3), 377–416.
- Bonaci, C. G., Matis, D., and Strouhal, J. (2010). Crisis of fair value measurement? Some defense of the best of all bad measurement bases. *WSEAS Transactions on Business and Economics* 7(2), 114–125.
- Brousseau, C., Gendron, M., Belanger, P., and Coupland, J. (2013). Does fair value accounting contribute to market price volatility? An experimental approach. *Accounting & Finance* doi: 10.1111/acfi.12030.
- Cahan, S. F., Courtenay, S. M., Gronewoller, P. L., and Upton, D. R. (2000). Value relevance of mandated comprehensive income disclosures. *Journal of Business Finance & Accounting* 27(9–10), 1233–1265.
- Cairns, D., Massoudi, D., Taplin, R., and Tarca, A. (2011). IFRS fair value measurement and accounting policy choice in the United Kingdom and Australia. *The British Accounting Review* 43(1), 1–21.
- Carnahan, I., and Novack, J. (2002). Two birds, one stone: Would firms inflate their earnings if it meant more taxes? *Forbes* 169(5), 40.
- Chambers, D., Linsmeier, T. J., Shakespeare, C., and Sougiannis, T. (2007). An evaluation of SFAS No. 130 comprehensive income disclosures. *Review of Accounting Studies* 12(4), 557–593.
- Chattopadhyay, S., Arcelus, F. R., and Srinivasan, G. (1997). Deferred taxes and bond ratings: A Canadian case. *Journal of Business Finance & Accounting* 24(3), 541–557.
- Cheng, A. C. S., Cheung, J. K., and Gopalakrishnan, V. (1993). On the usefulness of operating income, net income and comprehensive income in explaining security returns. *Accounting and Business Research* 23(1), 195–203.
- Chludek, A. K. (2011). Perceived versus actual cash flow implications of deferred taxes: An analysis of value relevance and reversal under IFRS. *Journal of International Accounting Research* 10(1), 1–25.
- Christensen, T. E., Paik, G. H., and Stice, E. K. (2008). Creating a bigger bath using the deferred tax valuation allowance. *Journal of Business Finance & Accounting* 35(5–6), 601–625.
- Danbolt, J., and Rees, W. (2008). An experiment in fair value accounting: UK investment vehicles. *European Accounting Review* 17(2), 271–303.
- Davies, P. J. (2008). True impact of mark-to-market accounting in the credit crisis. *Financial Times*, 29 February, sec. Markets & Investing, 24.
- Dechow, P. M., and Shakespear, C. (2009). Do managers time securitization transactions to obtain accounting benefits? *The Accounting Review* 84 (1), 99–132.
- Dhaliwal, D., Subramanyam, K. R., and Trezevant, R. (1999). Is comprehensive income superior to net income as a measure of firm performance? *Journal of Accounting and Economics* 26(1), 43–67.

- Eccher, E. A., Ramesh, K., and Thiagarajan, S. R. (1996). Fair value disclosures by bank holding companies. *Journal of Accounting and Economics* 22(1), 79–117.
- Enria, A., Capiello, L., Dierick, F., Grittini, S., Haralambous, A., Maddaloni, A., Molitor, P., Pires, F., and Poloni, P. (2004). Fair value accounting and financial stability. ECB Occasional Paper 13.
- Heaton, J. C., Lucas, D., and McDonald, R. L. (2010). Is mark-to-market accounting destabilizing? Analysis and implications for policy. *Journal of Monetary Economics* 57(1), 64–75.
- Hirst, D. E., and Hopkins, P. E. (1998). Comprehensive income reporting and analysts' valuation judgments. *Journal of Accounting Research* 36, 47–75.
- Hitz, J.-M. (2007). The decision usefulness of fair value accounting: A theoretical perspective. *European Accounting Review* 16(2), 323–362.
- Holthausen, R. W., and Watts, R. L. (2001). The relevance of the value-relevance literature for financial accounting standard setting. *Journal of Accounting and Economics* 31(1), 3–75.
- Huss, H. F., and Zhao, J. (1991). An investigation of alternative treatments of deferred taxes in bond raters' judgments. *Journal of Accounting, Auditing & Finance* 6(1), 53–68.
- International Accounting Standard Board. (2010). *The Conceptual Framework for Financial Reporting*. London: International Accounting Standards Board.
- Kanagaretnam, K., Mathieu, R., and Shehata, M. (2009). Usefulness of comprehensive income reporting in Canada. *Journal of Accounting and Public Policy* 28(4), 349–365.
- Koonce, L., Nelson, K. K., and Shakespeare, C. M. (2011). Judging the relevance of fair value for financial instruments. *The Accounting Review* 86(6), 2075–2098.
- Kubota, K., Suda, K., and Takehara, H. (2011). Information content of other comprehensive income and net income: Evidence for Japanese firms. *Asia-Pacific Journal of Accounting & Economics* 18(2), 145–168.
- Landsman, W. R. (2007). Is fair value accounting information relevant and reliable? Evidence from capital market research. *Accounting and Business Research* 37(Suppl. 1), 19–30.
- Laux, C. (2009a). Did fair-value accounting contribute to the financial crisis? CFS Working Paper, No. 2009/22, <http://nbn-resolving.de/urn:nbn:de:hebis:30-72719>.
- Laux, C. (2012). Financial instruments, financial reporting, and financial stability. *Accounting and Business Research* 42(3), 239–260.
- Laux, C., and Leuz, C. (2009b). The crisis of fair-value accounting: Making sense of the recent debate. *Accounting, Organizations and Society* 34(6), 826–834.
- Leuz, C., and Schrand, C. (2009). Disclosure and the cost of capital: Evidence from firms' responses to the Enron shock. Working Paper No. 14897, National Bureau of Economic Research.
- Leuz, C., and Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of Accounting Research* 38, 91–124.
- Leuz, C., and Wysocki, P. (2013). Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1105398.
- Lev, B., and Nissim, D. (2004). Taxable income, future earnings, and equity values. *The Accounting Review* 79(4), 1039–1074.
- McAnally, M. L., McGuire, S. T., and Weaver, C. D. (2010). Assessing the financial reporting consequences of conversion to IFRS: The case of equity-based compensation. *Accounting Horizons* 24(4), 589–621.
- Mitra, S., and Hossain, M. (2009). Value-relevance of pension transition adjustments and other comprehensive income components in the adoption year of SFAS No. 158. *Review of Quantitative Finance and Accounting* 33(3), 279–301.

- Nelson, K. K. (1996). Fair value accounting for commercial banks: An empirical analysis of SFAS No. 107. *Accounting Review* 161–182.
- Nixon, S. (2010). Regulators: Keep hands off accounts! *Wall Street Journal* January 22.
- Novoa, A., Scarlata, J., and Solé, J. (2009). *Procyclicality and Fair Value Accounting*, Vol. 9. Washington, DC: International Monetary Fund.
- O'Hanlon, J. F., and Pope, P. F. (1999). The value-relevance of UK dirty surplus accounting flows. *The British Accounting Review* 31(4), 459–482.
- Petroni, K. R., and Wahlen, J. M. (1995). Fair values of equity and debt securities and share prices of property-liability insurers. *Journal of Risk and Insurance* 62(December), 719–737.
- Pinto, J. A. (2005). How Comprehensive is comprehensive income? The value relevance of foreign currency translation adjustments. *Journal of International Financial Management & Accounting* 16(2), 97–122.
- Plantin, G., Sapra, H., and Shin, H. S. (2008). Marking-to-market: Panacea or Pandora's Box? *Journal of Accounting Research* 46(2), 435–460.
- Schrand, M., and Wong, M. H. F. (2003). Earnings management using the valuation allowance for deferred tax assets under SFAS No. 109. *Contemporary Accounting Research* 20(1), 579–611.
- Securities and Exchange Commission. (2008). *Testimony oncerning Transparency in Accounting Proposed Changes to Accounting for Off Balance Sheet Entities*. Washington, DC: Securities and Exchange Commission.
- Song, C. J., Thomas, W. B., and Yi, H. (2010). Value relevance of FAS No. 157: Fair value hierarchy information and the impact of corporate governance mechanisms. *The Accounting Review* 85(4), 1375–1410.
- Venkatachalam, M. (1996). Value-relevance of banks' derivatives disclosures. *Journal of Accounting and Economics* 22(1), 327–355.
- Véron, N. (2008). Fair value accounting is the wrong scapegoat for this crisis. *Accounting in Europe* 5(2), 63–69.
- Wagenhofer, A. (2008). Kontaktstudium-Fair Value-Bewertung: Fuhrtsiezueinernutzlicheren Finanzberichterstattung? *ZFBF: Schmalenbachs Zeitschrift für Betriebswirtschaftliche Forschung* 60, 185–194.
- Wallison, P. J. (2009). Fixing fair value accounting. *The Journal of Law, Economics & Policy* 6, 137.
- Whittington, G. (2008). Fair value and the IASB/FASB Conceptual Framework Project: An alternative view. *Abacus* 44 (2), 139–168.
- Wong, M. H. F. (2000). The association between SFAS No. 119 derivatives disclosures and the foreign exchange risk exposure of manufacturing firms. *Journal of Accounting Research* 387–417.

CHAPTER 24

TRANSPARENCY OF CORPORATE RISK MANAGEMENT AND PERFORMANCE

PETER MACKAY

24.1 INTRODUCTION

ONE of the most vexing problems facing empirical research on corporate risk management is the enduring dearth of detailed data on corporate hedging activity—the lack of transparency. Disclosure rules have evolved over time, largely in response to periodic meltdowns attributed to the misunderstanding and misuse of financial derivatives and the markets on which they trade. But transparency is not limited to disclosure, and disclosure does not in turn ensure transparency. This state of affairs not only weighs on researchers, but more importantly, on those who seek to utilize, report, understand, explain, and regulate these powerful but complex instruments.

This chapter expounds on the issue of transparency in corporate risk management, which lies at the heart of our understanding of the linkage between derivatives usage and performance. Indeed, just as corporate hedging activity is hard to measure, so is its effect on firm performance. Although the theories advanced to explain the use of financial derivatives by firms are straightforward, the empirical literature is plagued by measurement and identification problems. Miss-measurement arises because the data are coarse and infrequent—lacking in transparency. This leads to the corollary problem of identifying the relation between risk management and firm performance, and the mediating influence of hypothesized factors and firm characteristics.

This chapter is organized as follows. In Section 24.2, I offer some general comments on transparency, and the related notion of disclosure, and how these concepts apply to corporate risk management. Section 24.3 reviews accounting disclosure and transparency requirements over the last decades. In Section 24.4 I review the literature relating corporate performance to derivatives usage. Section 24.5 presents the various strategies employed by researchers to measure hedging activity. Section 24.6 discusses new opportunities for research created by recent changes in disclosure requirements for

derivatives used for hedging (vs. non-hedging) purposes. Section 24.7 concludes the chapter.

24.2 THE SUPPLY AND DEMAND OF FINANCIAL AND RISK-MANAGEMENT TRANSPARENCY

How much information is enough? What is transparency? What is disclosure? What are the costs and benefits of each of these constructs? How do they map to corporate risk management? It is perhaps worth exploring these philosophical questions before delving into technical details.

24.2.1 Financial Transparency, Disclosure, and the Regulatory Process

Transparency is hard to pin down: its nature, its benefits, and its costs, all are in contention. Transparency can perhaps best be framed in contrast to the closely related notion of disclosure. Transparency is basically a passive process, where information somehow seeps out to observers. What observers do with, or learn from, this information is a separate although related question. However, answers to these questions determine the economically viable “production” level of transparency, the value of transparency to its consumers, and its equilibrium supply and demand.

Disclosure is an active process, where information is produced and released to observers. Disclosure is more corruptible than transparency because the agents whose quality and effort are assessed through disclosure are primary filters in both mandatory and voluntary disclosures. The conflicts of interest that weigh on the auditing process are incontrovertible. Similar problems afflict the entire chain of agents (intermediaries) who mediate the capital-for-information flow that links investors (principals) to managers (agents). The disclosure–transparency spectrum is imperfect along many dimensions but the quantity and quality of information that channels through the system presumably reflects an optimum that balances all costs and benefits.

Transparency hinges on trust: observers must *believe* what they observe. It is therefore cumulative, like branding and reputation, built over time but lost if trust is lost. Transparency is largely exogenous, even accidental, akin to publicity, and mostly outside the control of the firm. To make another analogy, transparency is more germane to the buy-side, where the focus is on consumers of information (institutional investors and their advisers, retail investors, and brokers). By contrast, disclosure is mostly endogenous, an intentional act that is largely under firm control. Disclosure represents

the sell-side, where the focus is on suppliers of information, firms, and their investment bankers, charged with producing and disseminating information to the buy-side.

Calls for ever greater transparency have been all the rage these last few years, no doubt fueled by the financial crisis of 2008, and the egregious excesses that purportedly precipitated it. Whether the outcry surrounding the crisis and calls for greater transparency should be heeded as a matter of policy is not entirely clear. Financial economists are still investigating the root causes of the crisis, which have proven to be multifaceted, complex, and steeped in systemic complicity. Formulation of economically sound policy in this regard should be viewed as circumspectly as any blanket statement on the causes of the crisis. Policymakers are often more versed in politics (garnering appointments) than in making policy, which might actually be a blessing in disguise. Rushed formulation and implementation of post-crisis policy (e.g., Sarbanes–Oxley [SOX] in 2002, Dodd–Frank in 2010), with its compromises and deleterious effects, is a testament to this surmise. We need more thought and less tinkering. The other depressing aspect is that both research and policy tend to be retrospective and reactive, investigating or legislating the latest crisis, rather than prospective and proactive, spotting and stemming incipient crises. As a result, well-intended policies are premised on outdated analyses and sow the seeds of future crises.

24.2.2 The Supply and Demand of Corporate Risk-Management Transparency

What about corporate risk management? A popular view of the causes and consequences of the 2008 crisis lays the blame at the door step of “risk management.” The populist definition of risk management is both vaguer and broader than the narrow definition espoused in the corporate finance literature on risk management, which centers on the sensitivity of cash flow to variations in exogenous price factors (exchange rates, interest rates, credit spreads, equity prices, and commodity prices). Broader notions of risk management appeal to more basic risks, such as fraud and disruptions caused by operational failure, rather than continuous price distributions, and the concern rests entirely with downside outcomes rather than the two-sided outcomes most often implied by financial economists and practitioners charged with managing price volatility.

Justified or not, the indictment of risk management as primarily culprit in the latest crisis has translated into a surge in demand for risk-management services, broadly defined, much to the benefit of the purveyors of such services, to the less obvious advantage of supposed beneficiaries (investors). This surge has taken a variety of forms, such as the creation or revamping of high-level risk-management executive positions (Chief Risk Officers [CROs]),¹ broader notions of risk, internal and external risk audits, integrated risk-assessment systems, legal circumspection, and generally more

¹ Prior to the 2008 financial crisis, the risk-management function was typically handled by the

conservatism. It is not clear that the costs incurred in pandering to this post-crisis spike in risk aversion and risk due diligence are fully offset by quantifiable benefits. Lower risk normally translates into lower returns, and the risks plaguing investors can be managed through their portfolio choices, arguably more efficiently and more effectively than by the risk-mitigation measures described previously.² This is the classic Modigliani–Miller argument, which must first be invalidated before firms can productively adjust risk management policies. A similar conundrum arose following the passage of SOX, which turned out to impose high compliance fixed costs, much to the detriment of smaller capitalization firms attempting to list in the United States.³

Risk management, and the alleged lack of transparency on corporate derivatives usage, is a long-standing usual suspect in the witch hunt for culprits—not only an upshot of the 2008 crisis. A slew of high-profile derivatives scandals in the 1990s (Metallgesellschaft, Proctor and Gamble, Long-Term Capital Management [LTCM], etc.) cemented this sensationalist view in the public psyche, culminating in Warren Buffet’s infamous grandstanding in Berkshire Hathaway’s 2002 annual report: “[. . .] derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.” Mr. Buffet’s main concern was the rising complexity of the derivative instruments, the extreme leverage they enabled, and long lags between contract initiation and conclusion. These features in themselves are not problematic if well implemented. But in the face of governance problems, such as high-power compensation, intervention-induced moral hazard, and weak penalties on white-collar crime (civil judgments and fines vs. criminal prosecution and jail time), the temptation to misuse derivatives, or at least to rack up large risky positions, can get out of hand, even if outright fraud is deterred (a big assumption).⁴

Treasurer’s Office, or the Comptroller’s Office, reporting to the Chief Financial Officer. Since the crisis, many firms, especially the hardest hit, have instituted CROs who report directly to the Board of Directors. In some cases, e.g., Taiwan, the CRO reports directly to the government.

² The effectiveness of corporate risk management (vs. investor-portfolio risk management) is a central question in the literature on why firms might rationally manage risk at the corporate level rather than delegating this task to its heterogeneous shareholder base. As Smith and Stulz (1985) argue, managerial risk aversion among underdiversified managers and principal–agency conflicts in general are one such reason. Empirical evidence provided by Tuffano (1996, 1998) and others corroborates these agency-theoretical hypotheses. A countervailing argument is that, absent-incentive (agency) conflicts, corporate-level hedging may dominate under asymmetric information, if managers can better assess the risk exposure and optimal hedging strategy relative to shareholders. Whether hedging adds value is the object of the “hedging-performance” discussion presented elsewhere in the chapter.

³ A lively polemic has raged in the academic literature, the popular press, and policy circles, as to whether SOX has provided net benefits (or costs) the US economy and investors. However, this is outside the scope of this chapter.

⁴ Scandals such as Metallgesellschaft sustain a cottage industry of authors eager to tell the tales of woe and generally sensationalize realized lower-tail outcomes. See, for instance, Lowenstein (2001), Marthinson (2008), and Taleb (2005, 2007) for postmortems of famous cases, and Bernstein (1998) and Marrison (2002) for broader treatises.

These issues are well illustrated by Metallgesellschaft (MG) and LTCM, where massive positions were unwounded at great loss in the face of liquidity shocks. In both cases, the liquidity needs swamped supply and quickly turned early losses into deep losses, large enough in LTCM's case to reach systemic proportions and require regulatory intervention. Would greater—or full—transparency have spared MG and LTCM their fates? The counterfactual is unknown, of course, but one can speculate. In MG's case, the postmortem (Edwards, 1995) points to inconsistencies in how hedging gains and losses are reported across jurisdictions (i.e., between German and American accounting requirements, which MG had to uphold to satisfy investors and regulators in each country). Discrepancies also arise in how hedging gains and losses are treated compared to gains and losses from other sources. This is as intriguing as it is problematic because it defeats the main purpose of hedging, which is to stabilize the firm, not to subject it to arbitrary shocks!

This last point is well expressed by Edwards (1995, p. 14):

The MG case clearly demonstrates the dangers of treating derivatives positions differently from the assets or liabilities that the derivatives are being used to hedge. There should not be accounting recognition of gains and losses on derivatives positions used for hedging unless the gains and losses on the positions that are being hedged are also recognized.

Thus, disclosure did not yield transparency, or at least did not yield enough clarity, and the disparities in standards led to tensions that sent the supervisory board into a liquidation panic, which we now know did much more harm than would have resulted had MG simply weathered the early losses on its controversial derivatives positions.⁵ The MG case points to another critical condition for disclosure and transparency to deliver superior outcomes: That information users are able to properly interpret and suitably act on the information. MG's board was controlled by large German banks, whom either lacked the expertise or the incentives to manage the crisis or, more fundamentally, to prevent its occurrence in the first place. The MG case clearly shows that transparency and disclosure are not sufficient to achieve socially optimal outcomes.

⁵ MG had used a massive "rolling stack" of nearest-month oil-price futures contracts to hedge large short positions it took in the over-the-counter (OTC) forward market over a 10-year horizon (see Mello and Parsons [1995] for details). Though this strategy works conceptually, it ignores a critical difference between the two derivatives markets, namely, that futures contracts require that margin be posted to hold the position and that losses recognized in their daily mark-to-market revaluation are subject to daily maintenance margins. Forward contracts are typically guaranteed by collateral but not subject to daily mark-to-market revaluation and margin adjustments. Oil prices being volatile, MG got into deep trouble when oil prices dropped (temporarily as it turned out), triggering huge margin calls on its futures positions—but no countervailing cash inflow on its profitable forward positions. The liquidity drain was so severe (more than \$1 billion) that a massive rescue operation had to be orchestrated to avoid bankruptcy. In LTCM's case, derivatives were not the main show, but the drain on liquidity was on such a scale so large that the regulators feared systemic failure of the financial system. They did not want to find out and stepped in.

The genesis and flow of information must also be flanked by good governance and the right incentives.

In short, MG brought many issues to public attention, as Edwards (1995, p. 14) summarizes:

Accounting and disclosure requirements for firms using derivatives to hedge can be informative *if they are appropriate, and provide meaningful information*. Otherwise, they can result in misleading financial statements that can wreak havoc on firms and markets. Particularly in rapidly developing markets like OTC derivatives, accounting and disclosure conventions developed to meet past needs may be inappropriate for reporting new activities.

24.3 DISCLOSURE AND TRANSPARENCY REQUIREMENTS FOR CORPORATE RISK-MANAGEMENT

Practically speaking, in the case of corporate risk management, disclosure takes the form of accounting standards on how to report derivatives positions, gains and losses recognized on outstanding positions, and gains and losses realized on interim positions (derivatives traded within a reporting period). Beyond mandated accounting disclosures, *transparency* takes many forms including explicitly stated corporate policies regarding risk management, the methods employed to implement those policies (e.g., risk avoidance, preventive measures, cash cushions, financial conservatism, industrial and geographic diversification, insurance policies, derivatives), and organizational support (risk systems, corporate governance, investor relations, etc.). Needless to say, whether managers adhere to policy depends on their incentives and corporate governance.

Let us first discuss the disclosure of outstanding derivatives positions, that is, situations in which a trade involving a derivative instrument was opened during a reporting period but has not been closed by the end of that period. This is an “outstanding” position, such as an agreement to buy (long position) or sell (short position) something at a future date. These positions can be entered on standardized clearing markets (e.g., futures, options) or OTC markets (e.g., forwards, swaps). Although the operational details of these markets are quite different, the accounting treatment is generally the same. Prior to 1998, these positions were *not* reflected in financial statements, earning them the moniker of “off-balance sheet” positions, unless they were a firm’s main line of business, such as commodities dealers, admitted a small slice of the economy.⁶

⁶ Just why such positions were kept off the balance sheet is not obvious and became a highly-controversial issue. Part of the problem was what value to assign to these positions, especially

In June 1998, following the public clamor for more transparency, the US-based Financial Accounting Standards Board (FASB) issued FAS 133, *Accounting for Derivative Instruments and Hedging Activities*, which tightened the noose on accounting for derivatives, and removed some of the discrepancies in how gains and losses are reported “on” and “off” the balance sheet. The main component of FAS 133 is that derivatives must be recorded at fair (market) value as an asset or a liability, and associated gains and losses (realized or not) reflected in earnings, unless the derivatives position can be clearly shown to perform a hedging function, either to protect the value of an asset or a liability (fair value hedge) or a forecasted transaction (cash flow hedge), in which case “hedge accounting” rules apply. Under FAS 133 hedge accounting, only the *net* gain or loss (on the underlying plus derivative positions) passes to periodic earnings (fair value hedge) or the gain or loss on the derivative position is kept on the balance sheet (other comprehensive income) until the forecasted transaction is recognized in earnings (cash flow hedge).⁷

FAS 133 goes beyond these reporting requirements, on how gains and losses on derivatives should be reflected in financial statements, to encompass additional quantitative and qualitative disclosures aimed at improving transparency. For instance, FAS 133 requires firms to describe the exposure environment or the context for their derivative use, the objectives of their hedging program, and the strategies employed to achieve these objectives. Qualitative disclosures should address exposure/instrument duration, risks faced and hedged, and accounting treatment.

In March 2008, FASB issued FAS 161 to amend FAS 133. FAS 161 requires quantitative disclosures, in all annual and interim financial statements, specifically in the form of tables showing how derivative trading and hedging activities affect a firm’s financial position (balance sheet), financial performance (P&L), and cash flows (liquidity rather than cash flow statement). These tables should classify derivatives by risk type (exchange rates, interest rates, credit, equity prices, commodity prices, and “other”) and by accounting designation (hedge accounting or not). Firms are also required to

given the “historical cost” tradition in financial accounting, which did not suit the rapidly-fluctuating reference prices that determine derivatives values. Another aspect of the problem involved the scale of the contract, known as “notional value,” which normally dwarfs the scale of any gain or loss on the position. The latter is normally what would concern most interested parties but the notional value is closer to accounting traditions. A related question was whether *net* positions (sum of offsetting gains and losses on derivatives) or *gross* positions (sum total of all notional values) should be reported. Perhaps as a result of this ambivalence, and the lack of clarity on the objectives of financial accounting when it comes to reporting derivatives positions, the accounting profession kept derivatives values (notional, net, or gross) off the balance sheet. This changed with passage of FAS 133 by the FASB in June 1998.

⁷ To qualify for FAS 133 hedge accounting, the value of the underlying position (asset, liability, or forecasted transaction) and the value of its hedging instrument must have a correlation ratio between 80% and 125%, and the reporting entity must have hedge documentation in place at the inception of the hedge. Failing these conditions, normal accounting principles apply, meaning that gains and losses on noneligible derivatives pass to earnings.

provide insight on “volume of derivative activity,” such as the average number of trades open during a period, average notional on trades, and frequency of trading.⁸

Kalotay and Abreo (2001) studied the effect of FAS 133 on the risk of financial institutions (focused on fixed income securities and fair value hedge accounting). Charnes et al. (2003) studied the expected and realized effectiveness of hedges given the 80%–125% rule. Pollock (2005) challenges FAS 133 on two fronts. First, FAS 133 is expensive to implement, which lowers the demand for hedging and raises the equilibrium risk level. Second, FAS 133 rules often cause accounting treatment to depart from economic reality, making financial statements less transparent and less useful. This, too, discourages hedging activity and results in greater earnings volatility. In short, the quest for transparency may have come at the cost of greater sustained risk. There is little or no academic research on FAS 161, which might present research opportunities.

24.4 CORPORATE RISK MANAGEMENT AND PERFORMANCE

Stulz (1984) and Smith and Stulz (1985) lay the ground work for subsequent theory and related empirics. These papers show that by stabilizing cash flows, corporate hedging can add value when firms face imperfections that result in nonlinear payoffs (e.g., progressive taxation, bankruptcy costs, risk aversion). Their central idea—that nonlinearities justify hedging—has since been applied to other financial factors such as costly external finance (Froot et al., 1993), information asymmetry (DeMarzo and Duffie, 1991), and financial distress costs (Purnanandam, 2008). Another stream of theoretical literature links the value of corporate risk management to the real-side of the firm, such as production technology (MacKay and Moeller, 2007) or strategic product-market considerations (Adam et al., 2007).

Empirically, a number of studies document a positive relation between firm value and corporate hedging (Cassidy et al., 1990; Allayannis and Weston, 2001; Carter et al., 2006; Jin and Jorion, 2006; MacKay and Moeller, 2007). Pérez-González and Yun (2013) use the introduction of weather derivatives as an experiment that corroborates this finding, indicating that earlier results are robust to econometric refinements.

⁸ Many countries outside the United States adhere to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). In August 2005, the IASB issued IFRS 7, *Financial Instruments: Disclosures*, whose scope includes all financial instruments, not just derivative instruments.

24.5 MEASURING CORPORATE RISK-MANAGEMENT ACTIVITY

Given the problems plaguing the disclosure and transparency of derivatives usage, how have financial economists attempted to measure corporate hedging activity? In this section, I discuss past methods and present a new method proposed by MacKay and Moeller (2013).

24.5.1 Extended Market Model

Considering the lack of disclosure and transparency on corporate hedging activity prior to FAS 133 (1998), early empirical work saw financial economists rely on what might be termed “extended market models” that include the return on the risk factor of interest (e.g., Flannery and James [1984] for interest rates, Jorion [1990] for foreign exchange rates, Strong [1991] for oil prices, and Tufano [1998] for gold prices). Unfortunately, although this ad hoc approach might interest diversified investors to the extent that such risk factors are priced, it subsumes the information relevant to corporate risk managers because stock returns are net of corporate hedging activity. Thus, the resulting factor loadings are actually a measure of *residual* exposure; they are neither an indication of hedging activity nor do they tell us about pre-hedging exposure. Moreover, the risk factors may command diverse, time-varying premia—if any—which further confounds the estimation exercise. Allayannis and Ihrig (2001) and Bodnar et al. (2002) propose a more structured approach where they estimate exchange rate elasticities using industry-level stock returns rather than residual risk exposures from firm-level data.

24.5.2 Industry Surveys and Proprietary Data

A second approach has been to collect detailed data for a small set of firms, usually for a single industry such as gold mining, through surveys or proprietary data (e.g., Tufano, 1996, 1998; Haushalter, 2000; Brown, 2001; Haushalter et al., 2002; Adam and Fernando, 2006; Brown et al., 2006; Carter et al., 2006; Jin and Jorion, 2006). Unfortunately, this approach is very labor-intensive and it is not clear whether the results generalize to other firms or industries. This approach might be free of estimation error but is still prone to sample selection bias and measurement error. Response rates on surveys are notoriously low, raising the possibility of self-selection issues, and proprietary data are hard to validate, which means that the quality of the data and the reliability of related results are unverified. Finally, both surveys and proprietary data lack the quality assurance that audited accounts offer.

24.5.3 Financial-Statement Footnotes

The third established strategy employed by financial economists is to search through the financial-statement footnotes, a procedure that—even post FAS 133—often yields no more than a “hedge” versus “no hedge” dummy variable (e.g., Nance et al., 1993; Mian, 1996; Geczy et al., 1997; Guay, 1999; Allayannis and Weston, 2001; Hentschel and Kothari, 2001). Although the resulting measure of hedging intensity is coarse, this strategy delivers large samples spanning a broad cross section of firms and industries, which addresses the lack of generality that limits the second method (described previously).

As mentioned, FAS 133 (and FAS 161) promised greater disclosure on derivatives usage, which some researchers have used to produce continuous measures of hedging (e.g., Graham and Rogers, 2002; Guay and Kothari, 2003; Bartram et al., 2006). Unfortunately, despite more stringent rules under FAS 133, a review of *actual* disclosures shows that reporting practices remained spotty: firms might discuss their use of derivatives only qualitatively rather than quantitatively; the level and impact of the underlying risk exposures was rarely quantified; reported numbers were often notional amounts rather than fair values; and firms typically did not distinguish between derivatives used to hedge rather than speculate. FAS 161 amends FAS 133 to address these deficiencies but the cited literature pre-dates FAS 161, and there appears to be little or no work done yet to revisit the situation under FAS 161 (post 2008).

24.5.4 Deriving Corporate Risk-Management Activity from Financial Statements

MacKay and Moeller (2013) propose a method to backward engineer the intensity and maturity structure of corporate hedging activity by exploiting the mechanics of hedge accounting. Their approach is simple to implement and relies solely on standard financial-statement data (e.g., COMPUSTAT) and derivatives prices (e.g., NYMEX futures prices).

Their approach rests on two features of cash-flow hedge accounting. First, gains or losses on derivatives positions that qualify as cash-flow hedges are reported in sales or costs rather than under other comprehensive income, where nonqualified derivatives gains or losses are reported. Second, qualifying hedging gains or losses appear on the income statement only in the period when the underlying hedged transaction is recognized (until then, these hedging gains or losses are reported on the balance sheet as unrealized gains or losses). For instance, if a firm hedges half its production a year ahead of time, then half the sales reported in the current quarter reflects the previous year’s price and half reflect the current quarter’s spot price.

Therefore, as a result of cash-flow hedge accounting, the sales or costs of firms that hedge are an amalgam of their past hedging decisions, and their policies can be

discovered through a simple regression of current (quarterly) sales (or costs) on the lagged structure of futures prices. The estimated coefficients reflect the intensity and maturity of a firm's hedging policy. This method offers another way to detect hedging activity and holds much promise for new insights.

24.6 NEW AVENUES FOR CORPORATE RISK MANAGEMENT RESEARCH

As highlighted throughout this chapter, a recurring problem in corporate risk management research—one that plagues all parties interested what firms are doing with derivatives—is the persistent dearth of information, that is, the lack of transparency stemming from lax disclosure rules. The FASB (and IASB) continue to tighten disclosure requirements, which promises to offer new research opportunities. In this section, I provide some exploratory guidance on one such avenue.

24.6.1 Hedging Gains and Losses as Corporate Risk Management Transparency

Since 2005, US accounting rules require firms to recognize gains or losses on derivatives in their earnings (i.e., reflect them in the income statement) when the hedge becomes ineffective, that is, when the value of the derivative contract is insufficiently correlated to the hedged position. Firms must then cease hedge accounting on the offending transaction (whereby interim hedging gains or losses remain on the balance sheet until the hedged position settles) and apply standard accounting treatment (whereby periodic gains or losses migrate to the income statement).

These “gains or losses on ineffective hedges” are reported in COMPUSTAT (a panel dataset of publicly listed US firms' financial-statement accounts) both annually and quarterly (labeled HEDGEGL). Tables 24.1 through 24.5 present some exploratory analyses of that variable in relation to other commonly studied firm characteristics.

Table 24.1 reports summary statistics on the COMPUSTAT universe of North American firms from 2005 through 2011, at the annual frequency (part A) and quarterly frequency (part B). The main variable of interest is “Hedge Gain/Loss,” where we note some 9190 firm-year values (out of some 59,617 possible observations based on the number of firm-year values for assets). Of this total, there are 1382 reports of non-zero hedging gains (scaled by lagged total assets) and 1427 reports of nonzero hedging losses, which means the 9190 total contains 6381 instances of zero values being reported

as a hedging gain/loss.⁹ Though this might seem surprising, it is possible that either (1) firms that report a nonzero hedging gain/loss continue to report a value in subsequent years, even when no such gain/loss occurred (and a zero is carried forward), or (2) some firms (including those described in (1) might deliberately report a zero hedging gain/loss to signal the effectiveness of their hedging program. Table 24.2, which relates discretionary accruals and hedging gain/loss includes a “prior hedging gain/loss” dummy variable, but this signaling hypothesis is not one that has yet been examined. I leave it as fodder for future research.

Table 24.1 brings out one more notable fact about reported hedging gains and losses, namely, that even when the large percentage of zero values is omitted the magnitude of hedging gains and losses is small compared to total firm assets (see Hedge Gains and Hedge Losses variables). Note that this does not in itself tell us anything about the size of the hedging program because it is possible that hedgers run well orchestrated hedging operations, in that the chosen derivatives are sufficiently correlated with the underlying position to avoid becoming “ineffective” from the viewpoint of required disclosure. Implementation of the rules might have been lenient because both firms and their auditors have incentives to avoid the stigma that might be rightly or wrongly attached to reports of “ineffective hedging.” But this hypothesis cannot be verified directly.

24.6.2 Hedging Gains and Losses and Discretionary Accruals

The difference between cash flow, which reflects the market value of a firm, and earnings, which reflect the accounting treatment of intertemporal transactions, is known as accruals. Because accruals hinge on many of the discretionary aspects of financial-accounting principles, they tend to be viewed with circumspection and are often seen as antithetic to transparency. A large literature in accounting and corporate finance examines accruals in the context of agency problems and information asymmetry. Given a propensity to employ discretionary accruals to manage earnings, firms might utilize discretionary aspects of the rules on ineffective hedge accounting as yet another tool to manage reported earnings.¹⁰

⁹ The corresponding numbers for quarterly data are 23,520 firm-year values (out of some 240,650 possible observations based on the number of firm-quarter values for assets). Of this total, there are 3237 reports of nonzero hedging gains (scaled by lagged total assets) and 3389 reports of nonzero hedging losses, which means that the 23,520 total contains 16,894 instances of zero values being reported as a hedging gain/loss.

¹⁰ Following Kothari et al. (2005), I define total accruals as change in total current assets (item ACT) minus change in total current liabilities (item LCT) minus change in cash and short-term investments (item CHE) plus change in debt in current liabilities (item DLC) minus depreciation and amortization (item DP). Discretionary accruals are the residuals from a regression (without intercept) of total accruals (scaled by lagged assets) on the reciprocal of lagged assets, change in sales (scaled by lagged assets), and net, property and equipment (scaled by lagged assets), estimated by year and two-digit SIC.

Table 24.1 Hedging Gains/Losses and Sample Firm Characteristics—Annual and Quarterly

	Mean	Median	St. dev.	Minimum	Maximum	N
<i>A. Annual Data</i>						
Hedge Gain/Loss	-0.28	0.00	9.05	-89	53.00	9190
Hedge Gains/Assets	0.00	0.00	0.00	0.00	0.05	1382
Hedge Losses/Assets	0.00	0.00	0.00	-0.03	0.00	1427
Firm Size (Log Total Assets)	5.46	5.65	2.88	-3.82	12.22	59,617
Operating Income/Assets	-0.21	0.08	1.55	-20.74	0.83	58,043
Investment/Assets	0.15	0.05	0.31	0.00	2.66	59,104
Cash/Assets	1.69	0.07	90.13	-0.19	15,729	58,640
Net Equity Issuance/Assets	-0.03	0.00	0.07	-0.53	0.13	45,450
Net Debt Issuance/Assets	0.04	0.00	0.20	-0.33	1.93	56,147
Book-to-Market	0.58	0.54	1.63	-15.00	12.28	26,727
Total Accruals/Assets	-2.68	0.13	141.92	-12,926	17,887	48,754
Discretionary Accruals	-1.67	0.18	89.51	-9719	2238	48,485
<i>B. Quarterly Data</i>						
Hedge Gain/Loss	1.15	0.00	254.10	-4381	37,581	23,520
Hedge Gains/Assets	0.00	0.00	0.00	0.00	0.02	3237
Hedge Losses/Assets	0.00	0.00	0.00	-0.02	0.00	3389
Firm Size (Log of Total Assets)	5.42	5.64	2.88	-3.91	12.19	240,650
Operating Income/Assets	-0.05	0.02	0.32	-3.75	0.18	221,332
Investment/Assets	0.03	0.01	0.06	-0.07	0.46	231,229
Cash/Assets	0.57	0.08	74.99	-1.10	27,441	143,145
Net Equity Issuance/Assets	-0.01	0.00	0.02	-0.15	0.04	177,287

(Continued)

Table 24.1 (Continued)

	Mean	Median	St. dev.	Minimum	Maximum	N
Net Debt Issuance/Assets	0.00	0.00	0.06	-0.27	0.53	210,897
Book-to-Market	0.58	0.56	1.89	-18.61	9.90	81,928
Total Accruals/Assets	-0.02	-0.01	0.17	-1.88	0.63	179,163
Discretionary Accruals	-0.05	0.00	12.72	-1847	2429	178,620

Part A reports summary statistics for sample firms from 2005 to 2011 from annual COMPUSTAT data for North America. Hedge Gain/Loss is constructed from COMPUSTAT item HEDGEGL, defined as "Gain/loss on ineffective hedges," a required disclosure from 2005 onward. Hedge Gain/Loss takes on the value of one (1) if the observation is non-missing and zero (0) otherwise. When Hedge Gain/Loss is non-missing, we parse it into positive values (Hedge Gains) and negative values (Hedge Losses) and scale it by lagged total assets (Assets). Part B reports similar statistics for quarterly COMPUSTAT data. Firm size is measured as the log of lagged total assets. Operating income is operating income before depreciation, amortization, and taxes, plus interest income. Investment is the sum of capital expenditures (item CAPX) and research and development (item XRD, if non-missing). Capital expenditures represents cash outflow or funds used for additions to the company's property, plant, and equipment, excluding amounts arising from acquisitions, reported in the Statement of Cash Flows. Research and development represents all costs incurred during the year that relate to the development of new products or services. Net equity issuance is defined as the sale of common and preferred stocks (item SPPE) net of cash dividends (item DV) and purchase of common and preferred stocks (item PRSTKC). Net debt issuance is defined as long-term debt issuance (item DLTIS) net of long-term debt reduction (item DLTR). Book-to-market is log(BE/ME), where Book Value of Equity (BE) is stockholders' equity plus deferred taxes plus investment tax credit minus preferred stock, and market value of equity (ME) is common shares outstanding (item CSHO) times share price at fiscal yearend (item PRCC_F). Following Kothari et al. (2005), total accruals are change in total current assets (item ACT) minus change in total current liabilities (item LCT) minus change in cash and short-term investments (item CHE) plus change in debt in current liabilities (item DLC) minus depreciation and amortization (item DP). Market value of equity (ME) is common shares outstanding (item CSHO) times share price at fiscal year end (item PRCC_F). Discretionary accruals are the residuals from a regression (without intercept) of total accruals (scaled by lagged assets) on the reciprocal of lagged assets; change in sales (scaled by lagged assets); and net, property, and equipment (scaled by lagged assets), estimated by year and two-digit SIC.

Table 24.2 examines this hypothesis by regressing discretionary accruals on a battery of firm characteristics as controls and various permutations of hedging gains and losses as variables of interest. Although these ordinary least-squares (OLS) regressions cannot pin down the direction of causation (i.e., I cannot say whether hedging gains and losses explain discretionary accruals or vice versa), there is evidence of a strong statistical relation between these variables. For instance, model 2 shows a strong inverse relation between discretionary accruals and the hedging gain or loss dummy. This suggests that hedging gains and losses and discretionary accruals act as substitutes, which would corroborate the idea that firms seek to smooth earnings through both these vehicles. Model 3 highlights the effect of prior hedging gains or losses but model 7, which controls for the Hedge Gain and Hedge Loss dummies, shows the relation to be driven by hedging gains.

Table 24.3 examines differences in hedging gains and losses across industries (at the one-digit Standard Industry Classification (SIC) code level in part A and at the two-digit SIC level in part B). Contrary to Table 24.1, where hedging gains and losses are scaled by lagged total assets, Table 24.3 reports raw statistics in millions of US dollars. In both cases, there is wide variation both between and within industries. This means that multivariate regressions that seek to explain hedging gains and losses should control for industry fixed effects. Given the high occurrence of zero values noted in Table 24.1, it seems likely that there is too little within firm variation to control for firm fixed effects.

Table 24.4 presents cross-sectional regressions of firm risk on firm-level means (Panel A) and standard deviations (Panel B) of hedging gains and losses. I examine these relations for four measures of firm performance, namely, sales, cost-of-goods sold (COGS), cash flow (sales—COGS), and earnings before interest and taxes (EBIT). I find that firms with higher mean hedging gains and losses exhibit significantly riskier sales and COGS, consistent with hedging gains and losses resulting from *ineffective* hedges. This relation is not statistically significant for risk in cash flow and EBIT, suggesting that risky sales and COGS might be offsetting. Panel B shows statistically significant relations between performance risk and the standard deviation of hedging gains and losses, which again corroborates an *ineffective* (riskier) hedge interpretation. This relation holds true across all four measures of firm performance.

Table 24.5 tests for differences in performance across firms that report nonzero hedging gains and losses and those that do not report hedging gains or losses (Panel A), and between firms that report hedging gains versus firms that report hedging losses (Panel B). I find that firms that do report nonzero hedging gains and losses perform very significantly differently than those that do not. Interestingly, the results are mixed in that return on assets is lower for firms that report no hedging gains or losses (−0.23 vs. 0.11) but stock returns are higher (21% vs. 9%). Panel B shows no significant differences between firms reporting gains and those reporting losses.

Table 24.2 Discretionary Accruals and Hedging Gains/Losses

Model	1	2	3	4	5	6	7
Intercept	-17.08 ^a (1.24)	-17.42 ^a (1.25)	-16.84 ^a (1.25)	-17.27 ^a (1.24)	-17.21 ^a (1.24)	-17.42 (1.25)	-17.22 ^a (1.25)
Firm Size (Log of Total Assets)	3.16 ^a (0.23)	3.32 ^a (0.23)	3.27 ^a (0.23)	3.25 ^a (0.23)	3.22 ^a (0.23)	3.32 ^a (0.23)	3.37 ^a (0.23)
Operating Income/Assets	0.26 ^a (0.01)	0.26 ^a (0.01)	0.26 ^a (0.01)	0.26 ^a (0.01)	0.26 ^a (0.01)	0.26 ^a (0.01)	0.26 ^a (0.01)
Investment/Assets	0.25 ^a (0.01)	0.25 ^a (0.01)	0.25 ^a (0.01)	0.25 ^a (0.01)	0.25 ^a (0.01)	0.25 ^a (0.01)	0.25 ^a (0.01)
Net Equity Issuance/Assets	-0.52 ^a (0.04)	-0.52 ^a (0.04)	-0.52 ^a (0.04)	-0.52 ^a (0.04)	-0.52 ^a (0.04)	-0.52 ^a (0.04)	-0.52 ^a (0.04)
Net Debt Issuance/Assets	-0.66 ^a (0.03)	-0.65 ^a (0.03)	-0.66 ^a (0.03)	-0.66 ^a (0.03)	-0.66 ^a (0.03)	-0.65 ^a (0.03)	-0.66 ^a (0.03)
Book-to-Market	0.01 ^a (0.00)	0.01 ^a (0.00)	0.01 ^a (0.00)	0.01 ^a (0.00)	0.01 ^a (0.00)	0.01 ^a (0.00)	0.01 ^a (0.00)
Hedge Gain/Loss Dummy		-10.72 ^a (3.54)					
Prior HGL Dummy			-3.66 ^b (1.66)				-2.55 (1.71)
Hedge Gains Dummy				-11.95 ^b (5.02)		-12.39 ^b (5.02)	-10.99 ^b (5.11)
Hedge Losses Dummy					-8.69 ^c (4.77)	-9.22 ^c (4.77)	-7.86 (4.86)
Degrees of freedom	17,645	17,645	17,645	17,645	17,645	17,645	17,645
Adjusted R^2	0.0824	0.0829	0.0826	0.0827	0.0826	0.0828	0.0829

OLS regression results for 2005–2011 sample firms. The dependent variable is discretionary accruals (as defined later). Hedge Gain/Loss is constructed from COMPUSTAT item "HEDGEGL," defined as "Gain/loss on ineffective hedges," a required disclosure from 2005 onwards. Hedge Gain/Loss takes on the value of one (1) if the observation is non-missing and zero (0) otherwise. When Hedge Gain/Loss is non-missing, we parse it into positive values (Hedge Gains) and negative values (Hedge Losses) and scale it by lagged total assets (Assets). Prior HGL dummy takes on the value of one (1) if the firm has previously disclosed a nonzero HGL value and zero (0) otherwise. Hedge Gains (losses) dummy takes on the value of one (1) if the observation is reported positive (negative) and zero (0) otherwise. Following Kothari et al. (2005), total accruals are: change in total current assets (item ACT) minus change in total current liabilities (item LCT) minus change in cash and short-term investments (item CHE) plus change in debt in current liabilities (item DLC) minus depreciation and amortization (item DP). Market value of equity (ME) is common shares outstanding (item CSH0) times share price at fiscal yearend (item PRCC_F). Discretionary accruals are the residuals from a regression (without intercept) of total accruals (scaled by lagged assets) on the reciprocal of lagged assets; change in sales (scaled by lagged assets); and net, property, and equipment (scaled by lagged assets), estimated by year and two-digit SIC. Standard errors are reported in parentheses. Superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% confidence levels.

Table 24.3 Hedging Gains/Losses by Industry

A. SIC1	Mean	Median	St. dev.	Minimum	Maximum	N	N missing
0	0.3596	0	2.07	-4	10.09	39	185
1	-0.1409	0	13.27	-206	311.06	1168	6370
2	-0.6882	0	9.93	-141.65	47.23	1349	7068
3	1.2765	0	41.76	-123.16	1653	1704	10,419
4	-0.935	0	44.60	-1000	360	1075	5070
5	-0.195	0	5.3838	-91.865	58.76	726	3442
6	12.4174	0	867.00	-4,380	37,581	1993	9821
7	-0.068	0	6.08	-71.65	76.6	875	5937
8	-0.4217	0	5.68	-80	5.44	201	1618
9	-35.9343	0	155.79	-816	122.89	60	767
Average	-2.43296	0	115.16	-691.52	4022	919	5069
St. Dev.	12.42587	0	268.22	1340	11,801	675.60	3567

(Continued)

Table 24.3 (Continued)

	Mean	Median	St. dev.	Maximum	N	N missing
B. S/C2		0	2.9553			
1	0.7517	0	0	10.095	19	116
2	0	0	0.1633	0	6	20
7	-0.0323	0	0	0.097	8	24
8	0	—	—	0	6	23
9	—	0	5.2272	—	0	2
10	-0.498	0	3.517	—	0	2
12	-0.5869	0	17.8624	13.647	449	2972
13	0.1381	0	0.9842	4.8	28	165
14	-0.0905	0	6.7617	311.056	603	2584
15	0.0936	0	0	2.169	33	235
16	0	0	1.1875	20.9	17	169
17	-0.3033	0	11.1673	0	17	149
20	-0.2425	0	12.807	2.108	21	96
21	4.9195	0	0.1938	47	217	903
22	-0.0378	0	35.904	32.323	12	44
23	-12.2152	0	0	0.297	17	87
24	0	0	2.4133	4.954	61	283
25	-0.4001	0	6.0084	0	13	242
26	-1.1173	0	1.8107	0.295	40	162
27	-0.2531	0	2.5288	25.074	75	357
28	-0.1372	0	10.4567	2.2	65	372
29	0.3379	0	2.9718	18.874	757	4319
30	-0.3643	0	0.3525	47.296	92	299
31	0.0942			5.2	44	357
				1.604	21	106

32	1.621	0	5.3971	32	47	175
33	-0.3277	0	4.3333	13.365	126	520
34	0.1694	0	1.8736	13.983	85	411
35	-0.1197	0	2.8237	17	372	1811
36	-0.1065	0	5.7409	24.609	496	3390
37	14.6039	0	144.8867	1653.317	138	928
38	0.6673	0	11.4259	196.022	331	2408
39	0.0226	0	0.237	1.292	44	313
40	0.0098	0	10.0423	32	33	52
41	-0.1146	0	0.3188	0.129	9	31
42	-0.4463	0	2.1834	3.437	59	209
44	0.089	0	4.5424	20.9	121	356
45	-15.4998	0	118.6856	360	105	297
46	0.3619	0	1.4486	5.7	21	60
47	0.0667	0	0.441	2.1	24	184
48	0.5348	0	20.406	309.973	288	1622
49	1.1454	0	35.4624	289	415	2259
50	-0.0649	0	3.4478	25.8	141	808
51	0.1315	0	1.7619	11.469	91	501
52	0.9948	0	2.4368	5.969	6	55
53	-0.0793	0	0.2246	0	55	146
54	-2.5102	0	22.1592	58.761	31	211
55	-0.0074	0	0.0986	0.411	55	140
56	-0.1941	0	1.1876	1	68	333
57	0	0	0	0	21	131
58	-0.4484	0	5.5175	4	127	460
59	0.0184	0	1.1516	7	131	657
60	38.211	0	1343.217	37,581.3	797	4314
61	-39.8576	0	203.6322	293	208	711
62	24.118	0	634.7887	6543	128	831

(Continued)

Table 24.3 (Continued)

63	-1.6791	0	25.9738	83	261	1075
64	-0.1461	0	0.4773	0	21	190
65	0.945	0	5.8027	37	46	651
67	-0.1978	0	1.9559	7.6	532	2049
70	-0.6925	0	2.6839	0.05	20	129
72	0.0144	0	0.0414	0.156	18	97
73	-0.1837	0	4.3324	48.165	727	4978
75	-1.6229	0	5.5044	2.4	18	78
76	—	—	—	—	0	7
78	-2.7249	0	12.9231	1.3	31	236
79	3.3002	0	14.1491	76.6	61	412
80	0.0431	0	0.7534	5.441	75	630
81	0	0	0	0	3	4
82	-0.0077	0	0.0392	0	26	214
83	0	0	0	0	2	50
87	-0.9243	0	8.2282	1.785	95	718
89	—	—	—	—	0	2
99	-35.9343	0	155.7867	122.892	60	767
Average	-0.4046	0	43.39	712.2474	129.169	712.4085
St. dev.	9.0587	0	179.36	4576.901	189.3065	1088.429

Part A reports summary statistics on hedging gains and losses with industry breakouts at the one-digit SIC level for 2005–2011 annual COMPUSTAT data for North America. Part B is reports the same statistics at the two-digit SIC level.

Table 24.4 Regression of Risk Measures on Hedging Gains/Losses

A	Std. sales	Std. COGS	Std. CF	Std. EBIT
Intercept	1092.58 ^a (92.26)	776.71 ^a (74.01)	495.15 ^a (47.45)	368.65 ^a (43.22)
Mean HEGDEGL	2.16 ^a (0.52)	2.48 ^a (0.42)	0.38 (0.27)	-0.23 (0.24)
Degrees of freedom	2348	2348	2348	2345
Adjusted R^2	0.0068	0.0144	0.0005	0.0000
B	Std. Sales	Std. COGS	Std. CF	Std. EBIT
Intercept	1073.20 ^a (91.60)	761.64 ^a (73.67)	484.18 ^a (47.01)	361.10 ^a (43.06)
Std. HEGDEGL	1.63 ^a (0.22)	1.40 ^a (0.18)	0.80 ^a (0.11)	0.47 ^a (0.10)
Degrees of freedom	2348	2348	2348	2345
Adjusted R^2	0.022	0.0246	0.02	0.0083

Part A reports cross-sectional regressions of four measures of firm risk on the mean of Hedge Gain or Loss (HGL) using 2005–2011 annual COMPUSTAT data for North America. HGL is constructed from COMPUSTAT data item HEDGEG, defined as “Gain/loss on ineffective hedges,” a required disclosure from 2005 onwards. Risk is measured as the standard deviation of Sales, Cost of Goods Sold (COGS), Cash flow (= Sales minus COGS), and Earnings Before Interests and Taxes (EBIT). Part B reports the regressions of the same four risk measures on the standard deviation of Hedge Gain or Loss. Standard errors reported in parentheses. Superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% confidence levels.

Table 24.5 Performance Differences for Firms that Do or Do Not Report Hedging Gains/Losses												
A. Hedge Gain/Loss Dummy												
	Sales/assets			COGS/assets			EBIT/assets			Stock returns		
	N	Mean	Std Dev.	N	Mean	Std Dev.	N	Mean	Std Dev.	N	Mean	Std Dev.
0	56,681	0.90	1.05	56,678	0.64	0.91	55,369	-0.23	1.59	42,285	20.98	155.50
1	2,809	0.67	0.75	2809	0.48	0.66	2674	0.11	0.10	2252	9.39	83.80
diff		0.23 ^a	1.04		0.17 ^a	0.90		-0.34 ^a	1.55		11.59 ^a	152.70
t-statistics		15.50			12.92			-48.91			6.03	
B. Hedge Gain Dummy												
	Sales			COGS			Operating Income			Stock Return		
	N	Mean	Std Dev.	N	Mean	Std Dev.	N	Mean	Std Dev.	N	Mean	Std Dev.
0	1427	0.68	0.72	1427	0.48	0.62	1358	0.12	0.10	1143	9.95	80.57
1	1382	0.66	0.78	1382	0.47	0.70	1316	0.11	0.10	1109	8.81	87.04
diff		0.01	0.75		0.00	0.66 ^a		0.00	0.10		1.14	83.82
t-statistics		0.52			0.10			1.07			0.32	
Part A reports t-statistics for tests of differences in sales, COGS, EBIT, and annual stock returns between firms that do or do not report Hedging Gain or Loss (using 2005–2011 annual COMPUSTAT data for North America). Hedge Gain/Loss dummy takes on the value of one (1) if the observation is non-missing and zero (0) otherwise. Part B reports similar test statistics contrasting reporting firms that report a hedging gain (hedge gain dummy value of 1) or a hedging loss (hedge gain dummy value of 0). Each of the variables is winsorized at the 10% level at both tails of the sample (applied by year). Superscripts a, b, and c denote statistical significance at the 10%, 5%, and 10% confidence levels.												

24.6.3 The Informativeness of Disclosing Gains and Losses on Ineffective Hedges

MacKay (2013) examines whether gains and losses on ineffective hedged are informative to the stock market. In particular, he tests if stock-price reactions surrounding earnings announcements are affected by recent disclosures of hedging gains and losses. If these disclosures reveal useful and timely information—which is not already impounded in stock prices—then the cumulative abnormal return (CAR) around earnings should not be affected by such disclosures. The evidence produced shows little or no significant effect on CAR.

24.7 CONCLUSION ON THE TRANSPARENCY OF CORPORATE RISK MANAGEMENT AND PERFORMANCE

This chapter lays out the challenges and opportunities facing corporate risk management practitioners, accountants, investors, researchers, and policymakers as they seek to implement, report, understand, explain, and regulate this critical value-added function and the complex financial instruments—derivatives—that are often the centerpiece of risk-management strategies.

A common frustration facing all these agents is the relative lack of transparency, which is closely tied to the polemic surrounding the disclosure of derivatives. Despite greater disclosure requirements over time, the impact of derivatives on corporate performance is hard to pin down. A number of studies have, even in the context of limited precision, documented value increases associated with corporate hedging activity. The adoption of FAS 161, which amends FAS 133, promises new avenues for research as firms must now report not only the value of derivatives but also how changes in the value of these instruments impacts overall financial position (balance sheet), financial performance (income statement), and financial flows (cash flow statement).

I provide exploratory statistics on the research potential of a new disclosure requirement, namely, the need to recognize in periodic earnings (income statement) gains and losses on hedge positions that have become ineffective (insufficiently correlated to the hedged position). I find several significant contrasts between firms that report non-zero hedging gains and losses and those that do not, which suggests that this variable has good research potential. In other ongoing work, I examine the informativeness of gains and losses on ineffective hedges (MacKay, 2013). Overall, one can say that despite improvements in transparency (and disclosure) and research methods there remain many challenges and opportunities for researchers and practitioners alike.

I thank Mr. Harry Leung and Ms. Fangyuan Ma for expert and expedient research assistance. This research benefitted from the financial support of HKUST's Strategic Research Funding Initiative (SRFI).

REFERENCES

- Adam, T., Dasgupta, S., and Titman, S. (2007). Financial constraints, competition, and hedging in industry equilibrium. *Journal of Finance* 62, 2445–2473.
- Adam, T. R., and Fernando, C. S. (2006). Hedging, speculation and shareholder value. *Journal of Financial Economics* 81(2), 283–309.
- Allayannis, G., and Ihrig, J. (2001). Exposure and markups. *Review of Financial Studies* 14, 805–835.
- Allayannis, G., and Weston, J. P. (2001). The use of foreign currency derivatives and firm market value. *Review of Financial Studies* 14, 243–276.
- Bakshi, G., and Chen, Z. (1997). Equilibrium valuation of foreign exchange claims. *Journal of Finance* 52, 799–826.
- Bakshi, G., and Madan, D. (2000). Spanning and derivative-security valuation. *Journal of Financial Economics* 55, 205–238.
- Bartram, S., Brown, G. W., and Conrad, J. (2009). The effects of derivatives on firm risk and value. *Journal of Financial and Quantitative Analysis* 46, 967–999.
- Bodnar, G. M., Dumas, B., and Marston, R. C. (2002). Pass-through and exposure. *Journal of Finance* 57, 199–231.
- Brown, G. W., Crabb, P. R., and Haushalter, D. (2003). Are firms successful at selectively hedging? Working Paper, University of North Carolina.
- Brown, G. W., and Toft, K. B. (2002). How firms should hedge. *Review of Financial Studies* 15, 1283–1324.
- Buffet, W. (2002). *Berkshire Hathaway Annual Report*.
- Carter, D. A., Rogers, D. A., and Simkins, B. J. (2006). Does fuel hedging affect firm value? Evidence from the U.S. airline industry. *Financial Management* 35, 53–86.
- Cassidy, S. M., Constant, R. L., and Corbett, R. B. (1990). The market value of the corporate risk management function. *Journal of Risk and Insurance* 57, 664–670.
- Charnes, J. M., Koch, P., and Berkman, H. (2003). Measuring hedge effectiveness for FAS 133 compliance. *Journal of Applied Corporate Finance* 15, 95–103.
- DeMarzo, P., and Duffie, D. (1991). Corporate financial hedging with propriety information. *Journal of Economic Theory* 53(2), 261–286.
- Edwards, F. (1995). Derivatives can be hazardous to your health: The case of Metallgesellschaft. *Derivatives Quarterly* 8–17.
- Fehle, F., and Tsyplakov, S. (2005). Dynamic risk management: Theory and evidence. *Journal of Financial Economics* 78(1), 3–47.
- Flannery, M. J., and James, C. M. (1984). The effect of interest rate changes on the common stock returns of financial institutions. *Journal of Finance* 39, 1141–1153.
- Froot, K. A., Scharfstein, D. S., and Stein, J. C. (1993). Risk management: Coordinating corporate investment and financing policies. *Journal of Finance* 48, 1629–1658.
- Geczy, C., Minton, B. A., and Schrand, C. (1997). Why firms use currency derivatives. *Journal of Finance* 52, 1323–1354.
- Graham, J. R., and Rogers, D. A. (2002). Do firms hedge in response to tax incentives? *Journal of Finance* 57, 815–839.

- Graham, J. R., and Smith, C. W., Jr. (1999). Tax incentives to hedge. *Journal of Finance* 54, 2241–2262.
- Guay, W., and Kothari, S. P. (2003). How much do firms hedge with derivatives? *Journal of Financial Economics* 70, 423–461.
- Haushalter, D. G. (2000). Financing policy, basis risk, and corporate hedging: Evidence from oil and gas producers. *Journal of Finance* 55, 107–152.
- Haushalter, D. G., Heron, R. A., and Lie, E. (2002). Price uncertainty and corporate value. *Journal of Corporate Finance: Contracting, Governance and Organization* 8, 271–286.
- Jin, Y., and Jorion, P. (2006). Firm value and hedging: Evidence from U.S. oil and gas producers. *Journal of Finance* 61, 893–919.
- Jorion, P. (1990). The exchange-rate exposure of U.S. multinationals. *Journal of Business* 63, 331–345.
- Jorion, P. (2002). *Value at Risk*, 2nd ed. New York: McGraw-Hill.
- Kalotay, A., and Abreo, L. (2001). Testing hedge effectiveness for FAS 133: The volatility reduction measure. *Journal of Applied Corporate Finance* 13, 93–99.
- Kothari, S. P., Leone, A. J., and Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics* 39, 163–197.
- Lowenstein, R. (2001). *The Rise and Fall of Long-Term Capital Management: When Genius Failed*. New York: Random House.
- MacKay, P. (2013). Is there news in corporate risk management disclosures? Working Paper, Hong Kong University of Science and Technology.
- MacKay, P., and Moeller, S. (2007). The value of corporate risk management. *Journal of Finance* 62(3), 1379–1419.
- MacKay, P., and Moeller, S. (2013). Corporate risk management: What can we learn from financial statements? Working Paper, Hong Kong University of Science and Technology.
- Marrison, C. (2002). *The Fundamentals of Risk Measurement*. New York: McGraw-Hill.
- Marthinson, J. (2008). *Risk Takers: Uses and Abuses of Financial Derivatives*. New York: Prentice Hall.
- Mello, A., and Parsons, J. (1995). Maturity structure of a hedge matters: Lessons from the Metallgesellschaft debacle. *Journal of Applied Corporate Finance* 8, 106–120.
- Mian, S. L. (1996). Evidence on corporate hedging policy. *Journal of Financial and Quantitative Analysis* 31, 419–439.
- Minton, B. A., and Schrand, C. (1999). The impact of cash flow volatility on discretionary investment and the costs of debt and equity financing. *Journal of Financial Economics* 54, 423–460.
- Nance, D. R., Smith, C. W., and Smithson, C. W. (1993). On the determinants of corporate hedging. *Journal of Finance* 48, 267–284.
- Pérez-González, F., and Yun, H. (2013). Risk management and firm value: Evidence from weather derivatives. *Journal of Finance* 68, 2143–2176.
- Pollock, A. J. (2005). FAS 133: What Is Accounting Truth?. *Journal of Applied Corporate Finance* 17, 102–106.
- Purnanandam, A. (2008). Financial distress and corporate risk management: Theory and evidence. *Journal of Financial Economics* 87(3), 706–739.
- Smith, C. W., and Stulz, R. (1985). The determinants of firms' hedging policies. *Journal of Financial and Quantitative Analysis* 20, 391–405.
- Strong, J. S. (1991). Using oil share portfolios to hedge oil price risk. *Quarterly Journal of Economics* 31, 48–63.

- Stulz, R. M. (1984). Optimal hedging policies. *Journal of Financial and Quantitative Analysis* **19**, 127–140.
- Taleb, N. (2005). *Fooled by Randomness*. New York: Random House.
- Taleb, N. (2007). *The Black Swan: The Impact of the Highly Improbable*. New York: Random House.
- Tufano, P. (1996). Who manages risk? An empirical examination of risk management practices in the gold mining industry. *Journal of Finance* **51**, 1097–1137.
- Tufano, P. (1998). The determinants of stock price exposure: Financial engineering and the gold mining industry. *Journal of Finance* **53**, 1015–1052.

CHAPTER 25

STRESS TESTING, TRANSPARENCY, AND UNCERTAINTY IN EUROPEAN BANKING: WHAT IMPACTS?

RYM AYADI AND WILLEM PIETER DE GROEN

25.1 INTRODUCTION

How is it possible to provide certainty in times that are inherently uncertain? This was a key challenge that regulators and supervisors had to address in the aftermath of the fall of Lehman Brothers in September 2008, to restore confidence in a fragile financial system. Notwithstanding the factual financial losses that originated the destabilization of the financial sector and provoked a slow-down of the wider economy, the lack of information about the potential losses for banks and reach of implicit government guarantees aggravated the uncertainty in the financial system. This was, for example, reflected in decreasing market to book ratios of listed banks (see also Figure 25.1) and in narrowing spreads in market-to-book ratios of most banks.

To allow early detection of ailing banks and reduce uncertainty of information asymmetry between market players, supervisors aimed at breaching the information gap by making available key information about banks that was previously not available to the markets. One of the most prominent combinations of hard and soft measures that European cross-border banking supervisors have been using were stress tests. These attempted to assess potential impact of certain shock or stress events, while at the same time enhancing the transparency on the exposures of banks. Stress tests in banking are for example used to estimate the potential impact of certain hypothetical stresses such as adverse macroeconomic developments and distressed government finances on the capital level of individual banks.

Stress tests for banks are relatively new phenomena in Europe. Albeit limited information on the global usage of stress tests, it was widely applied by internationally

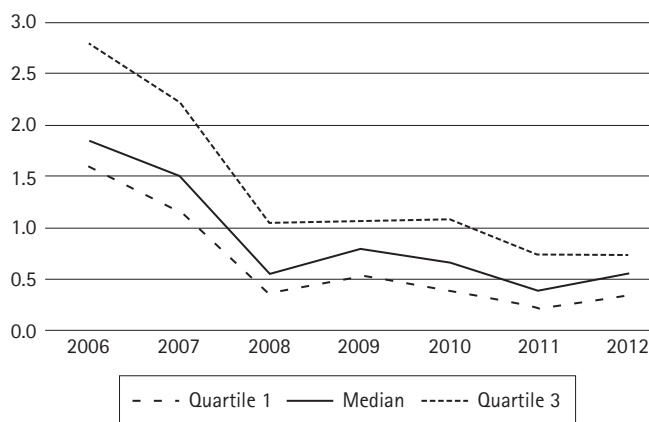


FIGURE 25.1 Evolution of the market-to-book ratios from 2006 to 2012.

active banks in the early 1990s (Blaschke et al., 2001), mentioned in a technical note by RiskMetrics in 1997 and used by the International Monetary Fund (IMF) for its Financial Sector Assessment Programme (FSAP) since 2001 (JP Morgan, 1997; Haldane, 2009). In Europe stress tests were until a few years ago performed only by individual banks internally, with very little disclosure. Since 2009 the Committee of European Banking Supervisors (CEBS) and its successor the European Banking Authority (EBA) have performed and disclosed several cross-country stress tests, which were later on followed by capital and transparency exercises that have many characteristics in common with the performed stress tests.

The stress tests have evolved over time to become a tool to strengthen transparency and to evaluate the resilience of the financial system in general and individual banks in particular. The first CEBS stress test, dating back to 2009, had as its official objective to increase the aggregate information on the resilience of the financial system and sharing of best practices among policymakers in the European Union. Initially, the exercise was not intended to determine the need for recapitalization of individual banks (CEBS, 2009). The following stress tests evolved to produce estimations of capital shortages, which brought new indications on the resilience of the EU banking sector. The disclosure of this supervisory information has served to bridge the missing link between the supervisory review activity and the market discipline. In the second stress test exercise CEBS led in 2010, it, for instance, reported the names of the banks that did not meet the capital targets under the adverse scenario. The room for national discretion declined at the moment that the pan-European Economic Area (EEA) supervisor of supervisors such as EBA came into force. The banks that failed EBA stress test and capital exercises in 2011 and 2012 were required to strengthen their capital position up to levels above the existing regulatory capital requirements. The disclosure was the primary objective of the transparency exercise in 2013, which was the follow-up of the stress tests and capital

exercises. The value that supervisors attach to the disclosure was, *inter alia*, highlighted in the following quote of the European Commission, European Central Bank (ECB), and CEBS at the time of the disclosure of the CEBS stress test results in 2010:

We support, in particular, **the transparency of this exercise**, given the specific market circumstances under which banks currently operate. We therefore welcome the publication of banks' individual results, particularly their respective capital positions and loss estimates under an adverse scenario, as well as detailed information on banks' exposures to EU/EEA central and local government debt. **Such disclosures ensure transparency regarding conditions in the EU banking sector.** (EC, ECB, and CEBS, 2010)

The aim of this study is to assess whether the stress tests and other comparable exercises have indeed been an effective tool to enhance transparency on the resilience of the EU banking sector. More specifically, it examines the impact of these stress tests as well as capital and transparency exercises on the financial markets. Using 572 observations of listed banks subject to cross-border viability and transparency exercises in Europe between 2009 and 2013, this event study evaluates the response of stock markets to the announcement of the test, methodology, and results. The impacts of the dissemination of the results of all six exercises are estimated at the aggregate level, but also for the individual exercises, nonviable banks, banks in countries that are faced with severe fiscal challenges, as well as bank business models.

The remainder of the chapter provides first an overview of the relevant literature in Section 25.2. Thereafter in Section 25.3 the hypotheses on the relation among the exercises, transparency, and uncertainty in the banking sector are explained. The applied methodology and data are presented in Section 25.4. The results of the statistical tests are further shown in Section 25.5. The conclusions and policy recommendations are drawn in Section 25.6.

25.2 LITERATURE REVIEW

The usage of stress tests on European banks is very recent. It brings a new dimension in assessing riskiness of banking in different stress conditions. It also provides more transparency in the banking sector by disclosing new external source of regulatory information on the resilience of banking institutions. Disclosure of stress tests results and methodology is a step forward toward bridging the missing link between supervisory review activity and market discipline of financial institutions.¹

¹ R. Ayadi (2008).

Before the eruption of the financial crisis, regulators relied mainly on banks and other market players (notably the rating agencies) to measure, assess, stress test, and disclose banking risks.

As financial intermediaries, banks combine a high leverage with a clear long-short maturity mismatch and tend to be more opaque than other types of firms. In fact, banks are specialized in lending to borrowers for whom they have better information on the credit quality than the general public and part of their portfolio is changing very rapidly (e.g., liquid assets, high-frequency trading, etc.), which makes monitoring by external market players a very challenging task (Morgan, 2002). To control this inherent precarious financial structure banks use risk measurement and management models to determine their capital requirement and liquidity needs, optimal portfolio allocation, and so forth. These risk models have different degrees of sophistication, but have in common that they are at best simplifications of reality and only able to take historical experiences into account. This makes it unlikely that they capture events that are unique or extreme. The risks measures based on the commonly used Value at Risk approach did not, for instance, include the extreme events that occurred during the 2007–2009 global financial crisis. Stress tests for banks complemented the existing models (Longin, 2000). They are used to examine the likely impact of exceptional, but plausible, future events.

The existing literature on stress tests focuses primarily on the methodology: Blaschke et al. (2001) distinguish two broad groups: stress tests on individual portfolios of single banks and aggregate portfolios of multiple banks. The individual portfolios can be performed on different risk models (market-, credit-, and other risks), shocks (individual market variables, underlying volatilities and correlations), scenarios (historical, hypothetical, and Monte Carlo simulations), and stress tests (sensitivity, scenario and other like extreme value, and maximum loss). Others such as Boss et al. (2006) and Sorge and Virolainen (2006) assessed the different methodologies for stress tests on banks active in particular countries, respectively Austria and Finland.

There are only a few studies that provide empirical insights on the effectiveness of stress tests in the United States and Europe. Peristian et al. (2010) find that the stress test on the 19 largest banks in the United States in 2009 provided only limited information to investors. Using event-study methodology, the authors found that banks with capital shortfall experienced significant positive abnormal returns at the moment that the US Federal Reserve clarified that the exercise would not be used as a ground for nationalization and the details on the capital assistance plan were disclosed. They also found significant positive abnormal returns for banks that have a significant capital shortfall in the test. In turn, the results on the announcement of the test as well as methodology were not found significant. Based on these results, Peristian et al. concluded that the equity markets are well capable of identifying banks with a capital shortages, but that they can be positively surprised by the size of the capital shortfall. Cardinali and Nordmark (2011) repeated part of the Peristian analyses for the stress test conducted by CEBS in 2010 and the first stress test conducted by EBA in 2011. Their findings, drawn from a standard event study, suggest that both the disclosure of results and clarification

of these exercises were uninformative. In turn, the disclosure of methodology was highly informative.

25.3 HYPOTHESES ON THE RELATION AMONG STRESS TESTING, TRANSPARENCY, AND UNCERTAINTY

Though there is still limited empirical work on the particular usefulness of disclosing stress tests and similar exercises for signaling the resilience of the European and other banking sectors, there is more on the importance of transparency in general. Akerlof (1970) already argued that clients are likely to lower prices for products of which the quality is uncertain, which reduces the incentive for the supplier to offer a products of a good quality. To get a fair price that matches its quality the supplier has to convince the client of the quality the product. The supplier can, for instance, provide more information about the product itself to signal the quality. Or maybe more convincing, a third (independent) party can provide this information or a quality mark.

The logic as promoted by Akerlof (1970) is one of the main reasons the European stress tests, capital exercise, and transparency exercise were undertaken. The objective of the stress tests as applied by the European banking supervisors was to show the different stakeholders the capacity of the largest European banking groups at both the aggregate and the individual level to absorb a severe economic shock. The capital exercise further aimed to show these stakeholders (e.g., policymakers, supervisors, other banks, investors, and clients) that the impact of a change in the valuation of the sovereign exposures, that is, applying fair value instead of historic valuation for the sovereign holdings. Both the stress test and capital exercise were introduced at a time of large uncertainty about the resilience of the banking sector, requiring the central banks and EU member states to intervene. The exercises could support prudent behavior by individual banking groups and decrease the level of uncertainty. Yet, this test should disclose new information to the markets, as only information that is new to any market participants has an impact on price formation in efficient markets (Fama, 1970; Malkiel, 1992). If this would indeed be the case the following hypotheses would hold:

H1. An increase of the available information (or more transparency) on the resilience of tested banks enhances the average value of these banks.

Further, it would not only enhance the average, but the deviation would also increase:

H2. An increase of the available public information on resilience increases the deviation in the value of tested banks.

As mentioned in the literature review, there are many different types of stress tests. The European banking supervisors also adjusted the methodology of the stress tests as well

as the level of disclosure over time. The consensus in the existing literature suggests that more transparency reduces risks (Cordella and Yeyati, 1998; Boot and Schmeits, 2000; Hyttinen, and Takalo, 2000, 2004), though there are some exceptions. More transparency, for instance, implies more public awareness on the risk level of banks, which can increase the funding costs and thus the probability of failure. The third hypothesis tests whether more transparency indeed fosters financial stability:

H3. The more information that the supervisors release on the resilience of tested banks the larger the increase in average value as well as deviation in the value of these banks.

In addition, the initial characteristics of the banks subject to the test might influence the effectiveness of the exercises. The composition of business activities differs between banks, which is also reflected in the level of bank public disclosure. Banks that undertake more activities on capital markets, such as investment and wholesale-oriented banks, are—for instance—relatively better able to report fair values of their assets, as compared to retail-oriented banks that have more opaque activities such as lending to households and small and medium-sized enterprises. In turn, investment and wholesale-oriented banks have larger cross-border exposures, which are often not disclosed at a country-by-country basis, as some of the stress test exercises did (Ayadi et al., 2011).

H4. The more important the stress-tested exposures and disclosed data are to the business model of the banks, the larger is the increase in average value of the banks categorized as belonging to this category of business model.

Overall, the four hypotheses assess whether the stress tests have an impact on the valuation of banks. Hence, the overall impact on the value as well as on different categories and types of supervisory exercises is assessed.

25.4 METHODOLOGY AND DATA

Standard event-study methodology is applied to assess the ability of the stress tests to signal the quality of both individual banks as well as the banking sector as a whole. Event studies are widely applied in the financial literature (e.g., Mikkelsen and Partsch, 1986; Campbell et al., 1997; Staikouras, 2009) to measure the response of the disclosure of new information to financial markets (e.g., announcement of financial results, mergers & acquisitions, supervisory actions, etc.) on financial returns.

To determine whether or not the event has an impact on the financial returns, cumulative abnormal returns are estimated. This study largely follows Peristian et al. (2010), using the basic Capital Asset Pricing Model (CAPM) to first estimate the normal returns. The CAPM model designed by Sharpe (1964) and Lintner (1965) explains daily stock return R_{jd} using daily market return $STOXX_d$ minus the risk-free interest rate $EURIBOR_d$.

$$R_{jd} = \alpha_{je} + \beta_{je} (STOXX_d - EURIBOR_d) + u_{jde} \quad (25.1)$$

The ordinary least squares (OLS) regression of daily stock returns on the market returns provides the constant α_{je} and market risk sensitivity β_{je} for the calculation of the normal return. The individual stock returns minus the normal return provides estimates for the abnormal returns u_{jde} .

$$u_{jde} = R_{jd} - (\alpha_{je} + \beta_{je} STOXX_d) \quad (25.2)$$

Figure 25.2 shows the cumulative average abnormal returns (CAAR) estimated using daily returns from January 1, 2006 to December 31, 2013. It shows clear patterns of auto-correlation after the failure of Lehman Brothers in September 2008. The estimation window also overlaps with the period of the tested events. This might affect the results of the event study. To limit the likelihood of biased results, a moving estimation window is used. The parameters to calculate the normal returns are estimated using the daily returns on the 60 trading days precluding the 5 trading days before the announcement of the exercise, to limit the likelihood that the event influences the estimates. For the 2010 stress test–related events the parameters are estimated based on the 60 trading days before the disclosure of the methodology, which prevents the estimation window from overlapping with the disclosure of the 2009 stress test results.

In line with Peristian et al. (2010), a three-day event window has been applied, that is, the trading day before the event, the day of the event, and the day after the event. Although financial markets are considered to digest new information immediately, the consequence of the leakage of information on the exercises as well as delayed response to the disclosure can influence abnormal returns before and after the event. The information on the exercises was further sometimes disclosed during the trading day and

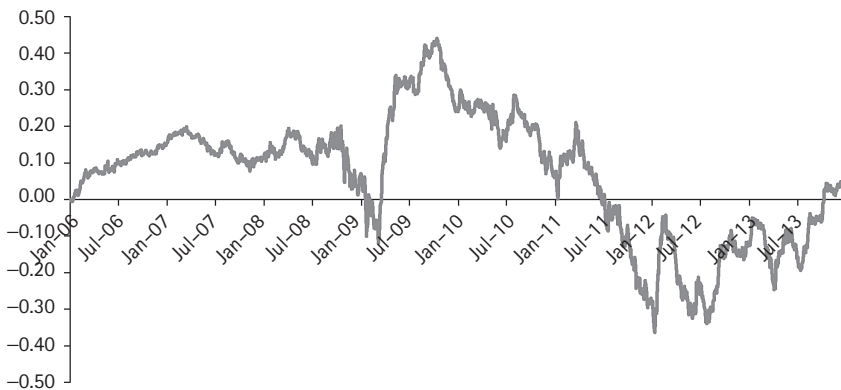


FIGURE 25.2 Cumulative average abnormal return, 2006–2013.

sometimes after closing of the markets. When the data are disclosed after closing (A), the event is for comparison purposes considered to have happened on the first trading day thereafter. Hence, the event day ($d = 0$) is for all exercises the first day at which the information is officially announced and stocks can be traded.

$$CAAR_e = \frac{1}{j} \sum_{j=1}^j \sum_{d=-1}^1 u_{jde} \quad (25.3)$$

The analysis is preformed on all of the viability and transparency exercises conducted by European cross-border banking supervisors in recent years.² In the period from 2009 to 2013 the European Banking Authority (EBA) and its predecessor the Committee of European Banking Supervisors (CEBS) conducted in total six of these exercises, that is, three stress tests (2009, 2010, 2011–1), one capital exercise (2011–2), follow-up on the capital exercise (2012), and finally a transparency exercise (2013). Table 25.1 provides a detailed overview on the characteristics of these exercises. The main difference between the stress test and the capital exercise is that the stress tests analyze the consequences of a potential loss, whereas the capital exercise assesses the impact of a change in valuation (e.g., hold to maturity vs. fair value). The transparency exercise only discloses detailed exposures, which allows third parties to undertake their own stress test or capital exercise.

The CEBS and EBA stress tests have become more stringent in response to criticism, especially that the stress tests were unable to identify the most ailing banks.³ In response, the supervisors increased the capital threshold from the minimum required capital level under Basel II (i.e., 4% Tier 1) in the 2009 stress test to the more stringent Basel III requirement plus markup (i.e., 9% Core Tier 1) in the 2011 capital exercises. Moreover, in the stress tests expected retained earnings were added, which relieved the capital shortfall, while the expected retained earnings were not anticipated in the capital exercises. In turn, the stresses were relaxed in the most recent exercises. The stresses decreased from €400 billion and €566 billion in the 2009 and 2010 stress tests to sovereign buffers of only €115 and €32 billion under the 2011 capital exercise and 2012 follow-up.

The coverage and the level of disclosure also increased progressively. The first stress test conducted by CEBS covered only 22 of the largest banking groups in Europe; the stress test results, the names of the banks, as well as the input data were not disclosed. Because the sample was unknown this exercise has been dismissed for the analyses of

² Besides the exercises conducted by EBA and CEBS, several national supervisors have also that conducted similar exercises. The Banco de España assessed, for instance, the solvency of the largest banks in Spain. See also <http://www.bde.es/bde/en/secciones/prensa/infointeres/reestructuracion/>

³ Dexia might be the most notable example of a bank that required state aid just after passing the stress test. See also De Groen (2011).

Table 25.1 Overview Cross-border Stress Tests of European Banks, 2009–2013

Name	EU-wide stress testing exercise	2010 EU-wide stress testing exercise		2011 EU-wide stress test	EU capital exercise 2011	EU capital exercise 2011 final results	2013 EU-wide transparency exercise
	CEBS	CEBS	EBA	EBA	EBA	EBA	EBA
Leading supervisor							
Estimation window (60 trading days)	05/02/2009	08/04/2010	12/10/2010	28/07/2011	05/07/2012	10/09/2013	
Announcement date of exercise	04/05/2009	30/06/2010	05/01/2011	19/10/2011	26/09/2012	02/12/2013	
Disclosure date methodological note	12/05/2009 (D)	02/12/2009 (A)	13/01/2011 (D)	(26/10/2011 - A)	(26/10/2011 - A)	09/12/2013 (A)	
Disclosure date exercise results	–	07/07/2010 (A)	18/03/2011 (D)	26/10/2011 (A)	(26/10/2011 - A)	–	
Type	01/10/2009 (D)	23/07/2010 (A)	15/07/2011 (A)	08/12/2011 (A)	03/10/2012 (A)	16/12/2013 (A)	
Scope of exercise	Stress test	Stress test	Stress test	Capital exercise	Capital exercise	Transparency exercise	
Number of banks	22	91	91	71	61	64	
% of banking assets	60	65	(90 disclosed)	(65 disclosed)	–	–	
Number of failing institutions	0	7	8	31	4	–	
Shortfall	0	3531	2495	84,683	3658	–	
Base	Dec 2008	Dec 2009	Dec 2010	Sept 2011	June 2012	June 2013	
Stress years	2009 and 2010	2010 and 2011	2011 and 2012	–	–	–	
Capital threshold	4% Tier 1	6% Tier 1	5% Core Tier 1	9% Core Tier 1	9% Core Tier 1	–	
Stresses	Macroeconomic	Macroeconomic	Macroeconomic	sovereign exposures	sovereign exposures	–	
Accumulated maximum stress/charge	€400 billion	€566 billion	€400 billion	€115 billion	€32 billion	–	
Bank-by-bank disclosure of data (Y = Yes; N = No)							
Exercise results	N	Y	Y	Y	Y	N	
Regulatory capital	N	Y	Y	Y	Y	Y	
Exp. to governments	N	Y	Y	Y	Y	Y	
Exp. to other sectors	N	N	Y	N	N	Y	
Include maturities	N	N	Y	Y	Y	Y	

the complete sample. Instead the analysis on the 2009 stress test has been performed on all of the banks included in the sample. The sample for the second stress test by CEBS included already a fourth fold of banks. The 91 banks in the sample cover more than half of the assets in all individual EU member states as well as an extensive sample of ailing banks in Greece and Spain. Moreover, not only was the sample itself disclosed, but also the capital position and exposures to governments. EBA applied a similar sample for its first stress test, while it expanded the disclosure with details on maturities and exposures to other sectors. In the later capital and transparency exercises the sample was limited to the largest banks. Moreover, the capital exercise focused on the capital position and government exposures. The exposures to other sectors were also not disclosed for these exercises.

The information on the exercises was briefed to financial markets at three key events. First, an announcement was made that CEBS and EBA would conduct an exercise on European banks; second, CEBS and EBA disclosed the methodology used for the exercise as well as the sample of banks that were subject to the exercise; and third, the supervisors disclosed the results of the exercise. These events are not distinct for all six exercises. Hence, the methodology of the 2011 capital exercise was disclosed along with the announcement that the exercise would be conducted, and the methodology of the follow-up on the 2011 capital exercise is similar to the methodology of the capital exercise itself. Likewise, the methodology for the 2013 transparency exercise is similar to the format of the data disclosed for the 2011 stress test. Only the first of these events is included in the analyses, to avoid double counting.

Besides the three different events, the cumulative abnormal returns are also compared for different subsamples. These are on the one hand used to test the impact of the different exercises and the consequence of weak sovereigns and business models of the stress-tested banks on the other. The main objective of the stress tests and capital exercises is to identify potential ailing banks. These banks are in the exercises indicated as having a capital shortfall. To see whether these banks also report different abnormal returns, the event study was performed on subsamples of only viable (no shortfall) and nonviable banks (shortfall). Moreover, euro area banks are closely linked to governments. Banks are, for example, important investors in government debt, while systemically important banks like the ones included in the exercises enjoy an implicit government guarantee. The impact of weak governments on the abnormal returns is assessed using two subsamples for respectively banks established in Cyprus, Greece, Ireland, Portugal, and Spain (CGIPS) and the banks established in other countries. The CGIPS all received financial support from the European Financial Stability Facility (EFSF), European Stability Mechanism (ESM), and IMF during the 2010 euro area sovereign debt crisis.

Finally, the impact of different characteristics on abnormal returns is tested using business models. The EBA stress-tested banks are divided into four distinct categories as identified by Ayadi et al. (2011) for 2010. Using clustering analyses on six balance sheet based indicators (i.e., customer deposits, bank liabilities, bank loans, debt liabilities, derivative exposures, and tangible common equity) they find two types of retail-,

wholesale-, and investment-oriented banks. Hence, the banks subject to the exercises of CEBS and EBA are large banks that have multiple activities; the business model analyses look at the activities that are relatively more important for the individual banks. The retail banks engage most in customer lending activities. The retail-focused banks fund this primarily with customer deposits, while for retail-diversified banks capital markets are a more important source for their funds. In turn, the wholesale banks engage relatively more in the intermediation between banks, and investment banks primarily conduct trading and derivatives activities.

Not all banks that have been subject to the CEBS and EBA exercises are listed. Of the 93 distinct banking groups, 61 banks are listed in the sample period from January 1, 2009 to December 31, 2013. The daily closing prices for 57 of these listed banks could be retrieved from the Yahoo Finance website. Table 25.A1 provides a description of all the stress-tested banks and shares. Moreover, the STOXX Europe 600 Index, composed of a large number of small, medium, and large companies across 18 European countries serves as proxy for the market index. The daily index scores are retrieved from the STOXX website. The three-month Euribor rate retrieved from the European Banking Federation website served as the risk-free rate.

25.5 RESULTS

The results of the event study suggest that the CEBS and EBA exercises have been informative to financial market participants. The banks subject to the stress test, on average, reported significant positive returns at the time that more information on the stress test was disclosed (see also Tables 25.2–25.4 and Figures 25.3–25.5). The announcement of the exercises and disclosure led to 1% significant positive abnormal returns. The disclosure of the methodology is significant at 5% for the three-day window. The results on the day that the information was disclosed to the market are for all three events positive and significant at the 1% level. These findings on all the banks subject to the stress tests and capital and transparency exercises support the first hypothesis that an increase of the available information on the resilience of tested banks enhances the average value of these banks.

The information released during the period that the exercises were conducted consisted of both more detailed disclosure of exposures and the identification of ailing banks. The banks that were identified as having insufficient capital (i.e., Nonviable) to resist the adverse economic conditions or unwinding of their government debt portfolio posted positive abnormal returns when the methodology and results were disclosed. The results suggest that the market had anticipated tougher exercises. However, the results are significant only for the one-day window and are based on a small number of observations. The exercises identified in total 43 distinct banks representing 50 observations that were advised or required to strengthen their capital position. About half of these banks were listed at the time that the information concerning the exercises

Table 25.2 Stress-Tested Banks Average Residuals—Exercise Announcement

	-1	0	+1	CAAR	N
All	0.0133***	0.0103***	0.0012	0.0247***	134
Viable	0.0154***	0.0123***	0.0012	0.0289***	93
Nonviable	0.0295	0.0066	0.0141	0.0501	5
<i>Difference</i>	<i>-0.0141</i>	<i>0.0057</i>	<i>-0.0129</i>	<i>-0.0212</i>	<i>98</i>
CGIPS	0.0243***	0.0084	-0.0019	0.0308***	48
Non-CGIPS	0.0071**	0.0113***	0.0029**	0.0213***	86
<i>Difference</i>	<i>0.0172***</i>	<i>-0.0029</i>	<i>-0.0048</i>	<i>0.0095</i>	<i>134</i>
CEBS (2009)	0.007	-0.0228***	-0.0266***	-0.039***	51
CEBS (2010)	-0.0055*	0.0014	-0.0042	-0.0083*	47
EBA (2011-1)	0.036***	0.0218***	0.0075***	0.0653***	51
EBA (2011-2)	—	—	—	—	—
EBA (2012)	—	—	—	—	—
EBA (2013)	0.0055**	0.0056*	-0.0007	0.0103**	36
RT FOC	0.021***	0.0069	0.0026	0.0305***	47
RT DIV	0.0107**	0.0105***	0.0028	0.0239***	46
WHLS	0.0075	0.0001	-0.0096	-0.002	9
INVST	0.0037	0.0168***	-0.0002	0.0203**	24

Cumulative average residuals of stress tested banks by category: CGIPS, Cyprus, Greece, Ireland, Portugal, Spain; RT FOC, retail-focused banks; RT DIV, retail diversified banks; WHLS, wholesale banks; INVST, investment banks.

***, **, * represent significance at 1%, 5%, and 10% levels, respectively.

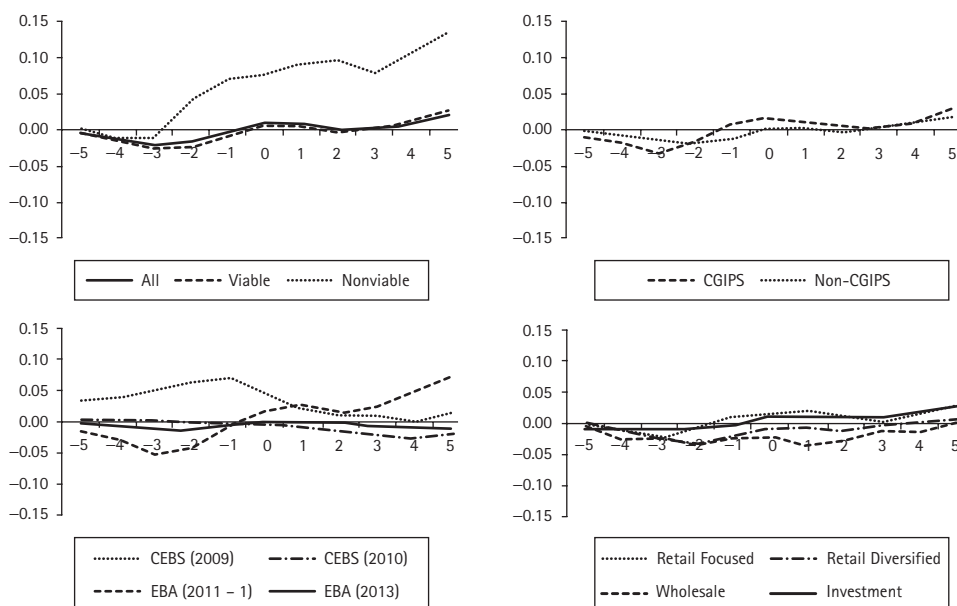


FIGURE 25.3 Cumulative Average Abnormal Returns—Exercise announcement.

Table 25.3 Average Residuals of Stress-Tested Banks—Methodology Disclosure

	-1	0	+1	CAAR	N
All	0.0006	0.0165***	-0.0054**	0.0116**	135
Viable	0.003	0.013***	-0.004	0.012**	113
Nonviable	-0.0117***	0.0334***	-0.0125**	0.0095	22
<i>Difference</i>	<i>0.0147***</i>	<i>-0.0204**</i>	<i>0.0085</i>	<i>0.0025</i>	<i>135</i>
CGIPS	-0.0042	0.0144***	-0.0002	0.0096	46
Non-CGIPS	0.003	0.0176***	-0.008***	0.0126**	89
<i>Difference</i>	<i>-0.0072</i>	<i>-0.0032</i>	<i>0.0078</i>	<i>-0.003</i>	<i>135</i>
CEBS (2009)	—	—	—	—	0
CEBS (2010)	0.0155***	0.0054**	-0.0088***	0.0121**	47
EBA (2011-1)	-0.007***	0.0057***	-0.0023	-0.0036	49
EBA (2011-2)	-0.0078**	0.0423***	-0.0052	0.0301**	39
EBA (2012)	—	—	—	—	0
EBA (2013)	—	—	—	—	0
RT FOC	-0.0044	0.0138***	0.0014	0.0105	44
RT DIV	-0.0001	0.0131***	-0.0137***	-0.0007	49
WHLS	0.0109	0.029*	0.0015	0.0414	11
INVST	0.0017	0.0301***	-0.003	0.0288***	24

Cumulative average residuals of stress tested banks by category: CGIPS, Cyprus, Greece, Ireland, Portugal, Spain; RT FOC, retail-focused banks; RT DIV, retail diversified banks; WHLS, wholesale banks; INVST, investment banks.

***, **, * represent significance at 1%, 5% and 10% levels, respectively.

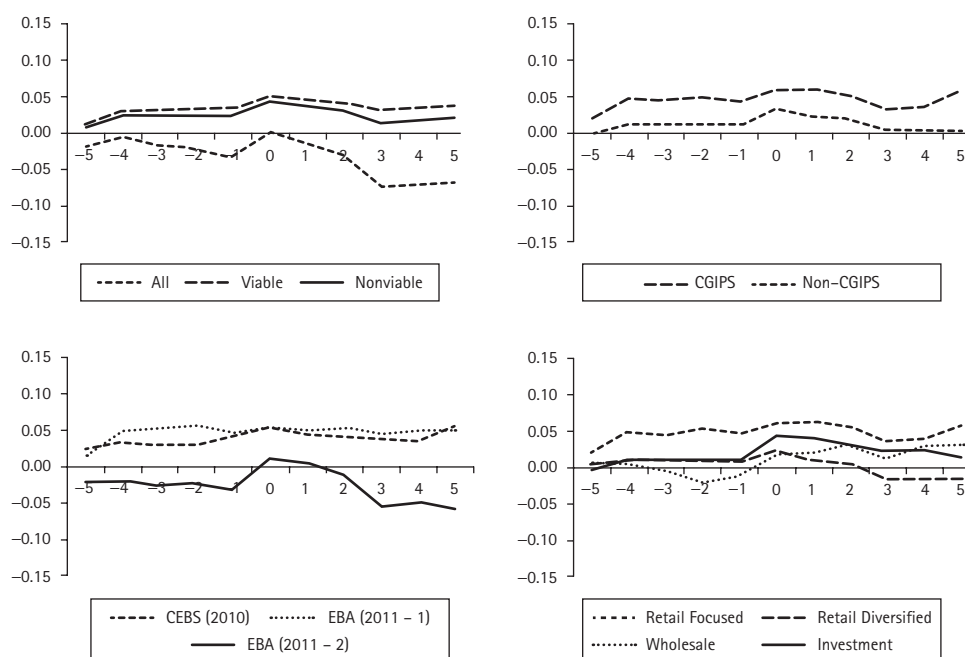


FIGURE 25.4 Cumulative Average Abnormal Returns—Methodology disclosure.

was disclosed. When compared to banks that were not identified as having a capital shortfall (Viable), the results suggest that there is no consistent significant difference between viable and nonviable banks. Hence, the nonviable banks showed, for example, a significant lower return than viable banks when the results were disclosed based on the three-day event window, whereas on the day of the release, the nonviable banks reported a higher abnormal return.

The impact of the exercises on nonviable banks might be partially understated. At least part of the information regarding the stress test results was already signaled to the market or was outdated. Several of the banks that failed the test announced already before the release of the stress test and capital exercise results that they would increase their capital ratios. Hence, they launched plans for deleveraging, changing the capital calibration, issuance of new capital instruments, as well as merger with or takeover by other banks. Moreover, other failing banks mentioned on the day that the results were announced that they would not need additional capital because of deleveraging, retained earnings, and changes in the internal capital calibration models.

In turn, the disclosure of the exposures has led to significant differences in valuation between banks established in different countries. This analysis made a distinction between countries that received financial support from the EFSF, ESM, and IMF and other European countries. The banks in CGIPS quoted, on average, significantly higher abnormal returns in response to the disclosure of the results. Yet, the analysis does not provide a motivation for the deviation. But because the disclosed data primarily provided more detailed country exposures than previously available, it is likely that the banks in CGIPS countries had more exposures to the stronger non-CGIPS countries than anticipated and/or the reverse.

With regard to the individual exercises, the results suggest that a combination of both stress test or capital exercise and extensive disclosure have been most effective. On the first stress test hardly any information was disclosed to the public. Initially the announcement of the first CEBS stress test in 2009 led to a significant negative abnormal return, like in the United States (Peristian et al., 2010), whereas the brief disclosure of the test results thereafter did not have any significant consequences for the abnormal returns. The disclosure of only transparency exercise results in 2013 also did not lead to significant abnormal returns. In turn, the disclosure of some of the other mixed exercises did. The market, for instance, warmly welcomed the announcement of the first EBA stress test in 2011. The banks reported large average positive returns in response to the announcement, significant at 1% for both the one- and three-day event windows. The market perceived the disclosure of the methodology and results that followed as not very informative, in contrast with the other stress tests and capital exercises linked with transparency exercises that posted significant abnormal returns in the three days surrounding the disclosure. The returns were positive except for the capital exercise in 2011, in which most failing banks were concentrated. The results on the day of the event are further not all significant. The results on the third hypothesis suggest merits of more transparency, but the results are not conclusive.

Table 25.4 Average Residuals of Stress-Tested Banks—Results Disclosure

	-1	0	+1	CAAR	N
All	-0.0064***	0.0083***	0.0101***	0.0129***	211
Viable	-0.004**	0.0093***	0.0164***	0.0222***	148
Nonviable	-0.0261***	0.0165**	-0.0059	-0.0116	27
Difference	0.0221***	-0.0072	0.0223**	0.0338**	175
CGIPS	-0.0048	0.0174***	0.018***	0.0307***	69
Non-CGIPS	-0.0072***	0.0039*	0.0063**	0.0042	142
Difference	0.0024	0.0135**	0.0117**	0.0264***	211
CEBS (2009)	0.0022	0.002	-0.0024	0.0014	51
CEBS (2010)	-0.0129***	0.026***	0.0466***	0.0597***	47
EBA (2011-1)	-0.005	-0.0006	0.0137***	0.0082	51
EBA (2011-2)	-0.0117*	0.0025	-0.021***	-0.0274***	39
EBA (2012)	0.0007	0.0146***	0.0065	0.0217**	38
EBA (2013)	-0.0015	-0.0022	-0.0036	-0.0074	36
RT FOC	-0.0066	0.0104**	0.0165***	0.0232***	68
RT DIV	-0.0058**	0.0055*	0.0041	0.0038	80
WHLS	-0.0076	0.0191	0.0135	0.025	15
INVST	-0.0067***	0.0056*	0.0076	0.0065	40

Cumulative average residuals of stress tested banks by category: CGIPS, Cyprus, Greece, Ireland, Portugal, Spain; RT FOC, retail-focused banks; RT DIV, retail diversified banks; WHLS, wholesale banks; INVST, investment banks.

***, **, * represent significance at 1%, 5% and 10% levels, respectively.

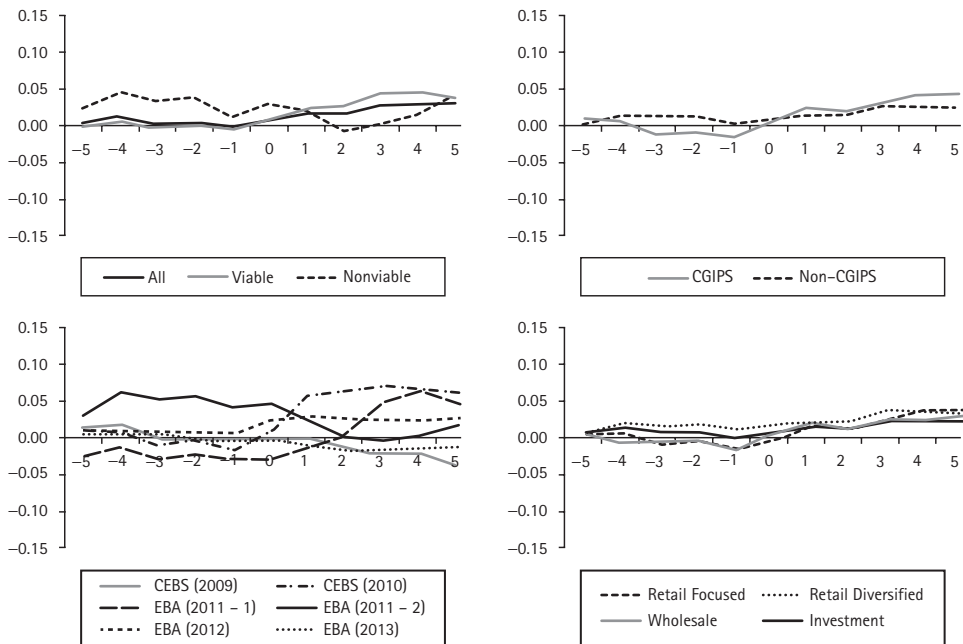


FIGURE 25.5 Cumulative Average Abnormal Returns—Exercise results.

Table 25.5 CAAR Differences between Business Models

	RT FOC	RT DIV	WHLS	INVST
Exercise announcement				
RT FOC	X	X	X	X
RT DIV	0.0066	X	X	X
WHLS	0.0325	0.0259	X	X
INVST	0.0102	0.0036	0.0223	X
Methodology disclosure				
RT FOC	X	X	X	X
RT DIV	0.0113	X	X	X
WHLS	-0.0309	-0.0421	X	X
INVST	-0.0183	-0.0296***	-0.0126	X
Results disclosure				
RT FOC	X	X	X	X
RT DIV	0.0194**	X	X	X
WHLS	-0.0017	-0.0212	X	X
INVST	0.0167	-0.0027	-0.0184	X

Differences between cumulative average abnormal returns (CAAR) of stress tested banks by business model: RT FOC, retail-focused banks; RT DIV, retail diversified banks; WHLS, wholesale banks; INVST, investment banks.

***, **, * represent significance at 1%, 5% and 10% levels respectively.

Finally, the event study was performed for the four subsamples of business models. Table 25.5 provides an overview of the differences between the results for the four distinct business models retrieved from Ayadi et al. (2011). The average cumulative abnormal returns are not significantly different between the business models, with the exception of the response to methodology disclosure on diversified retail and investment banks as well as the disclosure of the results on retail-focused and diversified banks. Based on the limited findings retrieved from the event study the fourth hypothesis is partially rejected. The activities of the bank have only limited impact on the response of the bank to the tested exercises.

25.6 CONCLUDING REMARKS AND POLICY RECOMMENDATIONS

The results on the impact of the stress tests conducted by EBA and its predecessor CEBS suggest that the announcements of the test itself, methodology, and results were informative at the aggregate level and led to significant positive market returns. The exercises further slightly promoted the reintegration of banks established in countries

with distressed public finances and banks established in non-distressed countries. On the other hand, the exercises were not informative for the identification of viable and nonviable banks and not sensitive to the business models of the participating banks.

An improvement of the applied methodology of the exercises could contribute to their effectiveness, which in turn would make transparency useful. The stress tests and capital exercises have been subject to substantial critique. In fact, the researched tests have not been able to identify most of the banks that failed to meet the capital requirements before they actually required government aid and/or central bank support. The main flaws in the tests are summarized as follows.

1. In the exercises capital ratios based on internal models were used as the threshold. Banks are used to adapting their core Tier 1 ratio. The application of internal models allows banks to optimize their total risk-weighted assets. To reduce this effect, the results of the benchmark exercise could be used to harmonise the capital base (Ayadi et al., 2012a, b).
2. Lack of good information. The stress test by EBA was done based on partial, incomplete, and non-harmonized data covering only a very short time period.⁴ This in itself already increases the likelihood that the results of the stress test are incorrect and incomplete as well as limit the possibility for time series analyses. To do time series analyses a longer period of comparable public data is needed (harmonized format, covering all exposures and performance above a minimum threshold by maturity).
3. The stresses were too subtle and following the cycle/sentiment. The banks in the stress tests were basically tested only for some of the risks to which they were already exposed at the time of the test (i.e., economic downturn and sovereign debt holdings), but the tests were not able to spot “future” stresses. To identify stresses, ongoing developments, for example, (sharp) increases in exposures and/or the introduction of new products should have been examined.
4. A top-down approach was followed. Banks in general try to hide their weaknesses and losses. To uncover these “hidden losses,” a more detailed assessment of the effective assets and liabilities could be useful. The stress tests were, for instance, not able to identify the Dutch SNS bank, Irish Anglo-Irish Bank, and the Spanish savings banks that understated the impairments on their loan

⁴ “The quality of the disclosed data leaves room for improvement. Data reporting needs to be further harmonised and streamlined across countries. The Lloyds Banking Group in the UK, for example, disclosed its credit exposures only for the domestic market, declining to disclose exposures in Ireland, as they would fall below the disclosure threshold. Likewise UniCredit did not reveal country-by-country data for branches of its Austrian subsidiary Bank Austria. Furthermore, the EBA mentions in the notes that there might be instances where banks have included exposures to public sector entities as institutions, whereas others may have included them as sovereign debt. The dataset is very much focused on country exposures, while funding sources that are important for examining the liquidity positions are neglected” Lannoo (2011, p. 2).

portfolios. To estimate the actual size of the impairments the Spanish authorities ordered a detailed assessment on the loan books.⁵ A detailed assessment of the assets would also contribute to more accurate results of the EBA stress tests.

5. Neglected specific risks of banks. In the stress tests the banks were subject to similar kinds of general stresses that target the most important exposures. Many of the banks in the stress test, however, have highly concentrated exposures to specific activities or specific risks, which might affect the viability of the bank but not be considered in the stress test. This is, for example, one of the reasons that Belgian/French Dexia, which mainly finances local governments, was not identified as problem bank at an early stage. Adjusting the stresses for differences in activities/business models reduces the likelihood that certain categories of banks are overlooked (Ayadi et al., 2011, 2012a).

The EU stress test and capital exercises are still works in progress. More reliable results based on more transparency and public disclosure will be beneficial for (national) taxpayers; as a result of earlier warnings, the costs of interventions can be reduced. Moreover, the results for banks are more ambiguous. They could be confronted with a higher reporting burden. In turn, some banks save costs as a result of the reduction of “unnecessary” capital increases.

This study aimed at assessing the usefulness of transparency using the disclosure of stress tests and capital exercises for signaling the stability of the European banking sector to market stakeholders. Owing to a lack of well comparable and frequent risk and performance indicators for all banks subject to the exercises, it had to focus exclusively on listed banks. Albeit these banks represent the majority of the banks in the tests, they might not be fully representative of all banks. Hence, the exchange legislations require listed banks to disclose more information than non-listed banks. A study on all or exclusively on non-listed banks might therefore lead to different results.

⁵ For more information: <http://www.bde.es/bde/en/secciones/prensa/infointeres/reestructuracion/valoracionesind/>.

APPENDIX

Table 25.A1 Stress-Tested Banks

No.	Name bank (Country)	Listed	Business model (2010)	CEBS 2010		EBA 2011 (1)		EBA 2011 (2)		EBA 2012		EBA 2013		Std.	
				Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	N	Mean	Max.
1	Erste Group (AT)	Y	Retail foc.	Y	—	Y	—	Y	743	Y	—	Y	1240	24.1	7.3
2	Raiffeisen Zentralbank Oesterreich (AT)	N	Retail foc.	Y	—	N	—	Y	2127	Y	—	Y	—	—	—
3	Raiffeisen Bank International (AT)	Y	Retail foc.	N	—	Y	—	N	—	N	—	N	1240	30.3	7.4
4	Oesterreichische Volksbank (AT)	Y	Wholesale	N	—	Y	160	Y	1053	N	—	N	214	62.5	55.4
5	Dexia (BE)	Y	Wholesale	Y	—	Y	—	Y	6313	N	—	N	1259	2.1	2.0
6	KBC Bank (BE)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1280	25.2	8.7
7	Cyprus Popular Bank (CY)	Y	Retail foc.	Y	—	Y	—	Y	1971	Y	—	N	121	0.05	0.02
8	Bank of Cyprus Public (CY)	Y	Retail foc.	Y	—	Y	—	Y	1560	Y	730	Y	1052	2.4	1.8
9	Danske Bank (DK)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1250	106.2	25.2
10	Jyske Bank (DK)	Y	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	1250	196.3	42.1
11	Sydbank (DK)	Y	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	1250	120.3	22.3
12	Nykredit (DK)	N	Retail div.	N	—	Y	—	Y	—	Y	—	Y	—	—	—
13	OP-Pohjola Group (FI)	N	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
14	BNP Paribas (FR)	Y	Investment	Y	—	Y	—	Y	1476	Y	—	Y	1282	44.5	9.7
15	Credit Agricole (FR)	Y	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	1081	5.6	2.3
16	BPCE (FR)	N	Wholesale	Y	—	Y	—	Y	3717	Y	—	Y	—	—	—
17	Societe Generale (FR)	Y	Investment	Y	—	Y	—	Y	2131	Y	—	Y	1282	34.2	10.7
18	Deutsche Bank (DE)	Y	Investment	Y	—	Y	—	Y	3239	Y	—	Y	1274	38.1	8.8
19	Commerzbank (DE)	Y	Investment	Y	—	Y	—	Y	5305	Y	—	Y	1273	35.1	23.4
20	Hypo Real Estate Holding (DE)	Y	Wholesale	Y	1245	Y	—	Y	—	Y	—	Y	200	1.4	0.3
21	Landesbank Baden-Württemberg (DE)	N	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
22	Bayerische Landesbank (DE)	N	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
23	DZ Bank (DE)	N	Wholesale	Y	—	Y	—	Y	353	Y	—	Y	—	—	—
24	Norddeutsche Landesbank (DE)	N	Wholesale	Y	—	Y	—	Y	2489	Y	—	Y	—	—	—

(Continued)

Table 25.A1 (Continued)

No.	Name bank (Country)	Listed	Business model (2010)	CEBS 2010		EBA 2011 (1)		EBA 2011 (2)		EBA 2012		EBA 2013		Std.	
				Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	N	Mean	dev. Min. Max.
25	Deutsche Postbank (DE)	Y		Y	—	N	—	N	—	Y	—	N	1274	25.3	6.2 7.2 38.8
26	WestLB (DE)	N	Investment	Y	—	Y	—	Y	224	N	—	N	—	—	—
27	HSB Nordbank (DE)	N	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
28	Landesbank Hessen-Thüringen/Helaba (DE)	N	Wholesale	Y	—	N	—	Y	1497	Y	—	Y	—	—	—
29	Landesbank Berlin (DE)	Y	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	894	3.7	0.6 2.1 4.6
30	DEKABANK (DE)	N	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
31	WGZ Bank (DE)	N	Wholesale	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
32	National Bank of Greece (GR)	Y	Retail foc.	Y	—	Y	—	N	—	N	—	Y	1240	71.9	71.2 2.0 277.9
33	EFG Eurobank Ergasias (GR)	Y	Retail foc.	Y	—	Y	58	N	—	N	—	Y	1243	33.2	31.0 0.5 126.1
34	Alpha Bank (GR)	Y	Retail foc.	Y	—	Y	—	N	—	N	—	Y	1243	3.8	3.2 0.4 14.2
35	Piraeus Bank Group (GR)	Y	Retail foc.	Y	—	Y	—	N	—	N	—	Y	1243	28.9	33.8 0.9 133.0
36	ATE Bank (GR)	Y	Retail foc.	Y	243	Y	713	N	—	N	—	N	889	8.5	6.6 0.1 23.6
37	TT Hellenic Postbank (GR)	Y	Retail foc.	Y	—	Y	—	N	—	N	—	N	911	2.9	1.7 0.2 6.4
38	OTP Bank (HU)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
39	FHB Bank (HU)	Y		Y	—	N	—	N	—	N	—	N	—	—	—
40	Bank of Ireland (IE)	Y	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	1139	0.6	0.7 0.1 3.4
41	Allied Irish Banks (IE)	Y	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	933	0.7	0.8 0.0 3.4
42	Permanent TSB (IE)	Y	Wholesale	N	—	Y	—	Y	—	Y	—	Y	1264	1.1	1.5 0.0 5.9
43	Unicredit (IT)	Y	Retail foc.	Y	—	Y	—	Y	7974	Y	—	Y	1270	11.8	7.6 2.3 27.7
44	Intesa Sanpaolo (IT)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1271	1.89	0.63 0.87 3.20
45	Monte dei Paschi di Siena (IT)	Y	Retail div.	Y	—	Y	—	Y	3267	Y	1728	Y	1270	0.67	0.44 0.15 1.57
46	Banco Popolare (IT)	Y	Retail div.	Y	—	Y	—	Y	2731	Y	—	Y	1271	2.8	1.9 0.8 7.2
47	UBI Banca (IT)	Y	Retail div.	Y	—	Y	—	Y	1393	Y	—	Y	1184	5.9	2.9 1.8 11.7
48	Banque et Caisse d'Epargne de L'Etat (LU)	N	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	—	—	—
49	Banque Raiffeisen (LU)	N		Y	—	N	—	N	—	N	—	N	—	—	—

No.	Name bank (Country)	Listed	Business model (2010)	CEBS 2010		EBA 2011 (1)		EBA 2011 (2)		EBA 2012		EBA 2013		Std. Mean dev.	Min.	Max.
				Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	Shortfall			
50	Bank of Valetta (MT)	Y	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	—	—	—	—
51	ING Bank (NL)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	—	1282	7.2	12.6
52	Rabobank Group (NL)	N	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	—	—	—	—
53	ABN Amro Bank (NL)	N	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	—	—	—	—
54	SNS Bank (NL)	Y	Retail div.	Y	—	Y	—	Y	159	Y	—	Y	1049	3.0	1.3	6.2
55	Dnb Nor Bank (NO)	Y	Retail div.	N	—	Y	—	Y	1520	Y	—	Y	1256	70.5	17.7	109.9
56	PKO Bank Polski (PL)	Y	Retail foc.	Y	—	Y	—	Y	—	Y	—	Y	1247	36.1	5.4	46.8
57	Caixa Geral de Depósitos (PT)	N	Retail div.	Y	—	Y	—	Y	1834	Y	—	Y	—	—	—	—
58	Banco Comercial Português (PT)	Y	Retail foc.	Y	—	Y	—	Y	2130	Y	—	Y	1282	0.42	0.31	1.07
59	Espírito Santo Financial Group (PT)	Y	Retail div.	Y	—	Y	—	Y	1597	Y	—	Y	1282	2.4	1.6	6.8
60	Banco BPI (PT)	Y	Retail div.	Y	—	Y	—	Y	1389	Y	—	Y	1207	1.27	0.57	2.54
61	Nova Ljubljanska Banka (SI)	N	Retail div.	Y	—	Y	—	Y	320	Y	—	Y	—	—	—	—
62	Nova Kreditna Banka Maribor (SI)	Y	Retail div.	N	—	Y	—	Y	—	Y	76	Y	1227	6.5	4.5	15.3
63	Grupo Santander (ES)	Y	Retail div.	Y	—	Y	—	Y	15,302	Y	—	Y	1278	7.3	2.0	11.8
64	Grupo BBVA (ES)	Y	Retail foc.	Y	—	Y	—	Y	6329	Y	—	Y	1278	8.1	2.0	13.2
65	BFA-Bankia (ES)	Y	Retail foc.	Y	—	Y	—	Y	1329	N	—	N	617	140.9	142.1	376.9
66	la Caixa (ES)	N	Retail div.	Y	—	Y	—	Y	630	Y	—	Y	—	—	—	—
67	Liberbank (ES)	Y	Retail foc.	Y	—	Y	—	Y	—	N	—	N	162	0.53	0.08	0.72
68	Banco Popular Español (ES)	Y	Retail foc.	Y	—	Y	—	Y	2581	Y	—	Y	1278	17.0	9.7	37.6
69	Banco de Sabadell (ES)	Y	Retail foc.	Y	—	Y	—	N	—	N	—	N	1279	2.82	1.01	5.04
70	CatalunyaCaixa (ES)	N	Retail foc.	Y	1032	Y	75	N	—	N	—	N	—	—	—	—
71	NovacaixaGalicia (ES)	N	Retail foc.	Y	—	Y	—	N	—	N	—	N	—	—	—	—
72	Grupo BMN (ES)	N	Retail foc.	Y	—	Y	—	N	—	N	—	N	—	—	—	—
73	Bankinter (ES)	Y	Retail foc.	Y	—	Y	—	N	—	N	—	N	—	—	—	—
74	Caja España-Duero (ES)	N	Retail foc.	Y	127	Y	—	N	—	N	—	N	1278	5.0	1.8	9.7
75	Grupo Banca Cívica (ES)	Y	Retail foc.	Y	406	Y	—	N	—	N	—	N	—	—	—	—
76	Ibercaja (ES)	N	Retail foc.	Y	—	Y	—	N	—	N	—	N	—	—	—	—

(Continued)

Table 25.A1 (Continued)

No.	Name bank (Country)	Listed	Business model (2010)	CEBS 2010		EBA 2011 (1)		EBA 2011 (2)		EBA 2012		EBA 2013		Std.	
				Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	Shortfall	Included	N	Mean	dev. Min. Max.
77	Unicaja (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
78	Banco Pastor (ES)	Y		Y	—	Y	317	N	—	N	—	N	790	4.1	0.9 2.7 6.2
79	Caja SOL (ES)	N		Y	—	N	—	N	—	N	—	N	—	—	—
80	Grupo Bbk (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
81	Unnim Caixa (ES)	N		Y	270	Y	85	N	—	N	—	N	—	—	—
82	Kutxa (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
83	Grupo Caja3 (ES)	N		Y	—	Y	140	N	—	N	—	N	—	—	—
84	Cajasur (ES)	N		Y	208	Y	—	N	—	N	—	N	—	—	—
85	Banca March (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
86	Banco Guipuzcoano (ES)	N		Y	—	N	—	N	—	N	—	N	—	—	—
87	Caja Vital (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
88	Caixa Ontinyent (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
89	Colonya (ES)	N		Y	—	Y	—	N	—	N	—	N	—	—	—
90	CAM (ES)	Y		N	—	Y	947	N	—	N	—	N	731	5.4	1.46 0.88 7.4
91	Nordea (SE)	Y	Investment	Y	—	Y	—	N	—	N	—	N	1251	66.9	9.5 39.5 86.7
92	SEB (SE)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1255	50.8	11.9 19.9 84.8
93	Svenska Handelsbanken (SE)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1256	211.9	46.4 85.5 317.3
94	SWEDBANK (SE)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1260	99.5	36.7 18.4 181.6
95	Royal Bank of Scotland (UK)	Y	Investment	Y	—	Y	—	Y	—	Y	—	Y	1262	345	93 103 581
96	HSPC (UK)	Y	Investment	Y	—	Y	—	Y	—	Y	—	Y	1261	622.4	80.5 349.0 770
97	Barclays (UK)	Y	Investment	Y	—	Y	—	Y	—	Y	—	Y	1262	260.2	65.0 51.2 383.6
98	Lloyds Banking Group (UK)	Y	Retail div.	Y	—	Y	—	Y	—	Y	—	Y	1262	57.9	20.8 21.8 140.7
	Count total	61	72	91	7	90	8	65	31	61	4	64	57	57	57 57

REFERENCES

- Akerlof, G. A. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics* 84(3), 488–500.
- Ayadi, R. (2008). Implementation of Basel II in Europe in the midst of turbulence. CEPS Taskforce Report.
- Ayadi, R., Arbak, E., and de Groen, W. P. (2011). *Business Models in European Banking: A Pre-and Post-crisis Screening*. CEPS. <http://www.ceps.eu/book/business-models-european-banking-pre-and-post-crisis-screening>.
- Ayadi, R., Arbak, E., and de Groen, W. P. (2012a). *Regulation of European Banks and Business Models: Towards a New Paradigm?* CEPS. <http://www.ceps.eu/book/regulation-european-banks-and-business-models-towards-new-paradigm>.
- Ayadi, R., Arbak, E., and de Groen, W. P. (2012b). Implementing Basel III in Europe: Diagnosis and avenues for improvement. CEPS Policy Brief. <http://www.ceps.eu/book/implementing-basel-iii-europe-diagnosis-and-avenues-improvement>.
- Blaschke, W., Jones, M. T., Majnoni, G., and Martinex Peria, S. (2001, June). Stress testing of financial systems: An overview of issues, methodologies, and FSAP experiences. IMF Working Paper. Washington, DC: International Monetary Fund.
- Boot, A. W. A., and Schmeits, A. (2000). Market discipline and incentive problems in conglomerate firms with applications to banking. *Journal of Financial Intermediation* 9(3), 240–273.
- Boss, M., Krenn, G., Puh, C., and Summer, M. (2006). Systemic risk monitor: A model for systemic risk analysis and stress testing of banking systems. *Financial Stability Report* 11, 83–95.
- Campbell, J. Y., Lo, A. W., and MacKinlay, A. C. (1997). *The Econometrics of Financial Markets*. Princeton, NJ: Princeton University Press.
- Cardinali, A., and Nordmark, J. (2011). How informative are bank stress tests? Bank opacity in the European Union. Master Thesis, Lund University.
- CEBS. (2009). CEBS’s press release on the results of the EU-wide stress testing exercise. <http://www.eba.europa.eu/documents/10180/15977/CEBS-2009-180-Annex-2-%28Press-release-from-CEBS%29.pdf>.
- Cordella, T., and Yeyati, E. L. (1998). Public disclosure and bank failures. *IMF Staff Papers*, 45(1).
- De Groen, W. P. (2011, October). A closer look at Dexia: The case of the misleading capital ratios. CEPS Commentary.
- EC, ECB, and CEBS. (2010). Publication of the results of the EU-wide stress-testing exercise. Joint press release. http://www.ecb.europa.eu/press/pr/date/2010/html/pr100723_1.en.html.
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance* 25(2), 383–417.
- Haldane, A. G. (2009). Why banks failed the stress test. Speech at Marcus-Evans Conference on Stress-Testing, February 9–10.
- Hyttinen, A., and Takalo, T. (2000). Enhancing bank transparency: A reassessment. *European Finance Review* 6(3), 429–445.
- Hyttinen, A., and Takalo, T. (2004). Preventing systemic crises through bank transparency. *Economic Notes* 33(2), 257–273.
- JP Morgan. (1997). CreditMetrics.™ – Technical Document, New York.

- Lannoo, K. (2011). The second EU bank stress test: Further work in progress. CEPS Commentary. <http://www.ceps.eu/book/second-eu-bank-stress-test-further-work-progress>.
- Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *Review of Economics and Statistics* 47(1), 13–37.
- Longin, F. M. (2000). From value at risk to stress testing: The extreme value approach. *Journal of Banking & Finance* 24(7), 1097–1130.
- Malkiel, B. (1992). Efficient market hypothesis. In *New Palgrave Dictionary of Money and Finance*, eds. P. Newman, M. Milgate and J. Eatwell. London: Macmillan, 739–744.
- Mikkelson, W. H., and Partch, M. M. (1986). Valuation effects of security offerings and the issuance process. *Journal of Financial Economics* 15(1–2), 31–60.
- Morgan, D. (2002). Rating banks: Risk and uncertainty in an opaque industry. *The American Economic Review* 92(4), 874–888.
- Peristiani, S., Morgan, D. P., and Savino, V. (2010). The information value of the stress test and bank opacity. Federal Reserve Bank of New York Staff Reports No. 460.
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *Journal of Finance* 19(3), 425–442.
- Sorge, M., and Virolainen, K. (2006). A comparative analysis of macro stress-testing methodologies with application to Finland. *Journal of Financial Stability* 2(2), 113–151.
- Staikouras, S. K. (2009). An event study analysis of international ventures between banks and insurance firms. *Journal of International Financial Markets, Institutions and Money* 19(4), 675–691.

AUTHOR INDEX

- Aboody, D., 484
Abramovitz, M., 219
Abreo, L., 502
Acemoglu, D., 201, 211
Ackert, L., 342, 345
Ad, J., 229
Adam, T. R., 502, 503
Ades, A., 323
Admati, A. R., 21, 361, 365, 371
Adrian, T., 485
Adut, D., 428
Aerts, W., 371, 372
Aggarwal, R., 389, 393, 394, 395, 396, 407
Aghion, P., 14, 200, 203, 396
Ahmad, N., 437
Ahmed, A. S., 482
Aker, J. C., 291
Akerlof, G. A., 7, 144, 245, 406, 525
Albæk, S., 154–155, 292
Albornoz, F., 24
Albrecht, J., 212, 290
Alesina, A., 404
Algan, Y., 14, 396
Allayannis, G., 502, 503, 504
Allen, F., 486
Allen, J., 292
AlNajjar, F., 344
Alsaeed, K., 463
Alt, J. E., 19, 99, 100, 101, 104, 105, 110, 349
Altman, E. I., 124, 126, 140
Alvarez, J. L., 350
Amar, A. R., 58
Anda, J., 188
Anderson, S. P., 289, 348
Andersson, C., 206
Anderton, R., 300
Andrén, N., 294
Andrews, L., 348
Ang, C.-L. Davies, M., 343
Angeletos, G.-M., 23
Angrist, J., 206, 211
Annim, S. K., 447
Antonucci, T., 200
Apel, M., 91
Arbak, E., 526, 530, 536, 537, 538
Arcelus, F. R., 490
Archambault, J. J., 464
Archambault, M. E., 464
Armendariz, B., 435, 437
Armstrong, C. S., 425
Arnold, E., 227, 231, 233
Arreda, P., 152
Arrow, K., 243, 248
Arun, T., 440, 441
Ashenfelter, O., 244
Asplund, M., 295, 297, 298
Atwood, T. J., 490
Austen-Smith, D., 348
Autor, D. H., 244, 245
Avgouleas, E., 280
Axelrod, R., 148
Ayadi, R., 523, 526, 530, 536, 537, 538
Ayers, B. C., 490
Babbel, D. F., 120
Bac, M., 326, 331
Bachis, E., 297
Bachram, M., 183
Baek, I., 121
Bagwell, K., 287
Baker, H. K., 123
Baldwin, R. E., 300
Balic, A., 464
Bandopadhyaya, A., 121
Banerjee, A. V., 23

- Bar, F., 234
Barclay, M. J., 429
Bardhan, P., 324
Barlev, B., 485
Barres, L., 448, 449
Barro, R., 17
Barth, J. R., 262, 270
Barth, M. E., 457, 477, 482, 483, 484
Bartram, S., 504
Bassanini, A., 211
Bastida, F., 106
Bauman, C. C., 490
Bauman, M. P., 490
Baumert, J., 206
Baye, M. R., 291
Beaver, W. H., 482, 483
Bebchuk, L. A., 416, 423
Beck, T., 393, 407
Becker, G. S., 243, 248, 374, 375, 377, 378
Beechy, T. H., 490
Beekes, W., 362, 364
Beers, D., 120
Begg, I., 86, 112
Beisland, L. A., 441, 442, 448, 449, 450
Bekkers, R., 222
Belanger, P., 483
Bell, R. G., 187, 188
Bellman, S., 296
Benabou, R., 201
Benink, H., 264
Benito, B., 106
Bergek, A., 231
Berger, P. G., 366–367
Bergman, M., 108
Berkman, H., 502
Berkman, L., 200
Bernanke, B. S., 87, 90, 107
Bernard, V. L., 482
Bernstein, D. E., 60
Bersch, K., 304
Berton, M. L., 342
Bertozi, S., 120
Bertraut, C., 393, 394
Besanko, D., 149, 158
Besley, T., 7, 102, 103, 445
Betts, J. R., 204
Bhagwati, J., 177
Bhattacharya, S., 389, 396
Bhur, N., 464
Biddle, G. C., 462, 487
Bidwell, M., 378, 385
Bies, R., 349
Bikhchandani, S., 23
Bilbao-Osorio, B., 18
Binstock, R. H., 200
Bizjak, J., 424
Bjørnland, H. C., 88
Bjornskov, C., 404
Black, E. L., 466
Blair, R. D., 146
Blanchet, J., 477
Blanke, J., 18
Blaschke, W., 522, 524
Blinder, A. S., 68, 69
Blomström, M., 311
Blum, W., 206
Blumenfeld, P. C., 207
Blundell-Wignall, A., 267, 280
Boddewyn, J. J., 349
Bodie, Z., 121, 126
Bodnar, G. M., 503
Boersch-Supan, A., 200
Boersma, M., 351
Boesso, G., 463
Boivin, J., 296, 299
Bolton, G., 348
Bonaci, C. G., 486
Bonnet, C., 288
Boot, A. W. A., 23, 526
Booth, A., 211
Borghans, L., 212
Borjas, G., 247
Bork, R. H., 60
Borrás, S., 228, 230, 233
Boss, M., 524
Botosan, C. A., 362, 461
Bourjade, S., 160
Braendle, U. C., 361
Brand, C., 90
Brandão-Marques, L., 19
Brandeis, L., 323, 330
Braun, D., 230
Brender, A., 105
Brenkers, R., 295

- Brennan, G., 34
 Brewer, T. L., 183, 310, 349
 Brockman, P., 429
 Brousseau, C., 483
 Brown, A. E., 417
 Brown, G. W., 503, 504
 Brown, J. R., 192, 291
 Brown, P., 362, 364
 Brown, T. J., 342
 Browning, E. K., 146
 Bruett, T., 448, 449
 Brunello, G., 203, 211
 Brunner, M., 206
 Bryans, J., 345
 Buccirossi, P., 155
 Buchanan, J. M., 34
 Buchner, B., 192
 Buckley, P. J., 351, 406
 Buffet, W., 498
 Buitter, W. H., 101
 Bujaki, M., 463
 Buncic, D., 90
 Bunker, B. B., 351, 405
 Burdett, K., 290
 Burguet, R., 342, 348
 Burns, N., 428
 Burstein, A., 293
 Bushee, B., 342
 Bushman, R. M., 15, 363, 365–366, 371, 373, 390,
 399, 400–403, 401t–402t, 404, 407, 409,
 457, 465
 Bwakira, L., 464

 Cabolis, C., 296
 Caceres, C., 121
 Cacioppo, J. T., 200
 Cadman, B., 424
 Cahan, S. F., 488
 Cahuc, P., 14, 396
 Cai, H., 287
 Cai, J., 421
 Cairns, D., 480
 Calhoun, M., 307
 Calmfors, L., 98, 112
 Calsyn, J., 160
 Campbell, J. R., 88, 90
 Campbell, J. Y., 526
 Campbell, T., 344
 Cannon, J. P., 405–406
 Cantor, R., 123
 Cao, Y., 490
 Cappiello, L., 485
 Caprio, G., 262
 Card, D., 210
 Cardinali, A., 524
 Carey, M., 264–265, 280
 Carletti, E., 486
 Carlsson, B., 226, 227, 228, 229, 231
 Carlsson, M., 248
 Carlton, D. W., 154
 Carmassi, J., 279, 280
 Carnahan, I., 490
 Carneiro, P., 201, 210
 Carnes, B. A., 200
 Carpenter, M. A., 457
 Carpenter, S. B., 69
 Carstensen, L. L., 200
 Carter, D. A., 502, 503
 Carter, M. E., 424
 Cassidy, S. M., 502
 Casson, M., 406
 Castanias, R. P., 375
 Cavanaugh, M., 120
 Cedefop., 208, 212
 Celentani, M., 348
 Certo, S. T., 8, 373, 377
 Chambers, D., 487–488
 Chambers, W. J., 120, 122
 Chan, M., 188, 189
 Chandra, A., 290, 295
 Chaoimh, E. N., 253
 Charnes, J. M., 502
 Chattopadhyay, S., 490
 Che, Y. K., 342, 348
 Checci, D., 203
 Chen, Q., 365–366
 Chen, Y., 287
 Cheng, A. C. S., 488
 Chesbrough, H. W., 225
 Cheung, J. K., 488
 Chevalier, J., 18
 Child, J., 349
 Chiswick, B., 247

- Chludek, A. K., 490
Choi, J. H., 487
Chortareas, G., 89, 90
Christen, R. P., 434
Christensen, T. E., 490
Chrystal, K. A., 349
Claiborne, M. C., 463, 464
Clark, R., 292, 296, 299
Clarkson, P. M., 463
Clay-Chambers, J., 207
Clerides, S., 296
Cliffordson, C., 207
Clinch, G., 482
Cline, W. R., 121
Coase, R. H., 14, 389, 390
Cofta, P., 351
Cohen, D. A., 420
Cohen, J., 403
Cohen, S., 234
Collins, D., 447
Combe, E., 152
Compte, O., 348
Congleton, R. D., 34, 38, 44
Connelly, B. L., 8, 373, 377
Conner, K. R., 347
Conrad, J., 504
Constant, R. L., 502
Convery, F., 182
Conyon, M. J., 414, 421
Cook, P., 144
Cooke, T. E., 463
Cooper, M. J., 420
Copestake, C. G., 436
Corbett, R. B., 502
Cordella, T., 526
Core, J. E., 416
Corfee-Morlot, J., 192
Cormier, D., 371, 372
Cornand, C., 332
Coupland, J., 483
Cournot, A., 288
Courtenay, S. M., 488
Coutinho de Arruda, M. C., 344
Cowhey, P., 234
Crabb, P. R., 503
Craig, J., 100
Crane, A., 348
Crawford, V., 348
Crowe, C., 72
Crucini, M. J., 293
Cuervo-Cazurra, A., 323, 324, 332
Cuklerman, A., 78
Cull, R., 441
Cunha, F., 207, 209
Curran, L., 448, 449
Cushman, B., 60

Dacin, P. A., 342
Dahlby, B., 291
Dahmén, E., 226
Daily, C. M., 371
Dalziel, T., 374
Danbolt, J., 483
Dasgupta, S., 502
Davies, M., 343
Davies, P. J., 485
Davis, P., 289, 290
Davis, S., 188
De Franco, G., 422
De Groen, W. P., 526, 528, 530, 536, 537, 538
De Haan, J., 69, 71
de Long, J. B., 7
de Paola, M., 211
de Perthuis, C., 182
de Renzio, P., 15, 98, 99, 103, 107, 110
de Soto, H., 3
Dechow, P. M., 448, 484
Deiss, J., 144, 145f
Delemarle, A., 229
Delman, S. M., 330
DeLong, B., 234
DeMarzo, P., 502
Demertzis, M., 89
Demirguc-Kunt, A., 393, 407, 441
Dempsey, S., 342
Denison, E. F., 219
Dennis, S., 345
Desmond, J., 348
Deutsch, M., 405
Devleeschauwer, A., 404
Dey, A., 420
Dhaliwal, D., 487
Di Tella, R., 323

- Diamond, D. W., 344, 361, 390
 Diamond, P., 17
 Dicks-Mireaux, L., 243
 Dierick, F., 485
 Diermeier, J. J., 393
 DiMaggio, P. J., 372
 Dincer, N. N., 72, 73, 73t, 90
 Djankov, S., 325, 397–403, 401t–402t, 404, 407, 409
 Doh, J., 344, 348
 Doney, P. M., 405–406
 Dow, J. C. R., 243
 Drabek, Z., 19, 307
 Drake, M. S., 490
 Dranove, D., 287
 Drazen, A., 105
 Drydakakis, N., 248
 Drzeniek Hanouz, M., 18
 Du, C., 121
 Dubois, P., 288
 Duchin, R., 272
 Duffie, D., 502
 Dumas, B., 503
 Dumay, X., 204, 205
 Dunning, J., 307
 Dupriez, V., 204, 205
 Duru, A., 342
 Duvendack, M., 436
 Dye, R. A., 362
 Easley, D., 9, 17, 462
 Easterly, W., 404
 Ebbinghaus, B., 246
 Eccher, E. A., 482, 483
 Edelen, R. M., 426
 Eden, L., 325, 344, 348
 Edenhofer, O., 189
 Edquist, C., 228, 233
 Edwards, F., 499, 500
 Efendi, J., 428
 Egelhoff, W. G., 347
 Egenhofer, C., 183
 Eger, C., 483
 Eggleston, K., 391
 Ehrmann, M., 69, 91
 Eichengreen, B., 72, 73, 73t, 90
 Eickelpasch, A., 233
 Eijffinger, S. C. W., 69, 72, 90
 Eisenhardt, K. M., 326, 377, 378
 Ekeli, T., 88
 Elg, L., 226, 228, 230, 233
 Eliassen, K. A., 347, 348
 Eliasson, Å., 229
 Eliasson, G., 229
 Ellerman, D., 182
 Elliot, K., 325
 Elliott, W. B., 465
 Ellis, D., 123
 Ellison, G., 300
 Ellison, S. F., 300
 Eng, L. L., 464
 Engel, C., 293
 Engel, E., 365–366
 Enria, A., 485
 Erchinger, H., 473
 Ergungor, O. E., 395, 396
 Erickcek, G. A., 244
 Ertimur, Y., 421
 Escalona, A., 448, 449
 Eslava, M., 102, 105, 106
 Esteban, J., 24
 Etzione, A., 318
 Evans, C. L., 88, 90
 Evans, R. B., 426
 Evenson, R., 21
 Faber, R. P., 293, 300
 Fader, P. S., 296
 Fairclough, N., 350
 Fama, E. F., 389, 525
 Fan, C. S., 293
 Fan, J. P. H., 462
 Fang, H., 287
 Fang, S. C., 342
 Farber, H., 244
 Faulkender, M., 424
 Faust, J., 79
 Feder, G., 121
 Fenn, G. W., 429
 Ferejohn, J., 34, 44
 Fernandes, N., 414
 Fernandez, R., 200

- Fernando, C. S., 503
Ferreira, M. A., 414
Ferrero, G., 92
Ferri, F., 421
Finlay, P. N., 343
Fischer, C., 294
Fisher, J. D. M., 88, 90
Fishman, B., 207
Fitsch, M., 233
Flachsland, C., 189
Flannery, M. J., 503
Flochel, L., 149
Flues, F., 183
Forssbæck, J., 16, 18, 39, 125, 304, 335, 343
Forza, C., 344
Fox, J., 22
Fracasso, A., 72, 91
Francis, J. R., 371, 450, 461
Frank, C. R., 121
Fransen, T., 192
Fratzscher, M., 69, 91, 93
Freedman, M., 464
Freixas, X., 440
Frenkel, M., 120
Frey, B. S., 14, 16
Friberg, R., 295, 297, 298, 300
Fried, J. M., 416, 423
Fried, L. P., 200
Froot, K. A., 502
Fry, M., 68, 72, 73, 89
Fukuyama, F., 391, 396, 403
Fung, A., 98, 103, 107

Gagnon, J., 93
Gaiha, R., 447
Gaio, C., 365
Galí, J., 82, 200
Gans, J. S., 222
Ganslandt, M., 298
Ganuza, J., 348
Garces, E., 289, 290
Gavazza, A., 108
Ge, W., 448
Geczy, C., 504
Geier, R., 207
Geiger, T., 18

Gelfand, D. I., 160
Gelos, G., 19, 307, 308, 309
Genberg, H., 72, 91
Gendron, M., 483
Gennaioli, N., 122, 242
Geraats, P. M., 24, 69, 70, 71f, 72, 75, 77, 78, 79, 83, 88, 90
Gerlach, S., 121
Gerlach-Kristen, P., 91
Gersbach, H., 78, 83, 87
Ghatak, M., 445
Ghauri, P. N., 304, 341, 342, 343, 347, 348, 350, 351
Giavazzi, F., 83
Gibson, C. B., 405
Gillan, S. L., 462
Gillman, H., 60
Gilsing, V., 227, 231
Ginsburgh, V. A., 289
Gladman, K., 184, 185t
Glennerster, R., 14, 15, 19, 20, 104, 106
Globberman, S., 307
Gobet, M., 150
Goh, L., 425
Goldberg, N., 436, 447
Goldberg, P. K., 294
Goldhaber, D., 206
Goldman, D. P., 200
Goldman, E., 14, 22, 417, 427
Gómez-Biscarri, J., 484
Gomez-Mejia, L. R., 371
Gönenc, R., 157
Goodell, J. W., 389, 393, 395, 396, 407
Goodhart, C. A. E., 258, 259, 280
Goolsbee, A., 291
Gopalakrishnan, V., 488
Gopinath, G., 293
Gosselin, P., 86
Gourinchas, P.-O., 293
Govekar, M., 347
Govier, T., 349
Graham, J. R., 504
Granovetter, M., 252
Granqvist, L., 246
Gray, D. F., 121, 126
Gray, S. J., 464, 466
Greely, M., 445, 448
Greenstone, M., 17, 20, 419

- Greenwald, B., 8
 Greiner, B., 243
 Grimes, W. S., 159, 160
 Grinols, E., 121
 Grittini, S., 485
 Gronewoller, P. L., 488
 Grönqvist, E., 206
 Grossman, S. J., 415
 Grout, P., 394, 407
 Guay, W. R., 416, 504
 Guedhami, O., 465
 Gugler, Ph., 144, 145f
 Guiso, L., 394
 Gulen, H., 420
 Gupta, A., 425
 Gürkaynak, R. S., 89, 90
 Guthrie, G., 92
 Gutiérrez-Nieto, B., 448
 Guzzo, V., 121

 Haddad, J. R., 485
 Hadjikhani, A., 341, 342, 343, 347, 348, 349, 350
 Haelermans, C., 212
 Hahn, R. W., 187
 Hahn, V., 69, 83, 87
 Hail, L., 393
 Håkanson, C., 201, 212
 Håkansson, H., 347, 350
 Haldane, A. G., 258, 259, 270, 522
 Hall, C., 205
 Hallerberg, M., 106
 Halsey, R. F., 490
 Halter, M. V., 344
 Halter, R. B., 344
 Hambrick, D. C., 373–374, 383
 Hameed, F., 19
 Hamilton, A., 43, 54
 Hamilton, K., 183
 Handley, K., 170
 Haniffa, R. M., 463
 Hann, R. N., 366–367
 Hanushek, E. A., 203
 Haralambous, A., 485
 Hardy, D. C., 440, 441
 Harrington, J. E., 154
 Harris, M. S., 365

 Harrison, D., 342
 Hart, O. D., 389, 390, 391, 403, 415
 Hartarska, V., 441, 442, 444
 Hashemi, S., 445
 Haufler, V., 186
 Haugh, D., 121
 Haushalter, D. G., 503
 Hayes, R. M., 423
 Head, K., 295
 Heald, D., 99–100, 103, 104, 107, 108, 112, 113
 Healy, P. M., 17, 361
 Heaton, J. C., 485–486
 Heckman, J. J., 201, 207, 209, 210
 Heinemann, F., 332
 Helble, M., 173, 174
 Helfat, C. E., 375
 Hellwig, C., 24
 Helms, B., 441
 Hemming, R., 101
 Henrich, J., 299
 Hermalin, B. E., 9, 22, 363, 364, 371, 373
 Hermes, N., 446
 Heron, R. A., 429, 503
 Herring, R., 279, 280
 Hess, D., 342
 Hester, G. L., 187
 Hilary, G., 462
 Hillegeist, S., 424
 Hillman, A. J., 374
 Hilscher, J., 121
 Hirshleifer, D., 23
 Hirst, D. E., 488
 Hitz, J.-M., 483
 Hmaied, D. M., 344
 Hofstede, G., 405, 406, 464
 Holden, P., 440, 441
 Holder, A. D., 428
 Hollyer, J. R., 11, 234, 342
 Holmström, B., 9, 11, 415
 Holthausen, R. W., 416, 483
 Hooper, L., 436
 Hooper, V., 3, 20, 307, 308
 Hope, O.-K., 422, 463, 464
 Hopkins, P. E., 488
 Horváth, R., 91
 Hossain, M., 489
 Hotchkiss, E., 140

- Houde, J.-F., 292
Hougaard-Jensen, S. E., 108
Houseman, S. N., 244
Howitt, P., 200, 203
Hrycay, M., 264–265, 280
Hsieh, C.-T., 293
Hsu, D. H., 222
Huang, P., 417
Huang, R., 342, 345
Hubbard, R. G., 18
Huddleston, T., 253
Hudon, M., 437
Hult, K. M., 347
Hultén, P., 353
Hume, D., 43, 53–55
Hunt, S., 351
Huntington, S. P., 325
Huson, M. R., 424
Huss, H. F., 490
Hutchison, M. M., 108
Hyytinen, A., 342, 344, 526
- Ibbotson, R. G., 393
Ihrig, J., 503
Imai, K. S., 447
Imbs, J. M., 294
Inderst, R., 426
Ioannou, I., 296
Ireland, R. D., 8, 373, 377
Irlenbusch, B., 14
Ittner, C. D., 425
Ivaldi, M., 292
Iyengar, S., 350
- Jackson, J., 200
Jacobsson, S., 226, 227, 228, 231, 233
James, C. M., 503
Jansen, D.-J., 69, 71
Javorcik, B. S., 222
Jay, J., 43, 54
Jayadeva, V., 434
Jenny, F., 149, 161, 162
Jensen, H., 79
Jensen, M. C., 7, 326, 360, 389
Jensen, R. T., 291
Jha, S., 345
- Jin, G. Z., 287
Jin, Y., 502, 503
Johal, S., 342
Johanson, S., 212
Johansson, P., 206
Johnson, C., 347
Johnson, E. J., 296
Johnson, S., 390, 394
Jones, C. A., 184
Jones, M. T., 522, 524
Jordan, A., 206
Jorion, P., 502, 503
Jovanovic, B., 242
Joyce, M. A. S., 93
Judd, K. L., 290
Julius, D., 68, 72, 73, 89
Jullien, B., 292
Just, R. E., 121
Justiniano, A., 88, 90
- Kadlec, G. B., 426
Kahane, B., 229
Kahn, L. B., 245
Kahneman, D., 299, 404
Kalleberg, A. L., 244
Kalotay, A., 502
Kamieniecki, S., 184
Kanagaretnam, K., 487
Kanwar, S., 21
Kaplan, R. S., 442
Kar, S., 247
Karim, A. K. M. W., 464, 465
Karmann, A., 120
Karoly, L. A., 210
Kaserman, D. L., 146
Kasznik, R., 484
Katz, E., 247
Kauffmann, D., 323
Kazamaki Ottersten, E., 212
Kazutomo, A., 174
Kedia, S., 428
Kell, M., 101
Kenney, M., 233
Khagram, S., 98, 103, 107
Khanna, T., 372
Khurana, I. K., 371, 429
Kiff, J., 125

- Kilburn, M. R., 210
 Kim, H., 307
 Kim, J., 465
 Kim, S., 307, 308
 Kim, S., 3, 20, 307, 308
 Kirchsteiger, G., 342
 Kirkman, B. L., 405
 Klapp Lekholm, A., 207
 Kleeman, M., 234
 Knetsch, J., 299
 Ko, C., 18
 Koch, P., 502
 Koen, V., 102
 Koessler, F., 342
 Kogut, B., 347
 Kohli, M., 200
 Kokko, A., 311
 Kolk, A., 183–184
 Kollmuss, A., 183
 Kooiman, J., 347
 Kool, C., 70
 Koonce, L., 483
 Kopits, G., 100, 101, 107
 Korbin, S., 347
 Kosenok, G., 349
 Kothari, S. P., 504, 506, 507t–508t, 510t
 Koutny, M., 345
 Kracaw, T., 344
 Kraft, M. E., 184
 Krajcik, J. C., 207
 Kramer, R. M., 351
 Krauss, S., 206
 Kreinin, M. E., 175
 Krenn, G., 524
 Kreuger, A., 200
 Krische, S. D., 465
 Kroft, K., 244
 Krugman, P., 122
 Kubota, K., 487
 Kuhlmann, S., 228, 231, 236
 Kumar, K., 463
 Kunicova, J., 333
 Kunter, M., 206
 Kurlat, S., 404
 Kwok, C., 393, 395, 396
 Kyaw, A. N., 394
 La Porta, R., 18, 325, 359, 390, 394, 397–403, 401t–402t, 404, 407, 409
 Laffont, J.-J., 145
 Lambert-Mogiliansky, A., 342, 348, 349
 Lambsdorff, J. G., 323
 Landsman, W. R., 482, 483, 484
 Lang, M., 462
 Lange, F., 244
 Lankhuizen, M., 227, 231
 Lannoo, K., 537
 Lapenu, C., 445, 448
 Larcker, D. F., 416, 425
 Larocque, S. A., 422
 Lasasosa, A., 93
 Lassen, D. D., 19, 99, 100, 101, 104, 110
 Laurila, J., 350
 Laux, C., 478, 486
 Laux, V., 427–428
 Lavy, V., 206
 Lazear, E. P., 244, 373
 Lee, J.-W., 348
 Leitemo, K., 88
 Lemmon, M., 424
 Lensink, R., 446
 Lenway, S. A., 347
 Leone, A. J., 506, 507t–508t, 510t
 Lester, B., 290
 Leuven, E., 211
 Leuz, C., 17, 20, 393, 461, 478, 486
 Lev, B., 490
 Levin, A., 89
 Levine, R., 262, 393, 447
 Levinsohn, A., 461
 Levinson, S., 41
 Levy, D. L., 184
 Lewicki, R. J., 349, 351, 405
 Li, N., 293
 Li, Y., 463
 Liang, N., 429
 Lie, E., 428, 429, 503
 Liikanen, E., 280
 Limão, N., 170
 Lindahl, M., 200
 Lindblom, C. E., 231
 Lindh, T., 212
 Lindholm-Dahlstrand, Å., 233
 Lindmark, S., 231

- Linsmeier, T. J., 487–488
Lintner, J., 526
Lissoni, F., 233
Lizzeri, A., 108
Llerena, P., 233
Lo, A. W., 526
Lochner, L., 207, 208, 209
Lohse, G. L., 296
Loke, Y., 436
Longin, F. M., 524
Longstaff, F., 121
Lopez-de-Silvanes, F., 18, 325, 359, 390, 394,
397–403, 401t–402t, 404, 407, 409
López-Espinosa, G., 484
Lotz, A., 86
Lowe, K. B., 405
Lowenstein, R., 498
Lowry, R. C., 104, 105
Lucas, D., 485–486
Lucas, R. E., 16, 201, 219
Luchtenberg, K., 342
Luciano, E., 281
Lui, F. T., 325
Lundahl, M., 248
Lundvall, B.-Å., 230
Lutz, D. S., 34, 44
Lys, T. Z., 420

Maber, D., 421
MacKay, P., 502, 503, 504, 517
MacKinlay, A. C., 526
Maddaloni, A., 485
Madison, J., 43, 54
Maes, J. P., 434
Maffett, M., 462
Magnan, M., 371, 372
Mahadeva, L., 68, 72, 73, 89
Maher, M., 157
Majnoni, G., 522, 524
Mak, Y. T., 464
Makadok, R., 373
Malkiel, B. G., 373, 525
Malueg, D. A., 289
Mankiw, N. G., 146
Manning, A., 244, 248
Manos, R., 435, 448, 449

Mansi, S. A., 123
Marrison, C., 498
Marschinski, R., 189
Marston, R. C., 503
Marthinson, J., 498
Martimort, D., 145
Martin, A., 122
Martin, X., 429
Martinex Peria, S., 522, 524
Marx, R. W., 207
Maskus, K., 298
Mason, P., 373–374
Massoudi, D., 480
Masterov, D. V., 207, 209
Masud, H., 98, 99, 110
Mathieu, R., 487
Matis, D., 486
Matos, P., 414
Matthews, D., 222
Matthews, R. C. O., 16
Mauro, P., 323
Mayes, D. G., 280
Mazaré, L., 345
Mazza, C., 350
Mbarek, L., 344
Mbiti, I. M., 291
McAfee, R. P., 160
McAllister, D., 349
McAnally, M. L., 490
McCall, J. J., 248
McConomy, B. J., 463
McDonald, R. L., 485–486
McGuire, J., 342, 344
McGuire, P. M., 440, 441
McGuire, S. T., 490
McIntosh, C., 439, 451
McKelvey, M., 233
Meade, E. E., 72
Meckling, J., 184
Meckling, W. H., 7, 326, 360, 389
Meesters, A., 446
Megginson, W. L., 394, 407
Mehta, A., 345
Meister, D. B., 343, 344
Méjean, I., 294
Melamed, D., 161
Melgar, N., 19

- Mellander, E., 201, 210, 211, 212
 Mello, A., 499
 Mersland, R., 435, 437, 439, 440, 441, 442, 443, 444, 445–446, 447, 448, 449, 450
 Merton, R. C., 121, 126, 482
 Metcalfe, J. S., 224, 227, 234
 Meyer-Krahmer, F., 236
 Mialon, H. M., 160
 Mialon, S. H., 160
 Mian, S. L., 504
 Michaelowa, A., 183
 Michaelowa, K., 183
 Michener, G., 304
 Middeldorp, M., 70
 Miguel, A., 121
 Mikkelsen, W. H., 526
 Milbourn, T. T., 23
 Milesi-Ferretti, G. M., 102
 Milhaupt, C. J., 391, 396
 Millar, L., 183
 Miller, G. S., 342
 Miller, K., 347, 348
 Miller, T., 373, 377
 Mills, E., 186
 Mina, J., 126
 Minton, B. A., 504
 Mishel, L., 414
 Mishra, A., 326
 Mitra, S. K., 442, 489
 Mobus, J. L., 349, 350
 Modigliani, F., 390, 395
 Moe, W. W., 296
 Moeller, S., 502, 503, 504
 Moessner, R., 92
 Mohr, L., 342
 Moïsé, E., 171
 Molas-Gallart, J., 229
 Molitor, P., 485
 Møllgaard, H. P., 147, 148, 154–155, 292
 Monast, J., 188
 Mons, N., 204, 205
 Montgomery, J. D., 252
 Morduch, J., 435, 436, 447
 Moretti, E., 211, 212
 Morgan, D. P., 344, 524, 526, 527, 534
 Morgan, J., 291, 349
 Morgan, R., 351
 Mori, N., 436
 Morris, S., 23, 24, 70
 Mortensen, D. T., 242
 Morton, F. S., 297
 Motta, M., 149
 Mowery, D. C., 233
 Mudambi, R., 307
 Mullen, M. R., 405–406
 Mumtaz, H., 294
 Murdoch, J., 441
 Murphy, K. J., 378, 414, 424, 425
 Murphy, W., 34
 Murray, F., 222
 Muslu, V., 421, 422
 Myers, L. A., 490
 Myers, S., 395
 Nadolnyak, D., 441
 Nagar, V., 428
 Nakhooda, S., 192
 Nance, D. R., 504
 Nanda, D., 428, 461
 Nandy, D., 345
 Navarra, P., 307
 Negi, S., 442
 Nelson, E. P., 448, 449
 Nelson, K. K., 482, 483
 Nelson, M. W., 483
 Nelson, R., 201
 Nelson, R. R., 233
 Nelson, T., 424
 Nelson, W. R., 92
 Neubrand, M., 206
 Newell, P. J., 184
 Ng, C. F., 296
 Nguyen, Y., 424
 Nicoletti, G., 157
 Niessen, J., 253
 Ninane, F., 149
 Nissim, D., 490
 Nixon, S., 485
 Nobes, C., 464
 Noe, C., 342
 Noll, J., 361
 Nooteboom, B., 225, 231
 Nordhaus, W. D., 188

- Nordmark, J., 524
Norell, D., 448, 449
North, D. C., 16, 388, 389, 390, 391, 393
Norton, S., 464, 465
Nosbusch, Y., 121
Notowidigdo, M. J., 244
Novack, J., 490
Novoa, A., 485
Nowak, S., 125
Nurunnabi, M., 464, 465
- O'Hanlon, J. F., 488
O'Hara, M., 9, 17, 462
O'Higgins, E., 349
O'Reilly, J., 250
Ockenfels, A., 243
Odell, K., 436, 447
Olli Segendorf, Å., 252
Ollivaud, P., 121
Olshansky, S. J., 200
Olsson, P., 450, 461
Orlov, E., 291
Oshiro, N., 121
Ostergard, R., Jr., 222
Ottaviani, M., 426
Overgaard, P. B., 147, 148, 154–155, 292
Oxelheim, L., 16, 18, 39, 125, 294, 304, 305, 307, 310, 335, 343, 344
Oyer, P., 17, 20, 244, 419
- Paik, G. H., 490
Painter, M., 230
Pajarinen, M., 342, 344
Palepu, K. G., 17, 361, 372, 482
Pallais, A., 245
Palmer-Jones, R., 436
Pan, J., 121
Park, Y. W., 424
Parker, R., 464
Parsley, D., 293
Parsons, J., 499
Partch, M. M., 526
Patel, S. A., 464
Patrino, H., 211
Patton, D., 233
Pavan, A., 23
- Payne, W., 19, 307
Pearce, J. L., 374, 385
Pedersen, L., 121
Peecher, M. E., 465
Peeperkorn, L., 154
Pelled, L. H., 377, 378
Pénard, Th., 145, 151
Peracchi, F., 211
Pereira, R., 371
Pérez-González, F., 502
Peristiani, S., 524, 526, 527, 534
Perloff, J. M., 154
Perotti, E., 3, 390, 395
Perry, T., 420
Peters-Stanley, M., 183
Petri, P. A., 175, 176
Petroni, K. R., 482
Pfleiderer, P., 21, 361, 365, 371
Phelps, E. S., 201, 242, 248
Philips, J. J., 60
Phillips, B., 427
Piga, C. A., 297
Pinkse, J., 183–184
Pinto, J. A., 489
Piore, M. J., 200
Piotroski, J. D., 15, 363, 373, 390, 399, 400–403, 401t–402t, 404, 407, 409, 457
Pires, F., 485
Pissarides, C., 242
Pistor, K., 391, 396
Pittman, J. A., 465
Plantin, G., 485
Plott, C. R., 57
Plumlee, M. A., 461
Plummer, M. G., 175, 176
Pocantico, D., 434
Pollock, A. J., 502
Poloni, P., 485
Polycarp, C., 183
Pomerleano, M., 122
Pope, P. F., 488
Porter, L., 374, 385
Posner, E. A., 391, 396
Posner, R. A., 149, 150, 153
Potter, J. D., 331
Potters, J., 150, 348

- Powell, W. W., 372
 Prabha, A. P., 270
 Prat, A., 8, 104, 342
 Prieto, C., 154
 Profeta, T., 188
 Prokopenko, V., 440, 441
 Psacharopoulos, G., 211
 Puhr, C., 524
 Pukthuanthong, K., 427
 Purnanandam, A., 502
 Putrevu, S., 342, 344

 Quinn, C. L., 417

 Radebaugh, L. H., 466
 Ragan, R. G., 390
 Ramesh, K., 482, 483
 Ramirez, G., 342, 345
 Randøy, T., 435, 441, 446, 450
 Ranjan, R., 442
 Ransom, M. R., 244
 Rao, N., 436
 Raposo, C., 365
 Rasch, B. E., 34, 38, 44
 Raskin, M., 93
 Rau, P. R., 416, 417, 420, 427
 Ravn, M. O., 294
 Razin, A., 308, 309
 Recanatini, F., 334
 Reeb, D. M., 422
 Reed, L. R., 434
 Rees, A., 252
 Rees, W., 483
 Reeves, R., 91
 Reger, G., 236
 Reille, X., 441
 Reinhart, M., 119
 Reinhart, V. R., 87, 90, 107
 Remache, J., 93
 Remolona, E., 123
 Reutzel, C. R., 8, 373, 377
 Rey, H., 294
 Rey, P., 160, 292
 Rhyne, E., 445
 Riach, P. A., 248
 Riahi-Belkaoui, A., 344

 Ric, J., 248
 Richardson, G. D., 463
 Rickne, A., 231
 Rijken, H. A., 124, 126
 Riley, J. G., 6
 Ring, P. S., 347
 Robin, A., 428
 Rochet, J.-C., 18, 440
 Rodriguez, G., 371
 Rodriguez, P., 325, 344, 348
 Rodrik, D., 17
 Roemer, J. E., 203
 Roger, S., 68, 72, 73, 89
 Rogers, D. A., 502, 503, 504
 Rogers, J. R., 293
 Rogoff, K., 119, 293
 Romer, P. M., 16, 219
 Rooth, D.-O., 248
 Roques, C. J., 150
 Rosa, C., 91
 Rose, N. L., 415, 520
 Rose-Ackerman, S., 324, 326, 330, 341, 348
 Rosenberg, R., 434, 443, 447
 Rosendorff, B. P., 11, 234, 342
 Rosenkranz, S., 70
 Ross, K., 121
 Ross, S. A., 326
 Rossi, S., 122
 Rotemberg, J. J., 299
 Rother, J., 200
 Rothschild, M., 21
 Roulet, C., 267, 280
 Rowe, J., 200
 Rubb, S., 245
 Rudebusch, G. D., 86
 Rutherford, S., 447
 Ruthven, R., 447
 Ryan, P., 345
 Ryan, S., 483

 Sabadish, N., 414
 Sack, B. P., 87, 90, 93, 107
 Sadka, E., 308, 309
 Sadka, G., 21
 Sadler, G., 421
 Saffar, W., 465

- Saha, B., 247
Sala-i-Martin, X., 18
Salanie, F., 342
Salop, S., 290
Sampat, B. N., 233
Sananikone, O., 441
Sanders, W. G., 457
Sandgren, P., 228, 230
Sandgren-Massih, S., 210
Sandino, T., 424, 425
Sanditov, B., 233
Sapienza, P., 394
Sapra, H., 485
Sargen, H., 121
Saruwatari, Y., 121
Satta, T. A., 440
Savino, V., 524, 526, 527, 534
Sawicki, M., 91
Scarlata, J., 485
Scatigna, M., 123
Schaefer, S., 244, 423
Scharfstein, D. S., 18, 502
Schiller, B., 186
Schinkel, M. P., 151, 158
Schipper, K., 450, 457, 477
Schmeits, A., 23, 526
Schmid, G., 250
Schmidt, R., 121
Schneider, B., 378
Schneider, L., 182, 183
Schoenmaker, D., 280
Scholten, P., 291
Scholtens, B., 120
Schömann, K., 250
Schrand, C., 17, 448, 478, 504
Schrand, M., 490
Schreiner, M., 445, 448
Schuetze, H. G., 212
Schultz, A., 121
Schumacher, L., 125
Schuman, H., 350
Schwartz, M., 289
Schwarz, N., 350
Schwellnus, C., 294
Schwenk, C., 371
Seabright, P., 160, 292
Secchi, A., 92
Segoviano, B., 121
Seiler, M., 342
Senft, D., 296
Serrano-Cinca, C., 448
Sewon, O., 463, 464
Seyoum, B., 307
Sgherri, S., 121
Shakespear, C., 483, 484, 487–488
Shane, S., 447
Shapira, P., 231
Shapiro, C., 245, 365, 367
Shapiro, D., 307
Sharma, D., 342, 349, 350
Sharpe, I., 345
Sharpe, W. F., 526
Shaw, C. L., 373
Shaw, K. L., 244
Shehata, M., 487
Sheldon, T., 448, 449
Shen, X., 444
Shepherd, B., 173, 174
Shi, M., 105
Shin, H. S., 23, 24, 70, 485
Shin, Y., 14, 15, 19, 20, 104, 106
Shirai, S., 395
Shleifer, A., 7, 14, 18, 242, 324, 325, 359, 390, 394, 396, 397–403, 401t–402t, 404, 407, 409
Siegel, D. S., 342, 344
Siegel, L. B., 393
Siltaoja, M., 347, 349, 350
Silva-Risso, J., 297
Simkins, B. J., 502, 503
Singleton, K., 121
Sinha, S., 442
Sjögren Lindquist, G., 246
Skedinger, P., 211
Slezak, S. L., 14, 22, 427
Sliwka, D., 14
Smarzynska, B., 307
Šmídková, K., 91
Smith, A. J., 15, 246, 247, 363, 365, 366, 371, 373, 390, 399, 400–403, 401t–402t, 404, 407, 409, 457, 465
Smith, C. W., 429, 498, 502, 504
Smith, D. M., 342, 344
Smith, K., 224, 228
Smith, R., 120

- Smith, S. D., 483
 Smithson, C. W., 504
 Smits, J., 222
 Smits, R. E., 231
 Snowberg, E., 57
 Soeide, T., 324
 Solé, J., 485
 Solow, R. W., 219
 Soloway, E., 207
 Song, C. J., 483
 Sonnenschein, H., 45
 Sorensen, A. T., 291
 Sorge, M., 524
 Sosyura, D., 272
 Souam, S., 145, 151
 Sougiannis, T., 487–488
 Spence, M., 6, 7, 12, 243
 Spratling, G. R., 158
 Spulber, D., 149, 158
 Srinivasan, G., 490
 Srinivasan, S., 372
 Srivastava, A., 428
 Staikouras, S. K., 526
 Stankiewicz, R., 229
 Stark, O., 247
 Stasavage, D., 89, 90
 Stasio, K., 192
 Stein, J. C., 502
 Stenberg, A., 211
 Stern, S., 222
 Sterne, G., 68, 72, 73, 89, 90
 Stevens, I., 93
 Stice, E. K., 490
 Stigler, G. J., 241, 441
 Stiglitz, J. E., 7, 8, 9, 21, 146, 147, 245, 287, 290, 365, 367
 Stocken, P. C., 427–428
 Stokman, C. J., 293, 300
 Strandgaard Pedersen, J., 350
 Straubhaar, T., 374
 Strauch, R., 106
 Streck, C., 183
 Street, C. T., 343, 344
 Street, D. L., 473
 Strøm, R. Ø., 435, 437, 439, 441, 443, 445–446, 447
 Strong, J. S., 502, 503
 Strouhal, J., 486
 Stulz, R., 498, 502
 Su, H. Y., 342
 Suarez, C., 184, 185t
 Subramanian, A., 17
 Subramanyam, K. R., 487
 Suda, K., 487
 Suetens, S., 150
 Summer, M., 524
 Summers, L. H., 7
 Sunder, S., 57
 Surowiecki, J., 57
 Svensson, J., 105, 323, 324
 Svensson, L. E., 79
 Swagel, P., 270
 Swanson, E. T., 89–93, 428
 Sweeney, R. J., 34, 45
 Symansky, S., 101
 Tadesse, S., 393, 395, 396
 Taglioni, D., 300
 Takahira, O., 120
 Takalo, T., 526
 Takeda, C., 482
 Takehara, H., 487
 Taleb, N., 498
 Tanzi, V., 323
 Taplin, R., 480
 Tappata, M., 290, 295
 Tarca, A., 480
 Taube, C., 38
 Tavares, A. T., 304
 Tavits, M., 331
 Taylor, D., 484
 Taylor, M. P., 146
 Teece, D. J., 234
 Telmer, C. I., 293
 Thakor, A. V., 389, 396
 Thaler, R. H., 299
 Thapa, G., 447
 Thiagarajan, S. R., 482, 483
 Thomas, W. B., 483
 Thorslund, J. G., 228, 230
 Tienari, J., 350
 Tillen, J. G., 330
 Tirole, J., 292
 Titman, S., 502

- Tong, H., 70
Tong, M., 93
Trebbi, F., 17
Treisman, D., 342, 344
Trezevant, R., 487
Triana, M., 373, 377
Trim, P., 348
Tripoli, A. M., 374, 385
Trussel, J. M., 448
Tsui, A. S., 374, 385
Tufano, P., 498, 503
Tuinstra, J., 158
Turner, D., 121, 152
Turunen, J., 90
Tversky, A., 404
- Uhlenbruck, K., 325, 344, 348
Ulph, A., 342
Unger, M., 183
Upton, D. R., 488
Urgeghe, L., 440
Urwitz, G., 442
- Vaara, E., 350
van den Berg, G., 212
Van den Noord, P., 102
Van Der Cruysen, C. A., 69, 71, 89, 90
Van Weelden, R., 22
Vanin, P., 24
Vanyushyn, V., 353
Vasvari, F. P., 463
Vause, A., 204, 205
Vehkaperä, M., 347, 349, 350
Venkatachalam, M., 483
Venkataraman, S., 447
Verboven, F., 294, 295
Verdier, T., 348
Verhoevend, P., 362
Vernon, J. M., 154
Véron, N., 486
Verrecchia, R. E., 17, 20, 344, 362, 461, 478
Verspagen, B., 222
Victor, D. G., 183
Vincent, N., 296, 299
Virolainen, K., 524
Viscusi, W. K., 154
- Vishny, R. W., 18, 324, 325, 359, 394
Vissing-Jorgensen, A., 17, 20, 419
Vives, X., 18
Vlachos, J., 206
Vlassis, M., 248
von Hagen, J., 98, 106
von Thadden, E.-L., 3
Vreeland, J. R., 11, 234, 342
Vroman, S., 212
- Wacziarg, R., 404
Wadensjö, E., 246, 248
Wagenhofer, A., 483
Wahlen, J. M., 482
Walcott, C., 347
Waldenström, N., 206
Waldmann, R. J., 7
Walker, D. I., 423
Walkling, R. A., 421
Wallison, P. J., 263, 485
Walsh, C. E., 78
Walter, I., 120
Wang, D., 342
Wang, K., 463, 464
Wara, M. W., 183
Warren, R., 349
Wasley, C. E., 506, 507t–508t, 510t
Watts, R. L., 483
Waxman, H., 425
Weaver, C. D., 490
Webb, D., 342
Weber, A., 83
Wehner, J., 15, 101, 110
Wei, S.-J., 19, 293, 307, 308, 309, 323, 325
Wei, X., 293
Weisbach, M. S., 9, 22, 363, 364, 371, 373
Welch, I., 23
Werner, P., 243
West, D. S., 291
Weston, J. P., 502, 504
Whish, R., 149, 155
White, E., 253
Whitesell, W., 188
Whittington, G., 482
Wihlborg, C., 264, 279, 281
Wilander, F., 295
Wilder, M., 183

- Williams, A., 20
 Williams, J. C., 86, 92, 93
 Williams, S. M., 464
 Williamson, O. E., 389, 393, 396, 397, 406, 409
 Wills, G., 54
 Wilson, C., 21
 Wilson, J. S., 173, 174
 Winkler, B., 70, 235
 Wiseman, R. M., 371
 Woessmann, L., 203
 Wolfe, R., 169
 Wolfers, J., 57
 Wolff, G., 121
 Wolfram, C., 415, 520
 Wolfson, M., 482, 483
 Wolitzky, A., 300
 Wolter, A., 374
 Wong, M. H. F., 483, 490
 Woodford, M., 83, 84, 87
 Woolthuis, R. K., 227, 231
 Wössmann, L., 203, 204f
 Wren-Lewis, S., 98, 112
 Wright, J., 92
 Wu, E., 123
 Wurgler, J., 18
 Wydick, B., 439, 451
 Wyplosz, C., 72, 83, 86, 91
 Wysocki, P., 428, 478

 Xin, K. P., 377, 378
 Xu, J., 416, 417

 Yang, J., 424
 Yaron, J., 435, 448, 449
 Yermack, D., 416, 417

 Yeyati, E. L., 526
 Yi, H., 483
 Young, B., 184, 185t
 Young, C. S., 342
 Young, S., 304, 310
 Yu, F., 462
 Yu, J., 364
 Yu, X., 462
 Yun, H., 502
 Yunus, M., 405

 Zabochnik, J., 378
 Zalewska, A., 394, 407
 Zápál, J., 91
 Zeckhauser, R., 391
 Zeff, S. A., 473
 Zeller, M., 445, 448
 Zenner, M., 420
 Zettelmeyer, F., 297
 Zhai, F., 175, 176
 Zhan, W., 364
 Zhang, Q., 364
 Zhao, J., 490
 Zhao, M., 222
 Zhao, S., 389, 396
 Zhao, W., 422
 Zhao, Y., 342
 Zheng, Y., 200
 Ziedonis, A. A., 233
 Zingales, L., 390, 394
 Zink, H., 183
 Zitzewitz, E., 57
 Zoli, E., 121
 Zupan, M. A., 146
 Zysman, J., 234

SUBJECT INDEX

- 1964 Securities Acts Amendment, executive pay disclosure in, 419–420
- accountability, 8
 - in human resource policy, 213
- accounting convergence, global, 465, 472
- Accounting for Derivative Instruments and Hedging Activities*, 501–502
- accounting practices, capital ratios and,
 - 272–276, 273f–275f
 - country differences in, 272–274, 273f, 274f
 - on derivatives, 274–276, 274f, 275f
 - in U.S., 273f, 274, 274f
- accounting standards
 - convergence (harmonization) of, 465, 472
 - for countries headquarters to biggest banks, 284t
- accounting transparency, 456–474, 477
 - benefits of, 477–478
 - definition of, 457–458, 477
 - factors in, 463–465, 463t
 - country-specific, 463t, 464–465
 - firm-specific, 463–464, 463t
 - International Financial Reporting Standards for, 478
 - international standards in, 465–474
 - development of, 466
 - financial reporting standards in,
 - 466–472, 467f, 468t–469t, 471t (*see also* International Financial Reporting Standards (IFRS))
 - future of, 473–474
 - global accounting convergence in, 465, 472
 - IFRS and US GAAP differences in, 472–473
 - importance of, 456
 - interest and demand for, 456
 - measurement of, 458–463
 - at country level, 458
 - country-level proxies of, 459–460
 - disclosure level in, 460–461
 - at firm level, 458
 - firm-level proxies of, 460
 - market reactions in, 461–463, 462t
 - methodological issues in study of, 478
- actors. *See also specific types*
 - incentives for, 12
 - innovation as interaction of institutions and, 220
 - in innovation policy transparency, 229–231
 - political (*see* multinational corporations and political actors)
- administrative state
 - vs. redistribution, 49–50
 - social welfare and, 49–50
- advanced approach, to risk weights, 264
- adverse selection, 7
 - in corruption and transparency, 331
 - for shareholders, 413
- agency costs, 326
- agency factors, in governance transparency, 373
- agency relationships, 326
 - in corruption, 326–330, 327t–328t
- agency theory, on equity pay and delta and vega, 415
- à la carte integration model, 204
- allowance markets, carbon, 181–182
- amendments, constitutional, 34–35
 - rules of 25 countries/federations on, 35, 36t–38t
 - on stability on Constitution, 44
 - state ratification of, as Type II errors, 51–52
 - transparency and, 41
 - to U.S. Constitution, Article V on, 55–56
- anti-self-dealing index, 397–399
 - vs. Governance Transparency Index, 400–403, 401t–402t
- antitrust policy. *See also* competition policy
 - as ex post task, 153
 - optimal, 151

- antitrust procedures, 157–162. *See also*
 - competition policy
 - disclosure of results in, 160
 - international competition policy and, 160–162
 - investigation processes in, 159–160
 - laws, regulations, and guidelines in, 158–159
 - life cycle of, 158
- arbitrageurs, 297–298
- Argentina sovereign crises, 120, 120f
- asymmetries, information. *See* information asymmetries; *specific topics*
- average residuals of banks, European
 - exercise announcement on, 531, 532t
 - methodology disclosure in, 531, 532t
 - results disclosure in, 531, 533t
- bailout ratios, of world's biggest banks, 282t–283t
- bank failures
 - capital-to-asset ratios in prediction of, 270–272
 - causes of, 261
 - early detection of, 521
 - prediction of, models for, 259
- banking system, shadow, 122
- banks
 - financial crisis and solvency of, 116
 - market to book ratio of, 521, 522f
 - organizational reform of, 279–281
- banks, world's biggest
 - accounting standards for countries headquarters to, 284t
 - bailout and capital ratios of, 282t–283t
 - capital (to-asset) ratios of, pre-bailout in bank failure prediction, 270–272
 - capital-to-asset ratios of, post-crisis, 276–279, 277t, 278t
 - leverage ratio in, 269, 270f
 - risk-based, 268–269, 269f, 282t–283t
 - Tier 1, 268, 268f
- Basel Capital Accords, 263–267
 - Basel II, 263–265
 - bank models for risk evaluation in, 259
 - quantitative impact studies of, 259–260
 - Basel III, 265–267
 - capital adequacy requirements in, 263
 - deficiencies of, 266–267
 - complexity of, 258
 - drawbacks of, 281
 - gaming and manipulation of, by banks, 264–265
 - market discipline in, 265
 - objective of, 263
 - risk weights in, 264
- behavioral theory, 341–342
- beneficial information effect, in forward policy guidance, 86–87
- Bertrand-type competition, 150
- Bloomberg New Energy Finance (BNEF), 191–192
- boards of directors, in governance, 360
- boards of directors, transparency of, 374–379
 - in Europe, 380–383
 - demographic characteristics in, 281t, 380–382
 - educational characteristics in, 381t, 382
 - experience characteristics in, 375f, 381t, 382–383
 - market-pull perspective on, 376t, 377–378
 - onion model of governance transparency in, 374–377, 375f
 - strategic hoarding perspective on, 376t, 378, 379f
- Bologna Process, 249
- bonds, government
 - rating stability for, 123–124
 - ratings on, 123
- bottom-up approach, to sovereign default risk assessment, 122, 127–131, 128t, 129t
- bribes. *See* corruption
- business performance, transparency and, 341. *See also* multinational corporations and political actors
- capability building, 373, 374
- capital adequacy requirements (CAR), 263
 - deficiencies in, 266–267
- capital allocation efficiency, 18
- Capital Asset Pricing Model (CAPM) model, 526–527

- capital, cost of, corporate transparency and, 17
- capital flows, international, 18
- capital, public stock of, 42–43
- capital structure, corporate transparency on, 394
- capital-to-asset ratios
- accounting practices and impact on, 272–276, 273f–275f
 - of largest banks, 282t–283t
 - of largest banks, post-crisis, 276–279, 277t, 278t
 - of largest banks, pre-bailout
 - in bank failure prediction, 270–272
 - leverage ratio, 269, 270f
 - risk-based, 268–269, 269f, 282t–283t
 - tangible equity-to-asset ratio, 269–270, 271f
 - Tier 1, 268, 268f
- measurement of
- bank insolvency and, 268–269, 268f, 269f
 - methods for, 267
 - regulatory requirements and, 267–272, 268f–271f
- carbon-based derivatives, 189
- Carbon Disclosure Project, 184
- carbon markets, 181–183
- allowance markets in, 181–182
 - annual transactions in, 180
 - CDM and JI project markets in, 182–183
 - corporate exposures and disclosures in, 183–187, 185t, 193
 - deceptive practices in, 188
 - further research on, 193
 - government regulation of, 180, 187–189
 - growth in trading in, 181
 - issues in, 179
 - literature on, 192–193
 - voluntary markets in, 183
- carousel fraud, 182
- cartels
- detection of, 150–151
 - leniency programs for, 151
 - market transparency and collusion by, 147–151, 148t
- cash pay, executive, 415–416
- causality issues, 14–15
- CDS. *See* credit default swaps (CDS)
- Certified Emission Reductions (CERs), 182
- dwindling demand for, 183
- citizens-government official relationship, corruption in
- as agency problem, 327t–328t, 329
 - transparency of, 331, 333–334
- Clean Development Mechanism (CDM), 179
- carbon market transactions under, 180
 - CDM markets in, 182–183
- clean surplus, 480
- CLEAR factors, 459
- climate change policies, markets, and
- corporate practice transparency, 179–194
 - carbon markets in, 181–183 (*see also* carbon markets)
 - corporate exposures and disclosures in, 183–187, 185t, 193
 - further research on, 193–194
 - government policymaking processes and outcomes in, 187–192
 - further research on, 193
 - monitoring, reporting, and verifying GHG emissions in, 189–191
 - monitoring, reporting, and verifying int'l financial flows in, 191–192
 - regulation of carbon markets in, 180, 187–189
 - literature to date on, 192–193
 - transparency in, defining, 180
- The Climate Funds Update, 191
- Coalition for Environmentally Responsible Economics (CERES), 184
- code-word communication, in forward
- policy guidance, 83
- collaboration, innovation from, 225
- collective dominance, 155
- collusion
- market transparency and, 147–151, 148t
 - price transparency and, 292
- Commerce Clause, in ObamaCare case, 60
- commitment, to forward policy guidance by
- central bank, 88–89
- Committee of European Banking Supervisors (CEBS)
- methodology and data of, 526–531
 - 2009–2013, 528, 529t
 - business models in, 530–531

- Committee of European Banking Supervisors (CEBS) (*cont.*)
cumulative abnormal returns in, 530
financial market briefing on, 530
increased coverage and disclosure level of, 528–530
increased stringency of, 528
stress tests of, 522
- compensation consultants, on executive pay and transparency, 424–426
- Compensation, Discussion, and Analysis (CD&A) section, 418
- competences. *See also* education; human resource policy transparency
in human resource policy, 206–208, 215
- competition
Bertrand-type, 150
in innovation policy transparency, 233
- competition law, 144
- competition model, perfect, 145–147, 147t
- competition policy, 144–162
definition of, 144
elements in, 144, 145f
as game of incomplete information, 145
importance of, 144
information asymmetries in, 144–145, 162
market transparency and collusion in, 147–151, 148t
market transparency and enforcement in, 157–162
disclosure of results in, 160
international competition policy in, 160–162
investigation processes in, 159–160
laws, regulations, and guidelines in, 158–159
market transparency and merger review in, 153–155
market transparency and monopolization in, 152–153
market transparency and network industries regulation in, 155–157
perfect competition model for, 145–147, 147t
transparency as core issue in, 144–145, 162
transparency as detrimental to some agents in, 162
- complete openness, in monetary policy transparency, 69–70
- comprehensive income
other, 479, 480
disclosure in, 486–489
IFRS 13 on, 481
statement of, 479–480
- COMPUSTAT HEDGEGL, 505–506, 507t–508t, 510t–516t
- computable general equilibrium (CGE) model, transparency in
AsiaPacific Economic Cooperation (APEC), 174, 175
regional trade agreements and, 174, 175–176
- constitution. *See also specific nations*
amendments on stability of, 44
guarantees in, 41
United Kingdom, protections in, 62–63
United States
amendments to, Article V on, 55–56
Supreme Court changes to, 56–57
- constitutional law, 41
- constitutional revolution of 1937, 60
- constitutional transparency, 33–65
administrative state and social welfare in, 49–50
amendments in, 41
rules of 25 countries/federations on, 35, 36t–38t
on stability, 44
- changes in constitutions and, 33–34
from amendments vs. high court interpretations, 34–35
benefits and harms from, 34
classification of, four-way, 34
U.S. Supreme Court decisions on, 35–39
- diversification and hedging in, 50–51
- documentation in, 40
- EU Constitution in, mixed protections to business decision maker in, 60–62
fundamentals of, 60–61
Maastricht and Euro crises lesson on, 61–62
- explicability in, 40
- institutions and type I–type II errors in, 51–57
EU Constitution in, changing, 56
principles of, 51–56, 55t
U.S. Constitution in, Supreme Court changes in, 56–57

- literature on, 34
- meanings of, 40
- as predictability, 39–42
- predictability of guarantees in, 33, 40–41
- public stock of capital in, 42–43
- redistribution *vs.* administrative state in, 49–50
- rules of the game in, 43
- surprise major constitutional change on, 45–49
 - dynamic adjustment in, 48–49
 - Hicksian effects on excess demands in, 45–46, 46f
 - Slutsky equation in, modified, 46–48
 - Sonnenschein on, 45
 - static analysis with price adjustment in, 48
 - Walras' Law in, 45
 - wealth effects in, 45
- UK constitutional protections in, 62–63
- U.S. Federal power of economy in,
 - evolution of, 58–60
 - constitutional revolution of 1937 in, 60
 - rational basis review in, 59–60
- visibility in, 40
- whips in, 57–58
- wisdom of crowds in, 57–58
- constrained Pareto efficiency, 10, 20
- consultants, compensation, on executive pay, 424–426
- consumers
 - in market integration
 - buying in cheaper location by, 294–297
 - dissatisfaction of, on price differences, 298–299
 - information on bargaining for better prices by, 297
 - search costs of
 - price dispersion and, 290–291
 - price transparency and, 287
 - on unfair behavior, 299
- content, policy, 8
- contract
 - complexity of, and quality of law, 391
 - enforcement of, 8
 - freedom of, 60
- convergence, global accounting, 465
 - obstacles to, 472
- conveyance issues, in international trade
 - policy transparency, 176–177
- coordination effect, 18
- corporate boards. *See* boards of directors
- corporate exposures and disclosures, on
 - climate change, 183–187, 185t, 193
- corporate governance
 - concept of, 359–360
 - corporate board in, 360 (*see also* boards of directors, in governance)
 - disclosure *vs.* transparency in, 363–364
 - executive compensation in, optimal design of, 413
 - managerial talent in, best use of, 360
 - shareholders' interest view of, 360
- corporate governance and optimal transparency, 359–369
 - conclusion on, 368–369
 - definition of, 359–360
 - key concepts in, 359–361
 - literature on, 361–366
 - bargaining between top management and owners in, 363
 - corporate governance and transparency as complements *vs.* substitutes in, 362–363
 - cost of more transparency in, 365–366
 - disclosure *vs.* transparency in, 363–364
 - endogenous and exogenous decisions in, 362
 - firm's business on, 364
 - information disclosure for welfare of investors in, 361
 - shareholder's view of, 364–366
 - voluntary information disclosure in, 362
- model for, 366–368
- social value of, 360
- corporate hedging. *See* hedging, corporate
- corporate risk management, 495–518
 - corporate hedging activity in, lack of transparency on, 495
- disclosure and transparency requirements
 - for, 500–502
- effectiveness of, 498
- measuring activity in, 503–505
 - extended market model in, 503
 - financial-statement footnotes in, 504

- corporate risk management (*cont.*)
 - financial statements in, 504–505
 - industry surveys and proprietary data in, 503
 - mismeasurement of, 495
 - performance and, 502
 - research on, new avenues for, 505–517
 - disclosing gains and losses on ineffective hedges in, informativeness of, 517
 - hedging gains and losses and discretionary accruals in, 506, 509, 510t–516t
 - hedging gains and losses as corporate risk management transparency in, 505–506, 507t–508t, 510t–516t
 - supply and demand of financial and risk-management transparency in, 496–500
 - in corporations, 497–500
 - financial transparency, disclosure, and regulatory process in, 496–497
- corporate transparency, 457
 - accounting
 - factors in, 463–464, 463t
 - measurement of, 458
 - measurement proxies for, 460
 - on capital structure and equity risks, 394
 - human capital attrition costs of, 373–374
- corruption, 13, 323–335
 - as agency problem, 326–330, 327t–328t
 - government officials and citizens in, 327t–328t, 329
 - government officials and firm managers in, 325–329, 327t–328t
 - top managers and firm managers in, 327t–328t, 329–330
 - classification of, 324–325
 - costs of, 325
 - definition of, 324
 - economic growth and, 325, 335
 - effective levels and monitoring of, 323
 - effects of, 323
 - firm managers in, 325
 - government officials in, 325
 - importance of, 324
 - incentives for, 323
 - metaphors for, 330
 - private, 324
 - public, 324
 - transparency in
 - on adverse selection, 331
 - on citizen–government official relationship, 331, 333–334
 - effectiveness of, complementary mechanisms for, 332–334, 335
 - on firm manager–government official relationship, 331, 333
 - incentives for, 334–335
 - increase in corruption from, 331
 - as solution, 330–332
 - on top management–firm manager relationship, 332, 334
 - Transparency International on, 330–331
 - views of, 325
- Corruption Perceptions Index (CPI), 459
- cost of capital, corporate transparency and, 17
- cost of equity, governance transparency and, 393–394, 407, 408f
- cost of services, true, in microfinance, 438t, 443–444
- costs
 - agency, 326
 - transaction
 - actors in, 390
 - definition of, 390
 - in governance transparency, 388–390
 - institutional quality and, 390–391
 - transparency of institutions in, 391
 - transformation, 388
- costs/benefits, 12, 26
- countries, accounting transparency of
 - factors in, 463t, 464–465
 - measurement of, 458
 - proxies for, 459–460
- country transparency, empirical studies of, 19
- credit default swaps (CDS)
 - implied probabilities of default from, 131–132, 131f
 - implied probabilities of default, from Z-metrics *vs.*, 137–138
 - market implied probabilities of default in, *vs.* private sector fundamental probabilities of default, 133–136, 134f–136f
 - market prices of, and volatility and risk, 117
- creditors, protection of, 262–263
- credit rating agencies
 - competition between, fostering, 124

- transparency of, 124–125
 - sovereign ratings of, 122–125
- Credit Rating Agency Reform Act, 124
- cross-border shopping, 294–297
 - in Europe, 295
 - on internet, 296–297
 - in U.S.-Canada, 295
- crowds, wisdom of, 57–58, 63–64
- culture of equity
 - characteristics of, 392
 - governance transparency and, 392–393
 - national differences in, 392
- cumulative average abnormal returns (CAAR), in European banking stress testing for 2006–2013, 527, 527f
 - between business models, 536, 536t
 - methodology for, 530
 - disclosure of, 531, 535f
- results for
 - exercise announcement in, 531, 533f
 - exercise results in, 531, 535f
- customers. *See also* consumers
 - impact of, on microfinance, 445–448
 - (*see also under* microfinance industry, transparency and disclosure in)
 - in microfinance, 437, 438–439, 438t
- deficit bias, in fiscal policy, 101, 102–103
- deficits
 - government disguising of, 102–103
 - political economy of, 105–106
- demand-side dimension of transparency, 8–9, 10, 25
- derivatives
 - carbon-based, 189
 - corporate
 - risk management for, 498
 - Warren Buffet on, 498
 - treatment of, in capital ratios, 274–276, 274f, 275f
- determinants, of transparency, 12–13. *See also specific areas*
 - social norms in, 13–14, 25
- Directors' Remuneration Report Regulations 2002 (DRR), 421
- dirty surplus, 480
- disclosure. *See also specific topics*
 - of antitrust procedure results, 160
 - on climate change
 - by Carbon Disclosure Project, 184
 - corporate, 183–187, 185t, 193
 - vs. confidentiality, in fiscal policy, 99
 - for corporate risk management,
 - requirements for, 500–502
 - “improved,” 9
 - of monetary policy, effects of, 90
 - optimal, vs. competitive advantage, 21–22
 - of other comprehensive income, 486–489
 - of relevant information, 360–361
 - vs. transparency, 496–497 (*see also* transparency)
 - in corporate governance, 363–364
- disclosure indices, 460
- disclosures, accounting
 - information overload in, 461
 - level of, 460–461
 - mandatory, 460
 - voluntary, 460–461
- discrimination
 - information-based, 248–249
 - in labor market, 248
 - against migrants, 248–249
- dissatisfaction, consumer, on price differences, 298–299
- distrust, 14, 351
- diversification, in constitutional transparency, 50–51
- documentation, in constitutional transparency, 40
- Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), 280, 418, 419
- domain, of policy intervention, 219–220
- dominance, collective (oligopolistic), 155
- dominant position
 - abuse of, 152–153
 - definition of, 152
- donors, to microfinance, 437, 438t, 439, 451
- double bottom line, in microfinance, 445
- dynamic adjustment, from surprise major constitutional change, 48–49
- earmarks, 108
- Earned Income Tax Credit (EITC), 50

- earnings management, in fair value
 - accounting, 484–485
- economic-dependent forward policy guidance, 84
- economic development, access to finance and, 447
- economic efficiency, political and
 - constitutional changes for, 45
- economic growth. *See* growth, economic
- economic instruments. *See also specific types*
 - in innovation policy transparency, 233
- economic transparency, 71, 71f
 - in education, 209
 - empirical measures of, 72
 - macroeconomic, 77–79
 - practices and trends in, 73–74, 73t
 - real-time accountability from, 78–79
- economy, evolution of U.S. Federal power over, 58–60
 - constitutional revolution of 1937 in, 60
 - rational basis review in, 59–60
- education. *See also* human resource policy
 - dimensioning of, 208–209
 - on earnings, 209–212, 243
 - formal adult, benefits and costs of, 211–212, 215
 - for jobs, 243
 - political decisions on, 198
 - standardization of systems for, 249
 - subsidies to, 201
 - on wages, 243
- effects, of transparency, 15–20
 - on cost of capital, 17
 - on economic growth, 16–17, 18–19
 - on efficiency, 15–17
 - empirical research on, 19–20
 - on financial constraints and risk, 18
 - incentive vs. information, 16
 - on international capital flows, 18
 - on investment, 18–19, 25–26
 - market failures in, 15–16
 - measurement issues in, 19–20, 26
 - on social norms, 14, 25
- efficiency, 15–17
 - economic, political and constitutional changes for, 45
 - in education and training, 203–205, 204f, 214
 - and growth, 16–17, 18–19, 25
 - efficiency wages, 245
- Eijffinger-Geraats index, 72, 75, 76f
- endogeneity
 - in executive pay, 419
 - monetary policy transparency on, 90
 - in price transparency and market integration, 298–299
- endogeneity issues, 13, 26
- entrepreneurial experimentation, in innovation, 232
- equity
 - cost of, governance transparency and, 393–394, 407, 408f
 - culture of, national differences in, 392
 - definition of, 203
 - in education and training, 203–205, 204f, 214
 - redistribution channels for, obscuring, 107
- equity-based pay, executive, 415–416
- equity culture
 - characteristics of, 392
 - governance transparency and, 392–393
 - national differences in, 392
- equity risks, influence of corporate transparency on, 394
- erga omnes*, 310
- Ericsson, lobbying in European Union
 - of, 353–354. *See also* multinational corporations and political actors
- European Banking Authority (EBA), stress testing by, 522
- effectiveness of, 523
- failure of
 - consequences of, 522–523
 - value of disclosure of, 523
- methodology and data in
 - 2009–2013, 528, 529t
 - business models in, 530–531
 - cumulative abnormal returns in, 530
 - financial market briefing on, 530
 - increased coverage and disclosure level of, 528–530
 - increased stringency of, 528
- European banking, stress testing of, 521–542
 - by Committee of European Banking Supervisors, 522
 - by European Banking Authority, 522

- history of, 523–524
 - literature review on, 523–525
 - effectiveness of, 524–525
 - methodology of, 524
 - methodology and data in, 526–531
 - 3-day event window in, 527–528
 - CAPM model in, 526–527
 - cumulative average abnormal returns in,
 - for 2006–2013, 527, 527f
 - event-study methodology in, standard, 526
 - methodology and data of CEBS and EBA
 - stress tests in
 - 2009–2013, 528, 529t
 - business models in, 530–531
 - cumulative abnormal returns in, 530
 - financial market briefing on, 530
 - increased coverage and disclosure level of, 528–530
 - increased stringency of, 528
 - policy recommendations for, 536–538
 - results of, 531–536
 - average residuals of banks in, exercise announcement, 531, 532t
 - average residuals of banks in,
 - methodology disclosure, 531, 532t
 - average residuals of banks in, results disclosure, 531, 533t
 - cumulative average abnormal returns in,
 - exercise announcement, 531, 533f
 - cumulative average abnormal returns in,
 - exercise results, 531, 535f
 - cumulative average abnormal returns in,
 - methodology disclosure, 531, 535f
 - informativeness of, 531
 - transparency, uncertainty and, 525–526
- European Monetary Union (EMU)
- failure of, 61–62
 - market integration, 293–294
- European Union Allowances (EUAs), 181–182
- European Union Constitution
- changes in, 56
 - mixed protections to business decision makers in, 60–62
 - fundamentals of, 60–61
 - Maastricht and Euro crises lesson on, 61–62
 - sovereign crises and, 119t, 120, 120f
 - type I–type II errors and, 56
- European Union Emissions Trading System (EU ETS), 181
- European Union, Ericsson lobbying in, 353–354.
- See also* multinational corporations and political actors
- Eurostat, labor statistics from, 253
- ex ante transparency, 7
 - for accountability/disciplining, 11
 - in human resource policy, 202, 205
 - in input utilization, 205–206
- excess demands, Hicksian effects on, 45–46, 46f
- executive compensation. *See also* pay, executive
 - equity pay and delta and vega in, 415
 - optimal design of, 413
- executive compensation, transparency in, 413–430
 - adverse effects of, 413–414
 - boards on, 422–423
 - CEO pay and future stock returns in, 420
 - comparisons across firms in, 414
 - compensation consultants on, 424–426
 - endogeneity of, 419
 - executives on, 423–424
 - exogenous mandated increases in, 421–422
 - incentive pay structure in, 414–417
 - cash, equity-based, and severance pay in, 415–417
 - moral hazard vs. managers' power in setting their own incentives and salaries in, 415–416
 - U.S. regulations on, 414
 - in U.S. vs. other countries, 414–415
 - in mutual funds and brokerages, 426–427
 - natural experiments on, 419–421
 - say-on-pay shareholder proposals on, 421
 - regulations on, 417–419
 - in Australia, 419
 - in Europe, non-U.K., 419
 - in U.K., 418–419
 - in U.S., 417–418
- executives, on executive pay and transparency, 423–424

- expectations, forward policy guidance for
 - management of, 83
 - in private sector, 82–83, 87
- ex post accountability, optimal transparency
 - in, 80
- ex post transparency, 7–8, 9
 - in human resource policy, 202, 205
 - in input utilization, 206
- explicability, in constitutional transparency, 40
- extended market model, 503
- externalities, positive
 - in human resources, 201
 - from innovation, 232
- external transparency, 343
- fair value accounting, 477–490
 - as accounting transparency, 482
 - accounting transparency in, 477
 - benefits of, 477–478
 - International Financial Reporting Standards for, 478
 - methodological issues in study of, 478
 - disclosure issues in, 481–482
 - enhanced disclosure in, 485
 - experimental studies on, unfavorable view from, 483–485
 - in financial crisis
 - criticism of, 480
 - IASB amendments after, 481
 - general principles of, 479–482
 - goals of, initial, 479
 - vs. historical cost accounting, 480
 - in inflationary times, 480
 - International Accounting Standard Board framework of, 477
 - levels of, IFRS 13, 481
 - measurement and presentation of, 482–486
 - measurement and earnings management in, 484–485
 - procyclicality and financial crisis in, 485–486
 - relevance and reliability in, 482–484
 - other comprehensive income in, 479, 480
 - disclosure in, 486–489
 - IFRS 13 on, 481
 - statement of comprehensive income in, 479–480
 - tax effects of, 489–490
 - use of, 479
- fair value, IRS definition of, 479
- fairness, 14
- FAS 133, 501–502
- FAS 161, 501–502
- financial architecture, governance
 - transparency and, 395–396, 407, 408f
- financial constraints, 18
- financial flows, international, government
 - monitoring, reporting, and verification of, 191–192
- financial institutions. *See also* banking;
specific types
 - organizational reform of, 279–281
- financial instruments. *See also specific types*
 - in innovation policy transparency, 233
- financial regulation. *See also specific types and contexts*
 - call for greater simplicity in, 258
 - objective of, 261
 - of risk, 261
- financial regulation transparency, 258–284
 - banks in, world's biggest
 - accounting standards for countries headquarters to, 284t
 - bailout and capital ratios of, 282t–283t
 - Basel Capital Accords in, 263–267 (*see also* Basel Capital Accords)
 - Basel II criteria and, 259–260
 - capital ratios in (*see also* capital-to-asset ratios)
 - accounting practices on, 272–276, 273f–275f (*see also* accounting practices, capital ratios and) measurement of, and regulatory requirements, 267–272, 268f–271f
 - capital ratios in, pre-bailout
 - in bank failure prediction, 270–272
 - leverage ratio in, 269, 270f
 - risk-based, 268–269, 269f, 282t–283t
 - tangible equity-to-asset ratio in, 269–270, 271f
 - Tier 1, 268, 268f
- creditor protection in, 262–263
- definition of, 259
- implications of, 262

- new direction in, 258, 259
- Northern Rock failure and, 260
- organizational reform of financial institutions in, 279–281
- perfection in, lack of, 258–259
- political process transparency in, 262–263
- post-crisis regulatory environment in, 276–279, 277t, 278t
- public perspective on, 258–259
- risk assessment objectivity in, 259
- simplicity in, greater, 258, 259
- views of, by different parties, 260–263
- financial reporting transparency, 457
- financial-statement footnotes, for measuring corporate risk management, 504
- financial statements, for measuring corporate risk management, 504–505
- financial transparency, 15
- firm manager–government official relationship, corruption in
 - as agency problem, 325–329, 327t–328t
 - transparency on, 331, 333
- firm manager–top management relationship, corruption in
 - as agency problem, 327t–328t, 329–330
 - transparency on, 332, 334
- firms. *See also* corporate; multinational corporations and political actors; *specific types*
 - accounting transparency in
 - factors in, 463–464, 463t
 - measurement of, 458
 - measurement proxies in, 460
- first fundamental welfare theorem, 70
- fiscal policy
 - deficit bias in, 101, 102
 - government behavior in response to, 98
 - problems in, 98
- fiscal policy transparency, 94–113
 - audience for, 112
 - call for, 98–99
 - definitions of, 100–101
 - democratic legitimacy of choices in, 100
 - fiscal sustainability in, concern about, 99
 - governance and practice in, 106–111
 - amount of transparency in, 108–109
 - crucial questions in, 106
 - experience in, 109–110, 111t
 - fiscal rules and transparency in, 107–108
 - improvements in fiscal transparency in, 109
 - novelty of, 106
 - information disclosure vs. confidentiality in, 99
 - multiannual fiscal frameworks in, 111
 - optimal amount of, 112
 - in policy process, 112
 - rationale for, 99–106
 - conceptual bases in, 101–103
 - political economy of fiscal policy in, 105–106
 - theories in, 103–105
 - research orientations in, 111–113
 - shifts facilitating, 103
 - worldwide state of, 109–110
- fiscal rules
 - definition of, 101
 - effectiveness of, 107
 - market pressure as substitute for, 108
 - scrutinization of, in EU, 101, 107
 - transparency and, 107
- fiscal sustainability, concern about, 99
- fiscal transparency, 100–101
- Fitch, sovereign ratings of, 122–125
- footnotes, financial-statement, for measuring corporate risk management, 504
- foreign direct investment (FDI), 19–20
 - government competition for, 304
 - history of, 310
- incentives for
 - history of, 310
 - host country transparency in, 309
 - investor transparency in, 312
 - via norms vs. processes, 309–313
- inward, 19–20, 304
 - transparency and, 304–320 (*see also* inward investment incentives, transparency and)
- liberalization of, in late 1980s, 310
- norms in, 309–311, 313
- norms plus process in, 311–313
- targeting particular types of, 311
- territorial image-building for, 1990s, 311
- transparency of

- foreign direct investment (FDI) (*cont.*)
 current understanding of, 305–307
 on quality of FDI, 308–309
 on quantity of FDI, 307–308
 stickiness of bad decisions and, 309
- foreign exchange interventions, monetary
 policy transparency on, 93
- forward policy guidance, central bank, 80–89
 beneficial information effect in, 86–87
 code-word communication in, 83
 commitment to, 88–89
 discrete steps in adjustment of, 80
 economic-dependent, 84
 expectations on
 management of, 83
 by private sector, 82–83, 87
 full description of, impossibility of, 86
 minutes and voting records in, 81, 82
 monetary policy effectiveness and, 87
 noisy information and, 86
 policy inclination announcement in, 80–81
 projected policy path in, 85–86
 rationale for, 81–82
 state-contingent, 84–85
 time-dependent, 84
 time-inconsistency problem and, 87–88
 usefulness of, 86
- foundation approach, to risk weights, 264
- freedom of contract, 60
- free-riding problem, in microfinance, 436
- full transparency, 6
- future path of policy, effects of, 90
- gains and losses, from corporate hedging
 as corporate risk management transparency
 (COMPUSTAT HEDGEGL), 505–506,
 507t–508t, 510t–516t
 disclosure of ineffective hedges in,
 informativeness of, 517
 discretionary accruals and, 506, 509, 510t–516t
- gaming and manipulation by banks, of Basel
 Capital Accords, 264–265
- General Purpose Financial Reports (GPFR),
 457–458
- Generally Accepted Accounting Principles
 (GAAP), 472
- vs. International Financial Reporting
 Standards, 472–473
- geographical market (space), 288–290
 transparency and price dispersion in,
 290–291
- global accounting convergence, 465, 472
- Global Initiative for Fiscal Transparency
 (GIFT), 99, 110, 111t
- global microfinance industry, transparency
 and disclosure in. *See* microfinance
 industry, transparency and disclosure in
- global risk assessments, 441–442
- governance. *See also specific types*
 corporate (*see* corporate governance)
 multilevel, supranational, 4
- governance transparency, 15
 agency factors in, 373
 definition of, 371
 demand for, 396
 importance and benefits of, 387
 influence on economic growth, 388
 institutional factors in, 372–373
 literature on, 371
- governance transparency and capitalism,
 387–409
- asymmetric information and transaction
 costs in, 388–390
- demand for, 396
- importance of, 392–396
 cost of equity in, 393–394, 407, 408f
 culture of equity in, 392–393
 evidence of, 407–408, 407f, 408f
 financial architecture in, 395–396, 407, 408f
 stock market participation in, 394–395,
 407, 407f
- institutional structure in, 390–391
- link between, conclusions on, 409
- measurement of, 397–406
 anti-self-dealing index in, 397–399
 descriptive statistics and comparison of
 measures of, 400–403, 401t–402t
 Governance Transparency Index in, 399
 social trust in, 403–404, 404f
 trust formation in, 405–406, 406f
- Governance Transparency Index, 399
- vs. anti-self-dealing index, 400–403,
 401t–402t

- government bonds
 rating stability for, 123–124
 ratings of, 123
- government official–citizens relationship,
 corruption in
 as agency problem, 327t–328t, 329
 transparency on, 331, 333–334
- government official–firm manager
 relationships, corruption in
 as agency problem, 325–329, 327t–328t
 transparency on, 331, 333
- governments, sovereign. *See also specific governments and issues*
 crises of, in modern history, 119–121, 119t, 120f
 financial crisis and solvency of, 116
- Grameen Bank, 437
- Greece
 credit ratings of, 123
 sovereign crises in, 119t, 120, 120f
- green house gas (GHG) emission
 government monitoring, reporting, and
 verification of, 189–191
 leakage problem in, 193
- growth, economic
 influence of corruption on, 325, 335
 influence of efficiency on, 16–17, 18–19, 25
 influence of governance transparency on, 388
 innovation in, 219
 transparency and, research on, 344
- guidelines. *See also regulation; specific types and regulating bodies*
 for antitrust procedures, 158–159
 on competition policy, market
 transparency and, 158–159
- harmonization, global accounting, 465, 472
- hedging, in constitutional transparency, 50–51
- hedging, corporate
 Accounting for Derivative Instruments and Hedging Activities for, 501–502
 disclosure of ineffective hedges in,
 informativeness of, 517
 firm value and, 502
 gains and losses in
 as corporate risk management
 transparency, 505–506, 507t–508t,
 510t–516t
 discretionary accruals and, 506, 509,
 510t–516t
 lack of transparency on, 495
 Hicksian substitution and wealth effects, on
 excess demands with surprise major
 constitutional change, 45–46, 46f
- human capital
 attrition costs of corporate transparency
 in, 373–374
 vs. human resources, 198–199
 vs. real capital, 200
- human resource management, efficacy and
 equity in, 203–205, 204f, 214
- human resource policy, 198–199
 dynamic nature of, 201
 market failures in, 198, 200–201
- human resource policy transparency, 198–215
 aspects relevant for, 202–212
 benefits and costs in, 209–212, 215
 education and labor market in,
 dimensioning of, 208–209
 efficacy and equity in, 203–205, 204f, 214
 input utilization in, 205–206, 215
 skills and competences in, 206–208, 215
 definition of, 201–202
 measures for improvement of, 212–214
 rationale for, 199–201
- human resources, vs. human capital, 198–199
- IFRS Conceptual Framework, 470
- IFSR 13
 on other comprehensive income, 481
 on tax, 481–482
- imperfect transparency, 7
- incentive effects, 16
 in macroeconomic transparency, 78
- in monetary policy transparency, 70
 negative, 70
- incentive pay structure transparency,
 executive, 414–417
 cash, equity-based, and severance pay in,
 415–417
 moral hazard vs. managers' power in
 setting their own incentives and salaries
 in, 415–416
 U.S. regulations on, 414
 in U.S. vs. other countries, 414–415

- incentive regulations, 157
- incentives
 - for actors, 12
 - for foreign direct investment, transparency
 - in
 - multilevel, coordination and, 315–316
 - multilevel, homogenization and, 316–317
 - top-down, 314–315
 - for innovation systems, 232
 - in principle–agent relationship, 12
 - of sender and receiver, 12
 - for transparency, 22
- inclination announcement, policy, 80–81
- income, comprehensive
 - other, 479, 480
 - disclosure in, 486–489
 - IFRS 13 on, 481
 - statement of, 479–480
- income statement, 480
- individualized integration model, 204
- industry surveys, for measuring corporate risk management, 503
- inflation
 - fair value accounting with, 480
 - macroeconomic transparency on
 - forecasts in, 77, 79
 - volatility in, 77–78
 - monetary policy transparency on, 89–90
- information asymmetries, 5, 9, 24–25. *See also*
 - transparency; *specific types*
 - Adam Smith on, 458
 - characteristics and behavior in, 7
 - in competition policy, 144–145, 162
 - in corruption, 326, 331 (*see also* corruption)
 - in governance transparency, 388–390
 - in human resource policy, 200
 - market failures and, 15–16
 - principal–agent relationships and, 7
 - sender–receiver relationship and, 6–7, 9, 24
 - transparency and, 6
- information effects, 16
 - in monetary policy transparency, 70
- information transfer, 6, 9
- innovation, 219
 - attributes of, 223–225
 - collaboration in, 225
 - as growth-enhancing, 220
 - intellectual property rights protection for, 233–234
 - as interaction of actors and institutions, 220
 - in systemic context, 225
- innovation policy
 - context on form of, 230
 - definition of, 228
 - legitimacy of, 232
 - policy coordination and integration in, 230–231
- innovation policy transparency, 219–236
 - attributes in, 223–225
 - definition of, 219
 - dimensions in, 229
 - domain of, 219–220
 - functional areas of, 231–234
 - generic issues in, 228–229
 - inherent problems in, 228
 - institutions and actors in, 229–231
 - instruments in, 231
 - international, 236
 - lack of, 235
 - measurement of, studies on, 222–223, 235
 - process and outcomes in, 235–236
 - public debate on, 235
 - rationale for, 226–228
 - science and technology policy in, 220–223
- innovation processes, 224
- innovation systems, 224
 - cognitive dimension of, 229
 - construction of, 227
 - definition of, 225–226
 - economic dimension of, 229
 - incentives for, 232
 - key characteristics of, 226
 - organizational/institutional dimension of, 229
 - transient nature of, 234
- innovation systems policy
 - as coordination problem, 227–228
 - to create new businesses, 228
 - globalization in, 228
 - investments in, 226–227
 - market failures in, 227
 - rationale for, 226–228

- input utilization, in human resource policy, 205–206, 215
- institutional factors, in governance
transparency, 372–373
- institutional structure, in governance
transparency, 390–391
- institutions, type I–type II errors and, 51–57
EU Constitution in, changing, 56
principles of, 51–56, 55t
U.S. Constitution in, Supreme Court
changes in, 56–57
- instrumental/efficiency rationale, 10–11, 15, 25. *See also* effects, of transparency
- insurance industry, optimal disclosure vs.
competitive advantage in, 21–22
- insurance, in remuneration, 246
- intellectual property rights (IPR) protection
for innovation, 233–234
in international standards, 222
measurement of, studies on, 222–223, 235
in science and technology policy, 221–222
- interest rates
nominal, transparency increases on, 90
predictability of, influence of monetary
policy transparency on, 91
- Interfaith Center for Corporate
Responsibility (ICCR), 184
- intermediate scrutiny, 59
- internal transparency, 343
- International Accounting Standards (IAS),
467, 468t–469t
- International Accounting Standards
Committee (IASC), 466
- International Budget Partnership, 99
- international capital flows, 18
- international financial flows, government
monitoring, reporting, and verification
of, 191–192
- International Financial Reporting Standards
(IFRS), 466, 467–470, 468t, 478
in China, 470–471, 471t
“clutter” in annual reports from, 474
country pressures for modification of, 473
global adoption of
obstacles to, 472
support for, 470, 471t
in India, 471, 471t
in Japan, 471–472, 471t
for small- and medium-sized enterprises,
470
in U.S. and E.U., 470, 471t
vs. US Generally Accepted Accounting
Principles, 472–473
- International Financial Reporting Standards
(IFRS) Foundation
governance structure of, 467, 467f
objectives of, 466–467
on presentation of financial statements,
467–470
standards issued by, 467, 468t–469t
standards setting responsibility of, 467
- International Integrated Reporting Council
(IIRC), 461
- international labor market, 247–249, 251
migrants in, 248–249
migration in, 247–248
- International Labour Organization (ILO), 253
- International Monetary Fund (IMF), 4, 75,
103, 110, 279, 522
standards and codes of, 98
transparency in, calls for, 4
- International Organization for Migration
(IOM), 253
- international standard setting, accounting
transparency and. *See* accounting
transparency
- international trade policy transparency,
166–177
conveyance issues in, 176–177
definitions of, 166–167
economic literature on, dearth of, 166–167
importance of, 166
legal rules on, 167
policy transparency in, 168–171
regional trading arrangements and,
175–176
regulatory transparency in, 171–175
- internet
cross-border purchases on, 296–297
and life insurance prices, 291
effect on price transparency and market
integration, 286–287
- interpretations, of constitution, high court,
34–35

- investment, 18–19, 25–26
 - foreign direct (see foreign direct investment (FDI))
 - in innovation systems policy, 226–227
 - investor transparency, in foreign direct investments
 - plus public transparency toward public at large, 319
 - toward public agency, 318
 - investors, corporate information disclosure
 - for welfare of, 361
 - inward foreign direct investment (FDI), 304
 - inward investment incentives, transparency
 - and, 304–320
 - history of FDI incentives in, 310
 - literature review on, 305–309
 - current understanding of, 305–307
 - transparency and stickiness of bad FDI decisions in, 309
 - transparency on quality of FDI in, 308–309
 - transparency on quantity of FDI in, 307–308
 - multilevel transparency in, 313–317
 - important aspects of, 313
 - multilevel incentives, coordination, and transparency in incentives toward FDI in, 315–316
 - multilevel incentives, homogenization, and transparency in incentives toward FDI in, 316–317
 - top-down incentives in, 314–315
 - multiparty transparency in, 317–319
 - investor plus public transparency toward public at large in, 319
 - investor transparency toward public agency in, 318
 - national entity transparency toward other territorial levels in, 318–319
 - norms vs. process in, 309–313
 - norms in, 309–311
 - norms plus process in, 311–313
 - Ireland, credit ratings of, 123
 - job productivity
 - education on, 243
 - information on, 245
 - promotion on, 245
 - wages on, 243
 - job shopping, 242–243
 - job vacancies, finding, 249–250
 - Joint Implementation (JI) program, of Kyoto Protocol, 179
 - carbon market transactions under, 180
 - markets in, 182–183
 - KMV model, 126
 - knowledge. *See also* education
 - development and diffusion of, 232
 - skills and competences in, 206–208, 215
 - Kyoto Protocol, on carbon markets, 187
 - labor demand, 244–245
 - labor market
 - dimensioning of, 208–209
 - information on, sources of, 251–252
 - information role in, 241
 - international, 247–249, 251
 - migrants in, 248–249
 - migration in, 247–248
 - vs. other markets, 241
 - labor market policy, 250
 - labor market transparency, 241–254
 - information in, 251–254
 - on labor market, 251–252
 - on migration and for migrants, 252–254
 - international labor market in, 247–249, 251
 - migrants in, 248–249
 - migration in, 247–248
 - lack of, sources of, 242–247, 250–251
 - labor demand in, 244–245
 - labor supply in, 242–244
 - remuneration in, 246–247
 - political decisions in, 249–250, 251
 - supply side vs. demand side, 242
 - uniqueness of, 241
- labor supply, 242–244
 - Lake Wobegon effect, 423–424
 - Latin America sovereign crises, 119–120, 119t, 120f
 - law. *See also specific types and contexts*
 - on antitrust procedures, 158–159
 - on competition, 144

- on competition policy, market transparency and, 158–159
- complexity of contracts and quality of, 391
- constitutional, 41
- demand for, 396
- statutory, 41
- supply and demand for, 391
- law of one price (LOP), 288
 - differences in goods and, 297
 - national borders and, 293
- leakage problem, 193
- legal origin, in stock market participation, 394
- legitimacy
 - of choices, democratic, 100
 - of innovation, 232
 - in multinational corporation–political actor relationships, 346–349, 348f
 - transparency, trust, and, 345–346, 346f
 - trust and, 350–351
 - of political units, 347
- Lehman Brothers bankruptcy, 279
- leverage ratio, 269, 270f
- Liikanen proposal, 280
- Liquidity Coverage Ratio (LCR), 266
- living wills, 280
- lobbying, 351
- Lochner Era, 60
- logit model, default probabilities estimation via, 126, 140
- Long-Term Capital Management (LTCM), 498–499
- loss given default (LGD), 264
- Maastricht Treaty, 61–62
- macroeconomic transparency, 76–80
 - effects of, 77
 - effects on inflation volatility, 77–78
 - incentive effects of, 78
 - inflation forecasts in, 77, 79
 - monetary policy rate r in, 78
 - stylized model of, 76–77
 - supply shocks in
 - anticipated aggregate, 77–78
 - harmful information effects of, 80
 - unanticipated transmission, 79
- Maimonides' rule, 206
- management guidance, on executive pay and transparency, 422–423
- management, top. *See* top management
- market failures
 - causes of, 15–16
 - definition of, 220
 - in human resource policy, 198, 200–201
 - innovation policy and, 220–221, 227
- market information, on microfinance, 438t, 443–444
- market integration
 - endogeneity in, 298–299
 - European Monetary Union on, 293–294
 - market delineation in, 288–290
 - price levels in, 291–292
- market integration forces, 294–299. *See also* price transparency and market integration
- arbitrageurs in, 297–298
- consumer dissatisfaction on price
 - differences in, 298–299
- consumers choosing to buy in cheaper
 - location in, 294–297
- information on consumer bargaining for better price in, 297
- market-pull perspective, 372
 - development of theory of, 372–373
 - institutional point of view of, 376t, 377–378
- market reactions (proxies), for accounting transparency, 461–463, 462t
- market to book ratio, banking, 521, 522f
- market transparency. *See also* competition policy
 - collusion and, 147–151, 148t
 - competition policy enforcement
 - procedures and, 157–162
 - disclosure of results in, 160
 - international competition policy in, 160–162
 - investigation processes in, 159–160
 - laws, regulations, and guidelines in, 158–159
 - merger review and, 153–155
 - monopolization of markets and, 152–153
- markets
 - delineation of, in price transparency and market integration, 288–290

- markets (*cont.*)
 - expectations of, monetary policy transparency and, 92
 - formation of, in innovation, 232
 - geographical space in, 288–290
 - imperfect, 146
 - monopolization of, market transparency and, 152–153
 - perfectly competitive, 145–147, 147t
 - product space in, 288–289
 - segmentation of, along national borders, 292–294
- measurement issues, 19–20, 26
- merger review, market transparency and, 153–155
- Metallgesellschaft, 498–500
- Michigan, as right to work state, 45
- microfinance
 - definition of, 434
 - extremes in market for, 434–435
 - growth and scope of, 434
- microfinance industry, transparency and
 - disclosure in, 434–452
 - among stakeholders, 435–440
 - customers in, 437, 438–439, 438t
 - donors in, 437, 438t, 439, 451
 - economic foundation in, 436
 - investors in, 440
 - key issues in, 438–440
 - manager accountability in, 435
 - owners in, 437, 438t, 439–440
 - social performance dimension in, 435–436
- importance and scope of, 434–435, 451
- market information and true costs of
 - services in, 438t, 443–444
- nongovernmental organizations in, 437
- ratings of, 441–442
- regulation of, 440–441
- social mission in, 437
- social performance and customer impact
 - in, 445–448
 - country-level effects in, 447–448
 - economic development in, 447
 - measurement issues in, 445–447
 - randomized controlled trials on, 447
 - Schreiner's framework for, 445–446
 - sustainability and financial performance in, 448–450
- Microfinance Transparency initiative, 444
- migrants
 - information for, 252–254
 - on international labor market, 248–249
- migration
 - information on, 252–254
 - on international labor market, 247–248
- Mincer equation, 243
- minutes, on forward policy guidance, 81, 82
- mixmarket, 442
- Modigliani–Miller argument, 498
- monetary policy
 - effects of forward policy guidance on effectiveness of, 87
 - recent changes in making of, 94
 - surprise in, 99–100
- monetary policy rate r , in macroeconomic transparency, 78
- monetary policy transparency, 68–94
 - conceptual framework for, 69–71, 71f
 - argument in favor of, 70
 - complete openness in, 69–70
 - five policymaking aspects of, 70–71, 71f
 - incentive effects in, 70
 - information effects in, 70
 - definition of, 69
 - empirical evidence on, 89–93
 - central bank communications in, 91
 - confounding factors in, 92–93
 - endogeneity in, 90
 - foreign exchange interventions in, 93
 - future path of policy in, 90
 - individual policymaker communications in, 91
 - inflation in, 89–90
 - interest rate predictability in, 91–92
 - interest rates in, nominal, 90
 - market expectations in, 92
 - minutes of monetary policy meetings in, 91
 - operational implementation of, 92
 - policy statements in, 90–91
 - predictability of decisions in, 92
- forward policy guidance in, 80–89 (*see also* forward policy guidance, central bank)

- importance central banks give to, 68
- macroeconomic transparency in, 76–80
 - (*see also* macroeconomic transparency)
- measures and trends in, 71–76
 - empirical measures in, 71–72
 - practices and trends in, 72–76, 73t, 76f
- other surveys on, 69
- policy announcements and reports in, 70
- rise in, 68–69
- monitoring, reporting, and verifying (MRV)
 - of GHG emissions, 189–191
 - of international financial flows, 191–192
- monopolies
 - market, market transparency and, 152–153
 - natural, 156–157
- Mons typology, 204–205
- Moody's sovereign ratings
 - methodology for, 125
 - transparency in, 122–125
- moral hazard, 7
 - in cartel's price-fixing activities, 149
 - in executive incentive pay, 415–416
 - for shareholders, 413
- multilevel, supranational governance, 4
- multilevel transparency, in foreign direct
 - investments, 313–317
- important aspects of, 313
- multilevel incentives and transparency in
 - coordination and, 315–316
 - homogenization and, 316–317
- top-down incentives in, 314–315
- multinational corporations and political
 - actors, 341–354
- examples of, 352–354
 - Ericsson lobbying in European Union, 353–354
 - Teliasonera in Uzbekistan, 352–353
- information asymmetries and business–
 - political relationship specificity in, 342–343
- legitimacy–trust in, 350–351
- research on, 341–342
- transparency in, 343
- transparency–legitimacy in, 346–349, 348f
- transparency, legitimacy, and trust in, 345–346, 346f
- transparency, opacity, and, 343–345, 345f
- transparency–trust in, 349–350
- transparent behavior in, 343
- multiparty transparency, in foreign direct
 - investments, 317–319
- investor plus public transparency toward
 - public at large in, 319
- investor transparency toward public
 - agency in, 318
 - national entity transparency toward other territorial levels in, 318–319
- mutual fund manager pay, transparency and, 426–427
- national entity transparency toward other territorial levels, in foreign direct
 - investment, 318–319
- natural monopolies, 156–157
- negative incentive effects, in monetary policy
 - transparency, 70
- net profit, 480
 - “normal,” 480
- Net Stable Funding Ratio (NSFR), 266
- network industries
 - market transparency and regulation of, 155–157
 - utility industries as, 153
- New Keynesian model, 86–87
- New Keynesian Phillips curve, 82
- noisy information, on forward policy
 - guidance, 86
- Nordic Statistical Yearbook, 253
- norms (normativity), 309–310
- Northern Rock failure, 260
- NRSRO status, 123
- ObamaCare Supreme Court case, Commerce
 - Clause in, 60
- objectives. *See also specific topics*
 - of financial regulation, 261
 - of principle and agent, 12, 25
- observability, 8
- oligopolistic dominance, 155
- onion model, of governance transparency, 374–377, 375f
- on-the-job training, private effects of, 212
- opacity
 - definition of, 343
 - degrees of, 344–354, 345f

- opacity (*cont.*)
 specificity of, 344
 transparency and, 343–345, 345f
- Opacity Index, 459
- Open Budget Index (OBI), 110
- Open Government Directive*, 4
- Open Method of Coordination (OMC), 10, 201
- openness, complete, in monetary policy,
 69–70
- operational implementation of monetary
 policy, 92
- operational separability, of subsidiaries, 280
- operational transparency, 71, 71f
 in education, 209
 empirical measures of, 72
 macroeconomic transparency in, 79
 practices and trends in, 73t, 74–75
- optimal disclosure, *vs.* competitive
 advantage, 21–22
- optimal transparency, 20–24, 26
 benefit of transparency, marginally
 decreasing and, 20–21
 corporate, 21
 cost to sender in, 21–22
 costs in, 20
 defining, difficulties with, 161, 162
 information processing costs of receiver
 and, 22–23
 in *ex post* accountability, 80
 fiscal policy, 22
 imprecise information on, 23–24
 for international competition, 161
 macroeconomic transparency on, 79–80
 for network industries, 156, 160
 policy, 21–22
- Organisation for Economic Co-operation
 and Development (OECD), 4, 109, 146,
 207, 466
 desirable practices of, 98
 migration information from, 253
 on transparency, 5, 172, 173
- other comprehensive income, 479, 480
 disclosure in, 486–489
 IFRS 13 on, 481
- owner–top management bargaining, 363
- owners, in microfinance, 437, 438t,
 439–440
- ownership transparency, in governance
 transparency measures, 400, 401t–402t,
 409
- Pareto improvement, 9
- pay, executive. *See also* executive
 compensation, transparency in
 cash, 415–416
 endogeneity in, 419
 equity-based, 415–416
 equity pay and delta and vega in, 415
 incentive, moral hazard of, 415–416
 optimal design of, 413
 regulations on, 414
 Say-on-Pay Bill on disclosure of, 421
 severance, 415, 416–417
 stock returns and, future, 420
 in U.S. *vs.* other countries, 414–415
- pay, executive, disclosure of, 419–429. *see also*
 executive compensation, transparency in
 1964 Securities Acts Amendment on,
 419–420
 compensation consultants on, 424–426
 executive on, 423–424
 incentive pay in, 414–417
 cash, equity-based, and severance pay in,
 415–417
 moral hazard *vs.* managers' power in
 setting their own incentives and
 salaries in, 415–416
 U.S. regulations on, 414
 in U.S. *vs.* other countries, 414–415
 management guidance on, 422–423
 Securities and Exchange Commission on
 1993 enhanced compensation disclosure
 requirement of, 418, 420
 Compensation, Discussion, and Analysis
 section in, 418
 Dodd-Frank on, 418, 419
 early history of, 417–418
 Sarbanes–Oxley Act on, 418, 420–421,
 427
 say-on-pay regulations in, 421
- pay, transparency and
 for brokers, 426–427
 for mutual fund managers, 426–427

PDs. *See* probabilities of default (PDS)

performance

- business, transparency and, 341
- corporate risk management and, 502
- financial, in microfinance, 438t, 448–450
- social (*See* social performance (impact), in microfinance)

personnel economics, 244

piece-rate payment, 244

policy. *See also specific types*

- evaluation of, for innovation policy
 - transparency, 233
- future path of, effects of disclosure on, 90
- government behavior in response to, 98
- public

- generic issues for, 228–229

- rationale for transparency in, 12

policy inclination announcement, 80–81

policy intervention, domain of, 219–220

policy statements, effects of, 90–91

policy transparency, 8, 71, 71f

- in education, 209
- empirical measures of, 72
- international, 168–171
- practices and trends in, 73t, 74

political actors, multinational corporations and

- and. *See* multinational corporations and political actors

political decisions, on labor market

- transparency, 249–250, 251

political economy, of fiscal deficits, 105–106

political transparency, 71, 71f

- in education, 209
- empirical measures of, 72
- in financial regulation transparency, 262–263
- practices and trends in, 73, 73t

political units, legitimacy of, 347

pork barrel, 108

positive externalities

- in human resources, 201
- from innovation, 232

precision, information, 9, 10

predatory pricing, 152–153

predictability, 7. *See also* ex ante transparency

- of constitutional guarantees, 33, 40–41
- constitutional transparency as, 39–42

- of monetary policy decisions, monetary policy transparency on, 92

price-cap regulations, 157

price transparency. *See also* competition policy

- anticompetitive effects of, 149–150
- collusion, cartels, and, 148–151, 162
- definition of, 287
- increase in, significant, on markets, 147
- in market monopolization, 152
- in oligopolistic markets, 148–150, 162
- as pro-competitive, 148
- in public procurement, 150–151

price transparency and market integration, 286–300

- consumer search costs in, 287

- effect of internet on, 286–287

- empirical results on, 290–294

- market segmentation along national borders in, 292–294

- price dispersion within a market in, 290–291

- price levels in, 291–292

- endogeneity of transparency in, 298–299

- forces in market integration in, 294–299

- arbitrageurs in, 297–298

- consumer dissatisfaction with price differences in, 298–299

- consumers choosing to buy in cheaper location in, 294–297

- information on consumer bargaining for better price in, 297

- fundamentals of, 286–288

- market delineation in, 288–290

prices

- differences in, in market delineation, 289

- dispersion in a market of, transparency and, 290–291

- effect of location on, 286

- levels of, price transparency and, 291–292

- movements of, in market delineation, 289–290

principal–agent relationship, 7

- incentives in, 12, 22

- in policy analysis, 7–8

- valuable signal in, 9

- probabilities of default (PDS)
 - bank, 132–133, 133f
 - implied from credit default swaps, 131–132, 131f
 - private sector fundamental vs. credit default swaps market implied, 133–136, 134f–136f
- procedural transparency, 8, 71, 71f
 - in education, 209
 - empirical measures of, 72
 - practices and trends in, 73t, 74
- procyclicality, in fair value accounting, 485–486
- productivity, job
 - education on, 243
 - information on, 245
 - promotion on, 245
 - wages on, 243
- product space, 288–289
- profit and loss statement, 480
- Programme for the International Assessment of Adult Competencies (PIAAC), 207
- prohibition, U.S. Supreme Court decision on, 35
- projected policy path, 85–86
- promotion, on productivity, 245
- proprietary data, for measuring corporate risk management, 503
- public employment exchanges, 249
- public human resource policy. *See* human resource policy
- public policy
 - generic issues for, 228–229
 - rationale for transparency in, 12
- public procurement, price transparency and cartels in, 150–151
- public stock of capital, 42–43
- purchases, cross-border, 294–297
 - in Europe, 295
 - on internet, 296–297
 - in U.S.-Canada, 295
- purchasing power parity (PPP), across national borders, 293
- quality, information, 9, 10, 24–25
- ratings
 - by credit rating agencies
 - fostering competition in, 124
 - sovereign, of, 122–125
 - transparency in, 124–125
 - for government bonds
 - stability of, 123–124
 - of microfinance industry, 441–442
- rational basis review, 59–60
- rationale, for transparency, 10–15, 25
 - causality issues in, 14–15
 - corruption and, 13
 - costs/benefits and, 12, 26
 - determinants of, 12–13
 - endogeneity issues in, 13, 26
 - incentives of sender and receiver in, 12
 - instrumental/efficiency, 10–11, 15, 25 (*see also* effects, of transparency)
 - objectives of principle and agent in, 12, 25
 - in public policy, 12, 228–229
 - social norms and, 13–14, 25
 - trust in, engendering, 11–12, 14
 - value driven, 10–11, 25
 - welfare in, 12
- receiver attention, 8
- receiver distortion, 8
- receiver, of information, 6, 9
- reciprocity, 14
- recovery and resolution plans, 280
- REDD (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries), 190–191
- redistribution
 - vs. administrative state, 49–50
 - from constitutional changes, 49–50
 - Hicksian effects on excess demands in, 45–46, 46f
 - Slutsky equation on, modified, 46–48
 - static analysis with price adjustment for, 48
 - political and constitutional changes for, 45–48
- redistribution programs, 35
 - U.S. Supreme Court mistakes on, 38–39
- regional trading arrangements, international trade policy transparency and, 175–176

- regulation. *See also* fiscal rules; *specific types and contexts*
 antitrust procedures in, 158–159
 of competition policy, market
 transparency and, 158–159
 of executive compensation
 CEO pay in, 414
 transparency of, 417–419
 financial
 call for greater simplicity in, 258
 objective of, 261
 of risk, 261
 incentive, 157
 in innovation policy, 233
 of microfinance industry, 440–441, 450
 price-cap, 157
 regulatory transparency, international,
 171–175
 remuneration. *See also* executive
 compensation; wages
 for labor, 246–247
 resource mobilization, in innovation, 232
 resource picking, 373, 374
 respect, 43
 right to work state, 45
 ringfencing, 280
 risk, 18
 risk assessment
 global, 441–442
 objectivity of, 259
 risk-based capital-to-asset ratios, 268–269,
 269f, 282t–283t
 risk management
 corporate (*see* corporate risk
 management)
 definition of, 497
 in financial crisis, 497
 risk-management services
 costs vs. benefits of, 498
 increased demand for, 497–498
 Risk Metrics Group, 117, 126. *See also*
 Z-Metrics
 risk weights, Basel II approaches to, 264
 rule-based macroeconomic stabilization
 policies, 3–4
 rules of the game, 43
 Russian sovereign crises, 119t, 120, 120f
 Sarbanes–Oxley Act
 on executive pay, 418, 420–421
 on firm value, 427
 net benefits vs. costs of, 498
 Say-on-Pay Bill, on executive pay disclosure, 421
 say-on-pay shareholder proposals, 421
 scarcity, information on, 8
 science and technology policy transparency,
 220–223. *See also* innovation policy
 scrutiny, intermediate, 59
 search costs, consumer
 price dispersion and, 290–291
 price transparency and, 287
 Securities Acts Amendment, 1964, on
 executive pay disclosure, 419–420
 Securities and Exchange Commission (SEC),
 on executive pay disclosure
 1993 enhanced compensation disclosure
 requirement of, 418, 420
 Compensation, Discussion, and Analysis
 section in, 418
 Dodd-Frank on, 418, 419
 early history of, 417–418
 Sarbanes–Oxley Act on, 418, 420–421, 427
 say-on-pay regulations on, 421
 segmentation, market, along national
 borders, 292–294
 selection, adverse, 7
 self-dealing disclosure, 388, 409
 anti-self-dealing index for, 387–399
 anti-self-dealing index vs. Governance
 Transparency Index for, 400–403,
 401t–402t
 Governance Transparency Index for, 399
 sender, of information, 6, 9
 sender–receiver relationship, 6–7, 9
 separation model, 204
 of financial activities in independent
 entities, 280
 severance pay, executive, 415, 416–417
 shadow banking system, 122
 shareholders' interest view, of corporate
 governance, 360
 shopping, cross-border, 294–297
 in Europe, 295
 on internet, 296–297
 in U.S.–Canada, 295

- signaling game, 6
- skills. *See also* education; human resource
policy transparency
in human resource policy, 206–208, 215
- Slutsky equation of individual i for good X_1 , 46
modified, 47–48
- SMART campaign, 445
- social performance (impact), in microfinance
customer impact and, 445–448 (*see also under* microfinance industry, transparency and disclosure in)
as donor concern, 437, 438t
measurement of, 435–436, 445–446
Schreiner's six aspects of, 445–446
transparency among stakeholders on, 435–436
truth in advertising in, 445
- Social Security, economic problems with, 35–38
- social trust
governance transparency and, measurement of, 403–404, 404f
in stock market participation, 394–395
- social welfare, administrative state in, 49–50
- “soft” instruments, in innovation policy transparency, 233
- sorting, 243
- South Korea sovereign crises, 119t, 120–121
- sovereign default risk assessment, 116–140
accurate estimation of, difficulty with, 124
bank probabilities of default as supplement to analysis of, 132–133, 133t
bottom-up approach to, 122, 127–131, 128t, 129t
conclusion on, 138–139
credit agency sovereign ratings and, transparency of, 122–125
probabilities of default in
credit default swaps implied, 131–132, 131f
logit model estimation of, 140
private sector fundamental vs. credit default swaps market implied, 133–136, 134f–136f
probabilities of default results based on privately owned vs. publicly owned firm models in, comparing, 128t, 129t, 136–137, 137t
recent financial crisis and, 116–117
in sovereign crises in modern history, 119–121, 119t, 120f
top-down analysis and macro approaches to, 117
VaR calculations in, 117
Z-Metrics approach to, 117–119, 125–127, 127f
Z-Metrics vs. implied credit default swaps probabilities of default in, 137–138
- Spain
credit ratings of, 123
sovereign crises in, 119t, 120–121, 120f
- specialization effect, 203–204
- standardization approach, to risk weights, 264
- Standard&Poor's sovereign ratings
methodology for, 125
transparency in, 122–125
- state-contingent forward policy guidance, 84–85
- statement of comprehensive income, 479–480
- static analysis with price adjustment, for surprise major constitution change, 48
- statutory law, 41
- stock market participation
governance transparency and, 394–395, 407, 407f
legal origin and, 394
social trust and, 394–395
- stock returns, future, executive pay and, 420
- strategic hoarding perspective of transparency, 372
development of theory of, 372, 373–374
institutional point of view of, 376t, 378, 379f
- stress testing, of European banking, 521–542. *See also* European banking, stress testing of
by Committee of European Banking Supervisors, 522 (*see also* Committee of European Banking Supervisors (CEBS))
effectiveness of, 524–525
by European Banking Authority, 522 (*see also* European Banking Authority (EBA), stress testing by)
history of, 523–524
literature review on, 523–525
effectiveness of, 524–525
methodology of, 524
methodology of, general, 524
results of, 531–536

- average residuals of banks in, exercise announcement, 531, 532t
- average residuals of banks in, methodology disclosure, 531, 532t
- average residuals of banks in, results disclosure, 531, 533t
- CAAR differences between business models in, 536, 536t
- cumulative average abnormal returns in, exercise announcement, 531, 533f
- cumulative average abnormal returns in, exercise results, 531, 535f
- cumulative average abnormal returns in, methodology disclosure, 531, 535f
- impact on nonviable banks of, 534
- impact on valuation of banks in, 534
- informativeness of, 531
- most effective methods in, 534
- viable vs. nonviable banks in, 534
- stress-tested banks in, 539t–542t
- transparency, uncertainty and, hypothesis on relation among, 525–526
- structural distance-to-default measures, 126
- subsidiaries, operational separability of, 280
- supplementary compensation, 246
- supply and demand, of financial and risk-management transparency, 496–500
 - in corporations, 497–500
 - financial transparency, disclosure, and regulatory process in, 496–497
- supply shocks. in macroeconomic transparency
 - aggregate, anticipated, 77–78
 - harmful information effects of, 80
 - unanticipated, transmission of, 79
- Supreme Court, U.S.
 - See also* U.S. Supreme Court
 - constitution changes of, 56–57
 - decisions of, 35–39
 - on prohibition, 35
- surplus
 - clean, 480
 - dirty, 480
- surveys, industry, for measuring corporate risk management, 503
- sustainability, in microfinance, 448–450
- tangible equity-to-asset ratio, capital-to-asset ratio in, 269–270, 271f
- tax effects, of fair value accounting, 489–490
 - other comprehensive income disclosure in, 486–489
- tax havens, 387–388
- Tax Power Clause, 60
- technology policy transparency, 220–222. *See also* innovation policy
- Teliasonera, in Uzbekistan, 352–353. *See also* multinational corporations and political actors
- Tiebout competition, 214
- Tier 1 capital-to-asset ratios, 268, 268f
- time-based wage, 244
- time-dependent forward policy guidance, 84
- time-inconsistency problem, forward policy guidance and, 87–88
- top-down incentives, in foreign direct investments, 314–315
- top management–firm manager relationship, corruption in
 - as agency problem, 327t–328t, 329–330
 - transparency on, 332, 334
- top management, in corporate governance, 360
- top management–owner bargaining, 363
- top of organization, transparency at, 371–385
 - board of directors and top management team types of, 374–379
 - market-pull perspective in, 376t, 377–378
 - onion model of governance transparency in, 374–377, 375f
 - strategic hoarding perspective in, 376t, 378, 379f
- data and methods in
 - sample in, 379, 380t
 - variables and measures in, 379–380, 381t
- differences in, concluding discussion on, 383–385
- European board of directors and top management team patterns in, 380–383
- demographic characteristics in, 281t, 380–382
- educational characteristics in, 381t, 382
- experience characteristics in, 375f, 381t, 382–383

- top of organization, transparency at (*cont.*)
 - governance transparency in
 - definition of, 371
 - disadvantages of, 371
 - theory development for, 372–374
 - market-pull perspective in, 372–373
 - strategic hoarding perspective in, 372, 373–374
- tracking, in education, 203–204
- trade policy transparency, international, 166–177. *See also* international trade policy transparency
- Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), 222
- trading
 - in carbon markets, 181
 - regional trading arrangements for, 175–176
- training. *See also* education;
human resource policy
 - effect on earnings of, 209–212
 - political decisions on, 198
 - subsidies to, 201
- transaction cost economics, 389
- transaction costs
 - actors in, 390
 - definition of, 390
 - in governance transparency, 388–390
 - institutional quality and, 390–391
 - transparency of institutions in, 391
- transfer, information, 6, 9
- transformation costs, 388
- transparency, 5–10. *See also specific types and topics*
 - adverse selection in, 7
 - vs. availability of information, 106
 - business performance and, 341
 - in business world, scandals and new regulations/codes on, 4
 - as catchword, 3
 - concept of, 4
 - definitions of, 413
 - in corporate governance, 359–361
 - in financial regulation, 259
 - in financial transparency, 15
 - in fiscal policy, 100–101
 - in fiscal transparency, 100–101
 - in governance transparency, 15, 371
 - in human resource policy, 201–202
 - in innovation policy, 219
 - in international trade policy, 166–167
 - in monetary policy, 69
 - in multinational corporations and political actors, 343
 - by OECD, 5
 - in price transparency, 287
 - in risk management, 496
 - by UNCTAD, 5
 - by WTO, 5
 - degrees of, 344–345, 345f
 - demand-side dimension in, 8–9, 10, 25
 - vs. disclosure, 496–497
 - in corporate governance, 363–364
 - of economic policy and government bodies, 3
 - as endogenous, 13, 26
 - ex ante (*see* ex ante transparency)
 - ex post (*see* ex post transparency)
 - external, 343
 - full, 6
 - “improved,” 9
 - information disclosure in,
 - relevant, 360–361
 - information technology and, 4
 - information transfer in, 6, 9
 - internal, 343
 - in International Monetary Fund and World Trade Organization, 4
 - moral hazard in, 7
 - opacity and, 343–345, 345f
 - as passive process, 496
 - predictability and, 7
 - rationale for, 10–15
 - recent interest in, 1990s, 3
 - rule-based macroeconomic stabilization policies and, 3–4
 - sender and receiver in, 6–7, 9
 - specificity of, 344
 - trust and, 496
 - uncertainty and European banking stress testing in, 525–526

- transparency international
 - on corruption, 330–331
 - Corruption Perceptions Index of, 459
- transparency–legitimacy, in multinational corporations and political actors, 346–349, 348f
- transparency, meaning of, 5–10, 24–25
 - accountability in, 8
 - common denominators in, 5
 - context on, 5
 - economic, 69
 - in economic research, 5
 - ex ante and ex post, 7–8, 9 (*see also* ex ante transparency; ex post transparency)
 - as information asymmetry reduction, 6–7, 9, 24–25
 - multiple, 4, 5–6
 - observability in, 8
 - precision (quality) of information in, 9, 10, 24–25
 - principal–agent relationship in, 7–8
 - receiver attention and distortion in, 8
 - sender–receiver relationship in, 6–7, 9
 - trustworthiness of information in, 9
 - valuable signals in, 9
- transparency trap, 110
- transparent behavior, 343
- Troubled Asset Relief Program (TARP), choice of banks to bail out in, 270–272
- trust, 11–12, 14
 - definition of, 349
 - in multinational corporation–political actor relationships
 - legitimacy and, 350–351
 - transparency and, 349–350
 - transparency and legitimacy of, 345–346, 346f
 - social
 - governance transparency and, measurement of, 403–404, 404f
 - in stock market participation, 394–395
 - in transparency, 496
 - trust formation, measurement of governance transparency in, 405–406, 406f
- trustworthiness
 - of information, 9, 10
 - of microfinance financial reports, 448
- type I–type II errors, institutions and, 51–57
 - EU Constitution in, changing, 56
 - principles of, 51–56, 55t
 - U.S. Constitution in, Supreme Court changes in, 56–57
- uncertainty, transparency, and stress testing of European banking, 525–526
- UN Framework Convention on Climate Change (UNFCCC)
 - on carbon markets
 - administration and oversight of, 187
 - reforms in, 183
 - Kyoto Protocol of, 179, 180
 - monitoring, reporting, and verifying requirements of, 190
- uniform integration model, 204
- United Kingdom Constitution, protections in, 62–63
- United States Constitution
 - amendments to, Article V on, 55–56
 - Supreme Court changes to, 56–57
- U.S. Federal power over economy, evolution of, 58–60
 - constitutional revolution of 1937 in, 60
 - rational basis review in, 59–60
- U.S. Generally Accepted Accounting Principles (GAAP), 472
 - vs. International Financial Reporting Standards, 472–473
- U.S. Supreme Court
 - changes to Constitution by, 56–57
 - decisions of, 35–39
 - on Prohibition, 35
- Uzbekistan, Teliasonera in, 352–353. *See also* multinational corporations and political actors
- valuable signal, 9
- value-added tax (VAT) fraud, 182
- Value at Risk (VaR), 117
- value-driven rationale, 10–11, 25
- value-relevance studies, 483
- visibility, in constitutional transparency, 40

- Volcker rule, 280
- voluntary markets, carbon, 183
- voting records, on forward policy guidance, 81, 82

- wages, 246–247. *See also* executive compensation; pay
 - Adam Smith on, 246–247
 - education on, 243
 - efficiency, 245
 - piece-rate, 244
 - in productivity, 243
 - time-based, 244
- Walras' Law, 45
- wealth effects, 45
 - Hicksian, with surprise major constitutional change, 45–46, 46f
- welfare, 12
 - improvements in, 8
- Whips, 57–58
- wills, living, 280
- wisdom of crowds, 57–58, 63–64
- World Economic Forum's Competitiveness Index, 18–19

- World Trade Organization (WTO), 4, 166, 170, 222, 315
 - transparency in, 175, 318
 - calls for, 4
 - definition of, 5

- Yardstick competition method, 157

- Z-Metrics, 117–119, 125–138
 - approach of, 125–127, 127f
 - for European countries and U.S., 2008–2012, 128–131, 128t, 129t
 - vs. probabilities of default implied in credit default swaps, 137–138
 - probabilities of default in
 - bank, 132–133, 133t
 - in logit model estimation, 126, 140
 - private sector fundamental vs. credit default swaps market implied in, 133–136, 134f–136f
 - of privately owned vs. publicly owned firm models, comparison of, 128t, 129t, 136–137, 137t
- Z-score model, Altman's original, 117, 140
 - predicting sovereign defaults with, 122