Sabri Boubaker · Bang Dang Nguyen
Duc Khuong Nguyen *Editors*

Corporate Governance

Recent Developments and New Trends

Springer

Corporate Governance

Sabri Boubaker • Bang Dang Nguyen
Duc Khuong Nguyen
Editors

Corporate Governance

Recent Developments and New Trends

Springer

Editors
Sabri Boubaker
Dept. of Accounting, Finance and Law
Champagne School of Management
(Groupe ESC Troyes en Champagne)
Troyes
France

Bang Dang Nguyen
Finance and Accounting Group
Cambridge Judge Business School
University of Cambridge
Cambridge
United Kingdom

Duc Khuong Nguyen
Dept. of Finance and Information Systems
ISC Paris School of Management
Paris
France

ISBN 978-3-642-31578-7 ISBN 978-3-642-31579-4 (eBook)
DOI 10.1007/978-3-642-31579-4
Springer Heidelberg New York Dordrecht London

Library of Congress Control Number: 2012954239

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Foreword

In the 1980s and 1990s, corporate governance developed as a separate field in financial economics. This coincided with a move in the US financial markets to align managerial interests with stockholder interests and was a return to an earlier research agenda. In their seminal book, *The Modern Corporation and Private Property*, Berle and Means (1932) had argued that, in practice, managers pursued their own interests rather than the interests of shareholders. The contractual aspect of the firm together with the problem highlighted by Berle and Means led to the development of the agency approach to corporate governance by, among others, Coase (1937) and Jensen and Meckling (1976). The main focus was the question: "How can shareholders ensure that managers pursue their interests?" This literature described a number of corporate governance mechanisms that encourage managers to act in the interests of the shareholders.[1]

The first mechanism is the *board of directors*. This is the starting point for shareholders to control managers and ensure the company is run in their interest. The way that boards are chosen and structured differs significantly across countries. The limited empirical evidence available suggests that different countries' systems are equally effective (or ineffective) at disciplining management. A second method of ensuring that managers pursue the interests of shareholders is to structure *executive compensation* appropriately. Compensation can be conditioned on the firm's stock price and this reflects information gathered by analysts. Stock prices are not the only contingency that can be used to motivate managers. Accounting-based performance measures are also frequently used. Managers who perform extremely well may be bid away at higher compensation levels to other companies. A third mechanism is the *market for corporate control*. Inefficient managers are removed and replaced with people who are better able to do the job. It can operate through proxy contests, friendly mergers, and hostile takeovers.

[1] For surveys of this and other approaches, see Shleifer and Vishny (1997), Allen and Gale (2000), Vives (2000), Becht, Bolton and Röell (2001), Denis and McConnell (2003) and Goergen (2012).

Another important way that value maximization by firms can be ensured is through *concentrated holdings and monitoring by financial institutions*. More wealth commitment by owners increases monitoring and firm performance. Many have argued that the Hausbank system in Germany and the main bank system in Japan were good examples of this. A large strand of the corporate governance literature has focused on the role of *debt* as a means of disciplining managers and overcoming the agency problem. Managers can precommit to work hard by using debt rather than equity and debt be used to prevent managers from squandering too much free cash flow. However, debt can have undesirable as well as desirable effects on managers' behavior. It can create an incentive to take risks and destroy value. Also there is the debt overhang problem where firms may forego good projects if they have significant debt outstanding since in this case a large part of the returns to a good project goes to bondholders. *Competition in product markets* is a very powerful force for solving the agency problem. If the managers of a firm waste or consume large amounts of resources, the firm will be unable to compete and will go bankrupt.

Finally, one important issue is the extent to which the Anglo-Saxon view of the firm as being a profit-maximizing entity is valid. For example, in countries such as Germany and China, legal governance mechanisms explicitly incorporate workers. In practice, stakeholders other than shareholders play an important role in other countries too. A very important issue concerns the relative merits of *shareholder* versus *stakeholder governance*.

The financial crisis that started in 2007 has led to resurgence in interest in corporate governance. How much responsibility for the crisis can be laid at the door of corporate governance failures? Or alternatively, how much can be blamed on the fact that shareholders, particularly in banks, may want the firm to take risks because of convex payoff functions? This book contains many excellent essays that reflect the recent increase in interest in corporate governance research. The editors have skillfully selected and organized the chapters.

This book is divided into four parts. The first is concerned with ownership structure and corporate governance. The chapters range from a study of management entrenchment using data on CEO purchases of houses and how they are financed by Crocker Liu and David Yermack to an essay on shareholder activism in Canada by Sylvie Berthelot and Vanessa Serret. There is also an interesting study of corporate governance mechanisms in China by Michael Firth and Oliver Rui and a discussion of the role of multiple large shareholders in publicly listed firms by Ana Paula Matias Gama.

The second section returns to the classic topic of executive compensation. Jarrad Harford, Sattar Mansi, and William Maxwell study the relationship between corporate governance and cash reserves. They find that weakly governed US corporations spend cash quickly on acquisitions and investments rather than hoarding it. Divya Anantharaman and Vivian Fang look at the literature on the role of debt-like compensation, such as pensions in controlling managerial risk taking. Gang (Nathan) Dong considers the role of board director compensation and finds evidence that this depends on directors' effectiveness in monitoring and

friendliness in advising CEOs. Lisa Goh and Aditi Gupta look at the compensation of bank CEOs and find that it is lower but more short term than for nonbank firms, while nonexecutive directors are more highly paid. Jason Ridge investigates the positive effects of compensation on aligning managerial and shareholder interests and the trade-off with negative effects such as fraudulent reporting, earnings manipulation, and so forth.

The third part focuses on boards of directors. Eliezer Fich and Anil Shivdasani consider whether busy boards are more or less effective and conclude they are less effective. Peter-Jan Engelen, Gerwin van der Laan, and Annette van den Berg look at the effect of different types of board diversity in Dutch companies during the crisis. They find age, expertise, and background diversity matter for firm financial performance while gender, nationality, and educational diversity do not. Rayna Brown, Ning Gao, Edward Lee, and Konstantinos Stathopoulos investigate the role of CEO social networks on their compensation and conclude the size of the network is positively related to the level but negatively related to pay-performance sensitivity. Ramzi Ben Kraiem studies an institutional change in France and concludes that independent directors can moderate earnings management that uses discrete accruals.

The final section of this book looks at new trends in governance. Lucian Bebchuk and Michael Weisbach review and comment on the current state of corporate governance research. Shann Turnbull develops a sustainable paradigm of corporate governance drawing on ideas from the natural sciences. Wolfgang Breuer and Astrid Julianne Salzmann use cross-country comparisons to demonstrate the importance of national cultures in corporate governance. Keanon Alderson focuses on the governance structures of family-owned businesses and highlights their advantages and disadvantages. In the wake of the crisis, Stelios Andreadakis considers how to reconcile traditional market-based governance systems with stakeholder systems that are ethically and socially responsible.

In summary, this is a collection of essays that any serious scholar of corporate governance should read.

Franklin Allen
Wharton School, University of Pennsylvania

References

Allen, F., & Gale D. (2000). *Comparing financial systems*. Cambridge, MA: MIT Press.

Becht, M., Bolton, P., Röell, A. (2001). Corporate Governance and Control. In G. Constantinides, M. Harris, and R. Stulz (Eds.) *Handbook of the economics of finance*. North Holland, Amsterdam, The Netherlands.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. Chicago: Commerce Clearing House, Inc.

Coase, R. (1937). The nature of the firm. *Economica*, 4, 386–405.

Denis, D., & McConnell, J. (2003). International corporate governance. *Journal of Financial and Quantitative Analysis*, 38, 1–36.

Goergen, M. (2012). *International corporate governance*. Harlow: Pearson.
Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305–60.
Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, 52, 737–783.
Vives, X. (2000). *Corporate governance: Theoretical and empirical perspectives*. Cambridge, UK: Cambridge University Press.

Preface

The current financial crisis has rocked the financial system in many countries and has cast doubt on the effectiveness of the existing regulatory regime and corporate governance mechanisms. Thousands of firms have gone bankrupt and many financial institutions were bailed out or taken over by governments. The effects of the crisis have shaken emerging and developed market economies alike and have not spared neither small nor large businesses. Many scholars and practitioners attribute the roots of the crisis to failures and weaknesses in the way corporate governance has been practiced since the mid-1990s in spite of the existence of various voluntary codes of good corporate governance. Lax board oversight of top management, short-termism, self-interested behavior, and greed have been fingered as the culprits behind recent financial turmoil.

This timely edited book highlights the recent developments and new trends in corporate governance and provides elements of the understanding of the current financial crisis. The 18 chapters, written by leading academics and well-known experts who have extensively published in leading practice and research journals, can assist corporate executives, governance bodies, investors, market regulators, and policymakers in having a global picture of major corporate governance issues. Through up-to-date theoretical insights, new ideas, and relevant empirical evidence, these chapters shed light on the roles of ownership structure, CEO incentives, board of directors, as well as the interaction among various corporate governance mechanisms, particularly those that guarantee the firm survival and the stability of the economic and financial system.

This book is broadly divided into four parts. The first part focuses on ownership structure as a corporate governance mechanism. The second part treats the hotly debated topic of executive compensation. The third part examines the roles, duties, and responsibilities of boards of directors, which are a crucial corporate governance device and a popular research topic among financial economists. The last part provides several state-of-the-art reviews and articles on new trends in research on corporate governance.

Sabri Boubaker, Bang Dang Nguyen, and Duc Khuong Nguyen

About the Editors

Sabri Boubaker is an associate professor of finance at Champagne School of Management (Groupe ESC Troyes en Champagne) and research fellow at the Institut de Recherche en Gestion (University of Paris Est). He holds a Ph.D. in finance from University of Paris Est (2006) and an HDR degree (Habilitation for Supervising Doctoral Research) in 2010 from the same university. He is a visiting professor at IESEG School of Management (France) and IAE Paris Gustave Eiffel (France). He was a member of the team that drafted the *Tunisian Code of Best Practice of Corporate Governance* and the G*uidelines for Annual Reports of Tunisian Listed Companies*. His main research interests include corporate governance, earnings quality, and initial public offerings. He has recently published several academic papers in international refereed journals including *Journal of Banking and Finance*, *Review of Accounting and Finance*, *Multinational Finance Journal*, *International Journal of Business*, and *Managerial Auditing Journal*.

Bang Dang Nguyen is a university lecturer in finance at University of Cambridge Judge Business School. He graduated from HEC Paris in July 2006 with a Ph.D. in finance. From January 2003 to April 2004, he was a visiting scholar in the Finance Department at Stern School of Business, New York University. His research interests include corporate finance, empirical finance, and corporate governance. Bang's research has been awarded French National Foundation for Education in Management (FNEGE) and French Finance Association (AFFI) Best Ph.D. Dissertation Award in France in 2006, Barclays Global Investor Best Doctoral Paper Award at the European Finance Association Meeting in 2006, and Xia Yihong Best Paper Award at the China International Conference in Finance (CICF) in 2009. Bang's articles have appeared in *Journal of Financial Economics*, *Management Science*, and *Finance*.

Duc Khuong Nguyen is an associate professor of finance and a chairman of the Department of Finance and Information Systems at ISC Paris School of Management. He holds a Ph.D. in finance from the University of Grenoble and obtained his HDR degree (Habilitation for Supervising Doctoral Research) from the University of Cergy-Pontoise (France). He is also an associate researcher

at the Department of Finance, Centre d'Economie de la Sorbonne (CES), University Paris 1 Panthéon-Sorbonne. His most recent articles have been published in *Journal of Banking and Finance*, *Journal of International Financial Markets, Institutions and Money*, *Journal of International Money and Finance*, *Quarterly Review of Economics and Finance, and Economic Modelling*.

Notes on the Contributors

Keanon J. Alderson is an associate professor in the Robert K. Jabs School of Business at California Baptist University in Riverside, California. His research areas are in family business governance, family business decision making, and generational differences in family businesses. He has presented his research at the Family Enterprise Research Conference (FERC) and at the Family Firm Institute (FFI). He has been published in *The Thunderbird International Business Review* and *The International Journal of Social Entrepreneurship and Innovation*, and has four chapter contributions in edited books. He is an author and columnist on family business issues. His book, *Understanding the Family Business*, was published in April 2011. He is on the editorial review boards for the *International Journal of Social Entrepreneurship and Innovation* (IJSEI) and for the *International Journal of Family Business Management* (IJFBM).

Divya Anantharaman joined Rutgers Business School in 2009. She holds an M.Phil. and a Ph.D. from Columbia University and a B.Sc. (Hons) in accounting from Oxford Brookes University in the United Kingdom. Divya's research revolves around the investing and reporting behavior of public and private pension funds, and the implications of pension compensation for top executives. Her work has been published in *The Accounting Review* and in *Accounting, Organizations and Society*. Divya teaches managerial accounting at Rutgers Business School, and has taught financial accounting and earnings quality previously. She is a member of the American Accounting Association and an affiliate member of the Association of Chartered Certified Accountants of the United Kingdom.

Stelios Andreadakis is a senior lecturer in law at Oxford Brookes University. He joined the School of Law in September 2008. Previously, he was a teaching assistant at the University of Leicester. He holds an LLM in international commercial law from the University of Leicester and an LLB from the School of Law of the University of Athens. He is a qualified lawyer (solicitor and barrister) in Greece and a member of the Bar Association of Athens since December 2004. Stelios Andreadakis' research interests are mainly in the areas of company and commercial law. He is particularly interested in corporate governance, exploring aspects of

regulation of companies, corporate theories, regulatory competition, and financial markets.

Ramzi Benkraiem is an associate professor of financial accounting at IESEG School of Management (LEM-CNRS, UMR 8179). His main research interests are ownership structure with a special focus on institutional investors, corporate governance, corporate financial performance, and earnings management. He has published several papers in both French and international peer-reviewed journals.

Sylvie Berthelot is full accounting professor at the Université de Sherbrooke (Canada) since 2008. Sylvie Berthelot has written several articles and made more than 100 presentations at numerous academic conferences. From 1998 to 2008, she taught at the University of Moncton and headed the Jeanne and J.-Louis-Lévesque chair in financial management at this university. She holds a doctorate in business administration with a major in accounting from the HEC Montreal and a master's in business administration with a major in accounting from the Université de Sherbrooke. Ms. Berthelot is also a fellow of the Canadian Society of Management Accountants and a member of the Ordre des comptables généraux accrédités du Québec. Her research interests focus mainly on fields related to sustainable development, corporation governance, and accounting standards.

Wolfgang Breuer is a full professor of corporate finance in the School of Business and Economics at the RWTH Aachen University in Germany. He was born in Cologne (Germany) in 1966. He studied economics at the University of Siegen and the University of Cologne and received his Ph.D. in 1993 from the University of Cologne. His research interests include corporate finance, international financial management, portfolio management, and cross-cultural research.

Rayna Brown is a senior lecturer at the University of Melbourne. Her research interests include the regulation and management of financial institutions with particular focus on board behavior and strategic decision making. More recently, her research has broadened to include nonfinancial corporations and more general corporate governance issues. She received her Ph.D. from the University of Melbourne. Before becoming a full-time academic, Rayna worked in the commercial banking sector. Rayna's professional experience also includes serving as an elected member on the board of a large credit union. Currently, she is focusing on her research.

Gang (Nathan) Dong is a lecturer/fellow at Rutgers University from fall 2007, and will join Columbia University as an assistant professor in fall 2012. He has taught courses on corporate finance, corporate governance, financial institutions, and microeconomics to undergraduate, MBA, and Ph.D. students. Nathan's research interests include corporate finance, corporate governance, banking, and risk management. His current projects examine the incentive problems in banking sector and their impact on systemic risk and real economy. His work has been presented in AFA, CEPR, FDIC, Federal Reserve Board of Governor, and NBER. Prior to his academic career, he was working at Bank of New York, Credit Suisse, and Bear Stearns. Nathan received M.S. from Illinois Institute of Technology, MBA from

Indiana University, P.D. from Columbia University, and Ph.D. from Rutgers University.

Peter-Jan Engelen is an associate professor of corporate finance at Utrecht University, the Netherlands. He holds a Ph.D. in applied economics, an M.Sc. in finance and tax management, and an M.Sc. in applied economics. He also obtained an LLB and an LLM in law. Some recent research topics include law and finance, corporate governance, CSR, law enforcement, reputational penalties, real options, IPOs, and the ethics of financial markets. In 2002, he was awarded with the prestigious *European Joseph de la Vega Prize*, and in 2006 he was awarded as *Best Researcher in Economics* at Utrecht University. He has published his articles in several journals including the *Journal of Banking and Finance*, *Research Policy*, *Technovation*, the *Journal of Business Finance and Accounting*, the *Review of Law and Economics*, the *European Journal of Law and Economics,* and the *Journal of Business Ethics*.

Vivian W. Fang joined Rutgers Business School in 2009. She holds a Ph.D. and a master's degree from Tulane University and a B.A. in business administration from Tsinghua University in China. Vivian's research interests lie in the intersection of corporate finance and financial accounting, with a focus on the effect of stock liquidity on firm value, executive compensation, and firms' incentives for voluntary disclosure. Her work has been published in the *Journal of Financial Economics*. Her teaching interests include advanced accounting, financial statement analysis, and equity valuation. Vivian is a member of the American Accounting Association and the Western Finance Association, and is also a certified public accountant (CPA) and a certified general accountant (CGA, Canada).

Michael Firth started his career as an accountant with Poulsom and Co, a firm of chartered accountants. Subsequently, he worked as an auditor for Whinney Murray (Ernst and Young) and as an investment analyst at Phillips and Drew (UBS Phillips and Drew). He has professional qualifications in accounting and finance and earned his Ph.D. at Bradford University. Professor Firth's first academic post was at the University of Stirling. His subsequent professional appointments were at Victoria University of Wellington, the University of Colorado, Lingnan University, and The Hong Kong Polytechnic University. He rejoined Lingnan University as chair professor of finance in 2007. He has held visiting positions at University of British Columbia, University of California at Los Angeles, China-Europe Management Institute (Beijing), China-Europe International Business School (Shanghai), Norges Handelshoyskole, Helsinki School of Economics, and Nanyang Technological University. Professor Firth's research interests cover issues in accounting, auditing, economics, and finance. He has published seven books and more than 150 journal articles.

Ana Paula Matias Gama obtained her Ph.D. in finance from the ISCTE/IUL Business School – Lisbon. She is an assistant professor at the University of Beira Interior (Portugal), where she teaches management and accounting. She focuses her research efforts on corporate governance, specifically, the corporate governance implications of firm ownership structure.

Lisa Goh is a lecturer in accounting at the London School of Economics and Political Science. She received her Ph.D. from the University of Cambridge, Judge Business School. She has published her work in the *Journal of Accounting, Auditing, and Finance* and presented at a number of seminars and conferences, including the European Accounting Association, European Financial Management Association, and Journal of Accounting, Auditing, and Finance symposium. Her research interests include board compensation, the role of compensation consultants, disclosure, and corporate governance.

Ning Gao is a lecturer (assistant professor) in finance at the Accounting and Finance Group, Manchester Business School, The University of Manchester. He received his Ph.D. in finance from The Hong Kong University of Science and Technology (HKUST). Active in research, he has published in world's leading journals, presented in world's leading conferences, and received grant from the Economic and Social Research Council (ESRC). He is a member of the Western Finance Association (WFA), European Finance Association (EFA), American Finance Association (AFA), Financial Management Association (FMA), and European Corporate Governance Institute (ECGI).

Aditi Gupta is a lecturer in accounting at King's College, London. She received her Ph.D. from Lancaster University in the field of corporate governance. Her work has been published in the *Journal of Accounting, Auditing, and Finance* and the *Auditing, Accounting, Accountability Journal*. Her research interests include executive compensation, corporate governance, gender, and market-based accounting research.

Edward Lee is a senior lecturer (associate professor) at Manchester Business School, The University of Manchester, UK. He received his Ph.D. from The University of Manchester. His research interests focus on the interrelationship between corporate disclosure, regulatory reforms, and their economic consequences to the capital market. He has published a range of papers in academic journals such as the *Journal of Accounting and Public Policy*, *European Financial Management*, *International Journal of Accounting*, *Corporate Governance: An International Review*, and *Accounting and Business Research*. He has also coauthored official reports for the Association of Chartered Certified Accountants (ACCA), which is one of the largest professional accounting organizations in the world. His work has been cited by policy statements of the Accounting Standards Board (ASB), which is the main accounting regulating body of the UK.

Crocker Liu is a professor of finance and a McCord chair of real estate, W. P. Carey School of Business, Arizona State University. Dr. Liu joined Arizona State University from the Stern School of Business at New York University where he was associate director of real estate. He earned a B.B.A. in real estate/finance from the University of Hawaii in 1976, a M.S. in real estate from the University of Wisconsin in 1980, and a Ph.D. in finance/real estate in 1988 from the University of Texas. He is currently the coeditor of the *Journal of Real Estate Economics* and is on the editorial board of the *Journal of Property Research*. He also was on the

editorial boards of the *Journal of Real Estate Finance and Economics* and the *Journal of Real Estate Finance*. He serves on the advisory board of the Real Estate Research Institute, and has served on the board of directors of the American Real Estate and Urban Economics Association (AREUEA). His research interests are focused on issues in real estate finance, particularly topics related to agency, organizational forms, market efficiency, and valuation. His research has been published in the *Review of Financial Studies*, the *Journal of Financial Economics*, the *Journal of Business*, the *Journal of Financial and Quantitative Analysis*, the *Real Estate Economics Journal* (formerly known as the AREUEA Journal), and the *Journal of Real Estate Finance and Economics*. Professor Liu won the AREUEA doctoral dissertation award and a postdoctoral award from the Homer Hoyt's Weimer School of Advanced Studies in Real Estate and Land Economics. He has received the Best Research Paper Award from the American Real Estate and Urban Economics Association in 1992 (coauthored with Aswath Damodaran) and 1993–1994 (coauthored with Jianping Mei). In addition to this, Dr. Liu is the past winner of the Wiley Award (1990) for Best Paper in the *Journal of Real Estate Research* and was named Undergraduate Teacher of the Year (1996–1997 and 2001–2002), and Executive MBA in Finance Teacher of the Year (1997, 1999). In 1999, he became a distinguished teaching fellow.

Jason Ridge is an assistant professor of strategic management at Clemson University. He received his Ph.D. from Oklahoma State University. Professor Ridge's research focuses on the general area of strategic leadership and governance with a specific emphasis on executive compensation, CEO succession, executive migration between organizations and also executive cognition. His research has been published in the *Strategic Management Journal*, *Journal of Small Business Management*, and *Social Indicators Research*. Professor Ridge is an active member in both the Academy of Management and Strategic Management Society.

Oliver M. Rui is a professor of finance and accounting at the China Europe International Business School. He is a chartered financial analyst (CFA) and financial risk manager (FRM). Prior to joining CEIBS, he taught at the Chinese University of Hong Kong, Tsinghua University, Shanghai National Institute of Accounting, and The Hong Kong Polytechnic University. He has published over 40 papers in reputable international journals including *Journal of Law and Economic*, *Journal of Financial and Quantitative Analysis*, *Review of Accounting Studies*, *Journal of Banking and Finance*, *Journal of Comparative Economics*, *Journal of Corporate Finance*, *Journal of Empirical Finance*, *Financial Review*, *Journal of Financial Research*, *European Financial Management*, *Journal of International Money and Finance*, *Journal of Accounting and Public Policy*, *Review of Quantitative Finance and Accounting*, *Journal of Management Studies*, *Journal of Behavioral Decision Making*, *Journal of Multinational Financial Management*, *Journal of International Financial Markets, Institutions and Money*, *Pacific Basin Finance Journal*, *Journal of Business Research*, and *Emerging Markets Review*. He has also published more than 20 papers in top Chinese refereed journals. Professor Rui is a member of the Advisory Board of the Business

Valuation Forum in Hong Kong. He is a visiting financial economist at Shanghai Stock Exchange, research fellow at Hong Kong Institute for Monetary Research, and research fellow at Asian Development Bank Institute. He is also a vice president of Hong Kong Financial Engineering Association.

Astrid Juliane Salzmann is assistant professor at the Department of Finance in the School of Business and Economics at the RWTH Aachen University in Germany. She was born in 1982 in Lich (Germany). She studied management mathematics at the Technical University of Kaiserslautern and the National University of Singapore and received her Ph.D. in 2010 from the RWTH Aachen University. Her research interests focus on international finance and cross-cultural research.

Vanessa Serret has been *Maitre de Conférences* at Université de Bretagne Sud (France) since 2002 where she teaches financial subjects. From 1999 to 2001, she taught finance at the University of Montpellier. She has a doctorate in business administration with a major in finance from the University of Aix-Marseille (IAE d'Aix-en-Provence). Her research interests focus mainly on fields related to mutual funds, corporate governance, and socially responsible investment. Ms. Serret has written a number of articles and book chapters on these subjects and made presentations at various academic conferences.

Konstantinos Stathopoulos is a lecturer (assistant professor) at Manchester Business School, The University of Manchester. He received his Ph.D. from The University of Manchester. He also holds an M.Sc. in accounting and finance (UMIST) and a B.Sc. in banking and financial management (University of Piraeus). His research examines corporate governance issues and in particular agency/contracting problems with a focus on executive compensation. His studies have been published in and cited by academic journals in the fields of accounting, finance, law, and management. He has received grants and awards from organizations such as the North Atlantic Treaty Organization (NATO), Economic and Social Research Council (ESRC), and Worldwide Universities Network (WUN).

Shann Turnbull B.Sc. (Melb.), MBA (Harvard), Ph.D. (Macquarie) was a serial entrepreneur establishing new firms, three of which became publicly traded. As a private equity partner between 1967 and 1974, he became chairman and/or CEO of some of the dozen pubic companies they acquired and reorganized. In 1975, he coauthored the worlds' first company director education qualification course. Dozens of his writings on reforming the theories and practices of capitalism, along with this Ph.D. dissertation are posted at http://ssrn.com/author = 26239. Two of his articles were republished in 2000 with the seminal contributions of leading scholars in the Corporate Governance volume of *The History of Management Thought*. A Google search reveals prolific contributions to academic journals, books, and professional publications describing ecological ownership of realty, organizations, and money with ecological governance. Besides teaching company directors for over 25 years, he has taught postgraduate courses at three Australian universities and made numerous presentations internationally.

Annette van den Berg is an assistant professor of institutional economics at Utrecht University (the Netherlands) and a postdoc research fellow at the University of Antwerp (Belgium). She obtained her Ph.D. in economics from the University of Amsterdam (the Netherlands). Annette's research focuses on industrial relations and corporate governance. Influenced by the stakeholder approach, she tries to demonstrate in her work that worker participation erroneously is a neglected aspect in corporate governance issues, because involving employees in company policies could result in a win-win outcome. Her recent articles have been published in *Industrial Relations*, the *Journal of Labor Research*, and the *International Journal of Employment Studies*.

Gerwin van der Laan is a postdoc research fellow at the University of Antwerp (Belgium) and an assistant professor of institutional economics at Utrecht University (the Netherlands). In 2009, Gerwin obtained a Ph.D. in economics and business from the University of Groningen (the Netherlands). He holds the 2009 "Best Ph.D. Thesis on Corporate Governance" award from the European Institute of Advanced Studies in Management (EIASM). Gerwin's research is in the fields of corporate governance and corporate social responsibility. In his work, he seeks to understand how processes within boards of directors and management teams relate the composition of the board to outcomes. His international work has been published in *Corporate Governance: An International Review*, *De Economist*, *European Management Journal*, *Journal of Business Ethics*, and *Journal of Strategy and Management*. Further, he has been an active contributor to the corporate governance debate in the Netherlands.

David Yermack is the Albert Fingerhut professor of finance and business transformation at New York University Stern School of Business. Professor Yermack teaches courses in corporate finance, restructuring firms and industries, and law and finance. Professor Yermack has been with NYU Stern since 1994. His primary research areas include boards of directors, executive compensation, executive stock options, and law and finance. Professor Yermack has been published in many journals including *Journal of Financial Economics*, *Journal of Finance*, and *Journal of Law, Economics, and Organizations*. Professor Yermack obtained his B.A. in economics, MBA, JD, M.A. in business economics, and Ph.D. in business economics from Harvard University.

Acknowledgments

We would like to thank Christian Rauscher, Barbara Bethke, and Frank Tumele at Springer Verlag (Berlin/Heidelberg, Germany) for their helpful comments and editorial assistance. We are grateful to professor Franklin Allen who kindly agreed to write the foreword to this edited volume. Our sincere thanks also go to all the contributing authors. Their intellectual contribution is greatly appreciated.

We gratefully acknowledge the following for permission to reproduce copyright materials:

"Corporate Governance and Firm Cash Holdings in the U.S.", *Journal of Financial Economics* 87, 535–555 (Jarrad Harford, Sattar Mansi, and William Maxwell, 2008), reprinted with permission from Elsevier.

"Are Busy Boards Effective Monitors?", *Journal of Finance* 61, 689–724 (Eliezer Fich and Anil Shivdasani, 2006), reprinted with permission from John Wiley and Sons.

"The State of Corporate Governance Research", Review of Financial Studies 23, 939–961 (Lucian A. Bebchuk and Michael S. Weisbach, 2010), reprinted with permission from Oxford University Press.

The contents of each chapter remain the sole responsibility of each contributor.

Sabri Boubaker, Bang Dang Nguyen, and Duc Khuong Nguyen

Contents

Part I
Corporate Ownership Structure and Corporate Governance

Where Are the Shareholders' Mansions? CEOs' Home Purchases, Stock Sales, and Subsequent Company Performance

Crocker Liu and David Yermack

Abstract We study real estate purchases by major company CEOs, compiling a database of the principal residences of nearly every top executive in the Standard and Poor's 500 index. When a CEO buys real estate, future company performance is inversely related to the CEO's liquidation of company shares and options for financing the transaction. We also find that, regardless of the source of finance, future company performance deteriorates when CEOs acquire extremely large or costly mansions and estates. We therefore interpret large home acquisitions as signals of CEO entrenchment. Our research also provides useful insights for calibrating utility based models of executive compensation and for understanding patterns of Veblenian conspicuous consumption.

1 Introduction

Purchasing a home represents a significant economic decision, involving aspects of both investment and consumption. The buyer generally adjusts his portfolio, often taking on secured debt and liquidating assets to pay the acquisition cost. Thereafter, the homeowner enjoys benefits related to the size, comfort, and location of the property. Affluent persons sometimes acquire impressive homes as signals of their personal wealth, power and importance, an age-old behavior labeled "conspicuous consumption" by sociologist Thorstein Veblen.

We study real estate purchases by prominent American CEOs, compiling a database of the principal residences of nearly every top executive in the Standard and Poor's 500 index of major U.S. companies. We test whether CEOs' decisions

C. Liu
Cornell University, Ithaca, New York, USA

D. Yermack (✉)
Stern School of Business, New York University, Ney York, USA
e-mail: dyermack@stern.nyu.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_1,

about the size, cost, and financing of their homes contain information useful for forecasting future performance of their companies, and we find patterns with strong statistical and economic significance. When a CEO buys a home, future company performance is inversely related to the CEO's liquidation of company shares and options as a source of financing for the transaction, even though these stock sales are often small relative to the CEO's total holdings in his firm. We also find that, regardless of the source of finance, future company performance deteriorates when CEOs acquire extremely large or costly mansions and estates.

According to an ancient saying, "A man's home is his castle."[1] This adage might apply especially well to American CEOs, many of whom are renown for enormous wealth and imperial personalities. The Hearst Castle, built in California by newspaper magnate William Randolph Hearst between 1919 and 1947, is probably the most celebrated home of a U.S. business leader, but it is hardly the only one. Mansions built by J.P. Morgan, Andrew Carnegie, and Henry Clay Frick remain landmarks today in New York City, all having been converted to museums.[2] In modern times, Microsoft Chairman Bill Gates received notoriety for constructing a 66,000 square foot home in Washington State, part of an estate valued at $140 million, while Mittal Steel (India) founder Lakshmi Mittal paid $128 million in 2004 for a London townhouse with a 20 car garage near Kensington Palace, the largest amount ever paid worldwide for an existing single family home. Conversely, Berkshire Hathaway CEO Warren Buffett is famous for having lived since 1958 in a house he bought for $31,500 in an ordinary neighborhood of Omaha, Nebraska.[3] When he was the richest man in the world in the early 1970s, industrialist Howard Hughes lived in a secret residence that became the subject of constant press speculation.

In our database of S&P 500 CEOs, we observe considerable differences in the timing, value, size, location, and financing of their real estate acquisitions. Some CEOs purchase modest townhouses or condominiums just a few miles from headquarters, while others live on sprawling beachfront estates more than an hour from work – and nearly 10 % live on the premises of or immediately adjacent to golf courses. Some finance their homes entirely out of pocket or by sale of their prior residences, while others liquidate significant amounts of shares and options near the transaction date.

We study a CEO's home purchase as a signal that reveals information about his commitment to his firm or his expected future effort level. These types of signals are mainstays of the principal-agent contracting literature, in which incomplete or asymmetric information often appears as a modeling device. In many of these models, investors must contract with managers while lacking complete knowledge

[1] According to www.phrases.org.uk, the classical phrasing is "An Englishman's home is his castle," and the earliest known references to the proverb date from 1581.

[2] Christopher Gray, "Carnegie vs. Frick: Dueling egos on Fifth Avenue," *The New York Times*, April 2, 2000.

[3] The Gates, Mittal, and Buffett residences are described in "Homes of the billionaires," *Forbes*, March 10, 2005.

of the managers' skills or preferences, such as their marginal rates of substitution between work and leisure or their reservation utility levels that determine their willingness to remain employed by the firm. A signal that helps ascertain a CEO's level of commitment to his firm should be valued by boards, shareholders, and other constituencies such as bondholders or labor, all of whom enter into contracts based partly upon the expected future contributions of the firm's managers. A signal that indicates low future effort levels by a CEO would be indicative of entrenchment, meaning that the CEO feels secure from discipline by his board and may fail to deliver future results.

To understand when a CEO's home purchase sends a signal consistent with either commitment or entrenchment, we study the characteristics of each property purchased as well as related information about the CEO's employment history and personal investment in his company. According to our empirical tests, two of the more relevant variables are the method of financing each purchase and the size of each individual property.

For each home purchase, we determine how much company stock, if any, the CEO sells around the time of acquisition. Although buying a house appears to offer a prima facie personal liquidity reason for CEOs to sell their own shares, most are wealthy enough to acquire homes with other sources of finance. We find a strong temporal pattern of CEOs exercising options and selling shares in the period leading up to their home acquisition dates. These stock sales are often small relative to the CEO's total investment in the firm, with a mean of about $675,000 and a median of zero. However, they appear to give significant signals about future company performance, a pattern that is all the more surprising due to the apparent personal liquidity rationale for the sales.

Among many characteristics of each home, we look at whether a property lies near the upper limits of our sample in terms of either land area of the estate or floor area of the residence. In principle, a very large home purchase could indicate either commitment, since reversing the purchase requires significant time and transactions costs, or entrenchment, since an opulent home may become a time-consuming distraction or place of quiet repose for its owner. Our analysis supports the entrenchment hypothesis, as we observe inverse associations between the value or size of a CEO's residence and the returns on his company's stock subsequent to the home purchase. This relation holds cross-sectionally for the year following the effective date of our sample, and it also holds when tested as a hypothetical trading rule implemented at the acquisition date of each residence, for the subsample of CEOs who acquire their homes after taking office.

To our knowledge, our research represents the first exploration of housing decisions made by a large sample of wealthy people. These data should interest researchers in a variety of fields of economics, including managerial incentives, consumer behavior, and the market for residential real estate. By interacting the real estate purchase data with executives' legal insider trading decisions, we also gain insight into aspects of stock-based incentive compensation.

The remainder of the paper is organized as follows. Section 2 presents a literature review and hypothesis development. Section 3 describes the data collection process. Section 4 contains analysis, and Sect. 5 concludes.

2 Literature Review and Hypothesis Development

Residential real estate is costly to acquire, impossible to move, and it generally can be liquidated only with time and expense. For these reasons, a home purchase by a corporate executive can represent a form of commitment by which he bonds himself to his organization. Many principal-agent models utilize commitment devices, through which the agent takes a costly or irreversible action as a means of bonding. The agent's commitment provides a credible signal to the principal of the agent's desire to work within the principal's organization, perhaps because he has private information that makes him confident about the organization's future.

Commitment strategies by managers appear often in models of capital structure, generally involving actions such as increasing dividends or replacing equity with debt as a source of capital. See, for example, Jensen (1986) or John and John (1993). In labor markets, a common managerial commitment strategy involves the agent investing in human capital that has little value outside the firm. Fama and Jensen (1983) provide the classic example of a Catholic priest, who undertakes lengthy seminary training to obtain credentials that have little use in other lines of work and are subject to forfeiture for poor performance. Other forms of commitment by a corporate executive can include investing in the company's shares or agreeing to a compensation package that includes a deferred or performance contingent element. Most of these actions can be interpreted either as forms of bonding, by which a manager voluntarily ties his own well being to the firm's success, or alternatively as signaling, by which a manager communicates information to others about his own ability or the firm's future prospects.

To our knowledge, no prior research into managerial commitment strategies has studied investments in fixed assets by the agent as the commitment device. We use residential real estate acquisitions for this purpose. Acquiring property can indicate a commitment to the company by a corporate manager, a signal that would be especially important if a CEO is a leader who has the potential to leave the firm and work elsewhere. Hayes and Schaefer (1999) show that successful CEOs can be "raided" by other firms, with the hiring firm typically seeing its stock price increase while the opposite happens to the shares of the CEO's former employer. Boards of directors are often very concerned with retaining talented CEOs and binding them to the company; much of the design of executive compensation, such as its vesting over time, addresses this concern. We conjecture that a CEO can reduce these costs of retention by voluntarily undertaking actions that demonstrate commitment, indicating that he is unlikely to entertain offers from other firms. The CEO would expect to be rewarded for this commitment by his current employer. From the board's perspective, commitment by the CEO can facilitate long-term investment planning, establishment of a logical timetable for management succession, and may also contribute to reaching agreements with labor unions or securing access to long-term finance.

In conjunction with the decision to invest in local real estate, a CEO could signal commitment to the firm through his decision about how to finance the cost of that

investment. A long literature has studied legal insider trading by managers as a signal of confidence in the firm. See, for example, Ke et al. (2003), which includes a list of references to earlier studies, the general theme of which is that managers are more likely to sell shares when the firm's prospects are poor. We therefore tabulate data about insider selling of shares and exercise of options around the time of home purchases by CEOs. We note that the literature on stock-based compensation cites information-neutral motives for insider selling, stressing that personal consumption needs such as the purchase of a house often motivate employees to exercise options early and immediately sell the shares acquired. See, for example, Huddart and Lang (1996). Our data on insider selling proximate to home purchases therefore offer an opportunity to test whether stock sales that appear to have a consumption motive may nevertheless also be driven by the CEO's private information. If an information pattern exists, one might argue that insiders rely on apparent liquidity needs as a pretext for selling company shares, since management selling is sometimes discouraged or prohibited by the board of directors (Core and Larcker 2002) or company compliance policies (Bettis et al. 2000) and also disfavored by outside investors.

In contrast to the commitment hypothesis, an alternative hypothesis is that CEO real estate purchases provide information about each manager's preference for leisure. If so, a manager who buys a grandiose estate might be planning to spend significant time enjoying the comforts of the property without concern about the effects upon his job performance. An impressive house would also provide a public signal about the executive's perception of his own status and security. Such a CEO would be considered entrenched, perceiving himself at low risk of discipline by his board and uninterested in improving his performance to attract outside offers. If CEO acquisitions of nice houses are consistent with entrenchment, they should augur badly for future shareholder returns.

An emerging line of finance research studies the role of visible "trophy" assets as motivational devices, in the context of perquisites awarded to executives by their firms. Rajan and Wulf (2006) discuss a range of theories about how perquisites such as company planes, cars, and the like can serve as incentives to managers, both because they provide comfort and pleasure but also because they signal the executive's power in the organization to a variety of audiences. The implication of this research is that a CEO might value the opportunity to exhibit a sports car, private jet, or mansion as an example of the spoils of his position.

Related studies raise questions about the performance of CEOs who attract trappings of success such as large perks or adulation in the news media. Yermack (2006) examines the most visible type of executive perk, corporate jets, and finds evidence of marked underperformance in firms whose CEOs obtain personal use of company aircraft. Similar results appear in Malmendier and Tate (2009), who find below-average performance for CEOs subsequent to receiving public awards given by the national business press. These studies include a number of conjectures about why CEOs who receive significant psychic rewards subsequently perform poorly. It is possible that these CEOs work less hard than before, believing they are secure in their positions and immune from discipline by their boards. These CEOs may also

become preoccupied with outside interests, including the maintenance of their newly acquired assets. Alternatively, the attention focused upon the CEO and his possessions may demoralize other executives in the organization. If a large estate or mansion acts as a vehicle for self aggrandizement, signaling the CEO's power and prestige to a variety of audiences, then its acquisition might foretell future underperformance in the same way as the use of a corporate jet or receipt of a national magazine award.

A related area of recent research illuminates connections between the personal circumstances of CEOs, such as marriages, children, and family illnesses, and the performance of their firms. See Bennedsen et al. (2007), and Bennedsen et al. (2011). Knowing about the size, value, timing, and location of CEOs' home purchases might help researchers augment and extend the results of this nascent literature. For example, CEOs may trade up to larger houses after a divorce and remarriage, or after the birth of a child. If real estate purchases are correlated with these family events, they might exhibit associations with the performance of the CEO's company. Large mansions or homesteads might be also owned more often by CEOs who are scions of company founding families that have been wealthy for more than one generation. These next-generation CEOs, who owe their positions more to blood relationships rather than intrinsic ability, have been shown to perform below market benchmarks (Villalonga and Amit 2006).

Beyond the implications of our study for understanding signals of commitment and entrenchment, we expect that our cross-sectional sample of CEOs' real estate holdings will have general interest for researchers into management incentives. In this literature, the most advanced theoretical approaches involve utility-based models of management incentives that use the manager's outside wealth as one of several input variables. Excellent expositions of such models appear in Lambert et al. (1991), which uses a utility based model to value stock option awards, and Kahl et al. (2003), which takes a similar approach to valuing restricted stock. Each of these papers uses numerical algorithms to generate the certainty equivalent of how much cash a manager would trade for an uncertain position in his own firm's options or shares. In both cases, the answer is higher if the manager's outside wealth is higher, due to decreasing absolute risk aversion.

In empirical work, calibrating these models requires information about the size and riskiness of the manager's personal wealth apart from his investment in the firm. In the U.S., data about the outside wealth of individual CEOs is almost unknown, a gap that our research helps fill. In the absence of such data, most papers make ad hoc assumptions about a manager's outside holdings. For Lambert et al. (1991), each manager is assumed to hold a fixed $10 million of outside wealth. In Kahl et al. (2003), outside wealth is expressed as a fraction of wealth held inside the firm, and different solutions are provided for different relative values. The same relative wealth approach is taken by Hall and Murphy (2002) in their valuation of stock options. Two interesting exceptions are Becker (2006) and Dittman and Maug (2007). Becker obtains data about the outside wealth – including real estate – of CEOs in Sweden, a country in which the government conducts wealth audits of individuals and uses the information as the basis for taxation, with all records available to the public. Becker finds that

richer Swedish CEOs receive higher incentives from their firms, a pattern consistent with the decreasing risk aversion that would accompany greater wealth. A limitation of his research is that most of the Swedish CEOs in his sample run smaller companies and are far less wealthy than their counterparts in the U.S. Dittmann and Maug (2007) construct a time series of all compensation received by the executives in their U.S. sample. They assume that all after-tax compensation is saved by each executive each year and invested at the prevailing risk-free rate so that its value grows over time. This approach allows the authors to build a cumulative time series estimate of the outside wealth held by each CEO in their panel.

Our data also has relevance to researchers in consumer behavior who study Veblen's conspicuous consumption hypothesis. High-end real estate purchases have long been believed to exemplify conspicuous consumption by buyers, who seek to use their estates to impress and intimidate their peer group. These impulses are expressed through history in the construction of royal palaces (such as Peter the Great's attempt to build Peterhof to exceed the grandeur of Louis XIV's Versailles), and in modern times through mansions built or acquired by industrialists or hedge fund managers. This behavior tends to drive up the prices for luxury assets, a pattern captured in the theoretical model of "Veblen effects" presented by Bagwell and Bernheim (1996). However, empirical tests of conspicuous consumption tend to focus not on real estate, which can be extremely expensive and illiquid, but rather on more easily traded goods such as art, sports cars, fine wines, and jewelry. To our knowledge, the only prior research into aspects of luxury real estate purchases by affluent consumers appears in Ait-Sahalia et al. (2004), which studies the macro associations between Manhattan luxury co-op price indices and movements in the stock and bond markets.

Beyond testing theories of conspicuous consumption, our data may provide more general insight into consumer behavior in the market for real estate. By analyzing the home purchases of CEOs, real estate economists might learn more about what motivates successful people to acquire real estate and whether these acquisitions are connected to surges in personal income or productivity.

3 Data Description

Our analysis is based upon a sample of the principal residences of all CEOs of companies in the S&P 500 index in office at the end of 2004. We search for each of the 500 CEOs in on-line real estate records of property taxes and deed transfers in the geographic area around each company's headquarters. These databases, which are compiled at the state level, serve as our primary data sources. They are available on Lexis-Nexis and other Internet portals. We choose the effective date of year-end 2004 for our sample because the databases are updated with varying degrees of time lag. We are able to identify the home addresses of about two-thirds of company CEOs in this straightforward manner.

When the CEO's home address is not immediately available from our primary sources, we can often obtain it from secondary sources which we then cross-check for accuracy against the primary databases. These secondary sources include state voter registration records, CEO employment contracts, Federal Election Commission campaign donation reports, and various Internet "people search engines" such as Zabasearch and Intelius. In some cases these sources provide an exact address, and for other observations they help us identify the correct geographic region in which to search property records more closely. These methods are especially useful for identifying CEOs who maintain their principal residences a great distance from corporate headquarters – sometimes across the country, several thousand miles away. They also help when a CEO has a common name, such as Patrick Ryan of Aon Corp., one of several homeowners by that name in the greater Chicago area.

For the remaining observations, we collect data by exploiting our knowledge of strategies sometimes used by wealthy persons to shift ownership of property for privacy, tax, estate planning, alimony, or other reasons. Some CEOs reside in properties nominally owned by their spouses. We are able to identify the names of wives and husbands from various search engines, wedding announcements, directories of prominent business persons, and the like. We then use the spouses' names to search property records in the relevant geographic area. Other CEOs transfer property ownership to trusts with anonymous sounding names. We identify these transfers by searching for real estate records that list the CEO and/or spouse as the seller and a trust (often named using the CEO's initials, or identifying the CEO as the trustee) as the buyer. We then verify that the trust remains as the legal owner of the property through December 31, 2004. A related problem comes from intra-family transfers of property that occur rather frequently in our sample for estate planning, tax, and other reasons. To identify the original date of acquisition and purchase price of a property, we must sometimes work backward through a sequence of intra-family transactions involving the CEO, spouse, and various trusts.

We attempt to identify the primary residence of each CEO, and problematic cases arise in several situations. When a CEO owns more than one property, we generally choose the one closest to headquarters, especially if the other property is a great distance away and located in a common vacation venue such as Florida or Martha's Vineyard. When the CEO owns two properties that are both reasonably close to headquarters, as in the case of several CEOs that have both Manhattan co-ops and houses in Connecticut or Westchester County, we search secondary sources such as campaign finance reports to ascertain which property the CEO personally designates as his home address. When a CEO appears to live a great distance from headquarters, we attempt to verify the arrangement through at least one secondary source, and we are successful in doing so in a majority of such cases. A number of these long-distance CEOs are relatively recent hires who have not yet moved their families from their former homes, while others are simply commuters who apparently prefer to live far from the company's offices or perhaps near the firm's manufacturing or marketing locations.

After persistent research, we identify the principal residences of 488 of the CEOs in the S&P 500. The remaining 12 CEOs may be renters who own no property or

may live outside the United States (one of the 12 works for a company with a Bermuda headquarters). The number of observations that appear in our analysis of stock returns is slightly smaller than 488, because some firms either entered or were deleted from the S&P 500 index around year-end 2004 due to mergers, IPOs, or bankruptcies, with the consequence that an uninterrupted time series of stock returns is not available for them.

After pinpointing the home address of each CEO, we attempt to obtain more information about the characteristics of each property, including acreage, floor area, year of construction, number of rooms, and the nature of the surrounding area, such as whether the property is adjacent to a golf course or waterfront. Some of this information appears directly on the primary databases of deed transfers and property tax records. For most observations, however, we rely on the online databases www.zillow.com and www.reply.com, which are comprehensive search engines of all residential real estate in the U.S., including aerial photographs of most properties. These databases also provide estimated market values for each home, and we download these values in November and December 2006. We use the average of the two market values when both are available. For observations for which these two public Internet sites give incomplete information, we are able to fill in a number of missing values by accessing a commercial real estate agents' property database made available to us by a professional mortgage broker. We calculate the distance of each CEO's residence from corporate headquarters by using driving distances provided by Google maps.

Figure 1 plots some basic descriptive information about CEOs' residences. The graph shows the estimated market value of each property tabulated as a function of the CEO's years tenure in office. A univariate regression line between these two variables and an intercept has a slope of 0.15 (t-statistic = 3.97), as also shown on the graph. This slope suggests that for every doubling of a CEO's tenure in office, he moves up to a residence 15 % more valuable. This may occur due to some combination of higher income, greater job security, and greater commitment to staying with the firm, all of which should be correlated with tenure in office. The figure also shows CEOs' residences that were purchased before and after their assumption of the top job, indicated by white and dark circles, respectively. These circles indicate that a majority of CEOs still live in homes they owned before being promoted, and that some of these homes are quite valuable. A CEO's probability of trading up to a new home appears to increase with tenure in office. When a CEO does buy a new home, it typically is more valuable than homes acquired by CEOs before their promotions.

Table 1 provides descriptive statistics about CEOs' residences. Information for the entire sample of 488 is shown on the left side of the table, and data for the 165 properties acquired subsequent to a CEO's taking office is shown on the right. Of the 488 residences in the entire sample, 431 are single-family houses and the remainder are condominiums, co-operatives, townhouses or apartments. Because property records are often incomplete for one or more variables, we indicate the number of useable observations for each data item out of either 488 or 165 total

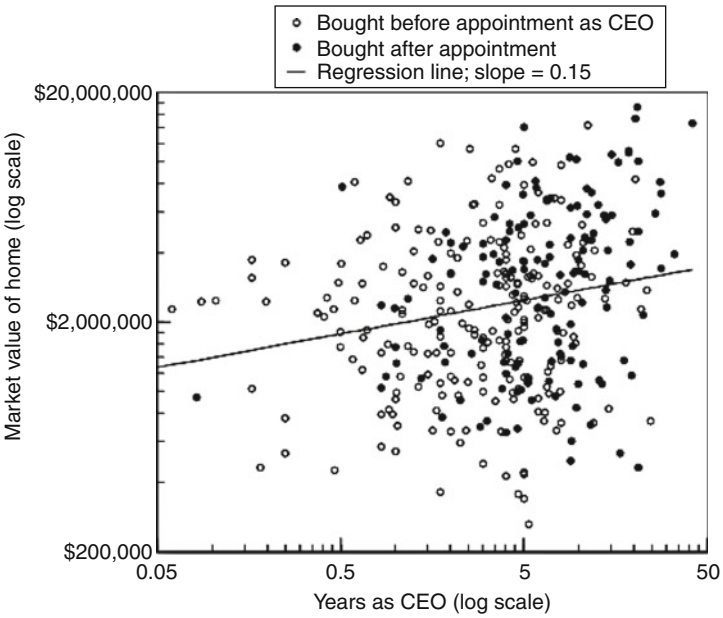

Fig. 1 Value of CEO residences versus CEO tenure in office. The figure plots the market value of CEOs' principal residences against their years in office, with log scales used for clarity. Residences are identified for CEOs of S&P 500 companies as of December 31, 2004. Market values are obtained from two residential real estate websites, zillow.com and reply.com, as of late 2006. The chart shows the 362 observations for which the date of purchase is available and at least one of the two websites provides an estimated market value; an average is used when both sites provide estimates. *Dark circles* indicate properties acquired by the CEO subsequent to his appointment, while *empty circles* indicate properties owned by the CEO before promotion in which he remains after becoming CEO. The *line shows* the outcome of a regression of the log of home value against the log of years tenure in office

observations. We set land acreage equal to missing for all condos, co-ops, apartments, and townhouses.

Data in Table 1 indicate that CEOs' residences are large. The median home includes 11 rooms plus 4.5 bathrooms, with a floor area of more than 5,600 square feet. It sits on land with a median area of one and quarter acres. Twelve percent of CEOs' homes are situated on waterfronts, and 8.5 % are adjacent to or on the grounds of golf courses. All of these statistics are slightly higher in the subsample of homes purchased after CEOs' appointments. Aerial photographs indicate that outdoor swimming pools, tennis courts, boathouses, formal gardens, and detached guest houses or servants' quarters are common features of CEOs' homesteads (we do not tabulate these items). At least one CEO's estate includes private polo fields and an equestrian ring. The median home's 2006 market value is $2.3 million. By comparison, the median sales price for all homes sold in the U.S. in 2004 was $274,500, and the median home constructed in the U.S. in 2004 had 2,140 square

Table 1 Characteristics of CEO residences. Descriptive statistics for a sample of the primary residences of CEOs of companies listed in the S&P 500 index at year-end 2004. The *left half* of the table shows data for the full sample of 488 residences. The *right half* shows data for the subsample of 165 residences acquired after the CEO assumed his current position. Certain variables have missing values for some observations. Each CEO's address is identified by searching databases of real estate records and related documents. Information about the characteristics of each property, including market value estimates, is obtained from two Internet search engines for U.S. residential real estate

	All CEO residences					Residences acquired after appointment as CEO				
	Obs.	Mean	Std.	Median	Max.	Obs.	Mean	Std.	Median	Max.
Age in years	376	32.6	32.6	17	144	134	28.4	32.7	12.5	123
Floor area (sq. ft.)	365	6,257	3,525	5,667	45,865	134	6,968	4,722	6,052	45,865
Rooms	231	12.0	4.2	11	36	79	13.1	4.6	12	28
Bathrooms	342	4.7	1.9	4.5	12	124	5.1	2.2	4.5	12
Land (acreage)	369	5.33	26.61	1.22	361.63	125	6.24	32.81	1.26	361.63
Distance from office (miles)	488	n.a.	n.a.	13.6	n.a.	165	n.a.	n.a.	13.7	n.a.
Waterfront location	483	0.124	0.330	0	1	164	0.146	0.353	0	1
Golf course location	483	0.085	0.279	0	1	164	0.110	0.313	0	1
Market value (mm., 2006)	405	$3.1	$2.8	$2.3	$17.4	146	$3.9	$3.3	$3.3	$17.4

feet of area with two bathrooms.[4] The maximum values reported in Table 1 are almost certainly not the true sample maximums; our sources for value estimates do not cover some of the very largest homes in the sample, probably because no reasonable benchmark sample of transactions exists with which to infer their value.[5]

The median CEO lives 13.6 miles from corporate headquarters. Data from the 2000 U.S. census indicate that the median commuting time for an American worker is 25.5 min, a statistic that implies that CEOs typically live about as far from headquarters as other workers. However, the distribution of CEO commuting distances has an extremely long right-hand tail, with 16 CEOs in our sample living more than 1,000 miles from headquarters (some live considerably farther), and another 18 who live between 250 and 1,000 miles from work. Therefore, about 7 % of CEOs appear to live at least a plane ride away from the office, and it is likely that

[4] These overview data about the U.S. housing market are published annually in *Housing Facts and Figures*, a pamphlet distributed by the National Association of Home Builders.

[5] Table 1 does not reflect data for the $140 million, 66,000 square foot Bill Gates property described at the beginning of the article. Gates had surrendered his CEO position at Microsoft prior to the effective date of the sample, so the company is represented in our data by current CEO Steve Ballmer, who lives in a more modest 4,100 square foot home with a value of about $8 million in Hunts Point, WA. Ballmer is a neighbor of the CEO of Costco Wholesale, who lives on the same street one-quarter mile away in a slightly larger and more valuable home.

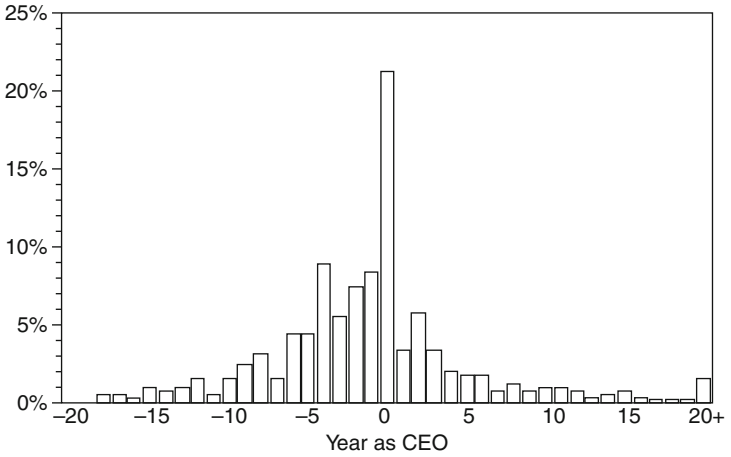

Fig. 2 Timing of acquisition of CEO residences. The figure displays the distribution of dates at which CEOs of S&P 500 companies acquired their current principal residences. Year 0 is the year in which the CEO is appointed to his position. Positive values on the x-axis represent home purchases subsequent to the CEO's appointment, while negative values represent homes purchased by the manager before becoming CEO in which he continues to live afterward. The dates of CEOs' home purchases appear on databases of residential real estate transactions that are searchable on the Internet

they reside in apartments or hotels during the work week. Due to this skewness of the data we do not report descriptive statistics for commuting distance other than the median. As noted above, for a large number of these cases we verify CEOs' long-distance commutes from press reports and other sources.[6]

Figure 2 presents a histogram of the timing of acquisition of CEOs' homes, relative to the timing of their appointments to their CEO positions. The data show a clear tendency for CEOs to buy new homes in the year of their appointment (year 0 on the graph), a pattern driven by the need for many CEOs to relocate if they are outside hires or had previously worked in a division of the firm away from headquarters.

[6] Well known examples of long distance CEOs include Craig Barrett, who lived in the Phoenix, AZ area for many years while serving as CEO of Intel Corp. (Santa Clara, CA), and Gerald Grinstein, a longtime resident of Washington State who has continued to keep his home there while serving as CEO of Delta Air Lines (Atlanta, GA). In each of these cases the CEO appears to have owned no property near headquarters and appears to have lived in company-subsidized housing. Recent proxy disclosures for these two firms report perquisite compensation related to "apartment near corporate headquarters" (Barrett) and "relocation expenses" (Grinstein).

In a handful cases we identify companies that list the nominal mailing address of headquarters at one location but have the actual head office elsewhere; Tyco International, for example, is officially domiciled in Bermuda but has its de facto headquarters in West Windsor, NJ, and Federated Department Stores lists its address in Cincinnati, OH, while its headquarters office is actually in New York City. In these cases we use the de facto location to measure the CEO's commuting distance.

Table 2 Financing of home acquisitions by CEOs. Sources of financing for new home purchases by CEOs of S&P 500 companies. The full sample includes 165 acquisitions of principal residences by CEOs, and 39 observations are excluded because the cost of the transaction cannot be obtained. The chart shows the amount of mortgage financing obtained at the time of purchase according to public real estate records. Net equity sale financing for each CEO equals the net proceeds from open market sales and option exercises in the year prior to the home acquisition; this variable is defined to have a minimum value of zero and a maximum value equal to the difference between the home cost and mortgage financing. Relocating outside hires are CEOs hired from outside the company who live outside the geographic area near headquarters and purchase a new home within 1 year of their appointments. Home acquisition costs are obtained from deed transfer records available from Internet databases, and net equity sale information is obtained from the Thomson Financial insider trading database

		Financing from mortgage proceeds		Financing from net sales of firm equity				
Sample	Obs.	Freq. (%)	Mean ($)	Freq. (%)	Mean ($)	Total home cost ($)	Fraction financed by mortgage (%)	Fraction financed by equity sales (%)
Home cost up to $1 million	34	24	212.5	32	122.6	607.5	35	20
Home cost $1–2 million	34	47	483.4	35	288.5	1,420.8	34	20
Home cost $2–4 million	31	45	729.4	35	535.0	2,993.9	24	18
Home cost above $4 million	27	44	2,148.9	56	2,018.6	8,550.6	25	24
Relocating outside hires	17	53	531.8	0	0.0	2,482.8	21	0
All purchases	126	40	827.7	39	675.1	3,116.2	27	22

Table 2 presents data about sources of financing for CEOs' home purchases, based on an analysis of the 165 observations of homes purchased after promotion to the CEO position. The table shows data for 126 transactions in the overall sample, those for which we could obtain information about the property's purchase price. We also show data for four subgroups of roughly equal size stratified by purchase price, and for the subsample of CEOs hired from outside the company who must relocate to the geographic area of headquarters and who are unlikely to have any company shares to sell. Financing for CEOs' purchases could come from a variety of sources, including borrowing, cash on hand, equity from the sale of a previous residence, and the liquidation of other assets such as shares or options in the CEO's company's stock.

We search public mortgage records and record the amount borrowed by the CEO-purchaser in each transaction. This information is displayed in the second and third columns of Table 2. The data indicate that 40 % of CEOs take out mortgages on their properties, a percentage that tends to increase with the cost of the home. The average mortgage value, including the zero-valued observations, is about $827,700, implying that the mean value of non-zero mortgages is about $2.1 million. We find almost a 50–50 split between fixed rate and adjustable rate mortgages (ARMs), as ARMs account for 48 % of loans by count and 57 % by dollar value. The heavy use of adjustable rate mortgages by CEOs is intriguing, because fixed rate mortgages tend to dominate ARMs in the marketplace, especially among borrowers with good credit histories. U.S. Federal Reserve Chairman Alan Greenspan attracted wide attention with a 2004 speech suggesting that ARMs

should be attractive to more borrowers given the high interest-rate markups charged for fixed rate mortgages, and perhaps CEOs' affinity for ARMs reflects their above-average financial sophistication.[7]

Overall, new borrowing covers about 27 % of the cost of home acquisitions for CEOs. However, this number is likely biased downward because it excludes loans made by the CEO's employer that are unlikely to be recorded in local property transfer databases. Though such loans have been illegal since the Sarbanes-Oxley Act in 2002, they were a relatively common source of finance for top managers' real estate acquisition purposes prior to that date (Kahle and Shastri 2004). We find that the percentage of CEOs taking out mortgages at the time of home purchases is modestly higher, 41 % compared to 35 %, for homes bought subsequent to August 29, 2002, the effective date of Sarbanes-Oxley.

We construct a measure of the amount of each CEO's home purchase financed by the net cash proceeds from liquidating company shares and options. We calculate each CEO's net cash inflows realized from selling shares either on the open market or directly to the company, and we subtract out the cash spent for open market purchases (which are rare) and to exercise stock options. In our sample, most shares acquired by CEOs from option exercises are quickly sold on the open market, and the option exercise price is frequently financed by selling shares of stock back to the firm. We assume that each CEO's net cash proceeds from equity sales over the 12 month period prior to his home acquisition are used to finance the home purchase price, up to a limit equal to the property's acquisition cost minus the amount raised via mortgage. In a few cases in which the CEO is a net purchaser of shares, we set this variable equal to zero, and due to a lack of information we do not consider the impact of these sales upon the CEOs' personal tax situations. Data about financing from net sales of equity appears in the fourth and fifth columns of Table 2. CEOs on average finance about 22 % of their home costs from selling shares and options. In nearly every case, however, the amount raised from equity sales is relatively modest relative to the CEO's overall stake in the firm. The median equity investment (shares plus Black-Scholes option value) exceeds $35 million for the CEOs in our sample, and even at the 10th percentile CEOs own $6.7 million worth of company shares and options. These numbers are an order of magnitude (or more) greater than the amount raised by CEOs through net sales of stock, which equals zero for most observations and has a mean value above $1 million only among the very largest cohort of homes, according to data in Table 2.

[7] Greenspan's speech to the Credit Union National Association is posted at www.federalreserve.gov/boarddocs/speeches/2004/20040223/default.htm. Data about mortgage products appears in Mortgage Bankers Association (2005), which states that ARMs account for only 23 % of outstanding mortgages and a lower share among prime credit borrowers, though ARMs have recently gained market share against fixed rate loans.

4 Analysis

4.1 Home Purchases as Signals of Commitment or Entrenchment

If home purchases represent a signal of commitment by the CEO, subsequent stock performance of the company should at least remain unchanged and possibly improve. Conversely, if home purchases represent a signal of entrenchment, we would expect stock performance to decline after the time of purchase. Either of these effects should increase with the size or cost of the home.

We begin our analysis with some simple partitions of the data as of December 31, 2004, the effective date of our sample, and we measure stock performance for each firm over the next year, calendar 2005. For those CEOs who leave office or have their firms delisted during 2005, we cumulate performance up to the times of their departures.

Table 3 displays mean and median 2005 stock returns for portfolios of companies sorted according to the value and size of CEOs' residences. For simplicity of presentation, we do not use any market index or model of expected returns in these calculations, since all information is for the same time period and all companies are members of the S&P 500. We test the sensitivity of our analysis to adjustments for industry average returns and expected return models such as Fama-French, and none of these changes affects the underlying results.

In the top half of Table 3, we partition the sample of CEO residences according to their estimated market values, as obtained from the two Internet real estate sites described earlier. We must discard about 20 % of the sample for which these sites do not provide estimates (many of these missing observations are for new construction that has not yet entered the sites' databases). A weakness of our approach is the reliance on market value estimates from late 2006, nearly 2 years past the effective date of the sample. Unfortunately, historical estimates of market values are not available, so we effectively assume that the market values prevailing in late 2006 are proportional to those at the end of 2004.

Data in Table 3 indicate that CEOs who live in homes with values above the sample median underperform their counterparts whose homes have values below the sample median. We show this result for the entire sample, on the left side of the table, and for the subsample of CEOs who acquired their home subsequent to taking office, on the right side. The degree of underperformance by CEOs in the more expensive homes is stronger and more significant within the subsample.

In the lower half of Table 3 we partition the sample according to the sizes of CEOs' homes. We have several variables available as measures of home size, including floor area, number of rooms, number of bathrooms, and land acreage. For many observations, some or all of these variables are missing. We adopt a simple scheme for classifying a CEO's residence as "very large" if it has either 10,000 square feet of floor area or at least 10 acres of land. While this rule is somewhat ad hoc, it fits our data nicely by identifying about 15 % of the sample residences as extremely large.

Table 3 Company stock returns, 2005. Stock returns realized during calendar year 2005 for companies in the S&P 500 index, partitioned according to market value and size of their CEOs' personal residences. On the *left half* of the table, the analysis includes all CEOs' houses with adequate information available. On the *right half* of the table, the analysis is limited to those CEOs who acquired their current residences after taking office. Information about the characteristics of each CEO's residence, including market value estimates, was obtained from two Internet search engines for U.S. residential real estate. The indicator for largest homes equals 1 if the property is at least 10 acres large or the residence's floor area is at least 10,000 square feet

	All CEO residences			Residences acquired after appointment as CEO		
	Obs.	Mean	Median	Obs.	Mean	Median
Market value above sample median	200	2.39 %	4.43 %	72	0.27 %	1.45 %
Market value below sample median	199	6.17 %	5.71 %	72	8.70 %	9.63 %
Difference		−3.78 %	−1.28 %		−8.43 %	−8.18 %
t-statistic or Wilcoxon rank-sum statistic		1.33	1.51		1.70	1.95
p-value		0.19	0.13		0.09	0.05
Largest homes (at least 10,000 sq. ft. or 10 acres)	53	−1.90 %	−1.69 %	25	−2.05 %	−1.69 %
All other homes	428	5.27 %	5.65 %	138	5.17 %	7.37 %
Difference		−7.17 %	−7.34 %		−7.22 %	−9.06 %
t-statistic or Wilcoxon rank-sum statistic		2.13	2.54		1.53	1.92
p-value		0.03	0.01		0.13	0.05

As shown in the lower half of Table 3, we find that for the year 2005, CEOs in the largest homes underperform their counterparts in the rest of the sample, with the difference in performance lying in the range of −7 % to −9 %, depending on the performance metric chosen. Significance levels are somewhat stronger, and the magnitudes are very similar, for the overall sample compared to the subsample of CEOs who purchased homes after taking office. These results are robust to the exclusion of condos and apartments, which are unlikely by definition to qualify for our "very large" home categorization.

To test whether the results shown in Table 3 are unique to the year 2005, we look back to the time at which each CEO purchased his current home, for the subsample whose acquisitions we can identify as having taken place subsequent to their owners' becoming CEO. Summary statistics about these observations appear in the right half of Table 1. These companies on average outperform the S&P 500 index due to the survivorship bias in our sample; this bias arises because our sample only has companies that were included in the index at year-end 2004, but all home purchases took place before this date. To be in the index at the end of 2004, firms must have performed well prior to then.

We construct a hypothetical trading rule in which in an investor is assumed to take long or short positions in company stocks at the time of their CEOs' home purchases, with the choice of long or short based upon the size of the CEO's new home. Since these home purchases occur at different times, we subtract the contemporaneous S&P 500 return from each observation's raw return to adjust for moves in the overall market. We cannot pursue a similar analysis based on home

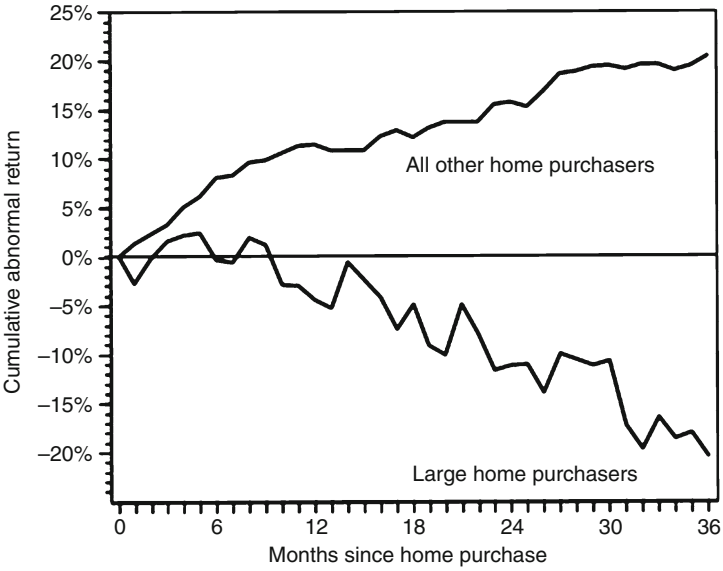

Fig. 3 Cumulative abnormal stock returns subsequent to CEOs' home purchases. The graph shows the cumulative abnormal stock performance for a sample of 165 S&P 500 companies in which the CEO acquired his home subsequent to his appointment as CEO. The large home subsample, which includes 25 observations, features residences of at least 10,000 square feet or land area of at least 10 acres. CEOs' addresses and home characteristics are obtained from searches of Internet residential real estate records. Abnormal stock returns are calculated on a monthly basis as the difference between the raw stock return and the return on the S&P 500 index, both compounded continuously

values, because values would have fluctuated over time (our sample of purchases extends as far back as 1982) and we lack the necessary historical data.

We calculate mean cumulative net-of-market returns on a monthly basis for a portfolio of 25 CEOs' homes that exceed either 10,000 square feet in floor area or 10 acres in land area. The initial month is the first month subsequent to the CEO's purchase of the home, and we continue the analysis for a period of 36 months. We similarly calculate the cumulative mean returns for a separate portfolio of 136 CEOs' homes that either do not meet the size criteria or have missing values for these variables. If a firm replaces its CEO within the 36 month window, we drop it from the analysis at that point. Results of our hypothetical trading strategy are shown in Fig. 3. Data displayed in the figure show a steadily widening gap between the profits in the long portfolio and the losses in the short portfolio.[8] The cumulative difference between these two mean values equals 1.7 % after 3 months, 8.5 % after

[8] The overall sample exhibits positive net-of-market performance prior to 2004, since the criteria for inclusion in the sample is based upon S&P 500 membership in that year, and firms must have performed well prior to 2004 to have survived and earned a spot in the index. This accounts for the upward slope in the top line of Fig. 3, which reflects the performance of the majority of the sample.

6 months, 15.8 % after 1 year, and 40.8 % after 3 years. The cumulative difference in means has a t-statistic that widens from 1.09 after 1 year, to 1.60 after 2 years, and 2.16 after 3 years.

In Table 4 we present regression evidence consistent with Fig. 3, in a framework that allows us to control for the risk-adjusted expected return of each observation. We estimate a Fama-French four factor model of monthly stock returns for our sample of 165 companies, and the standard list of independent variables is augmented by a dummy variable that equals 1 if the CEO purchases a large home, according to our cutoff of 10 acres or 10,000 square feet. Though not tabulated to save space, we also produce nearly identical results using different measures of the market index, such as the S&P 500 Index or industry returns in place of market returns, and by using a balanced panel with standard errors clustered at the firm level. We estimate the regression over the 36 months subsequent to each CEO's home purchase, the same interval used in Fig. 3.

Results in the first column of Table 4 indicate a significantly negative stock performance following the acquisition of very large homes by company CEOs. The magnitude of this effect, which is significant below the 5 % level, is quite large, at 1.08 % per month, which is in line with the data shown in Fig. 3. We interpret the stock return evidence as consistent with large CEO home purchases indicating entrenchment and foreshadowing poor future stock performance.

We continue the regression analysis by adding an independent variable equal to the percentage of acquisition cost for each house financed by liquidation of company shares and options, as described in Table 2. If the CEO purchases the home without selling shares, we interpret it as a signal of commitment and expect more positive stock returns. When the stock financing variable is added to the regression model, it has a negative estimate that has borderline significance at the 11 % level. Inclusion of the control for equity sales by the CEO has no effect on the estimate for the indicator variable for very large homes, which is virtually identical in the first two columns of Table 4. Together, the estimates for the two main dependent variables suggest that a grandiose home purchase by a CEO represents a signal of entrenchment, while a purchase financed without sales of company stock represents a positive signal of commitment, and any overlap between these two motives in an individual transaction is purely idiosyncratic. Extending this model to include an interaction term between the stock sales variable and the mansion indicator does not yield a significant estimate for the additional variable.

One can identify certain subsamples of CEOs for whom a home purchase, however large, is unlikely to coincide with an increase in entrenchment. At one extreme, new CEOs hired from outside the firm probably have little job security or control over corporate governance. We construct a dummy variable and set it equal to 1 for CEOs whose purchases take place in their first year in office and who are hired from outside the firm. A group of CEOs with the opposite degree of job

The difference in the two lines, which is the statistic of interest, should not be affected by the general pattern of market outperformance in the sample as a whole.

Table 4 Regression analysis of company stock returns. Ordinary least squares analysis of monthly stock returns for companies in the S&P 500 index in the 36 months following the purchase of new homes by their CEOs. The sample includes 165 companies in the S&P 500 at year-end 2004 whose CEOs purchased their homes after being promoted to the CEO position. The dependent variable equals the firm's monthly stock return minus the risk-free rate. The variable measuring fraction financed by stock sales equals the CEO's proceeds from stock sales and option exercises in the year prior to the home purchase, capped at the difference of the home cost less the amount financed by mortgage The indicator for large homes equals 1 if the property is at least 10 acres or the house's floor area is at least 10,000 square feet. The founding family indicator equals 1 if the CEO is a member of the company's founding family. The relocating outside hire indicator equals 1 if the CEO is hired from outside the company and purchases his home within 1 year following his start date. Standard errors appear below each estimate in *parentheses*

Period	Months 1–36	Months 1–36	Months 1–36	Months 1–12	Months 13–24	Months 25–36
Intercept	0.0007	0.0020	0.0019	0.0086[a]	−0.0009	−0.0017
	(0.0016)	(0.0018)	(0.0018)	(0.0031)	(0.0032)	(0.0030)
Market return – risk-free rate	1.1023[a]	1.1006[a]	1.1030[a]	1.0649[a]	1.2286[a]	1.0025[a]
	(0.0394)	(0.0403)	(0.0403)	(0.0644)	(0.0736)	(0.0725)
(High – Low) portfolio	0.1751[a]	0.1750[b]	0.1772[a]	0.2795[a]	0.0325	0.1813[c]
	(0.0522)	(0.0526)	(0.0526)	(0.0859)	(0.0954)	(0.0935)
(Small – Big) portfolio	0.2191[a]	0.2191[a]	0.2197[a]	0.2436[a]	0.1131	0.3106[a]
	(0.0443)	(0.0447)	(0.0446)	(0.0728)	(0.0836)	(0.0763)
(Up – Down) portfolio	−0.0298	−0.0313	−0.0312	0.0684	−0.0677	−0.1361[a]
	(0.0281)	(0.0284)	(0.0284)	(0.0445)	(0.0520)	(0.0519)
Large home indicator (at least 10,000 square feet or 10 acres)	−0.0108[a]	−0.0124[b]	−0.0222[a]	−0.0263[a]	−0.0183[c]	−0.0225[b]
	(0.0039)	(0.0041)	(0.0057)	(0.0097)	(0.0100)	(0.0099)
Fraction financed by stock sales		−0.0071	−0.0157[a]	−0.0193[b]	−0.0104	0.0107
		(0.0044)	(0.0054)	(0.0076)	(0.0078)	(0.0074)
Large home indicator x founding family indicator			0.0198[b, c]	0.0081	0.0318[b]	0.0220
			(0.0086)	(0.0150)	(0.0153)	(0.0142)
Large home indicator x relocating outside hire indicator			0.0173[c]	0.0315[c]	0.0127	0.0055
			(0.0104)	(0.0182)	(0.0186)	(0.0169)
Observations	5,565	5,457	5,457	1,901	1,884	1,672
R^2	0.172	0.170	0.170	0.164	0.193	0.165

Significant at 1 %(a), 5 %(b), and 10 %(c) levels

security might be members of a company's founding family. According to a literature that begins with Johnson et al. (1985), CEOs who are either founders or descendants of the founder are often both poor performers and immune from removal through the ordinary processes of corporate governance. Therefore, we expect home purchases to be irrelevant as a signal of entrenchment for this group, since their family relationship makes them entrenched from the date of appointment as CEO. We construct a founding family dummy variable and set it equal to 1 for members of the company's founding family.

We augment the regression model in Table 4 by adding two interaction terms between the large home indicator and the indicators for (1) new CEOs hired from outside the firm, and (2) founding family CEOs. We expect the two interaction terms to be positive, based upon our conjecture that home purchases should not

occur contemporaneously with changes in entrenchment for these subgroups. Results shown in the third column of Table 4 are in accord with our predictions. The coefficient on the large home dummy variable indicates underperformance close to 2 % per month by CEOs who live in very large homes. However, the effect is negated almost exactly by the magnitude of either of the two interaction terms, each of which is positive and significant with estimates also quite close to 2 % per month. Inclusion of the interaction terms also improves the significance of the stock sale variable to below the 1 % level.

In the right three columns of Table 4, we decompose our sample according to calendar time, with the model from the third column estimated separately for each of the 3 year periods subsequent to each CEO's home acquisition. Several interesting patterns emerge in evolution of regression estimates across time. First, the large home indicator has a similar magnitude and significance level across all three subperiods, suggesting that the "mansion effect" persists. Second, the impact of a CEOs stock sales for forecasting future stock performance appears to attenuate over time, a sensible pattern. Third, the impact of the interaction term for CEOs who are new outside hires also dissipates over time, as it is significant and much larger in the first year (when the CEO is new) and shrinks in magnitude and significance as the CEO's tenure grows.

Together, the evidence for the year 2005 plus the evidence for a trading strategy implemented over time is consistent with a significant difference in performance between CEOs living in very large homes and all other CEOs. A trading strategy to capitalize on this pattern would not have been difficult to implement. Real estate purchases and sales are public information and tend to be highly visible, as are the characteristics of most properties, and even if a trading strategy had been implemented with some time lag, the continually widening gap in Fig. 3 suggests that profits would have been earned over any interval of reasonable length.

To understand better the reasons behind the underperformance of companies whose CEOs acquire very large homesteads, we read news stories about major events affecting the 25 firms in our sample in which a CEO acquires a property with at least 10 acres or a 10,000 square foot house. These news stories suggest parallels between the CEOs' oversight of their personal assets and management of their companies. No less than nine of the 25 CEOs attempted major corporate acquisitions in the 2 years following their personal acquisitions of very large real estate,[9] and seven of the 25 announced significant capital investment initiatives involving the construction or expansion of corporate facilities. An additional two firms became mired in accounting scandals shortly after their CEOs purchased mansions, and one firm saw a previously agreed merger collapse.

We examine a variety of ex ante information about CEOs prior to home purchases and compare the data across subsamples of CEOs who buy very large homes and all other CEO home purchasers. These two subgroups do not exhibit significant differences in ownership, ex ante stock performance, market-to-book

[9] These acquisitions included such well-known deals as Hilton Hotels' failed attempt to acquire ITT Corp., and Sprint Corp.'s successful merger with Nextel.

ratio, rank of the metropolitan statistical area in which the company is located, or whether they are hired from outside the firm. Very large home purchasers are significantly more likely than all other CEO-purchasers to come from the company's founding family (38 % vs. 13 %) and also have more years tenure in office (7.4 years vs. 4.0, on average), each of which may be associated with greater likelihood of entrenchment in office.

We evaluate carefully the possibility that our results may be influenced by CEOs of Internet and technology companies, who could have liquidated shares in large amounts and transferred the proceeds into real estate in the 1999–2001 period, near the peak of the tech stock bubble. If this pattern repeated itself often, then our results about negative share performance after grandiose home purchases might reflect only the bursting of the Internet bubble. Several facts argue against such an interpretation. First, we observe no significant difference in the ex ante stock performance of firms whose CEOs purchase very large homes compared to all other CEO home buyers; in other words, those CEOs buying mansions are not doing so after abnormally large run-ups in their shares.[10] Second, all of the results in Table 4 and Fig. 3 are essentially unchanged if we use industry stock indexes in place of the overall market index as the benchmark for expected returns. Therefore, CEOs who move into very large homes are generally underperforming their industry peers as well as the overall market in the aftermath. Third, only a minority of the very large homes in our sample are acquired near the top of the market for technology shares. Eight of the 25 large estates were bought between July 1999 and April 2001, while nine were purchased earlier and another eight were purchased later. Of the eight homes bought between July 1999 and April 2001, only one was acquired by the CEO of a technology company (PMC-Sierra), while the other CEO purchasers during this period worked in less glamorous industries such as footwear, banking, toys, energy, and hardware.

Finally, we note the parallel between our results and Ghosh et al. (1995), who study investor reactions to several hundred announcements of corporate headquarters relocations. The authors identify a subsample of 42 cases in which the main motive appears to be transferring offices to a more luxurious building (as well as related agency issues). While investors react positively to most relocations, such as those motivated by cost savings, shares of companies drop by a significantly negative 1.5 % when the move is primarily related to procurement of more opulent surroundings for the managers. This result confirms Parkinson's (1983) conjecture that an inverse relation exists between the impressiveness of a company's headquarters and its future success: "Perfection ... is achieved only by institutions on the point of collapse."

[10] We see this in a variety of tests. For example, the mean cumulative abnormal returns over the 252 trading days (1 year) prior to home purchases are +1 % for CEOs buying very large homes and +6 % for all other CEOs, with the difference not significant.

4.2 Insider Trading Related to Personal Liquidity Needs

As discussed above, personal consumption needs represent a common, information-neutral rationale for company executives to sell shares and options. Even though most executives receive stock based compensation for incentive reasons, it is understood by boards and shareholders alike that major personal expenses – such as the purchase of a home – may require even CEOs to exercise options and sell shares from time to time. For lower level employees, personal consumption motives probably account for the large majority of insider selling, although diversification is a powerful impetus too.

No previous study of managers' insider trading has isolated trades that are related to personal liquidity needs, and our sample of CEOs purchasing new homes offers the opportunity to extend the literature in this direction. We use the Thomson Financial insider trading database to study transactions for 160 CEOs in our sample who purchase homes after being promoted to the CEO position (three other CEOs are not included because their homes were purchased prior to creation of the database). The data exhibit a steady run-up of insider selling during the year prior to the home purchase, with approximately half of the CEOs in the sample making either purchases, sales, or both during this 12 month period and the average net selling increasing gradually through the year. Interestingly, the pattern of insider selling accelerates still further over the year subsequent to home purchases as CEOs sell even more stock in the next 12 months, perhaps to finance renovations, furniture, moving expenses, and the like.

To study the information content of this trading, we focus closely upon 27 CEOs who are net sellers of shares and options during the 2 months prior to their home purchase dates. These CEOs' net cash proceeds during this 2-month period range from $8,100 to $32.3 million, with a mean of $5.2 million and median of $2.1 million. Our null hypothesis is that, because these trades are undertaken with an evident liquidity motive, company stocks should not exhibit abnormally negative performance in the aftermath, in contrast to most studies of insider trading which find stock declines following CEO sales.

We conduct a stock price event study based upon the trading patterns of these 27 CEOs, in which the event date is the last transaction date prior to the home purchase (we focus on the last transaction date because some CEOs sell stock several times during the 2-month window that we study). Contrary to our null hypothesis, we find a pattern of substantial stock price declines following these CEO equity sales. Over the next 20 trading days, the companies in our sample exhibit negative cumulative abnormal returns in 17 out of 27 cases, with a mean CAR of −5.44 % and median of −1.88 %, both statistically significant at the 5 % level.[11]

[11] We use standard market model assumptions to calculate these CARs, with a 255 day estimation period that ends 46 days prior to the event day, and the CRSP equal weighted index as the market return. If we instead calculate net-of-market returns without the alpha and beta market model parameters, the mean and median CARs are −3.39 % and −3.42 %, respectively, again statistically significant at the 5 % level.

This result represents an interesting complement to the literature on insider trading. Even though CEOs who are purchasing new houses have an evident liquidity motive for selling shares, insider sales under these conditions nevertheless precede negative future stock performance. These CEOs may even see the home purchase as an opportunity to sell shares under a pretext that the sales are necessary to finance the home acquisition, while the true motive may be more closely connected to private information about the firm. We look for circumstantial evidence of this possibility by examining the timing of our 27 CEOs' stock sales relative to earnings announcements. Bettis et al. (2000) show that a large number of companies have "blackout periods" that prohibit insider trading in the weeks leading up to quarterly earnings announcements. In their sample of 284 companies, fewer than 5 % permit insider trading within 1 week prior to an earnings announcement, and fewer than 15 % permit trades as far in advance as 6 weeks before an announcement (Fig. 1). Of the 27 CEOs that we study, nine trade within the 6-week window before their firms' next earnings releases, and three trade within the window 2 weeks before the earnings news (this latter group includes the two largest net sellers in our sample, who realize $22.9 and $32.3 million, respectively). We cannot identify the precise insider trading blackout periods for the firms in our sample (or even whether they have them), but the authors of the Bettis et al. study have indicated to us that most firms permit waivers of their blackout rules if an executive can present the firm's general counsel with a persuasive reason for needing to sell stock. A home purchase would appear to provide such a reason, and our data suggest that at least some CEOs are able to use their real estate transactions as the basis for trading outside conventional insider trading blackout periods.

4.3 Other Variables

We explore whether several other variables related to home purchases exhibit statistically significant associations with company performance. We use the distance of the CEO's home from headquarters (in several specifications, including log form) as an independent regression variable, conjecturing that CEOs who live far from the office may spend less time at work and have less direct contact with coworkers. Somewhat surprisingly, the distance variable does not come close to having a statistically significant estimate, even in cases of CEOs who live thousands of miles from their offices. A possible explanation is that these long-distance CEOs fly into the headquarters city each week, reside in an apartment or hotel close to the office, and work through the week undistracted by family or friends. We experiment with a dummy variable for new construction, setting it equal to one when the CEO acquires undeveloped land and builds a new house upon it. Our hypothesis is that these CEOs may be preoccupied with blueprints and construction details and therefore underperform. This dummy variable, however, does not yield a statistically significant estimate. Finally, we use aerial photographs to identify CEO

properties that are adjacent to golf courses and to waterfronts, in the expectation that the leisure opportunities associated with these homes may lead to CEO shirking. Once again we fail to find a statistically significant estimate when indicator variables for these properties are included in regressions.

4.4 Second Homes

We explore whether information about CEOs' acquisitions of second homes for vacation purposes might be useful for validating or reinforcing some of the statistical tests above. We search real estate records throughout the U.S. to identify additional properties acquired by each CEO subsequent to his appointment to the CEO position. We locate 122 additional properties, many of which are smaller units near the CEO's main residence. We conjecture that these local properties may be purchased by the CEO for occupation by his adult children or other family members. After ruling out these units, we are left with 66 lots that are clearly for vacation purposes, with locations such as Maui, HI; Boca Raton, FL; Hilton Head, SC; and Cape May, NJ. These 66 vacation properties are owned by 42 of the CEOs in our sample; some CEOs purchase a number of adjacent lots in one location, sometimes simultaneously and sometimes over time. We replicate our long-short trading strategy presented above, creating a hypothetical short portfolio of companies whose CEOs acquire vacation homes with a cost of $5 million or more (about half of the sample) and a long portfolio of the remaining companies whose CEOs acquire less costly vacation homes (we do not use land area or square footage, as done above, because many of these units are condos and apartments). The results are quite similar to the outcome of the long-short trading strategy for CEOs' main houses; those CEOs buying the most costly vacation homes see their stocks significantly under-perform those of CEOs who buy lesser-cost vacation retreats. After correcting for the market index, the gap in returns between these two portfolios is above 15 % points per year.

We do not pursue the vacation home analysis in detail because of the small sample size, as we are able to identify vacation homes owned by only 42 CEOs, less than 10 % of our sample. We conjecture that many of the others probably own vacation homes internationally, or perhaps domestically on a time share basis, so that they do not appear in the United States databases of property taxes and deed transfers that we use as our sources.

5 Conclusions

Using a database of principal residences of company CEOs, we study whether these executives' decisions about home ownership contain information useful for predicting the future path of their companies' stock prices. We find that CEOs

who acquire extremely large properties exhibit inferior ex post stock performance, a result consistent with large mansions and estates being proxies for CEO entrenchment. We also find that the method of financing a home's acquisition is informative about future stock returns. A general pattern of CEO sales of their firms' shares and options exists over the 12 months leading up to the date of home acquisition. However, when the CEO does not sell any shares, his stock performs significantly better ex post than the stocks of firms whose CEOs do liquidate equity to finance their houses. The retention of company shares simultaneous with a new home purchase, despite the presence of an evident personal liquidity need, appears to send a signal of commitment by a CEO to his company.

Acknowledgements For helpful comments we wish to thank J. Carr Bettis, Stuart Gillan, William Rabel, and seminar participants at the University of Alabama, Boston College, Center for Financial Studies (Frankfurt), Erasmus University (Rotterdam), European School of Management and Technology (Berlin), Federal Reserve Bank of New York, University of Georgia, London Business School Corporate Governance Conference, University of Lugano, Mannheim University, New Economic School (Moscow), Texas Tech University, and Tilburg University. We appreciate research assistance by Michael Gershman and Michael Mahoney. For the paper's title, we acknowledge Fred Schwed Jr., *Where Are the Customers' Yachts? Or, A Good Hard Look at Wall Street* (1940).

References

Ait-Sahalia, Y., Parker, J. A., & Yogo, M. (2004). Luxury goods and the equity premium. *Journal of Finance, 59*, 2959–3004.

Bagwell, L. S., & Bernheim, D. B. (1996). Veblen effects in a theory of conspicuous consumption. *American Economic Review, 86*(3), 349–373.

Becker, B. (2006). Wealth and executive compensation. *Journal of Finance, 61*, 379–397.

Bennedsen, M., Nielsen, K., Perez-Gonzalez, F., & Wolfenzon, D. (2007). Inside the family firm: The role of families in succession decisions and performance. *Quarterly Journal of Economics, 122*, 647–691.

Bennedsen, M., Perez-Gonzalez, F., & Wolfenzon, D. (2011). Do CEOs matter? Columbia University (unpublished manuscript).

Bettis, J. C., Coles, J. L., & Lemmon, M. L. (2000). Corporate policies restricting trading by insiders. *Journal of Financial Economics, 57*, 191–220.

Core, J. E., & Larcker, D. F. (2002). Performance consequences of mandatory increases in executive stock ownership. *Journal of Financial Economics, 64*, 317–340.

Dittmann, I., & Maug, E. (2007). Lower salaries and no options? On the optimal structure of executive pay. *Journal of Finance, 62*, 303–343.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*, 301–325.

Ghosh, C., Rodriguez, M., & Sirmans, C. F. (1995). Gains from corporate headquarters relocations: Evidence from the stock market. *Journal of Urban Economics, 38*, 291–311.

Hall, B. J., & Murphy, K. J. (2002). Stock options for undiversified executives. *Journal of Accounting and Economics, 33*, 3–42.

Hayes, R. M., & Schaefer, S. (1999). How much are differences in managerial ability worth? *Journal of Accounting and Economics, 27*, 125–148.

Huddart, S., & Lang, M. (1996). Employee stock option exercises: An empirical analysis. *Journal of Accounting and Economics, 21*, 5–43.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review, 76*, 323–329.

John, T. A., & John, K. (1993). Top-management compensation and capital structure. *Journal of Finance, 48*, 949–974.

Johnson, W. B., Magee, R. P., Nagarajan, N. J., & Newman, H. A. (1985). An analysis of the stock price reaction to sudden executive deaths. *Journal of Accounting and Economics, 7*, 151–174.

Kahl, M., Liu, J., & Longstaff, F. A. (2003). Paper millionaires: How valuable is stock to a stockholder who is restricted from selling it? *Journal of Financial Economics, 67*, 385–410.

Kahle, K. M., & Shastri, K. (2004). Executive loans. *Journal of Financial and Quantitative Analysis, 39*, 791–811.

Ke, B., Huddart, S., & Petroni, K. (2003). What insiders know about future earnings and how they use it: Evidence from insider trades. *Journal of Accounting and Economics, 35*, 315–346.

Lambert, R. A., Larcker, D. F., & Verrecchia, R. E. (1991). Portfolio considerations in valuing executive compensation. *Journal of Accounting Research, 29*, 129–149.

Malmendier, U., & Tate, G. (2009). Superstar CEOs. *Quarterly Journal of Economics*, *124*, 1593–1638.

Mortgage Bankers Association. (2005). Housing and mortgage markets: An analysis, research monograph series no. 1, 6 Sept 2005.

Parkinson, C. N. (1983). *The law complete*. London: Ballantine.

Rajan, R. G., & Wulf, J. (2006). Are perks purely managerial excess? *Journal of Financial Economics, 79*, 1–33.

Villalonga, B., & Amit, R. (2006). How do family ownership, control, and management affect firm value? *Journal of Financial Economics, 80*, 385–417.

Yermack, D. (2006). Flights of fancy: Corporate jets, CEO perquisites, and inferior shareholder returns. *Journal of Financial Economics, 80*, 211–242.

Does One Size Fit All? A Study of the Simultaneous Relations Among Ownership, Corporate Governance Mechanisms, and the Financial Performance of Firms in China

Michael A. Firth and Oliver M. Rui

Abstract We draw on the many aspects of corporate governance examined in the developed economies and extend them to the Chinese environment. We find evidence of strong linkage and interdependence in the use of different control mechanisms. While there are significant relations between the governance control mechanisms and firm performance, these disappear when using simultaneous equation estimation. Our findings support the argument that governance control mechanisms are substitutes for one another and there is no one set of mechanisms that are optimal in maximizing firms' performances.

1 Introduction

Agency theory and the corporate governance literature identify and propose an array of devices and mechanisms that are demanded by investors (and other stakeholders) to help protect and enhance their investments (or other interests) from the self-interested motivations of managers. Examples include internal mechanisms such as carefully designed executive compensation contracts and the monitoring of managers by independent directors, and external mechanisms such as the market for corporate control and oversight by debt holders. Key mechanisms of an effective corporate governance framework identified by Keasey et al. (1997) are ownership (including institutional and managerial ownership), the board of directors (including board structure), CEO and directors' remuneration, auditing,

M.A. Firth (✉)
Department of Finance and Insurance, Lingnan University in Hong Kong, 8 Castle Peak Road, Tuen Mun, New Territories, Hong Kong
e-mail: mafirth@ln.edu.hk

O.M. Rui
Finance Group, China Europe International Business School (CEIBS), Shanghai, China
e-mail: oliver@ceibs.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_2,

information disclosure, and the market for corporate control. The Cadbury Report (1992) recommends that firms should adopt model codes of governance (best practices) and implement them to the fullest extent possible. Cadbury and other governance guidelines (e.g., the Peeters report in the Netherlands, the Vienot report in France, the SEBI report in India, and the OECD principles) provide checklists of desirable practices without weighting them by importance or detailing the interrelations among them.

There are now a plethora of studies that examine specific governance issues across many countries and institutional contexts. In many cases, these studies have used corporate performance as the dependent variable and then test the association with governance, broadly defined. The conclusions from these studies are a mixed bag. For example, Cubbin and Leech (1983) find a positive relation between ownership concentration and profitability, while Demsetz and Lehn (1985), after controlling for endogeneity, conclude that there is no significant relation between ownership and performance. Agency theory argues that carefully designed compensation contracts will align the interests of CEOs and investors. However, Jensen and Murphy (1990) find that the explanatory power of the CEO's pay for performance relation is very low in the U.S. and they argue this casts doubts on the descriptive validity of agency theory. To increase the effectiveness of the board of directors, agency theory argues in support of outsider representation on the board and the separation of the CEO/chairman positions. Dalton et al. (1998) in a meta-analysis of studies relating to board effectiveness (CEO duality and the insider/outsider proportion of the board) conclude that these two aspects of governance have no direct relations with firm performance. Heracleous (2001b) concludes that studies have failed to find any convincing connection between the 'best practices' in corporate governance and organization performance. Although agency theory provides a theoretical basis for corporate governance mechanisms and helps to explain the one-to-one relations between corporate governance constructs and firm performance, its descriptive validity is weak. This is due to firms operating under the influence of many governance mechanisms, and agency theory alone has limited ability in predicting optimal relations among corporate governance mechanisms and performance (Turnbull 1997).

A number of recent studies take a contingent view of the firm. Researchers have investigated the mutual relations among corporate governance mechanisms and the relations between these mechanisms and firms' performance (Lehn et al. 2007). This research argues that examining governance mechanisms in an isolated context is not effective. Rediker and Seth (1995) examine the linkages between governance mechanisms and suggest that the mechanisms operate as substitutes and work simultaneously in the firm. Barkema and Gomez-Mejia (1998) argue that we must not ignore the influence of a firm's governance structure and various contingencies when studying the CEO pay and performance relationship. Coles et al. (2001) argue that firms have the ability to choose among different governance mechanisms and firms are able to create an appropriate structure given the environment in which they operate. Thus, each firm has unique characteristics and so the appropriate governance structure is unique.

The underlying assumption in this study is that corporate performance, ownership structure, and corporate governance are interrelated. There is a trade off between

ownership patterns and governance control factors to achieve a firm-specific optimal structure that increases firm value. The argument that governance mechanisms are substitutes for one another and the selection of the specific mechanisms depends on the individual firm has been made previously in U.S. studies (Rediker and Seth 1995; Barkema and Gomez-Mejia 1998; Lehn et al. 2007). Coles et al. (2001, p. 23) state "Our view is that the most critical issue still to examine is the ability of firms to choose among a number of different governance mechanisms in order to create the appropriate structure for that firm, given the environment in which it operates".

We believe the ownership and corporate governance structure of a particular firm reflects the trade-off between costs and benefits for that firm (Linck et al. 2008) and so corporate governance mechanisms vary across firms. Thus, there is likely to be no empirical cross-sectional relations between ownership or board structure and firm value once interdependencies are taken account of. Although we acknowledge the conceptual trade-off between costs and benefits of various governance mechanisms, we cannot explicitly measure them for individual firms. The fact that there is little consensus in the results from numerous empirical studies in Europe and the U.S. on what constitutes the important governance variables in explaining firm profitability (Dalton et al. 1998; Coles et al. 2001; Keasey et al. 1997; Lehn et al. 2007) is testament to the substitutability and endogeniety of ownership and boardroom structures.

The main motivation for this paper is to examine whether there is one set of governance mechanisms that is appropriate for listed firms in China (i.e., one size fits all). We use the simultaneous equation method to investigate the interrelations among ownership structures, governance control mechanisms, and firm performances for a sample of privatized firms listed on China's stock market. China has an embryonic corporate governance system that is borrowing concepts from industrialized nations including, notably, the U.K. and the U.S. Whether these governance mechanisms are appropriate for China at this stage is an open question. The share ownership structure and legal system are far different in China than in other countries and this presents unique challenges for corporate governance. A major distinguishing feature of China's economic landscape is that despite moves towards a market economy, the government still has strong influence over the corporate sector and this is likely to be the case in the foreseeable future. Another important consideration is weak law enforcement and capricious legal decisions that make property rights more uncertain and governance mechanisms less effective (Chen et al. 2006b). Whether the unique ownership characteristics in China render western-style corporate governance irrelevant, is an empirical matter.

We investigate the following issues in the context of China: (1) the interrelations among the governance devices; (2) the relations between firm value and the governance systems; and (3) whether the governance mechanisms are substitutes for one another such that there is no single or subset of mechanisms that stand out as the precursors to good financial performance.

The paper is organized as follows. Next, we provide an overview of the institutional environment in China, including a description of the privatization process, ownership structure, and external and internal governance. We then present a brief overview of the recent governance literature from the U.S. and Europe and discuss

the interrelations among governance mechanisms. The research design introduces the sample and the simultaneous equation models we use, together with a description of the variables. The results section focuses on the interrelations among the governance variables and discusses the simultaneous equation model results. Finally, the discussion and conclusions section draws the results together and describes the policy implications.

2 Institutional Environment

China embarked on major economic restructuring in the late 1970s and the process of reform continues to this day. The aim of these reforms were, and still are, to improve economic efficiency, stimulate growth and innovation, increase competitiveness, and, ultimately, to improve people's welfare. In general, the reforms are aimed at moving China away from a centrally-planned economy to a more market-based approach similar to, but not identical to, the capitalist-style economies of Western Europe and North America. The institutional environment in China is substantially different from those of developed economies.

2.1 Reform and Ownership Structure

The privatization of state owned enterprises (SOEs) is a major component of the economic reform process in China. Although the privatization of SOEs is a worldwide phenomenon, there are some characteristics unique to China. For example, a majority of the shareholdings of privatized firms remain under the control of the government and its various agencies.

Research shows mixed results about the economic gains associated with privatization in different parts of the world. On the one hand, Megginson and Netter (2001) and Shleifer (1999), among other researchers, advocate the privatization of SOEs as this helps to clarify property rights and hence reduce agency costs. On the other hand, Wright et al. (1998) conclude that privatizations in Poland and Russia have not achieved the gains that were expected and Chen et al. (2006a) show that privatization has not improved enterprise efficiency in China.

A listed company in China is typically owned by five groups of shareholders. They are the state, legal persons (or institutions), employees, individuals (for A-shares), and foreign investors (for B-shares). State shares are shares owned by the government. Legal person shares are owned by domestic institutions such as corporations and financial institutions. A- and B-shares are tradable shares that are mostly held by individuals. A-shares are owned by locals and B-shares are owned by foreign investors. Other foreign shares include H-shares and N-shares and these are traded on the Hong Kong and New York stock exchanges, respectively; only a small number of firms have made such issues. Employee shares are offered to

employees and are eventually convertible to tradable A-shares after a short lock up period.

The government still maintains a strong influence over the economy. The central government and the local governments own the state shares, and the ultimate control of these shares is in the hands of the State Council. In many cases the government is the major or controlling shareholder of listed firms. The government also retains control over the appointment of senior management in many companies. Domestic corporations and financial institutions own the legal person shares although the ultimate owner of the domestic corporations and financial institutions is often the regional or local government or a state ministry. On average, the government, legal person, and tradable shares, each own about one-third of the total outstanding shares, although there is a great deal of variability across firms.

2.2 External and Internal Corporate Governance Mechanisms

Mergers and takeovers (or threats of mergers and takeovers) can be effective disciplinary devices used against poor management. However, most mergers of large state-owned enterprises in China are engineered by the state, and government approval is necessary for all such activity (Chen et al. 2008). Thus, mergers and acquisitions are often done at the behest of central or regional government in order to achieve socio-political objectives or to prop up ailing businesses. Any mergers and acquisitions of state owned enterprises typically do not affect the job security of managers and so the discipline imposed by an active market for corporate control is absent. An ineffective managerial labor market is another characteristic in China. Managers are not hired and fired as happens in western countries. For example, although individual competence and performance are becoming more important (Firth et al. 2006b), political standing still ranks as an important criterion in promoting senior ranking staff; it is very difficult to be promoted to a senior business position unless the individual is a Communist Party member (Gan and Lu 1997).

Privatization of SOEs gives managers a lot more autonomy and so the agency costs inherent in the separation of ownership and control can escalate. In order to reduce these agency costs, China introduced corporate governance rules, which borrow heavily from the U.S., Britain, and elsewhere. The "*Code of Corporate Governance for Listed Companies in China*" was issued in late 2001 by the China Securities Regulatory Commission (CSRC – the regulator of listed firms) and the State Economic and Trade Commission (SETC). The code is very influential and is enforced by the CSRC. The boards of directors of listed firms ostensibly have similar responsibilities and functions as their western counterparts. In particular, independent non-executive directors are supposed to monitor the actions of top managers, offer independent advice on business matters, and act in the best interests of shareholders. Duality of the chairperson and CEO positions, where both are held by the same person, leaves a lot of power in the hands of one individual. Since 1998,

China's regulatory authorities have discouraged duality but some firms still have a joint chairperson and CEO.

Compensation policies can also be used to reduce agency costs. For example, the compensation of the top executive can be designed so that the executive has incentives to maximize stockholder wealth. One way to do this is to introduce stock options for the CEO and top management. So far, China has not gone down this road, in part, because the state controls the issue of new shares. Instead, CEO cash compensation includes bonus pay that is related to performance; note, however, that this breakdown of base pay and bonus pay is not always disclosed by firms (Firth et al. 2006a) and this is a limitation in compensation studies in China.

3 Literature

This section provides a brief review of the role of ownership and other corporate governance mechanisms in controlling agency conflicts within the firm. It draws heavily on empirical research using U.S. data. We discuss the individual significance of ownership and corporate governance mechanisms as monitors of firm performance. The section concludes with a discussion of the interrelations among ownership, governance mechanisms, and firm performance.

3.1 Theory and Practice

There are various theoretical or conceptual studies of ownership, corporate governance, agency costs, and firm performance. Examples of these studies include Jensen and Meckling (1976), Adams and Ferreira (2007), Rajeha (2005), and Harris and Raviv (2008). However, these studies examine small subsets of governance mechanisms (e.g., board structure) and there is no general equilibrium theory of board structure (Linck et al. 2008) or of governance in general. At the practical level, a variety of governance guidelines have been introduced in different countries and these often carry quasi-regulatory status as they are typically required by stock exchanges. These guidelines are check-lists of ideal boardroom structures and they do not consider the costs involved and do not discuss substitution or complementary effects.

3.2 Ownership

The type of ownership structure a firm has may have an impact on a firm's performance and internal governance mechanisms. Research has examined managerial ownership (Tosi et al. 1997), founding-family ownership (Anderson and

Reeb 2003; Villalonga and Amit 2006), blockholders, institutions, (Shleifer and Vishny 1986), and shareholder concentration. Managerial ownership may help align the incentives of managers with those of the investors although higher ownership could lead to entrenchment. The incentive alignment and entrenchment arguments lead to different predictions on the relation between ownership and firm performance. Similar arguments apply to founding-family ownership. Blockholders and institutional investors can be a force for good by monitoring management although some may focus on short term rather than long-term performance.

3.3 Boards of Directors

Boards of directors are involved in solving the agency problems inherent in managing any organization (Finkelstein and Hambrick 1996; Faleye 2007; Linck et al. 2008) and there is a growing literature that considers the effect of board control on firm activities (Coles and Hesterly 2000; Westphal 1999; Boone et al. 2007). Some studies focus on the role of independent non-executive directors (Fama and Jensen 1983). In general, the evidence shows that outsider-dominated boards provide a form of control on firm activities. For example, outsider dominated boards are more likely to remove CEOs following poor performances (Hermalin and Weisbach 2000). However, some studies find that the presence of independent directors may actually harm performance or else have no impact at all (Peasnell et al. 2003). For example, Yermack (1996) and Agrawal and Knoeber (1996) find there are negative relations between the proportion of independent directors and performance. Other board structures that have been examined are CEO-chairperson duality (Faleye 2007) and board size (Linck et al. 2008). In review articles, Johnson et al. (1996) and Dalton et al. (1998) argue that there does not appear to be any substantial relation between boards of directors and performance and even if there is some, it will be of little practical import.

3.4 Managerial Compensation

Managerial compensation can be used to reduce the agency conflict between managers and shareholders by aligning their common interests. Agency theory argues that there should be a positive relation between CEO pay and financial performance, and empirical studies have sought to confirm this association. However, the research results have provided mixed conclusions (Jensen and Murphy 1990). Yermack (1996) finds that the pay-performance relation for CEOs decreases with board size, which suggests that small boards give CEOs larger incentives and force them to bear greater risk than do larger boards.

3.5 Debt

Corporate debt policy is a control mechanism that can reduce agency conflicts between management and shareholders, particularly the agency cost of free cash flow, as suggested by Jensen (1986). The cost of leverage plays a role in the control mechanism as it affects the manager's control and flexibility in making resource allocation decisions. For example, some form of control of cash flow relocates from the debtor to the lender, and managerial discretion over resources is reduced (Shleifer and Vishny 1997). There is some empirical support for the effectiveness of debt as a controlling device (Berger et al. 1997; Bathala et al. 1994). The negative side of debt is that bankruptcy risk increases and this is especially true in periods where lenders do a poor job in monitoring creditworthiness.

3.6 Market for Corporate Control

External market control mechanisms include takeovers, buyouts, and the legal protection of minority shareholders. When a firm is undervalued or poorly managed, external control mechanisms cause it to be vulnerable to market interventions and takeovers. Mikkelson and Partch (1997) provide evidence that takeover activities affect the intensity of managerial discipline. The executive labor market also serves as a control mechanism; for example, the threat of dismissal and replacement can serve as an effective control on self-interested behavior among top managers (Firth et al. 2006b).

3.7 Interrelations Among Ownership Structure, Control Mechanisms, and Firm Value

Ownership and corporate governance mechanisms and firm performance are interrelated. However, empirical evidence from the U.S. yields conflicting views on the relative importance of these relations. The mixed results are due, in part, to the substitutability of one corporate governance mechanism for another (Lehn et al. 2007). Moreover, these mechanisms are not without costs. For example, very high managerial ownership of common stock may lead to entrenchment problems and the significant use of debt financing may result in a substantial increase in the firm's bankruptcy risk and lead to underinvestment or to investment in risky projects. Very high institutional ownership may have significant costs as many of these shareholders are very concerned with the liquidity of their investment and this may induce short-term myopia in management (Hansen and Hill 1991).

Given the costs and benefits of the different control mechanisms, a number of studies focus on the interrelations among these variables and firm performance. There are alternative views on the relationships among ownership structure, control mechanisms, and firm value (Linck et al. 2008). One approach assumes that there is an optimal condition of ownership structure and control mechanisms that maximizes firm value. For example, many studies treat performance or firm value as a dependent factor of ownership structure and control mechanisms (Bathala et al. 1994; Qi et al. 2000).

Another approach treats ownership, control mechanisms, and firm performance as endogenously determined, and thus affecting each other. For example, Linck et al. (2008) argue that board structure may be the result of agency problems rather than a solution. Faleye (2007) states that firm attributes mediate the relation between duality and firm performance. Demsetz and Lehn (1985) provide evidence that the dispersion of shareholder ownership depends on the characteristics of the firms. Demsetz and Villalonga (2001) argue that the market succeeds in bringing forth ownership structures, whether diffuse or concentrated, that are appropriate for the firms they serve; any systematic relations between ownership structure and performance therefore disappears. Agrawal and Knoeber (1996) examine the use of seven ownership and control mechanisms. They show that the effect of a single mechanism alone disappears when all seven mechanisms are considered together. In their model it is assumed that alternative ownership and control mechanisms exist, and that the extent of their use is determined within the firm. The greater use of one form will induce the lesser use of the other, resulting in equally good performance. Rediker and Seth (1995) examine alternative control mechanisms and their results are consistent with the substitution hypothesis. In particular, they find that large shareholders, inside and outside directors, and the incentive effect of managerial shareholdings are substitute corporate governance mechanisms. Coles et al. (2001, p. 24) remark that "examining governance mechanisms in an isolated context is not a particularly effective way to study these issues". Empirically it has been shown that the choice of the level of a particular mechanism influences the level of the other mechanisms (Rediker and Seth 1995; Coles et al. 2001; Gillan, Hartzell et al. 2007). The appropriate mechanisms for a specific firm therefore reflect the tradeoffs between benefits and costs.

Three recent and well-cited studies find positive associations between corporate governance indexes (that encompass a variety of items) and firm performance using U.S. and international data (Bebchuk et al. 2005; Gompers et al. 2003; Klapper and Love 2004). However, it is not clear what causes what. In an attempt to investigate the causal relations between governance and firm value, Lehn et al. (2007) replicate the Bebchuk et al. (2005) and Gompers et al. (2003) studies but specifically address the endogeneity issue. Lehn et al. (2007) conclude that after controlling for endogeneity, no contemporaneous relation exists between corporate governance and firm valuation.

The basic argument of this paper is that there is no unique governance structure that is applicable to all firms (Heracleous 2001b) and this especially applies in China where industrial re-organization and market reforms have been swift and

substantial. A firm will seek a corporate governance structure to cope with the environment, and choose among substitute or alternative governance mechanisms. Thus the strict adoption of a prescribed set of governance mechanisms (e.g., Cadbury recommendations) is unlikely to be appropriate. While regression models may yield significant relations between performance and an individual governance mechanism in isolation, the causal relations may disappear when the endogeneity problem is controlled. We present our hypotheses in broad terms as follows:

Hypothesis 1: There is interdependence among various governance mechanisms and the choice of one mechanism will have an impact on the effectiveness of other mechanisms that are also adopted at the same time.

Hypothesis 2: Any systematic relations between ownership, governance structure, and firm performance will disappear in a simultaneous equation setting that captures the intricacies of the system.

4 Research Design and Data

4.1 Model

Given the interdependencies among the ownership and corporate governance mechanisms discussed above, a simultaneous equations approach is an appropriate methodology with which to examine their relations with company performance. A number of empirical papers use simultaneous equations methods to model the relations among corporate governance mechanisms, governance structure, and firm valuation in the U.S. Jensen et al. (1992) examine the simultaneous relations among insider ownership, debt, and dividend policies; Bathala et al. (1994) examine the interrelations among institutional ownership, managerial ownership, and debt; and Agrawal and Knoeber (1996) examine the interrelations among seven control mechanisms.

Based on the international literature, we identify major mechanisms that may be relevant to corporate governance control in China. These are institutional ownership, ownership concentration, capital structure (debt), board of directors' control, managerial compensation, and government. We do not include the market for corporate control and managerial labor market factors in our model as they have very limited presence in China. In addition, we do not include managerial ownership, as the proportion of managerial ownership is very small in China. Executive ownership is, on average, only a few thousand shares. Figure 1 offers a simplified representation of these various causal relations. For example, the owners can influence the structure of the board of directors and the board, in turn, may influence who buys shares (via their performance and decisions). Debt holders may be effective monitors of the firm but the monitoring controls in place may attract

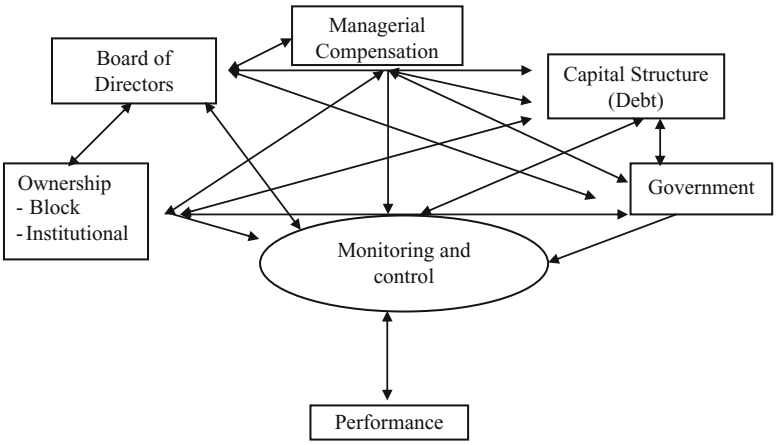

Fig. 1 Summary of relations. Building on the corporate governance literature and our knowledge of the commercial environment in China, we identify the key mechanisms of corporate governance control. These are institutional shareholdings, shareholding concentration, board of directors' control, managerial compensation, debt, and government. As government influence is so pervasive in China, we consider a government factor in our model. Each type of corporate governance mechanism is related to the others and so the use of each is determined endogenously. The figure shows the directional relationships

investors to lend to the firm. Our literature review expands on the two-way causality of the governance mechanisms. It is clear from the Figure that causality can proceed in either of two directions between each pair of variables, which justifies use of the simultaneous equation methodology to model the relations.

We develop a simultaneous equation model defined by Eqs. 1, 2, 3, 4, 5, and 6 to capture the interrelations among the six control mechanisms; the model is expressed as follows (justifications for the equations appear later):

$$\text{LSHARE} = f\{\text{HSF, DERATIO, INED, PAY, GOV, SIZE, RISK, FS}\} \quad (1)$$

$$\text{HSF} = f\{\text{LSHARE, DERATIO, INED, PAY, GOV, SIZE}\} \quad (2)$$

$$\text{INED} = f\{\text{LSHARE, HSF, DERATIO, PAY, GOV, BOARD, DUAL}\} \quad (3)$$

$$\text{PAY} = f\{\text{LSHARE, HSF, DERATIO, INED, GOV, SIZE, AREA}\} \quad (4)$$

$$\text{DERATIO} = f\{\text{LSHARE, HSF, INED, PAY, GOV, SIZE, AGE, AVROA}\} \quad (5)$$

$$\text{GOV} = f\{\text{LSHARE, HSF, DERATIO, INED, PAY, SIZE}\} \quad (6)$$

$$\text{ROA} = f\{\text{LSHARE, HSF, DERATIO, INED, PAY, GOV, SIZE, FS}\} \quad (7)$$

Equation 7 captures the relations between the control mechanisms and firm performance. To give some context to the ownership and governance factors, we relate them to an important objective of the firm, namely financial performance. In common with many studies, we use return on assets as our primary measure of a company's performance. To enable us to estimate the above system of equations using two-stage least squares (2SLS) procedures, we include the instrumental variables FS, SIZE, RISK, AGE, AVROA, AREA, BOARD, and DUAL in the model. These variables are defined in Table 1.

There are considerable differences in regional development across China's various provinces and municipalities and this can have an impact on a firm's performance. To control for this, we add a market development index (MINDEX) to each equation. MINDEX is a comprehensive index of the economic, legal, and institutional development of each region scaled from 0 to 10. The index is constructed by China's National Economic Research (NERI) Institute (Fan and Wang 2008). The MINDEX score for the region where the firm is located is used in the regressions.

Equation 1 captures the effect of institutional ownership (LSHARE). We use legal person shareholders (institutions, other SOEs) as a proxy for institutional shareholders. Although legal person shareholders are not identical to institutional shareholders seen in the west, they do have some common characteristics such as having the expertise to analyze and monitor firms. Moreover, legal person shareholders tend to be long term investors. Previous studies have found that firms with substantial legal person shareholdings are associated with better performance (Xu and Wang 1999; Qi et al. 2000) although there are dissenting views (Chen et al. 2009). We include the other five governance control variables (HSF, DERATIO, INED, PAY, and GOV) in the equation as the choice of LSHARE may depend on them. For example, the government may decide the number of legal shares issued by state-controlled listed firms. In addition, we also include RISK, FS, and SIZE in the equation.

The second equation relates to large shareholdings (HSF). To capture the effect of large ownership we use an ownership concentration factor. We include SIZE as an independent variable in the equation and expect that it will be positively related to concentrated shareholding. There is a greater incentive to control larger corporations in China and this leads to a more concentrated shareholding structure for ease of control.

To capture the board of directors control mechanism, we use board composition in the third equation of our model. Like prior studies (e.g., Dalton et al. 1998), we use the proportion of independent non-executive directors (INED) on the board as a proxy for board control. Prior to 2003, there was no mandated disclosure of which directors were independent and so we use information from the 2003/2004 annual reports (i.e., the names of the independent directors) to trace back the number of independent directors in the earlier years. As the proportion of independent directors is directly related to board size and may be the presence of a chairperson with a dual role as the CEO, we include these factors in the equation.

Table 1 Variable definitions and summary statistics

Variables		Definition	Mean	Median	Minimum	Maximum	Standard deviation
Performance variables							
Return on Assets	ROA	Return on assets adjusted by the median return of the industrial sector	−0.01	0.00	−0.10	0.04	0.01
Institutional ownership							
Legal person shareholdings	LSHARE	Proportion of legal person shares	0.23	0.14	0.00	0.75	0.24
Ownership concentration	HSF	Sum of the squares of the proportionate shareholdings of the three largest shareholders in the company	0.22	0.19	0.02	0.61	0.13
Board control							
Board composition	INED	Percentage of independent non-executive directors on the board	0.35	0.33	0.00	0.92	0.23
Incentive structure							
Compensation	PAY	We take the sum of the pay of the top three senior managers as the CEO compensation and PAY is the natural log of the cash compensation	12.70	12.77	10.36	14.69	0.88
Capital structure							
Long term debt ratio	DERATIO	Book value of long term debt/book value of shareholders' equity	0.16	0.06	0.00	1.77	0.24
Market control							
Government controlled firm	GOV	1 when the state holding is greater or equal to the next major shareholding	0.69	1.00	0.00	1.00	0.46
Instrumental variables							
Foreign shareholding	FS	1 when the company also issues B shares and/or H shares	0.08	0.00	0.00	1.00	0.27
Firm size	SIZE	the natural log of the book asset value of the company (millions)	7.25	7.17	5.28	9.81	0.83
Firm risk	RISK	Standard deviation of monthly returns on the firm's stock estimated from the monthly returns for the year	0.10	0.10	0.04	0.26	0.04
Firm age	AGE	Number of years since listing	7.04	7.00	1.00	17.00	3.17

(continued)

Table 1 (continued)

Variables		Definition	Mean	Median	Minimum	Maximum	Standard deviation
Average ROA	AVROA	Average ROA for 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006	−0.01	0.00	−0.07	0.02	0.01
Location	AREA	Places of registration. 1 for firms registered in developed areas, open cities, and coastal provinces.	0.57	1.00	0.00	1.00	0.49
Board size	BOARD	The number of directors on the board	9.59	9.00	3.00	19.00	2.19
Duality	DUAL	1 when the chairman also serves as the CEO (or the general manager)	0.09	0.00	0.00	1.00	0.09
The market development level in each province.	MINDEX	The market development level in each province	6.79	6.61	1.57	9.74	1.76

The AREAs = 1 include Guangdong, Fujian, Zhejiang, Liaoning, Jiangsu, Hainan, Shandong, Hebei provinces and Shanghai, Tianjing, Beijing cities.

Equation 4 deals with the managerial incentive variable (PAY). Managerial pay is a key factor in the principal-agent relationship (Tosi et al. 1997; Firth et al. 2006a). The exogenous variables are SIZE and AREA. The most consistent and enduring result from CEO pay studies is that firm size is positively and significantly associated with compensation levels (Conyon 1997). This pay-size relation is observed in all countries in which research has been conducted and in some cases, size is the only significant variable. The complexity of the job, the skills required, the number of hierarchical structures, and the ability to pay all point toward large firms paying their CEOs more. Furthermore, tournament theory (Bognanno 2001; O'Reilly et al. 1988) also predicts higher CEO pay in large firms. Living expenses and average wage costs in the coastal regions are much higher than in the interior. In particular, costs and wages are extremely high in Shanghai and Shenzhen, and are very high in the coastal regions where most of the export businesses are located. CEO salaries are therefore likely to depend on the location of the business (AREA). We use the aggregate pay of the three highest paid executives as the PAY variable. These three executives include the chairperson (the chairperson is an executive position in Chinese firms), CEO, and general manager of the firm.

Equation 5 deals with the capital structure (DERATIO). We use the debt-equity ratio as a proxy for capital structure. We expect that the debt level depends on the SIZE, AGE, and the profitability of the firm (AVROA). Strong government influence is pervasive in China, and to measure its effect on other control mechanisms and performance we include GOV in our system of equations (Eq. 6). In Eq. 6, we include SIZE as an exogenous variable as the government wishes to keep control over larger firms.

In addition to the interrelations among the control mechanisms within the system of six simultaneous equations, we also examine the relations between these mechanisms and performance. Equation 7 represents the performance and control mechanism relations. We model performance with two additional variables, SIZE and FS. Larger firms often enjoy preferential treatment and protection from the government, as well as greater scrutiny, and we capture this effect with SIZE. We include FS to capture the differences due to the presence of a foreign shareholder. The presence of foreign shareholders has been shown to enhance firm performance in transitional economies (for example, see Makhija and Spiro 2000).

4.2 Sample Description

The analysis is based on information from listed company annual reports over a 9-year period from 1999 to 2007. Annual reports are used as our source for the shareholding structure, board size, and board composition. The rest of the data including performance, operating risk, and state ownership is obtained from the China Stock Market and Accounting Research (CSMAR) database. In line with other studies, we exclude companies in the financial sector; note, however, that

there are only a few listed financial companies. There are 6,358 firm-year observations for our analysis. Table 1 provides summary statistics for the variables.

Performance statistics of the firm show that the mean industry adjusted ROA is −0.2 %, and it ranges from −9.8 % to 3.5 %. The average proportion of legal person shareholding is 23.3 % with a maximum of 75 %. The concentrated ownership factor (HSF) ranges from 2.3 % to 60.9 % with mean (median) values of 22.4 % (19.4 %). The proportion of independent directors is about 35.1 % in the sample companies and this is comparable to the ratio of non-executive directors on western boards.

The mean of the log of compensation payments to the three highest paid executives is 12.701 (328,000 RMB). The average long-term debt to equity ratio is 15.7 %. This ratio is low when compared to those of developed economies (Rajan and Zingales 1995). The mean value of GOV is 0.695, which indicates the state is the major shareholder in approximately 69.5 % of the sample companies.

Approximately 8.3 % of the sample companies issue shares to foreign shareholders. Our proxy for a firm's size is the natural log of book assets; the mean and median of firm size are RMB 1,415 million and RMB 1,300 million, respectively. RISK ranges from 4.2 % to 26.2 % and the mean of the 8-year AVROA is 0.2 %. The average board size is 9.6. There are relatively few cases of the board chairperson also holding the position of general managers (or chief executive officers).

5 Results

We first examine the relations among the control mechanisms and then examine the relations between firm performance and control mechanisms. Finally, we compare the results of Ordinary Least Squares (OLS) regressions with those of two-stage least squares (2SLS) regressions. Spearman and Pearson correlations and the associated p-values are shown in Table 2.

5.1 Relations Among the Control Mechanisms

We estimate Eqs. 1, 2, 3, 4, 5, and 6 as a system of linear simultaneous equations using the 2SLS method and the results are shown in Table 3. We control for clustering at the firm level, heterogeneity, and time series correlation using robust standard errors (Petersen 2009). We use the Sargan test to confirm the validity of our instruments, and the Hausman test to confirm there is no endogeneity issue in the two stage least squares regressions. The first equation shows that LSHARE is not significantly related to the other control mechanism variables. The coefficients on the exogenous variables SIZE and RISK are also not significant although they have the predicted signs. The second equation shows that the large shareholding

Table 2 Correlation coefficient matrix

	roa	lshare	hsf	ined	pay	deratio	gov	fs	size	risk	age	avroa	area	board	dual	mindex
roa	1	−02	.09**	.01	.27**	−09**	−05**	−02	.06**	−13**	−10**	.73**	.09**	.01	−02	.11**
		(.19)	(.00)	(.30)	(.00)	(.00)	(.00)	(.27)	(.00)	(.00)	(.00)	(.00)	(.00)	(.46)	(.13)	(.00)
lshare	−04**	1	−32**	.03*	−01	−07**	−48**	−06**	−22**	.06	−00	−06**	.04**	−02	.01	.09**
	(.00)		(.00)	(.04)	(.48)	(.00)	(.00)	(.00)	(.00)	(.07)	(.91)	(.00)	(.0')	(.11)	(.70)	(.00)
hsf	.10**	−24**	1	.05**	−11**	−04**	.33**	.01	.15**	−13**	−26**	.13**	−0'	−03*	−00	−07**
	(.00)	(.00)		(.00)	(.00)	(.00)	(.00)	(.54)	(.00)	(.00)	(.00)	(.00)	(.60)	(.02)	(.94)	(.00)
ined	.01	.03*	.04**	1	−09**	−06**	.07**	.04**	−06**	.00	−03*	.00	.08**	.10**	−01	.04**
	(.48)	(.02)	(.00)		(.00)	(.00)	(.000)	(.00)	(.00)	(.92)	(.02)	(.83)	(.00)	(.00)	(.71)	(.00)
pay	.22**	.00	−12**	−12**	1	.03*	−03*	.12**	.33**	.03	.23**	.32**	.28**	.09**	−08**	.4**
	(.00)	(.77)	(.00)	(.00)		(.01)	(.02)	(.00)	(.00)	(.07)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
deratio	−06**	−05**	−03*	−04**	.01	1	.09**	.00	.32**	.02	.05**	−05**	−09**	.07**	.01	−08**
	(.00)	(.00)	(.05)	(.01)	(.40)		(.00)	(.81)	(.00)	(.16)	(.00)	(.00)	(.00)	(.00)	(.46)	(.00)
gov	.01	−50**	.31**	.06**	−04**	.05**	1	.04**	.15**	−09**	−07**	−00	−05**	.10**	−00	−11**
	(.34)	(.00)	(.00)	(.00)	(.00)	(.00)		(.01)	(.00)	(.00)	(.00)	(.94)	(.00)	(.00)	(.82)	(.00)
fs	−02	−08**	.00	.04**	.12**	.00	.04**	1	.20**	.01	.20**	−01	.17**	.05**	−02	.19**
	(.14)	(.00)	(.90)	(.00)	(.00)	(.82)	(.01)		(.00)	(.63)	(.00)	(.56)	(.00)	(.00)	(.27)	(.00)
size	.11**	−21**	.18**	−06**	.33**	.25**	.15**	.22**	1	−09**	.16**	.17**	.15**	.16**	−05**	.13**
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)		(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
risk	−11**	.02	−12**	.00	.01	.02	−09**	.00	−09**	1	.16**	−14**	−02	−06**	.06**	−01
	(.00)	(.23)	(.00)	(.99)	(.55)	(.18)	(.00)	(.91)	(.00)		(.00)	(.00)	(.08)	(.00)	(.00)	(.17)
age	−10**	−02	−26**	−04**	.24**	.05**	−07**	.22**	.15**	.16**	1	−09**	.15**	−02	−03*	.24**
	(.00)	(.23)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)		(.00)	(.00)	(.10)	(.04)	(.00)
avroa	.63**	−07**	.14**	−02	.29**	−04**	.05**	−01	.20**	−13**	−07**	1	.12**	.01	−03*	.15**
	(.00)	(.00)	(.00)	(.26)	(.00)	(.00)	(.00)	(.38)	(.00)	(.00)	(.00)		(.00)	(.37)	(.02)	(.00)
area	.08**	.05**	−00	.08**	.28**	−06**	−05**	.17**	.14**	−02	.16**	.12**	1	−04**	−01	.81**
	(.00)	(.01)	(.79)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.09)	(.00)	(.00)		(.00)	(.32)	(.00)
board	.02	−04**	−03	.10**	.08**	.03*	.10**	.06**	.18**	−05**	−03	.03	−05**	1	−04**	−02

(continued)

Table 2 (continued)

	roa	lshare	hsf	ined	pay	deratio	gov	fs	size	risk	age	avroa	area	board	dual	mindex
	(.06)	(.01)	(.07)	(.00)	(.00)	(.04)	(.00)	(.00)	(.00)	(.00)	(.06)	(.06)	(.00)		(.00)	(.09)
dual	−02	−00	−01	−00	−09**	.02	−00	−02	−05**	.08**	−03	−03*	−01	−04**	1	−04*
	(.08)	(.77)	(.53)	(.77)	(.00)	(.28)	(.82)	(.27)	(.00)	(.00)	(.06)	(.03)	(.32)	(.01)		(.01)
mindex	.09**	.10**	−06**	.04**	.41**	−06**	−10**	.20**	.14**	−03	.25**	.14**	.80**	−025	−04**	1
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.06)	(.00)	(.00)	(.00)	(.07)	(.01)	

The numbers reported in the upper right diagonal are Spearman correlations and the numbers reported in the lower left diagonal are Pearson correlations
The numbers reported in the parenthesis are p values.

** $p < .01$

* $p < .05$

Table 3 Result of two-stage least square regressions of control mechanisms. Simultaneous equation analysis of ownership variables and other control mechanisms using the two-stage least squares method to estimate the following equations

Variable	LSHARE (Legal person share)	HSF (Ownership concentration)	INED (Board composition)	PAY (Compensation)	DERATIO (Long term debt ratio)	GOV (Government controlled firm)
Endogenous variables						
LSHARE		0.41	0.07	6.25	0.22	−1.41**
(Legal person share)		(1.21)	(0.28)	(1.16)	(0.55)	(−4.65)
HSF	−11.15		0.43*	−2.43	−1.34**	0.64*
(Ownership concentration)	(−0.03)		(2.27)	(−1.03)	(−2.96)	(2.05)
INED	−6.23	−0.66**		−0.15	−0.52	0.89**
(Board composition)	(−0.03)	(−3.07)		(−0.05)	(−1.34)	(3.13)
PAY	−2.15	−0.13**	0.01		−0.10	−0.05
(Compensation)	(−0.03)	(−3.64)	(0.26)		(−0.92)	(−0.92)
DERATIO	−24.88	−1.53**	−0.23*	−12.78**		0.16
(Long term debt ratio)	(−0.03)	(−4.76)	(−2.34)	(−3.60)		(0.27)
GOV	0.59	0.19	−0.26	−2.97*	−0.04	
(Government controlled firm)	(0.02)	(1.21)	(−1.41)	(−2.18)	(−0.20)	
Instrument variables						
FS	−0.89					
(Foreign shareholding)	(−0.03)					
SIZE	2.79	0.19**		2.04**	0.16**	−0.01
(Firm size)	(0.03)	(4.44)		(2.92)	(2.65)	(−0.03)
RISK	4.48					
(Firm risk)	(0.03)					
AGE					−0.01	
(Firm age)					(−1.34)	
AVROA					1.17	
(Average ROA)					(0.52)	

(continued)

Table 3 (continued)

Variable	LSHARE (Legal person share)	HSF (Ownership concentration)	INED (Board composition)	PAY (Compensation)	DERATIO (Long term debt ratio)	GOV (Government controlled firm)
AREA				−0.66		
(Location)				(−1.25)		
BOARD			0.02**			
(Board size)			(4.57)			
DUAL			0.02			
(Duality)			(0.47)			
Adjusted R^2	0.01	0.011	0.02	0.01	0.05	0.04

LSHARE = f {HSF, INED, PAY, DERATIO, GOV, SIZE, RISK, FS}
HSF = f {LSHARE, INED, PAY, DERATIO, GOV, SIZE}
INED = f {LSHARE, HSF, DERATIO, PAY, GOV, BOARD, DUAL}
PAY = f {LSHARE, HSF, INED, DERATIO, GOV, SIZE, AREA}
DERATIO = f {LSHARE, HSF, INED, PAY, GOV, SIZE, AGE, AVROA}
GOV = f {LSHARE, HSF, INED, PAY, DERATIO, SIZE}
Endogenous Variables = LSHARE, HSF, INED, PAY, DERATIO, GOV
Instrumental Variables = FS, SIZE, RISK, AGE, AVROA, AREA, BOARD, DUAL
These variables are defined in Table 1.
t-statistics in parentheses.
** $p < 0.01$; * $p < 0.05$

factor HSF has significant negative associations with independent directors, management compensation, and debt ratios. This implies independent directors and shareholder concentration are substitute governance mechanisms and shareholder concentration (HSF) is a monitoring device that substitutes for incentive compensation (PAY). HSF is also positively and significantly related to the exogenous variable, firm size.

In Eq. 3, where the ratio of the independent non-executive directors to total directors on the board (INED) is used as the dependent variable, we find that concentrated ownership (HSF) and debt ratio (DERATIO) are significant endogenous factors and board size (BOARD) is a significant exogenous factor. These results show that a board with a greater proportion of independent directors is positively related to concentrated ownership (HSF) and negatively related to the debt ratio (DERATIO). Therefore, a higher proportion of independent non-executive directors is used to offset concerns about entrenchment in highly concentrated ownership firms (that is, INED and HSF are complementary). In contrast, the percentage of independent directors (INED) and debt ratio (DERATIO) are substitute corporate governance mechanisms. The proportion of independent directors is positively related to board size (BOARD). Thus, larger boards have a greater proportion of independent directors.

In the managerial compensation equation, PAY is negatively related to the debt ratio (DERATIO). One possible explanation for this observation is that debt holders monitor the firm and inhibit the awarding of excessive management compensation. Managerial compensation (PAY) is negatively and significantly related to state ownership (GOV). Because of monitoring by the government there is less need for incentive compensation. As expected, firm size (SIZE) is positively associated with managerial compensation (PAY).

The capital structure ratio shows that the debt ratio is negatively related to concentrated ownership. When the share ownership is highly concentrated, firms have lower debt. So debt and highly concentrated ownership are substitute mechanisms to monitor the firm's management. Large firms have more debt. The large assets-in-place of big companies provide collateral against which banks and other debt holders will lend. The last equation is the influence of state ownership (GOV) on the control mechanisms. GOV is negatively related to the proportion of legal person shares (LSHARE) and thus they are substitute methods of governance. In contrast, GOV is positively related to concentrated ownership and the proportion of independent directors.

The above regression results show that governance mechanisms are interrelated and the choice of one mechanism depends on the choice of others. Taken as whole, these results support Hypothesis 1. To control for possible non-linear relations between ownership variables and other corporate governance variables, we also run the 2SLS regressions by including squared terms for the ownership variables in Eqs. 1, 2, 3, 4, 5, and 6. The introduction of squared ownership variables does not significantly change the results. We also include a control for the stock exchange where the firm is listed (China has two stock exchanges, Shanghai and Shenzhen). Inclusion of this control does not change the results.

5.2 Firm Performance and Control Mechanisms

In this section, we investigate the relations between the control mechanisms and firm performance. We do this because a major focus of China's economic reforms is to improve performance (Chen et al. 2006a). Before we recognize the endogeneity of corporate governance mechanisms, we estimate the regression of firm performance on individual control mechanisms. We also add the interaction term of government ownership (GOV) and the governance variable to the model to see if governance has a different impact on performance in state controlled listed firms. Table 4 shows the OLS regression estimates with return on assets (ROA) as the performance indicator. We choose ROA as the performance indicator because stock market measures of performance (stock returns) are subject to manipulation, rumor, and synchronicity (Morck et al. 2000).

The results show that LSHARE, HSF, PAY, and DERATIO are significant factors in the performance relationship. Lower legal share ownership (LSHARE), concentrated shareholdings (HSF), higher compensation (PAY), and lower debt (DERATIO) are all significantly associated with good performance. Our interpretation of the linear regression results is that many control mechanisms have an effect on firm performance when the interdependencies of the other control mechanisms are ignored. The interaction terms are mostly insignificant.

Following the approach used by Agrawal and Knoeber (1996), we enter all ownership and governance control factors into the model as shown in Eq. 7 and we present the OLS and 2SLS estimation results of the model in Table 5. The results for the pooled sample include firm year data from 1999 to 2007. We also sub-divide our sample into the 3-year period 1999–2001, and the 6-year period 2002–2007. Corporate governance guidelines came into effect in 2002 and we use this date to partition the sample. Table 5 shows that performance is related to LSHARE, HSF, INED, PAY, DERATIO, and GOV as well as the control factors SIZE and FS in the OLS regression. These results are similar to the results in Table 4. However, the significance of these factors disappears in the 2SLS estimation. The results support the argument that control mechanisms interact with each other. For example, GOV is significant and negatively related to performance in the OLS estimation and this result is similar to the findings of Qi et al. (2000) and Xu and Wang (1999). However, the government effect is not significant in the 2SLS estimation. Similarly, HSF and PAY are positively related to performance in OLS estimations as shown in Tables 4 and 5, but the significances of these variables disappear in the 2SLS estimation.

In summary, these results imply that ownership and other corporate governance mechanisms are endogenously determined. Each mechanism has its own costs and benefits and they differ across firms. Hence, they are likely to be unrelated to firm performance cross-sectionally and this is in line with the conclusions from previous studies (Agrawal and Knoeber 1996; Mak and Li 2001). The results support Hypothesis 2.

Table 4 The effect of individual control mechanisms on firm performance dependant variable = ROA

LSHARE	-0.01^{*}					
(Legal person share)	(−2.10)					
LSHARE*GOV	−0.01					
	(−0.44)					
HSF		0.01^{**}				
(Ownership concentration)		(5.47)				
HSF*GOV		$-0.01^{\dagger}$				
		(−1.95)				
INED			0.01			
(Board composition)			(0.45)			
INED*GOV			0.01			
			(0.55)			
PAY				0.01^{**}		
(Compensation)				(13.51)		
PAY*GOV				0.00		
				(1.49)		
DERATIO					-0.01^{**}	
(Long term debt ratio)					(−2.65)	
DERATIO*GOV					−0.00	
					(−1.40)	
GOV						0.001
(Government controlled firm)						(0.65)
SIZE	0.01^{**}	0.01^{**}	0.01^{**}	0.01^{**}	0.01^{**}	0.01^{**}
(Firm size)	(7.20)	(6.68)	(7.82)	(3.29)	(9.36)	(7.73)
FS	-0.01^{**}	-0.01^{**}	-0.01^{**}	-0.01^{**}	-0.01^{**}	-0.01^{**}
(Foreign shareholding)	(−4.57)	(−4.22)	(−4.46)	(−4.27)	(−4.63)	(−4.44)
MINDEX	0.01^{**}	0.01^{**}	0.01^{**}	0.00	0.01^{**}	0.01^{**}
(Development level)	(6.83)	(6.86)	(6.55)	(1.13)	(5.87)	(6.61)
Adjusted R^2	0.02	0.03	0.02	0.05	0.03	0.02

To test the effect of individual control mechanisms on firm value, the OLS method is used to estimate the following equation:
ROA = f {{LSHARE, HSF, INED, PAY, DERATIO, GOV}, SIZE, FS, MINDEX}
MINDEX measures the market development level in each province.
The variables are defined in Table 1.
t-statistics in parentheses.
$^{**}p < 0.01$; $^{*}p < 0.05$; $^{\dagger}p < 0.1$

The sub-period results yield similar conclusions to the full-period results. While the OLS regressions (1999–2001, 2002–2007) show that ownership and governance factors are important in explaining firm performance, these effects disappear in the two-stage regressions. Although firms became more aware of corporate governance after 2001 following the publication of official guidelines, this has no impact on our general conclusion that there is no one optimal set of governance and ownership mechanisms.

Table 5 Coefficient estimates from OLS and 2SLS of firm performance on control mechanisms

Variables	1999–2007 2SLS	1999–2007 OLS	1999–2001 2SLS	1999–2001 OLS	2002–2007 2SLS	2002–2007 OLS
Dependent variable = ROA						
CONSTANT	−0.21	−0.06**	−1.04	−0.03**	−0.36	−0.07**
	(−1.54)	(−18.53)	(−0.14)	(−4.96)	(−1.00)	(−20.01)
LSHARE	−0.27	−0.01*	0.43	−0.00	−0.31	−0.01*
(Legal person share)	(−1.40)	(−2.21)	(0.12)	(−0.76)	(−0.26)	(−2.54)
HSF	0.18	0.01**	1.55	0.01**	−0.02	0.01**
(Ownership concentration)	(1.49)	(8.50)	(0.15)	(2.92)	(−0.11)	(7.90)
INED	−0.01	0.01**	1.20	0.00	−0.40	−0.00
(Board Compensation)	(−0.10)	(2.72)	(0.13)	(1.19)	(−0.40)	(−0.07)
PAY	0.04†	0.01**	0.09	0.01**	0.08	0.01*
(Compensation)	(1.77)	(15.03)	(0.15)	(4.89)	(0.49)	(16.59)
DERATIO	0.25	−0.01**	2.20	−0.01**	0.60	−0.01**
(Long term debt ratio)	(0.66)	(−4.72)	(0.13)	(−5.24)	(0.23)	(−2.96)
GOV	0.08	−0.01*	−0.19	−0.00	0.28	−0.01†
(Government controlled firm)	(0.87)	(−2.20)	(−0.15)	(−1.57)	(0.34)	(−1.88)
SIZE	−0.06	0.01*	−0.17	0.00	−0.11	0.01*
(Firm size)	(−1.07)	(2.49)	(−0.13)	(0.24)	(−0.27)	(2.55)
FS	−0.00	−0.01**	0.01	−0.00	−0.00	−0.04**
(Foreign shareholding)	(−0.77)	(−4.39)	(0.10)	(−1.33)	(−0.02)	(−4.62)
MINDEX	0.00	0.00	−0.02	−0.00	0.01	0.00
(development level)	(0.65)	(0.51)	(−0.15)	(−1.38)	(0.22)	(1.19)
Adjusted R^2	0.01	0.08	−0.01	0.06	−0.00	0.10

Simultaneous equation analysis of the ownership variables, other control mechanisms, and firm performance, using the two-stage least squares method to estimate the following equation:

ROA = f {{LSHARE, HSF, INED, PAY, DERATIO, GOV}, SIZE, FS}

Endogenous Variables = ROA, LSHARE, HSF, INED, PAY, DERATIO, GOV

Instrument Variables = FS, SIZE, RISK, AGE, AVROA, AREA, BOARD, DUAL, MINDEX

The variables are defined in Table 1

t-statistics in parentheses

** $p < 0.01$; * $p < 0.05$; † $p < 0.1$

6 Discussion and Conclusions

We draw together the many different aspects of corporate governance mechanisms that have been examined and reported in the literature and we investigate the interrelations among them. The six control mechanisms we examine are institutional ownership, concentrated ownership, debt financing, the proportion of independent directors to total directors, pay structure, and government influence. We investigate three issues using a data set of listed firms in China. Because China is rapidly transforming its state owned enterprises into modern corporations, it is imperative that studies be undertaken into the governance structures that are being put in place.

First, we hypothesize that there is interdependence among the various governance and control mechanisms and there are trade offs among the control mechanisms. We find strong evidence to show that substitution and complementary effects of the different governance mechanisms exist.

Second, firms are likely to choose an appropriate control mechanism to suit their own specific needs. We hypothesize that corporate control mechanisms vary across firms and the empirical results support our hypothesis. While in an OLS setting, we find that institutional ownership, large shareholdings, board independence, compensation, debt levels, and government control are significant factors associated with firm performance these results disappear when the inherent endogeneity is controlled for via the simultaneous equations methodology.

Third, we find that many of the control and governance mechanisms that influence performance in the developed economies also apply in China. One major difference in China is the significant share ownership by the state and its interventionist approach to the economy. Private investors have a limited role in the market as government has an overarching influence. Despite these characteristics, there are still alternative mechanisms for corporate control and firms in China can choose an appropriate structure to cope with their environment. The results contribute to our understanding of Chinese corporate governance systems in privatized firms.

What are the policy implications of these findings in the Chinese corporate control context? First, whilst previous research finds that firm performance and government ownership are negatively correlated (Xu and Wang 1999; Qi et al. 2000), we argue that, in the simultaneous choice of governance control mechanisms, the negative impact of government ownership will disappear. Our results support this argument. As ownership and other corporate control mechanisms are interdependent, models that only consider the influence of a single governance variable (say government ownership) on firm performance may be miss-specified. Heracleous (2001a, b) also argues that private ownership is neither a necessary nor a sufficient condition for superior performance. There is much debate going on in China about the need to reduce the government shareholdings in listed firms; if the argument for the reduction in government shareholding is to improve performance of these firms, such argument is debatable.

Second, our results indicate that there are no convincing absolute relations between corporate governance and firm performance. The Chinese government is working hard to incorporate a corporate governance ethos comparable to those in the developed economies. However, we demonstrate that governance structure has no direct relationship with firm performance. We believe the focus of any effective governance structure should be the protection of investors instead of the maximization of firm performance. Thus, legal reform involving the enactment of investor protection laws and, critically, effective legal enforcement are more important than merely following a set of "good governance practices" in a perfunctory way.

Finally, we must stress that the empirical results in this study are strongly dependent on the specification of the model and the choice of the instrumental variables. Unfortunately, existing theory does not provide us with a precise model specification. This means that although the simultaneous equation method allows us to interpret the interaction of the control mechanisms in the system, the results should be interpreted cautiously, and alternative models are always possible. Moreover, the results from this study and the substitution and complementary effects of the different governance mechanisms suggest that the theoretical considerations of the corporate governance issues are complex and relatively under-explored.

References

Adams, R., & Ferreira, D. (2007). A theory of friendly boards. *Journal of Finance, 62*, 217–250.

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis, 31*, 377–397.

Anderson, R. C., & Reeb, D. M. (2003). Founding family ownership and firm performance: Evidence from the S& P 500. *Journal of Finance, 58*, 1301–1328.

Barkema, H. G., & Gomez-Mejia, L. R. (1998). Managerial compensation and firm performance: A general research framework. *Academy of Management Journal, 135*, 135–145.

Bathala, C., Moon, K. P., & Rao, R. (1994). Managerial ownership, debt ownership and the impact of institutional holdings: An agency perspective. *Financial Management, 23*, 38–50.

Bebchuk, L., Cohen, A., & Ferrell, A. (2005). What matters in corporate governance? Working paper, Harvard Law School.

Berger, P. G., Ofek, E., & Yermack, D. (1997). Managerial entrenchment and capital structure decisions. *Journal of Finance, 52*, 1411–1438.

Bognanno, M. L. (2001). Corporate tournaments. *Journal of Labor Economics, 19*, 290–315.

Boone, A., Casares Field, L., Karpoff, J., & Raheja, C. (2007). The determinants of corporate board size and composition: An empirical analysis. *Journal of Financial Economics, 85*, 66–101.

Cadbury Committee. (1992). *Report of the committee on the financial aspects of corporate governance*. London: Gee.

Chen, G. M., Firth, M., & Rui, O. (2006a). Have China's enterprise reform led to improved efficiency and profitability. *Emerging Markets Review, 7*, 82–109.

Chen, G. M., Firth, M., Gao, D., & Rui, O. (2006b). Ownership structure, corporate governance, and fraud: Evidence from China. *Journal of Corporate Finance, 12*, 424–448.

Chen, G. M., Firth, M., Xin, Y., & Xu, L. (2008). Control transfers, privatization, and corporate performance: Efficiency gains in China's listed companies. *Journal of Financial and Quantitative Analysis, 43*, 161–190.

Chen, G. M., Firth, M., & Xu, L. (2009). Does the type of ownership control matter? Evidence from China's listed companies. *Journal of Banking and Finance, 33*, 171–181.

Coles, J. W., & Hesterly, W. S. (2000). Independence of the chairman and board composition: Firm choices and shareholder value. *Journal of Management, 26*, 195–214.

Coles, J. W., McWilliams, V. B., & Sen, N. (2001). An examination of the relationship of governance mechanisms to performance. *Journal of Management, 27*, 23–50.

Conyon, M. J. (1997). Corporate governance and executive compensation. *International Journal of Industrial Organization, 15*, 493–509.

Cubbin, J., & Leech, D. (1983). The effect of shareholding dispersion on the degree of control in British companies: Theory and measurement. *Economic Journal, 93*, 351–369.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic review of board composition, leadership structure, and financial performance. *Strategic Management Journal, 19*, 269–290.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy, 93*, 1155–1177.

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance, 7*, 209–233.

Faleye, O. (2007). Does one hat fit all: The case of corporate leadership structure. *Journal of Management and Governance, 11*, 239–259.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics, 26*, 301–325.

Fan, G., & Wang, X. L. (2008). NERI index of market development in China. Beijing: The Economic Science Press (in Chinese).

Finkelstein, S., & Hambrick, D. C. (1996). *Strategic leadership: Top executives and their effects on organizations*. St. Paul, MN: West.

Firth, M., Fung, P., & Rui, O. M. (2006a). Corporate performance and CEO compensation in China. *Journal of Corporate Finance, 12*, 693–714.

Firth, M., Fung, P., & Rui, O. M. (2006b). Firm performance, governance structure, and top management turnover in a transitional economy. *Journal of Management Studies, 43*, 1289–1330.

Gan, D., & Lu, L. (1997). The growth of entrepreneurs under the modern enterprise system. *Academic Journal of the Graduate School, Chinese Academy of Social Sciences, 5*, 25–31 (in Chinese).

Gillan, S., Hartzell, J., & Starks, L. (2007). Tradeoffs in corporate governance: Evidence from board structures and charter provisions. Working Paper, University of Texas.

Gompers, P. A., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics, 118*, 107–155.

Hansen, G. S., & Hill, C. W. L. (1991). Are institutional owners myopic? A time-series study of four technology-driven industries. *Strategic Management Journal, 12*, 1–16.

Harris, M., & Raviv, A. (2008). A theory of board control and size. *Review of Financial Studies, 21*, 1797–1832.

Heracleous, L. (2001a). State ownership, privatization and performance in Singapore: An exploratory study from a strategic management perspective. *Asia Pacific Journal of Management, 18*, 69–81.

Heracleous, L. (2001b). What is the impact of corporate governance on organizational performance? *Corporate Governance: An International Review, 9*, 165–173.

Hermalin, B. E., & Weisbach, M. S. (2000). Boards of directors as an endogenously determined institution: A survey of the economic literature. Working Paper, University of California at Berkeley.

Jensen, M. C. (1986). Agency costs of free flow, corporate finance and takeovers. *American Economic Review, 76*, 323–329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*, 305–360.

Jensen, M. C., & Murphy, K. J. (1990). Performance and top management incentives. *Journal of Political Economy, 98*, 225–264.

Jensen, G., Solber, D., & Zorn, T. (1992). Simultaneous determination of insider ownership, debt and dividend policies. *Journal of Financial and Quantitative Analysis, 27*, 247–263.

Johnson, J. L., Daily, C. M., & Ellstrand, A. E. (1996). Boards of directors: A review and research agenda. *Journal of Management, 22*, 409–438.

Keasey, K., Thompson, S., & Wright, M. (1997). The corporate governance problem – competing diagnosis and solution. In K. Keasey, S. Thompson, & M. Wright (Eds.), *Corporate governance: Economic, management and financial issues*. New York: Oxford University Press.

Klapper, L. F., & Love, I. (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance, 10*, 703–728.

Lehn, K., Patro, S., & Zhao, M. (2007). Governance indexes and valuation: Which causes which? *Journal of Corporate Finance, 13*, 907–928.

Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. *Journal of Financial Economics, 87*, 308–328.

Mak, Y. T., & Li, Y. (2001). Determinants of corporate ownership and board structure: Evidence from Singapore. *Journal of Corporate Finance, 7*, 235–256.

Makhija, A. K., & Spiro, M. (2000). Ownership structure as a determinant of firm value: Evidence from newly privatized Czech firms. *Financial Review, 41*, 1–32.

Megginson, W. L., & Netter, J. M. (2001). From state to market: A survey of empirical studies on privatization. *Journal of Economic Literature, 39*, 321–389.

Mikkelson, W. H., & Partch, M. M. (1997). The decline of takeovers and disciplinary managerial turnover. *Journal of Financial Economics, 44*, 205–228.

Morck, R., Yeung, B., & Yu, W. (2000). The information content of stock markets: Why do emerging stock markets have synchronous stock price movements? *Journal of Financial Economics, 58*, 215–260.

O'Reilly, C. A., Main, B. G., & Crystal, G. S. (1988). CEO compensation as a tournament and social comparison: A tale of two theories. *Administrative Science Quarterly, 33*, 257–274.

Peasnell, K. V., Pope, P. F., & Young, S. (2003). Managerial equity ownership and the demand for outside directors. *European Financial Management, 9*, 99–118.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies, 22*, 435–480.

Qi, D., Wu, W., & Zhang, H. (2000). Shareholding and corporate performance of partially privatized firms: Evidence from the listed Chinese firms. *Pacific-Basin Finance Journal, 8*, 587–610.

Rajan, R., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *Journal of Finance, 50*, 1421–1460.

Rajeha, C. (2005). Determinants of board size and composition: A theory of corporate boards. *Journal of Finance and Quantitative Analysis, 40*, 283–306.

Rediker, K. J., & Seth, A. (1995). Board of directors and substitution effects of alternative governance mechanisms. *Strategic Management Journal, 16*, 85–99.

Shleifer, A. (1999). State versus private ownership. Working Paper, Harvard University.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of Political Economy, 95*, 461–488.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance, 52*, 737–783.

Tosi, H. L., Katz, L. P., & Gomez-Mejia, L. R. (1997). Disaggregating the agency contract: The effects of monitoring, incentive alignment, and CEO tenure on management decision making. *Academy of Management Journal, 40*(3), 620–638.

Turnbull, S. (1997). Corporate governance: Its scope, concerns and theories. *Corporate Governance: An International Review, 5*, 180–205.

Villalonga, B., & Amit, R. (2006). How do family ownership, control, and management affect firm value? *Journal of Financial Economics, 80*, 385–417.

Westphal, J. D. (1999). Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal, 42*, 7–24.

Wright, M., Hoskisson, R. E., Filatochev, I., & Buck, T. (1998). Revitalizing privatized Russian enterprises. *Academy of Management Executive, 12*(2), 74–85.

Xu, X., & Wang, Y. (1999). Ownership structure and corporate governance in Chinese stock companies. *China Economic Review, 10*, 75–89.

Yermack, D. (1996). Higher market valuation for firms with a small board of directors. *Journal of Financial Economics, 40*, 185–211.

The Role of Multiple Large Shareholders in Public Listed Firms: An Overview

Ana Paula Matias Gama

Abstract A key issue in corporate governance is whether large owners contribute to resolving agency problems or exacerbate them. This paper surveys how large shareholders interact among themselves and how the composition of the controlling group, as well as the type of shareholders, can affect both monitoring and the level of private benefit extraction and, consequently, firm value. Recent studies on ownership structure of listed firms reveal that family firms are the most common form of ownership. We therefore also analyse potential agency conflicts that can emerge between families and other large shareholders by examining the governance roles of the structures of multiple large shareholder.

1 Introduction

Beginning with Berle and Means (1932), an extensive literature has investigated the consequences to firm value of a separation between ownership and control. The bulk of corporate governance literature examines the agency problems that arise from two extreme ownership structures: 100 % small shareholders, and one large, controlling owner combined with many small shareholders (for a review, see Shleifer and Vishny 1997). In the first case, each small shareholder lacks the incentives or contractual mechanisms to align the interests of managers with those of shareholders. Consequently, managers may exert substantial discretion over firm decisions and divert corporate resources for private gain (Jensen and Meckling 1976; Grossman and Hart 1980). At the other extreme, the large shareholder either directly manages the firm or internalizes the benefits from monitoring managers, which aligns managerial interests with those of the large shareholder.

A.P.M. Gama (✉)
University of Beira Interior, Portugal, Rua Marquês d'Ávila e Bolama, Covilh, Portugal
e-mail: amatias@ubi.pt

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_3,

This situation creates a different agency problem in which the controlling owner can expropriate private benefits at the expense of other shareholders (e.g., Shleifer and Vishny 1986; Burkart et al. 1997). Hence the concentration of ownership is seen as a mixed blessing.

Several studies show that large companies have several shareholders with significant blockholdings (e.g., La Porta et al. 1999). According to the results of the European Corporate Governance Network, in eight out of nine of the largest stock markets in the European Union, the median size of the second largest voting block in large publicly listed companies exceeds 5 %. In Germany, the only exception on this list, between 25 % and 40 % of listed firms have two or more large shareholders. Most surprisingly, in the UK, long seen as the country with the lowest shareholder concentration, the sizes of the second and third largest blocks appear to be larger than the European average (Lehmann and Weigand 2000). Moreover, Claessens et al. (2000) show that only 3 % of Asian firms lack a controlling owner. Similar evidence is provided by Esterin and Prevezer (2011) for Latin American. Even in the US, research demonstrates that ownership concentration is important (e.g., Demsetz 1983; Holderness and Sheehan 1988).

Still, the literature is sparse regarding (1) how large shareholders interact among themselves and (2) the effects the composition of the controlling group, as well as the type of shareholders, can have on monitoring and the level of private benefit extraction and, consequently, firm value.

This paper makes three contributions to corporate governance literature. First, it reviews the theoretical literature on the role of multiple large shareholders (MLS). Second, it analyses whether large owners (blockholders) contribute to resolving agency problems or exacerbate them, by reviewing the literature analysing the impact of ownership concentration on firm value and firm performance. Third, recent studies on ownership structure reveal that in most markets a large number of listed companies have one or more large shareholders. Among these types of owners, family firms appear to be the most common form of ownership. This new view of ownership structure calls for a carefully analysis of the conflicts between families and other large shareholders. Hence we review the role of other large shareholders in monitoring families according to their incentives to expropriate minority shareholders, popularly called tunnelling (e.g., earnings management). Furthermore, it is important to analyse how different shareholder combinations can interact among themselves and their effects on firm value.

The paper proceeds as follows. Section 2 reviews the literature on the role of MLS. Section 3 analyses the impact of ownership concentration on firm value and performance. Section 4 discusses the consequences of family ownership on agency issues and firm value. Section 5 examines the monitoring role of MLS in the context of tunnelling by reviewing the governance role of MLS on earnings management, the cost of capital, and the level of cash holdings in family firms. Section 6 summarizes the main conclusions and Sect. 7 offers suggestions for further research.

2 An Overview of the Theoretical MLS Literature

The theoretical models of MLS address three concerns about this type of ownership structure: (1) the formation of the controlling group, (2) the effects the composition of the controlling group can have on firm value and firm performance, and (3) the adequacy of a particular composition for different types of firms. Because the structure of the controlling group will determine the power distribution among the different shareholders, theoretical studies have proposed different explanations for the existence of concentrated ownership structures with MLS: (1) models based on how monitoring will be conducted by a group of large shareholders and (2) models based on how private benefits of control will be shared by the controlling shareholders. Moreover, because these models are not mutually exclusive and, to a great extent, present complementary explanations for the existence and the effects of these types of ownership structures, some models combine both the monitoring and private benefits sharing implications of MLS structures.

2.1 Models Based on the Monitoring Role of Large Shareholders

Pagano and Roëll (1998) show that MLS commit the firm to protect minority investors. Assuming a setting in which the manager in control is a large shareholder who is monitored by other large shareholders, Pagano and Roëll (1998) demonstrate that having two or more large shareholders monitoring the manager results in free riding in monitoring. However, this free-riding problem enhances value because it reduces the excessive monitoring of a very large shareholder. Thus an ownership structure with several large shareholders is a commitment device that allows shareholders to commit to an optimal monitoring intensity. Accordingly, the authors assign a monitoring role to the non-controlling shareholders in ownership structures with a single controlling shareholder (SCS). As the number of large shareholders increases, there will be less monitoring. Hence, to preserve managerial initiative, companies where agency problems are unlikely to be important should have a higher number of shareholders and, if the number of large shareholders is optimally chosen, differences in the number of shareholders will not translate to differences in firm value. Similar intuition is provided by Burkart et al. (1997), who show that the reduction in the size of the ownership stake of the unique large shareholder reduces the incentives to monitor and thus preserves managerial initiative. Hence a trade-off between control and initiative emerges contingent on the outside ownership concentration.

However, other studies argue that MLS are unlike to emerge. For instance, in Zwiebel's (1995) general equilibrium model, investors sort such that only one of them holds a block in any given firm. The free-rider problem in monitoring efforts among MLS is emphasized by Winton (1993). Similarly, in Bolton and von

Thadden's (1998) liquidity control trade-off model, MLS would increase liquidity costs without offering compensating advantages in monitoring.

2.2 *Models Based on How Private Benefits are Shared Among Large Shareholders*

Large shareholders have greater power and strong incentives to ensure shareholder value maximization (Jensen and Meckling 1976). However, blockholder ownership above a certain level can lead to the entrenchment of owner–managers, which can dilute corporate funds for private benefit and thus, in turn, reduce the value of the firm (Fama and Jensen 1983; Morck et al. 1988; Shleifer and Vishny 1997). For instance, Barclay and Holderness (1992) find that share prices tend to rise following acquisitions of large share blocks (indicating shared benefits because of improved monitoring), but that increase is generally less than the premium paid by the acquirer of the block (indicating the existence of some private benefits of control). This empirical evidence suggests that benefits of control are divisible and can be shared by several large shareholders. Nevertheless, the presence of several large shareholders should be irrelevant if it does not alter the total amount of private benefits that can be extracted by the controlling group. However, there are reasons to think that the composition of the controlling group can affect the extent of expropriation of the minority shareholders.

Zwiebel (1995), Bennedsen and Wolfenzon (2000), Bloch and Hege (2001), and Gomes and Novaes (2001) consider a setting in which the firm is controlled by a group of large shareholders who together hold the majority of the voting rights; that is, these authors consider an ownership structure with MCS. The controlling group in Gomes and Novaes's (2001) model, which is formed by all the large shareholders, will only approve a project if all the members of the group benefit from it. Thus, for a given ownership stake of the controlling group, increasing the number of shareholders has two effects: the 'bargaining effect', which implies that private benefits are less likely to be taken, since all the members of the control group must agree on the preferred project, and the 'disagreement effect', which implies that the approval of positive net present value projects also becomes more difficult because of the necessary agreement of all the members of the controlling group. According to Gomes and Novaes (2001) the bargaining effect dominates when there are few shareholders, whereas the disagreement effect dominates when the number of shareholders increases. In addition, for a given number of shareholders in the controlling group, increasing the total ownership stake strengthens both effects. Hence, due to the trade-off between the benefits from bargaining over private benefits and the costs of passing up profitable projects, there is an optimal number of large shareholders and an optimal total controlling stake size.

In Bennedsen and Wolfenzon's (2000) model, large owners compete to form controlling coalitions because there are private benefits. The presence of other large

shareholder forces the controlling coalition to amass a greater stake or control may be lost. The large stake control increases efficiency because controlling coalition must internalize more of the firm's value. The authors ignore bargaining problems and a monitor's ability to discipline the controlling shareholder; instead they focus on the coalition game that determines the size of the controlling stake.

Zwiebel (1995) assumes that the control benefits will be divided among the different blockholders according to the relative sizes of their respective blocks. Accordingly, there is a threshold size beyond which the largest blockholder will not be challenged by other investors. Consequently, in equilibrium there are two types of firms: firms with only one large blockholder, where the size of the block is beyond the threshold, and firms with several medium-sized blocks, where the size of the largest block is below the threshold. In equilibrium the investors allocate their money across firms to maximize their benefits of control.

In Bloch and Hege's (2001) model two large shareholders compete for control. Differences in the capacity to define the company's strategy and ability to monitor managers characterize the different shareholders. The shareholder who wins control defines the strategy but both shareholders take on a monitoring role. To win control, the two large shareholders compete for the votes of the minority shareholders by committing to reduce their private benefits. The model predicts different equilibria, depending on the heterogeneity in monitoring costs and capacity to define the firm's strategy of the two competing shareholders. The authors conclude that minority expropriation will be lower in companies where control is more contestable, that is, in companies where the difference in the stakes and abilities of the large shareholders is smaller.

In summary, the models described above show that, besides the fact that ownership structure can be consciously chosen by the initial owners, firms with different characteristics can choose a different composition of the controlling group. Regarding firms with an SCS, the ownership stake of the non-controlling shareholders should be more concentrated when expropriation is likely to be severe (i.e., the internal cost to expropriate is lower), to provide incentives for monitoring (e.g., Pagano and Roëll 1998). With respect to firms with MCS structures, the models of Gomes and Novaes (2001) and Bennedsen and Wolfenzon (2000) predict that firms where expropriation is more likely should have a larger controlling group with a larger joint stake, as well as a higher number of blockholders.

This feature protects minority shareholders, because disagreement in coalitions with several blockholders is more likely. In addition, the model of Gomes and Novaes (2001) also predicts that when disagreement costs may be relevant, firms should reduce the number of controlling shareholders to increase the efficiency of the decision process. Accordingly, a somewhat concave relation between proxies of minority expropriation (e.g., the stake in the hands of a family) and the number of blockholders is expected. Moreover, when the decision power within the controlling group depends on the relative sizes of blockholder stakes and the presence of a blockholder with a significant stake hinders the presence of other blockholders, controlling groups with a lower stake (around 50 %) should have different blockholders with similar stakes (e.g., Zwiebel 1995; Bennedsen and

Wolfenzon 2000). Note that if the composition of the controlling group is chosen with an awareness of its consequences for performance, then performance and the structure of the controlling group should be unrelated. However, if the composition of the controlling group is (partially) predetermined by exogenous factors – such as wealth, risk aversion, and/or the liquidity needs of the initial owners – significant effects on firm performance are still expected.

3 MLS and Firm Value

According to the incentive alignment hypothesis (Jensen and Meckling 1976), large shareholders have greater power and stronger incentives to ensure shareholder value maximization. Such a controlling shareholder has a far bigger incentive to control management since a large part of the shareholder's wealth is invested in the company. As a result, every shareholder should benefit from this situation (Berle and Means 1932). Hence, as argued by Demsetz (1983), ownership structure does not influence firm performance or value because companies chose the form of ownership that minimizes agency costs. Consequently, in equilibrium, ownership has no effect on firm value, since profit-seeking owners or investors can gain by rearranging their portfolios (Demsetz and Lehn 1985; Demsetz and Villalonga 2001). However, the relation between large owners and firm value is theoretically and empirically ambiguous.

3.1 Theoretical Issues

Although the presence of a controlling shareholder is common in many firms (e.g., La Porta et al. 1999), the literature on concentrated ownership still not explain satisfactorily the coexistence of MLS and the effects on firm value. For instance, above a certain level, blockholder ownership may lead to the entrenchment of owner–managers that expropriate the wealth of minority shareholders (Morck et al. 1988; Shleifer and Vishny 1997). Moreover, the owners' portfolio risk will increase with exposure, which may influence both risk taking and expected returns (Bolton and von Thadden 1998). However, firm value can also have positive and negative effects on blockholder ownership. If blockholders are more inclined to sell shares in a firm when its share price is high, blockholder ownership will drop following increases in firm value, (the opportunity cost hypothesis; see Zeckhouser and Pound 1990). In addition, Demsetz and Lehn (1985) show a negative effect of firm size/market value on ownership concentration. Because a higher market price allows financing a given level of investment by issuing a smaller amount of stock to outside owners, positive feedback effects of firm value on blockholder ownership can occur if blockholders strongly prefer to remain in control (the control preference hypothesis; see La Porta et al. 2000).

Moreover, an increase in share price and firm value allows insiders (e.g., managers) to finance a given level of investment in the firm by issuing fewer shares while relying more on debt and internally generated funds (the pecking order hypothesis; see Myers and Majluf 1984); that is, a positive effect of firm value on the shares held by the controlling shareholder is implied. Furthermore, recent research emphasizes the importance of the legal system and investor protection (Shleifer and Vishny 1997; La Porta et al. 1998, 1999, 2000, 2002) in explaining differences between ownership structure and performance across countries.

Investor protection is hypothesized to increase investments by small shareholders because it reduces the private benefits that controlling shareholders and managers can extract at the expense of minority investors. When the levels of investor protection are lower (e.g., in Continental Europe; see La Porta et al. 1998), large private control benefits provide an extra incentive for blockholder ownership. Therefore blockholder ownership has a more positive effect on firm value in countries with lower levels of investor protection because countering managerial agency problems in these countries is a greater necessity. These finding are broadly consistent with a review of the empirical evidence outside the US and the UK (e.g., Denis and McConnell 2003). However, in the opposite direction, and in line with the persistence hypothesis, Bebchuck and Roe (1999) sustain that a controlling shareholder structure does not automatically develop into a non-control structure (i.e., dispersed ownership), even when the market-based structure maximizes the value of the firm. The reason is the presence of private benefits for controlling shareholders. For firms that have already adopted a mixed ownership structure, that is, with some minority investors, any benefits gained by selling more shares to the public must be shared with these investors, thus reducing the incentive to give up private control. In addition, incumbent managers may resist the formation of controlling blocks and fight hostile takeovers. Because gains from the formation of large blocks of control will be shared with the market, this feature reduces the incentive to form such blocks in market-based systems (Shleifer and Vishny 1986). Under these circumstances, increasing blockholder ownership – as in a bid for control or when a corporate raider takes a large position in a firm – could lead to increases in firm value from the viewpoint of minority investors.

3.2 Empirical Evidence

On the whole, the empirical evidence from previous studies provides mixed results. While some empirical research based on single regression models finds that blockholder ownership (or similar measures, such as director ownership) has a positive effect on performance, the effect appears to be insignificant when ownership is treated as an endogenous variable. Table 1 summarizes the most representative studies in this field. Panel A show the mixed results obtained when the variable ownership concentration is treated as endogenous (e.g., simultaneous equations estimations) or exogenous (e.g., single-equation estimations) on firm value. Panel B

Table 1 Large shareholders and firm value

Panel A: Ownership structure		
Method		
Dependent variable	Authors	Key findings
Single regressions:		
Accounting profitability	Demsetz and Lehn (1985)	No systematic relation
	Holderness and Sheehan (1988)	
	Pedersen and Thomsen (1999)	
	Bianco and Casavola (1999)	Non-linear relation
Firm value (Tobin's Q)	Anderson and Reeb (2003)	Non-linear relation
	McConnell and Servaes (1990)	
	Morck et al. (1988)	
	Edwards and Nibler (2000)	Positive (non-linear) effect
	Gorton and Schmid (2000)	
	Mehran (1995)	No systematic relation
Simultaneous equations:		
Firm value (Tobin's Q)	Cho (1998)	No systematic relationship
	Demsetz and Villalonga (2001)	
	Himmelberg et al. (1999)	
	Loderer and Martin (1997)	
Panel data:		
Firm value (Tobin's Q)	Himmelberg et al. (1999)	No systematic relation
	Cronqvist and Nilsson (2003)	Negative effect
Event studies:		
Risk-adjusted abnormal returns	Agrawal and Mandelker (1990)	Positive effect
	Barclay and Holderness (1991)	
	Bethel et al. (1998)	
	Holderness and Sheehan (1985, 1988)	
	Lewellen et al. (1985)	
	Renneborg (2000)	
	Cronqvist and Nilsson (2003)	Negative effect
	Slovin and Sushka (1993)	
	Song and Walking (1993)	
	Eckbo and Smith (1998)	No systematic relation

Panel B: Different measures of blockholder ownership		
Measure	Authors	Key finding
Blockholders	Allen and Phillips (2000)	Positively related with operating and stock market performance, especially in the presence of investments in research and development and strategic alliances
Number of blockholders	Ashbaugh-Skaife et al. (2006)	Negatively associated with credit ratings
Purchase of block shares	Barclay and Holderness (1991)	Positive market reactions to block purchases
Blockholder ownership	Brockman and Yan (2009)	Blockholders decrease stock return but increase informed trading

(continued)

Table 1 (continued)

Panel B: Different measures of blockholder ownership		
Measure	Authors	Key finding
	McConnell and Servaes (1995)	Blockholder ownership is positively associated with Tobin's Q, particularly in high-growth firms
	Moeller (2005)	Positively associated with takeover premiums
	Steen (2005)	Negatively associated with dividend payouts, but positively associated with the firm's market value.
	Chen et al. (2005)	Positively associated with director and officer ownership
Largest institutional owners	Dharwadkar et al. (2008)	Negatively related to top executive compensation
	Khan et al. (2005)	Negatively related to total compensation and options-based compensation
	Schnatterly et al. (2008)	Positively associated with the bid–ask spread, suggesting an informational advantage of the largest owners
Ownership of the largest five investors	Chen et al. (2007)	Concentrated ownership by independent institutions is positively related to post-merger performance
	Zhong et al. (2007)	Ownership concentration is positively associated with earnings management

presents the key findings when different measures of concentration ownership are used (e.g., blockholder ownership, officer and director ownership, insider ownership, the share of the largest owner, the share of the two largest owners, closely held shares, and the Herfindahl index of ownership concentration).

When single equations are employed, empirical studies show a weak positive association between controlling owners and accounting profitability (e.g., Pedersen and Thomsen 1999; Demsetz and Lehn 1985) or firm value (e.g., Morck et al. 1988; McConnell and Servaes 1990). Because single-equation studies do not consider the possible endogeneity of ownership structure, simultaneous equations models have found insignificant performance effects in the simultaneous estimations of the causes and effects of director ownership (e.g., Loderer and Martin 1997; Cho 1998; Himmelberg et al. 1999; Demsetz and Villalonga 2001). The critical issue in simultaneous equations models, however, is the difficulty in identifying exogenous instrumental variables, that is, variables that influence ownership structure but are not correlated with firm performance. Even when adopting panel data analysis, Himmelberg et al. (1999) find that a positive impact of director ownership becomes insignificant when the fixed firm effects (unobserved heterogeneity) are taken into account. However, as argued by Zhou (2001), the fixed effect approach may not be appropriate because intrafirm managerial ownership is stable over time, while there are large differences between firms.

Adopting the event studies approach has the advantage of being able to isolate market reactions to specific events, thus filtering out much firm-specific heterogeneity. However, even event studies have produced ambiguous results. Holderness

and Sheehan (1985, 1988), Lewellen et al. (1985), Agrawal and Mandelker (1990), Barclay and Holderness (1991), Bethel et al. (1998), and Renneborg (2000), among others, find a positive effect of higher ownership concentration and firm value. However, Slovin and Sushka (1993), Song and Walking (1993), and Cronqvist and Nilsson (2003) show a negative effect, while others (e.g., Eckbo and Smith 1998) find no systematic relation.

In sum, single regression estimates are appropriate if ownership structures are sufficiently stable to be regarded as exogenous variables. However, ownership structures can change over time, perhaps in response to past performance (e.g., Denis and Sarin 1999). In this context, simultaneous equations models can help overcome the problem, but the lack of reliable instrument variables, that is, variables that influence either ownership or performance without influencing the other, is the main drawback of this method (Himmelberg et al. 1999). Panel data can sort out causal relations on cross-sectional data, but fixed effect estimates tend to remove firm-level differences, which may be attributable to ownership structure. The event studies method has the advantage of filtering out a lot of firm-specific noise but it cannot altogether avoid the potential influence of unobserved firm-specific variables. Furthermore, large changes in ownership structure may well be accompanied by strategic changes (such as changes in owner identity or corporate strategy), which can also influence company performance.

4 Large Shareholders in Family Firms

A firm's ownership structure can adopt various forms and combinations. Firms may have only an SCS (Pagano and Roëll 1998), more than one blockholder (MLS) (e.g., Bennedsen and Wolfenzon 2000; Gomes and Novaes 2001), or no large shareholders. However, recent studies on ownership structure reveal that in most markets, a large number of listed companies have one or more large shareholders that can be categorized as families, states, or other industrial or financial companies. Among these types of owners, family firms appear to be the most common form of ownership. For example, in an international study La Porta et al. (1999) show that 30 % of firms are family controlled while 36 % are widely held. Faccio and Lang (2002) show that family firms are the predominant ownership form in Western Europe, except for the UK and Ireland. Guedhami et al. (2009); Claessens et al. (2000) find that in Asian countries approximately two-thirds of firms are owned by families or individuals. Even in the US, where it is widely accepted that companies have dispersed ownership, Anderson and Reeb (2003) find that around 35 % of companies in the S&P 500 are familial. This ownership structure feature calls for a careful analysis of the consequences that family ownership has on agency issues and company performance.

4.1 Agency Issues

Previous agency studies (i.e., studies of the 1970s and 1980s) analysed the conflicts of interest between principals and agents, assuming a world with diffuse ownership. Because small shareholders lack the incentives or contractual mechanisms necessary to align the interests of managers with those of shareholders, managers can exert substantial discretion over firm decisions and divert corporate resources for private gain Jensen (1986). This agency conflict is the classic owner–manager conflict described by Berle and Means (1932) and Jensen and Meckling (1976), which Villalonga and Amit (2006) refer to as the *Type 1 agency conflict*. Within this context, monitoring can be effective only if a single party becomes large enough to internalize the costs of control (Grossman and Hart 1980). Hence, this classical agency problem does not apply to a large proportion of family firms (Fama and Jensen 1983).

Families act as principals of the agency relation by investing their wealth in companies and protecting their interests with governance systems intended to maximize their utility and demand market returns. However, they can also act as agents. As controlling shareholders, families manage firms directly or appoint the firms' management teams (e.g., Miller et al. 2007); they dictate corporate policies, while the remaining shareholders may lack the power and/or incentives to oppose the families' decisions (Bennedsen and Wolfenzon 2000). Thus, families can extract rents from managers ex post and may expropriate wealth from minority investors (Shleifer and Vishny 1997). Consequently, another type of agency problem between large and minority shareholders emerge: the *Type 2 agency conflict* (Villalonga and Amit 2006). Within this context, the extraction of private benefits is the centre of the problem. Since its modelization by Grossman and Hart (1980), others have tried to quantify the magnitude of private benefits. For example, based on a sample of 39 markets throughout the world, Dyck and Zingales (2004b) show that private benefits of control amount, on average, to 14 % of firm value.

However, conflicts of interest between shareholders can also exist among large shareholders. Listed family firms are characterized by a large owner, for example, a family or an individual, other large owners, and a set of minority shareholders. Outside the US, the presence of several large shareholders with substantial blocks of shares is common (Barca and Becht 2001). For European companies, Faccio and Lang (2002) show that 39 % of firms have at least two blockholders holding at least 10 % of the voting rights and 16 % of firms have at least three blockholders. In addition, Laeven and Levine (2008) suggest that more than 40 % of the public firms in Western economies have one large shareholder and an additional large shareholder (or more than one) who own more than 10 % of the firms' shares.

These other large shareholders may monitor the families as controlling shareholders and moderate their influence and power, limiting tunnelling or private rent-seeking behaviours (Pagano and Roëll 1998). Still, their presence may add professionalism and experience to the firms and contribute to better decision making (Winton 1993; Bolton and von Thadden 1998; Lehmann and Weigand 2000;

Miller et al. 2005). However, bargaining problems between the large shareholders can also result in corporate paralysis and reduce firm efficiency and performance and minority shareholders' wealth (Bennedsen and Wolfenzon 2000). In addition, large shareholders can form coalitions in a firm to extract benefits (Zwiebel 1995) and their presence may limit the liquidity of the firms' shares and result in lower firm performance (Randoy and Goel 2003). Hence, the characteristics of large shareholders determine their preferences and goals.

4.2 Different Shareholders' Combinations and Family Firm Value

The influence of other large shareholders on family firm performance can vary depending on their nature and the coalitions they establish with the controlling family. The Appendix presents an overview of the studies about family firms and firm value. In civil law European countries, the second largest shareholder has a critical role in contesting the largest shareholder's control and in reducing the largest shareholder's extraction of private benefits, thus improving firm performance (Lehmann and Weigand 2000). On the other hand, in common law European countries, capital structure and managerial ownership are the most effective mechanisms of control (López de Foronda et al. 2007). For German listed companies, Lehmann and Weigand (2000) report that the presence of a second large shareholder enhances profitability. Moreover, they suggest that the existence of other blockholders moderates the relation between family ownership and firm performance. Hence, when analysing the impact of a family firm's ownership structure on firm performance, one should consider the distribution of the firm's shares and the nature or type of its large shareholders. Table 2 summarizes the most representative empirical studies in this field.

Regarding other families or individuals as other large shareholders, the empirical evidence for Continental European countries supports that the presence of families as second largest shareholders negatively influences firm performance, because coalitions between families have a higher propensity to seek private benefits of control (e.g., Maury and Pajuste 2005; Jara-Bertín et al. 2008).

When financial institutions become a largest investor,[1] they may provide financial resources to the firms in which they invest; consequently they may actively monitor managerial performance. Furthermore, because they value the security of their loans and are presumed to have a lower degree of asymmetric information, it is expected that they may impose wealth constraints upon the companies. Moreover,

[1] During the last decade, financial institutions in Organisation for Economic Co-operation and Development countries increased their total assets as a percentage of gross domestic product by 143 %, while the proportion of equity holdings in their portfolios more than doubled (Li et al. 2006).

Table 2 The role of other large shareholders in family firms

Dependent variable	Authors	Key finding
Return on assets (EBITDA/ EBIT)	Andres (2008)	Other large shareholders either affect firm performance adversely or have no detectable influence on performance measures
Tobin's Q	Tribó and Casasola (2010)	When a bank buys the largest stake and forms coalitions with other banks, there is a negative effect on firm returns
	Lehmann and Weigand (2000)	Having financial institutions as the largest shareholders improves corporate performance but, in general, the presence of other large shareholders does not imply enhanced profitability
	Maury and Pajuste (2005)	Firm value increases when ownership structure, and hence voting power, is distributed more equally. The relation between multiple blockholders and firm value is significantly affected by the identity of these shareholders
Market to book	Pedersen and Thomsen (2003)	If the largest shareholder is a financial institution or another corporation, ownership concentration is positively related with firm value. If the largest shareholder is a family or an individual, there is no effect on firm value. Hence owner identity matters
	López de Foronda et al. (2007)	In civil law countries, the role of the second shareholder is positively related to firm value
	Jara-Bertín et al. (2008)	If the largest shareholder is a family, a second family shareholder reduces firm value. When the protection of shareholders is higher, a positive effect on family firm value is found

banks may have a long-term interest in the firms. Accordingly, the presence of a financial institution as a large shareholder positively influences firm value (Hoshi et al. 1990; Nickel et al. 1997; Thomsen and Pedersen 2000; Maury and Pajuste 2005). However, banks can also value other business relations with the company and form coalitions with other banks; therefore their presence may decrease firm value.

Beside banks, other financial institutions, such as insurance companies and mutual funds, can also hold large equity stakes in family firms. These investors are generally subject to special regulations and supervision. Because their marginal cost of value diversion is high, they monitor other large shareholders to avoid the discretional use of corporate resources and the extraction of private benefits. Hence their presence should positively influence firm performance. Empirical evidence reports a positive influence of institutional investors on family firm performance when institutional investors are the largest shareholders (McConnell and Servaes 1990; Acker and Athnassakos 2003) and/or the second largest shareholders (Jara-Bertín et al. 2008). Regarding foreign institutional owners, which typically

hold shares only for short periods of time, they may not provide a significant benefit in terms of reducing agency costs. Instead, they may impose additional costly reporting requirements (Randoy and Goel 2003).

Nevertheless, acquiring a controlling position can be prohibitively costly for financial institutions due to regulatory investment limits, as well as their preference for diversification and liquidity (Admati et al. 1994; Bhide 1994; Parrino et al. 2003). Thus recent studies argue that monitoring gains can still be captured through ownership changes in less public transactions, such as negotiated block purchases (Admati et al. 1994) and allocations of initial public offering shares (Stoughton and Zechner 1998) or when trading is conducted under information asymmetries (Maug 1998; Kahn and Winton 1998). Under these conditions, the ability of monitors to capture gains is likely to depend on factors such as available monitoring technologies, diversification concerns (Admati et al. 1994), trading liquidity (Maug 1998), and firm transparency (Kahn et al. 2005).

Non-financial companies and foreign companies are often large shareholders of listed firms. These shareholders usually hold shares in other companies as part of a cross-ownership structure that functions as a takeover defence to protect managerial interests or as part of a company group structure. With business ties to the companies in which they participate, these large shareholders may be considered insider–owners because their cost of profit diversion is low. Hence these shareholders should contribute to increasing firm performance (Pedersen and Thomsen 2003; Randoy and Goel 2003). However, these shareholders may also be promoting their personal interests or utility and neglect and even harm minority shareholders and thus destroy value (López de Foronda et al. 2007).

The effect of other large shareholders on family firm performance also differs, depending on how the control is exercised by families. Control within family firms may be implemented by controlling firm ownership (passive control) or by assuming the position of either CEO or chair of the board of directors (active control). Patterns of separation of ownership and control may vary across countries (Bukart et al. 2003). In the US, founders often hire professional managers in the early stages of a firm's existence and, by the time the founder retires, his or her family retains only marginal ownership. However, in Western Europe, significant stakes of shares typically remain with the family after the founder retires. When the control of the family is characterized by holding large stakes and managing the firm by serving as firm CEO, filling other top management positions, or occupying board seats, families can more readily align firm interests with their own. Therefore, the negative effects of family ownership on firm performance may be magnified (Anderson and Reeb 2003). For instance, when a family firm's chairperson is also the CEO or a member of the same family, families can extract greater private benefits of control that may harm minority shareholders' wealth. However, when the control is passive, families may have more difficulties inducing managers to pursue the families' interests, especially in the presence of another large shareholder; hence, higher firm performance should be expected (Anderson and Reeb 2004).

5 The Role of Large Shareholders in the Context of Tunnelling

The separation between management and ownership is the basis of *Type 1* agency conflict. In the context of family firms, this type of agency conflict is therefore weak. However, these firms are noted for another type of agency conflict, *Type 2*, that is, between the controlling shareholders (e.g., families) and the minority shareholders. Replacing one type of agency problem with another has important implications for family firms because a family uses a variety of means to transfer a significant proportion of the free cash flows from a company in which it usually has small cash flow rights but large voting rights into a company in which it has large cash flow rights and control (e.g., Johnson et al. 2000; Boubaker 2007). Hence, controlling families may then maximize their private benefits at the expense of other shareholders (Hwang and Hu 2009).

Tunnelling can take the form of expropriating cash flows, assets, equity, or some combination of two or more of these firms attributes (Atanasov et al. 2008; Boubaker and Sami 2011). Cash flow tunnelling includes the sale of a firm's output at below-market prices to another firm in which the family or other blockholder has significant or complete cash flow rights, or overpayment for inputs purchased from such firms. Cash flow tunnelling can also result in excessive salaries or perquisites for family members (or insiders). Asset tunnelling involves the transfer of a firm's assets to companies fully owned by families (or blockholders) and can significantly affect a firm's long-term ability to generate cash flows. Equity tunnelling involves actions that benefit the families/blockholders at the expense of a reduction in the value of the shares owned by the other investors (e.g., sale of new shares to the families at below-market prices).

For example, the Tanzi family, which controlled the Paramalat group, tunnelled out at least USD three billion from the group companies into other companies directly owned by the family (Enriques and Volpin 2007). This amount accounted for a sixth of the group's use of financial resources between 1990 and 2003 and 30 % of the group's debt. The transfer of resources was accomplished largely by way of overpayment for the acquisition of assets, and the family used other means, such as hiding losses and understating debt on their financial statements, to cover up the fraud. Hence, in the long run, any expropriation of cash results in a loss of earnings for minority shareholders, either directly or by way of loss of productive assets, which in turn reduces outside investment in these firms. Consequently, tunnelling has implications for earnings management by firms. Furthermore, the empirical evidence strongly suggests that the likelihood of earnings management is greater among firms in which ownership is concentrated in the hands of blockholders such as families.[2] In this context, a growing body of research examines the governance role of MLS structures.

[2] Empirical evidence on tunnelling by family and other large blockholders is documented for Bulgaria by Atanasov (2005), for China by Gao and Kling (2008), for France by Boubaker and Sami (2011), for Hong Kong by Cheung et al. (2006), for India by Bertrand et al. (2002), for Japan

5.1 Earnings Management

As previously mentioned, in companies in which there is significant divergence between voting rights and cash flow rights, families/blockholders can generate significant private benefits by using their superior company-specific information because the other shareholders do not have the necessary information to 'see through' the manipulated earnings (e.g., Francis et al. 2005). Moreover, earnings management can also occur due to the other shareholders having insufficient resources, incentives, or access to relevant information to monitor family-owned firms (Fan and Wong 2002). It is well known, despite the elaborate corporate governance network, that Enron was able to attract large sums of capital to fund a questionable business model, conceal its true performance through a series of accounting and financing manoeuvres, and hype its stock to unsustainable levels (Healy and Palepu 2003).

Earnings management exists due to loopholes in accounting standards. The loopholes exist because financial reports convey managers' information on firm performance. Thus accounting standards permit managers to exercise judgement in financial reporting (Financial Accounting Concepts Statement, No. 5, 1984). To have a rigid accounting system with no rules offering the possibility for judgements, the accounting system should provide rules for all circumstances, which is almost impossible. Hence generally accepted accounting principles require that judgement be exercised in preparing financial statements. Thus managers can use their firm-specific knowledge to select reporting methods and disclosures that increase the value of accounting as a form of communication. However, because auditing is imperfect, managements' use of judgement also creates opportunities for earnings management, in which managers choose reporting methods and estimates that do not accurately reflect their firms' underlying economics.

The majority of studies about earnings management focus on *Type 1 agency problems*. In this context, the principal motivation for earnings management is executive compensation. Managerial compensation typically consists of a basic salary and a bonus. The bonus is usually tied to accounting performance measures (e.g., earnings and return on equities). Thus managers have incentives to influence their compensation by managing either accruals or real transactions (e.g., Warfield et al. 1995; Evans and Sridhar 1996). However, there are other incentives for managers to exercise discretion in financial reporting. For instance, higher corporate earnings result in higher share value, which increases job security and wealth if managers are shareholders (e.g., Watts and Zimmerman 1986). Managers can also use current discretionary accruals to maximize both this time period's bonus and the expected value of next period's bonus. Moreover, if earnings are above or below last year's earnings, managers can shift income to future time periods to maximize multiperiod compensation (Healy 1985; Guidry et al. 1999).

by Weinstein and Yafeh (1998), for Russia and the US by Atanasov et al. (2006), for South Korea by Bae et al. (2002), and for Sweden by Bergstrom and Rydqvist (1990).

However, a growing literature argues that *Type 2 agency conflict* is also a main reason behind earnings management. For example, Francis et al. (2005) find that earnings in dual-class firms (i.e., firms characterized by the separation of cash flow rights from voting rights) are less informative than in single-class firms. This finding suggests that the separation of control rights and ownership is negatively related to the informativeness of accounting earnings. Similar evidence is provided for East Asia, where firms report a high discrepancy between voting rights and cash flow rights (Claessens et al. 2002). This discrepancy provides controlling shareholders incentives to take self-interested actions, causing the reported earnings to lose credibility with outside investors (Fan and Wong 2002). Hence, there is a credibility-reducing effect of entrenchment that is increasing in the degree of divergence between cash flow rights and voting rights (Ali et al. 2007).[3]

In this context, a large body of literature emphasizes the monitoring role that can be played by outside shareholders (e.g., Shleifer and Vishny 1986). However, because outside investors may lack incentives to monitor controlling owners, since they would bear all the monitoring costs but capture only a small portion of the monitoring gains (Grossman and Hart 1980), an ownership structure with multiple controlling shareholders may work as a commitment device that can achieve optimal monitoring intensity (e.g., Pagano and Roëll 1998). Accordingly, the presence of several large shareholders can then be associated with valuable monitoring; in turn, multiple blocks commit the firm to protect minority investors (Bloch and Hege 2001). Moreover, Bennedsen and Wolfenzon (2000) show that it is optimal to have as many shareholders as possible in a controlling coalition. The greater the cash flow possessed by this coalition, the more the coalition internalizes the costs of private benefits extraction and limits minority expropriation. In addition, the authors show that sharing control among large shareholders increases firm efficiency, particularly in firms with investment opportunities that are hard for outsiders to evaluate.[4]

Empirical studies seem to confirm that the presence of several large shareholders should have a positive effect on minority investors and firm efficiency. In line with Laeven and Levine (2008), Maury and Pajuste (2005) argue that the contestability of the controlling coalition's power may increase firm value and limit the expropriation of minority shareholders. Furthermore, the marginal cost of stealing increases with the number of coalition partners, thereby discouraging the extraction of private benefits and the diversion of profits. Therefore high control contestability of the

[3] Several other studies provide evidence on whether earnings management influences share price. For example, Perry and Williams (1994) analyse earnings manipulation in the year preceding the public announcement of a management buyout and conclude that management manipulates discretionary accruals to understate earnings in the hope of decreasing the share price. Others demonstrate that the vehicle used for earnings management is transactions with related firms. For instance, Gordon and Henry (2005) show that in the US absolute adjusted abnormal accruals, a proxy for earnings management, is positively correlated with certain related-party transactions.

[4] Yet a number of studies argue that multiple blockholders are unlikely to emerge (e.g., Winton 1993; Zwiebel 1995).

largest controlling shareholder can enhance a firm's information quality, and thus increasing earnings informativeness (Attig et al. 2009). As shown by Attig et al. (2008), control contestability can downgrade the negative effects of a single large shareholder – such as earnings manipulation, low disclosure quality, and the extraction of private benefits – because other large shareholders intervene in the preparation of the financial information.

5.2 The Cost of Capital

The previous section suggests that that agency costs and asymmetric information problems in publicly traded firms are mainly driven by the separation between the control and ownership rights (i.e., excess control) of the controlling shareholder. Furthermore, empirical studies document that excess control engenders value discount (Claessens et al. 2002) and higher liquidity costs (Attig et al. 2006) and influences the quality of financial reporting (Fan and Wong 2005), which can result in increased costs to firms since financing becomes more expensive (e.g., La Porta et al. 2002, 2006).

Recent accounting and finance literature documents a significant association between the cost of equity capital and information quality. For instance, the theoretical work of Easley and O'Hara (2004) demonstrates that lower firm information quality (e.g., asymmetric information) leads to a high cost of capital. Empirically, Francis et al. (2005) conclude that enhanced financial information (e.g., greater disclosure, more transparent earnings, more independent audit committees, and lower abnormal accruals) is associated with a lower cost of equity capital for firms. In addition, Guedhami and Mishra (2009) document a positive relation between the cost of equity and the largest shareholder's excess control. This relation, as explained by Dyck and Zingales (2004a), implies that minority shareholders are willing to pay lower value for shares. Thus lowering the value of all companies limits the ability of such firms to find attractive investment projects.

Because investing and financing decisions are critical for a firm, Attig et al. (2008) examine whether the presence of large shareholders alleviates the firm's agency costs and information asymmetry manifested in the cost of equity financing. Controlling for other potential determinants of the cost of capital, the authors' findings suggest that the presence, number, and control size of multiple large blockholders beyond the largest shareholder are associated with significantly lower costs of equity, lending support to the efficient monitoring role of MLS. Attig et al. also conclude that the presence of multiple controlling shareholders with comparable voting power mitigates a firm's agency costs and lowers its cost of equity capital. This result could be because a high risk of control contestability (of the largest controlling shareholder) is likely to enhance a firm's information quality and thus lower its cost of equity capital. In sum, the authors conclude that the discount rate is an important channel through which investors value the monitoring role of MLS in limiting the diversion of a firm's resources for private

benefits. However, additional tests investigating the effects of ownership identity reveal that when the two largest shareholders are families, the information risk is high; consequently, the cost of equity is high too. In line with Maury (2006), this result shows that the connection between family control and different types of monitors is relevant in shaping firms' agency problems.

5.3 Cash Holdings

Empirical evidence suggests that minority investors are vulnerable to expropriation problems in firms where the controlling shareholder holds control rights in excess of his or her commensurate capital investment. Several studies document the presence of MLS across the globe (e.g., La Porta et al. 1999; Claessens et al. 2000; Faccio and Lang 2002; Thomsen et al. 2006). While recent theoretical developments have expanded the discussion of firms' agency costs to address the potential economic effects of the existence of large blockholders beyond the controlling shareholder, they do not provide unequivocal evidence of the governance role of MLS. Furthermore, in face of these arguments, other studies show that family-controlled firms are associated with more pronounced agency costs because controlling families tend to build uncommon power positions by either controlling the board or through pyramidal structures (e.g., Claessens et al. 2002; Almeida and Wolfenzon 2006; Attig et al. 2006; Boubakri et al. 2010). Therefore it is important to extend this stream of research by highlighting the role of MLS in mitigating family firms' agency problems, such as the valuation of firms' cash holdings.

Cash holdings (i.e., cash reserves above the level needed to conduct day-to-day operations and pursue profitable growth opportunities) can be converted into private benefits at a lower cost than other assets (Myers and Rajan 1998), thus decreasing firm value (e.g., Dittmar and Mahrt-Smith 2007; Kalcheva and Lins 2007; Masulis et al. 2009; Frésard and Salva 2010). This effect may be strong in family firms due to concerns about the problems associated with family control and the increasing likelihood of the abuse of managerial power (Morck et al. 1988; Smith and Amoako-Adu 1999). Moreover, family interest may dominate over the interests of non-family shareholders because the concentration of personal and family wealth in owner-managed firms normally creates a preference for income and wealth preservation over other dimensions of firm performance, such as the maximization of dividend payments to outside shareholders (DeAngelo and DeAngelo 2000). Additionally, family control tends to shield a firm from the disciplinary pressure of the market on corporate control because concentrated ownership reduces the probability of a hostile takeover (Gomez-Mejia et al. 2001).

In this context, recent corporate governance research suggests that MLS decrease the potential extraction of private benefits through their role as participants in the internal decision process (e.g., Laeven and Levine 2008), as well as through their role as informed traders (Edmans and Manso 2011). Furthermore, because of high exit costs – such as price effects, transaction costs, tax timing, and rebalancing

costs – the sale of large blockholdings becomes unattractive and monitoring increasingly desirable (Hirschman 1970). Accordingly, the adverse price impact associated with the sale of MLS stakes also strengthens the alignment between managers and shareholders, which helps ensure better governance and thus better use of excess cash holdings.

Although scarce, the empirical evidence shows that the presence of MLS is positively associated with the value of cash holdings, indicating that MLS are associated with beneficial internal monitoring. Attig et al. (2011) find that the positive valuation effects of MLS presence and voting dispersion are more pronounced in family-controlled firms, implying that the effectiveness of the MLS governance role varies with the identity of the largest shareholder. This result is due to the fact that the possibility of agreement among family shareholders is more feasible. A coalition formed by families faces lower costs of extracting private benefits than a coalition that includes an institutional investor or a bank, which is under stricter supervision by regulatory authorities and consequently increases the costs of extracting private benefits (Maury and Pajuste 2005). In other words, it is much more difficult to form coalitions to expropriate minority shareholders among institutional investors than among families or private shareholders. Accordingly, consistent with the greater potential for expropriation in family-controlled firms, Attig et al. (2011) show that control contestability is more valuable in family firms.

However, the literature also shows that firms experiencing *Type 2 agency problems,* agency costs may actually be reduced when the controlling blockholder's share of the equity crosses some threshold (i.e., when there is significant convergence between cash flow rights and voting rights). For instance, regarding Chinese firms, Ding et al. (2007) find that when the ownership concentration is high (i.e., more than 55 %), large shareholders are more likely to seek to preserve its future growth potential by minimizing accounting earnings. In addition, Ali et al. (2007) show that family firms exhibit less discretionary accruals and that in these firms earnings components better predict cash flows; family firms are also more likely to warn about likely negative shocks to the companies than their non-family counterparts. Hence the quality of disclosure in family firms is quite good (e.g., Hutton 2007; Wang 2006). These divergent perspectives suggest that whether or not MLS serve a monitoring role in mitigating the agency problems of concentrated control is still an open issue.

6 Conclusion

Until recently, the dominant paradigm in the academic literature was that most public companies are widely held. Berle and Means (1932) and later Jensen and Meckling (1976) were among the first to state that the separation between ownership and control can cause problems and incur important costs to shareholders. In this context, the main challenge is to provide remedies to the classical agency problem present in such corporations. However, recent studies on ownership

structure reveal that in most markets a large number of listed companies do not have a widely dispersed ownership structure; they have, in general, one or more large shareholders that can be categorized as families, states, or other industrial or financial companies.

The potential benefits associated with the presence of a majority shareholder are not new. Because such large shareholders have a large part of their wealth invested in the company, they have a bigger incentive to control management. Accordingly, every shareholder should benefit from this situation. Furthermore, as stated by Himmelberg et al. (1999) and Demsetz and Villalonga (2001), each company chooses the form of ownership that minimizes agency costs; hence ownership concentration does not have an influence on firm value.

However, the potential benefits of having a large shareholder in a company can be limited by the appearance of another type of agency problem, *type 2 agency conflict*. Large shareholders can influence decisions that foster their personal profit or utility but neglect and even harm minority shareholders. The extraction of private benefits is at the centre of this problem. Large owners are less motivated to sell out and give up private benefits even if this has a positive effect on the firm's current value (Shleifer and Vishny 1997; La Porta et al. 1998). Hence blockholder ownership can exceed value-maximizing levels while variations in blockholder ownership can have a systematic effect on firm value, despite Demsetz's (1983) conjecture of no equilibrium effect.

Theoretical models predict that, given a firm's characteristics, the structure of the controlling group may have important effects on performance. In Pagano and Roëll's (1998) model, as the number of large shareholders increases and their individual stakes decrease, there will be less monitoring and performance will deteriorate if there is undermonitoring. In Gomes and Novaes's (2001) model, the effect on performance depends on whether the 'bargaining coalition effect' or the disagreement effect dominates. Hence a concave relation between blockholders and performance is predicted. However, Bennedsen and Wolfenzon (2000) state that performance will be increasing in the number of members of the control coalition as well as decreasing in the overall number of blockholders, which is inversely related to the controlling stake. Moreover, according to Bloch and Hege (2001), performance will be increasing in the degree of contestability.

In addition, international studies show that family firms are a predominant ownership form (e.g., La Porta et al. 1999). This new feature of ownership calls for a careful analysis of how large shareholders interact among themselves, how they exercise their power and control, and how their mutual coexistence affects firm performance. The literature suggests that the nature and identity of the second large shareholder has a strong impact on firm performance. Moreover, the way family firms design their corporate governance structures is not irrelevant. Empirical studies in line with Bennedsen and Wolfenzon's (2000) and Zwiebel's (1995) models indicate that if the large shareholders are two or more families and/or individuals, especially when the posts of CEO and chair of the board are shared by the same family member, this enhances the possibility of extracting private benefits from control.

7 Implications for Future Research

When firms dissociate ownership and control through control-enhancing mechanisms, it allows for a higher probability of extracting private benefits. According to Bebchuck and Roe (1999), greater private benefits of control could be one reason why incumbent blockholders such as families, governments, banks, and business groups hold on to their shares. When they reduce their holdings relative to outside portfolio investors, the markets may (correctly) infer a greater emphasis on shareholder value. Thus, because institutional settings can also influence the analyses, additional international and cross-cultural studies regarding this subject would enhance understanding of the importance of different large shareholders in firm value.

Moreover, future studies should account for the differences between the ownership held by the largest and the other large shareholders (e.g., the second and third) within firms – for instance, by analysing how long and why these shareholders stay in a company. Furthermore, because families appear to be one of the most common forms of ownership concentration, it is important to analyse more in depth how firm corporate governance structures influence family firm performance (e.g., the different combinations of large shareholders on the board). Moreover, because previous studies showed that the results differ for different methodologies, it is important to investigate more carefully the endogeneity of ownership in empirical studies. In sum, in addition to the need for more empirical studies, theoretical models that analyse these issues will enhance the understanding of the role of other large shareholders on firm value and performance.

Acknowledgements NECE – research unit financed by the Portuguese Foundation for Science and Technology (FCT) pluriannual programme for research and development units.

Appendix: Empirical Studies About Family Firms

Authors	Country	Key findings
McConaughy et al. (1998)	Canada	Family firms outperform their non-family counterparts. Active management by the family and especially by the founder seems important for the firm to create value and be more profitable
Anderson and Reeb (2003)	US – S&P 500	Family firms with a founding family member CEO are more profitable. Descendants as CEO, however, do not seem to affect performance
Villalonga and Amit (2006)	US Fortune 500 companies	Family firms in which the founder is active as CEO or chairperson perform well, while those with descendants as CEO or chairperson perform worse. Differentiation between ownership and control (e.g., through cross-holdings, pyramidal structures, or dual-class shares) negatively affect firm performance. Thus family firms per se do not outperform non-family firms

(continued)

Authors	Country	Key findings
Pérez-González (2006)	Spain	Inherited control has a negative impact on both firm valuation and profitability that can be interpreted as a sign of nepotism if founders put their heirs in charge of the firm instead of an outsider
Barontini and Caprio (2006)	Western Europe	Family firms with a founder CEO perform best. Companies with descendants perform differently: If the descendant member of the family only assumes a non-executive position, the firm still outperforms non-family firms. If the descendant member is the CEO, the firm performs as well as a non-family firm. Only if the family takes no active role at all does the firm perform worse
Maury (2006)	Western Europe	Revealing a non-linear relation between control and performance, the results suggest that benefits from family ownership fade with higher levels of controls. Profitability increases with family control level, indicating that family management improves the company's efficiency but minority shareholders cannot really profit from it
Favero et al. (2006)	Italy	Market performance is not different for family firms. When a dynamic performance measurement approach is used, similar positive results are found as for accounting measures. Hence differences in previous studies may be due to the different methods employed
Sraer and Thesmar (2007)	France	Founders explain most of the outperformance and describe different reasons linked to labour force, wages, and productivity explaining why the respective management type delivers superior performance

References

Acker, L., & Athnassakos, A. (2003). A simultaneous equation analysis of analyst' forecast bias and institutional ownership. *Journal of Business, Finance and Accounting, 30*, 1017–1041.

Admati, A., Pfleiderer, P., & Zechner, J. (1994). Large shareholder activism, risk sharing and financial market equilibrium. *Journal of Political Economy, 102*, 1097–1130.

Agrawal, A., & Mandelker, G. (1990). Large shareholders and the monitoring of managers: The case of antitakeover charter amendments. *Journal of Financial and Quantitative Analysis, 25*(2), 143–161.

Ali, A., Chen, T., & Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics, 44*, 238–286.

Allen, J., & Phillips, G. (2000). Corporate equity ownership and product market relationships. *Journal of Finance, 55*, 2791–2815.

Almeida, H., & Wolfenzon, D. (2006). A theory of pyramidal ownership and family business groups. *Journal of Finance, 61*, 2637–2680.

Anderson, R., & Reeb, D. (2003). Founding-family ownership and firm performance. Evidence from the S&P 300. *Journal of Finance, 58*(3), 1301–1328.

Anderson, R., & Reeb, D. (2004). Board composition: Balancing family influence in S&P 500 firms. *Administrative Science Quarterly, 49*(2), 209–237.

Andres, C. (2008). Large shareholders and firm performance: An empirical examination of founding-family ownership. *Journal of Corporate Finance, 4*, 431–445.
Ashbaugh-Skaife, H., Collins, R., & LaFond, R. (2006). The effects of corporate governance on firms' credit ratings. *Journal of Accounting and Economics, 42*, 203–243.
Atanasov, V. (2005). How much value can blockholders tunnel? Evidence from the Bulgarian mass privatization auctions. *Journal of Financial Economics, 76*, 191–234.
Atanasov, V., Black, B., Ciccotello, C. S., & Gyoshev, S. (2006). The anatomy of financial tunnelling in an emerging market. Finance working paper no. 123/2006, European Corporate Governance Institute.
Atanasov, V., Black, B. & Ciccotello, C. S. (2008). Unbundling and measuring tunnelling. Law and Economics *Working Paper* No. 117, School of Law, University of Texas and Austin.
Attig, N., Fong, W., Lang, L., & Gadhoum, Y. (2006). Effects of large shareholding on information asymmetry and stock liquidity. *Journal of Banking and Finance, 30*, 2875–2892.
Attig, N., Guedhami, O., & Mishra, D. (2008). Multiple large shareholders, control contests and implied cost of equity. *Journal of Corporate Finance, 14*, 721–737.
Attig, N., El Ghoul, S., & Guedhami, O. (2009). Do multiple large shareholders play a corporate governance role? Evidence from East Asia. *Journal of Financial Research, 32*, 395–422.
Attig, N., El Ghoul, S., Guedhami, O., & Rizenau, S. (2011). Multiple large shareholders and the value of cash holdings, forthcoming. Journal of Management Governance DOI 10.1007/s10997-011-9184-3.
Bae, K., Kang, J., & Kim, J. (2002). Tunnelling or value added? Evidence from mergers by Korean business groups. *Journal of Finance, 57*, 2695–2740.
Barca, F., & Becht, M. (2001). *The control of corporate Europe*. Oxford: Oxford University Press.
Barclay, M., & Holderness, C. (1991). Negotiated block trades and corporate control. *Journal of Finance, 46*(3), 861–878.
Barclay, M., & Holderness, C. (1992). The law and large block trades. *Journal of Law and Economics, 35*, 265–294.
Barontini, R., & Caprio, L. (2006). The effect of family control on firm value and performance: Evidence from Continental Europe. *European Financial Management, 12*, 689–723.
Bebchuck, L., & Roe, M. (1999). A theory of path dependence in corporate ownership and governance. *Stanford Law Review, 52*(1), 127–170.
Bennedsen, M., & Wolfenzon, D. (2000). The balance of power in close corporations. *Journal of Financial Economics, 58*(1–2), 113–139.
Bergstrom, C., & Rydqvist, K. (1990). Ownership of equity in dual-class firms. *Journal of Banking and Finance, 14*, 255–269.
Berle, A., & Means, C. (1932). *The modern corporation and private property*. New York: Macmillan.
Bertrand, M., Mehta, P., & Mullainathan, S. (2002). Ferreting out tunnelling: An application to Indian business groups. *Quarterly Journal of Economics, 117*, 121–148.
Bethel, J., Porter, J., & Opler, T. (1998). Block share purchases and corporate performance. *Journal of Finance, 53*(1), 605–634.
Bhide, A. (1994). Efficient markets, deficient governance: U.S. securities regulations protect investors and enhance market liquidity. But do they alienate managers and shareholders? *Harvard Business Review, 72*, 128–140.
Bianco, M., & Casavola, P. (1999). Italian corporate governance: Effects on financial structure and performance. *European Economic Review, 44*(6), 1057–1069.
Bloch, F., & Hege, U. (2001). *Multiple shareholders and control contests*. France: Université Aix-Marseille.
Bolton, P., & von Thadden, E. (1998). Blocks, liquidity, and corporate control. *Journal of Finance, 53*(1), 1–25.
Boubaker, S. (2007). Ownership–control discrepancy and firm value: Evidence from France. *Multinational Finance Journal, 11*(3&4), 211–252.

Boubaker, S., & Sami, H. (2011). Multiple large shareholders and earnings informativeness. *Review of Accounting and Finance, 10*(3), 246–266.

Boubakri, N., Guedhami, O., & Mishra, D. (2010). Family control and the implied cost of equity: Evidence before and after the Asian financial crisis. *Journal of International Business Studies, 41*, 451–474.

Brockman, P., & Yan, S. (2009). Block ownership and firm-specific information. *Journal of Banking and Finance, 33*, 308–316.

Bukart, M., Panunzi, F., & Shleifer, A. (2003). Family firms. *Journal of Finance, 58*(5), 2167–2201.

Burkart, M., Gromb, D., & Panunzi, F. (1997). Large shareholders, monitoring, and the value of the firm. *Quarterly Journal of Economics, 112*, 693–728.

Chen, S., Nagar, V., & Rajan, M. (2005). Identifying control motives in managerial ownership: Evidence from antitakeover legislation. *Review of Financial Studies, 18*, 637–672.

Chen, X., Harford, J., & Li, K. (2007). Monitoring: Which institutions matter. *Journal of Financial Economics, 86*, 279–305.

Cheung, Y., Rau, P., & Stouraitis, A. (2006). Tunnelling, propping and expropriation: Evidence from connected party transactions in Hong Kong. *Journal of Financial Economics, 82*, 343–386.

Cho, M. (1998). Ownership structure, investment, and the corporate value: An empirical analysis. *Journal of Financial Economics, 47*(1), 103–121.

Claessens, S., Djankov, S., & Lang, L. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics, 58*, 81–112.

Claessens, S., Djankov, S., Fan, J., & Lang, L. (2002). Disentangling the incentive and entrenchment effects of large shareholders. *Journal of Finance, 57*, 2741–2771.

Cronqvist, H., & Nilsson, M. (2003). Agency costs of controlling minority shareholders. *Journal of Financial and Quantitative Analysis, 38*(4), 695–714.

DeAngelo, H., & DeAngelo, L. (2000). Controlling stockholders and the disciplinary role of corporate payout policy: A study of the Times Mirror company. *Journal of Financial Economics, 56*, 153–207.

Demsetz, H. (1983). The structure of ownership and the theory of the firm. *Journal of Law and Economics, 26*(2), 375–394.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy, 93*(6), 1155–1177.

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance, 7*, 209–233.

Denis, D., & McConnell, J. (2003). International corporate governance. *Journal of Financial and Quantitative Analysis, 38*(1), 1–36.

Denis, D., & Sarin, A. (1999). Ownership and board structures in publicly traded corporations. *Journal of Financial Economics, 52*(2), 187–223.

Dharwadkar, R., Goranova, M., Brandes, P., & Khan, R. (2008). Institutional ownership and monitoring effectiveness: It's not just how much but what else you own. *Organizational Science, 19*(3), 419–440.

Ding, Y., Zhang, H., & Zhang, J. (2007). Private versus state ownership and earnings management: Evidence from Chinese listed companies. *Corporate Governance: An International Review, 15*, 223–238.

Dittmar, A., & Mahrt-Smith, J. (2007). Corporate governance and the value of cash holdings. *Journal of Financial Economics, 83*, 599–634.

Dyck, A., & Zingales, L. (2004a). Control premiums and the effectiveness of corporate governance systems. *Journal of Applied Corporate Finance, 16*, 51–72.

Dyck, A., & Zingales, L. (2004b). Private benefits of control: An international comparison. *Journal of Finance, 59*, 537–600.

Easley, D., & O'Hara, M. (2004). Information and the cost of capital. *Journal of Finance, 59*, 1553–1583.

Eckbo, B., & Smith, D. (1998). The conditional performance of insider trades. *Journal of Finance, 53*(2), 467–498.
Edmans, A., & Manso, G. (2011). Governance through trading and intervention: A theory of multiple blockholders. *Review of Financial Studies, 24*, 2395–2428.
Edwards, J., & Nibler, M. (2000). Corporate governance in Germany: The influence of banks and large equity holders. *Economic Policy, 25*(31), 239–267.
Enriques, L., & Volpin, P. (2007). Corporate governance reforms in Continental Europe. *Journal of Economic Perspectives, 21*, 117–140.
Esterin, S., & Prevezer, M. (2011). The role of informal institutions in corporate governance: Brazil, Russia, India and China compared. *Asia Pacific Journal of Management, 28*, 41–67.
Evans, J., & Sridhar, S. (1996). Multiple control systems, accrual accounting, and earnings management. *Journal of Accounting Research, 34*, 45–65.
Faccio, M., & Lang, L. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics, 65*, 365–395.
Fama, E., & Jensen, M. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*, 301–325.
Fan, J., & Wong, T. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics, 33*, 401–425.
Fan, J., & Wong, T. (2005). Do external auditors perform corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research, 43*, 1–38.
Favero, C., Giglio, M., Honorati, M., & Panunzi, F. (2006). The performance of Italian family firms. ECGI – Finance working paper no. 127/2006.
Francis, J., Khurana, I., & Pereira, R. (2005). Disclosure incentives and effect on cost of capital around the world. *Accounting Review, 80*, 1125–1162.
Frésard, L., & Salva, C. (2010). The value of excess cash and corporate governance: Evidence from U.S. cross-listings. *Journal of Financial Economics, 98*, 359–384.
Gao, L., & Kling, G. (2008). Corporate governance and tunnelling: Empirical evidence from China. *Pacific-Basin Finance Journal, 16*, 591–605.
Gomes, A., & Novaes, W. (2001). Sharing of control as a corporate governance mechanism. PIER working paper 01–029, University of Pennsylvania Law School.
Gomez-Mejia, L., Nunez-Nickel, M., & Guttierrez, I. (2001). The role of family ties in agency contracts. *Academy of Management Journal, 44*, 81–95.
Gordon, E., & Henry, E. (2005). Related party transactions and earnings management. Available at SSRN, http://ssrn.com/abstract=612234.
Gorton, G., & Schmid, F. (2000). Universal banking and the performance of German firms. *Journal of Financial Economics, 58*(1/2), 29–80.
Grossman, S., & Hart, O. (1980). Takeover bids, the free-rider problem and the theory of the corporation. *Bell Journal of Economics, 11*, 42–64.
Guedhami, O., & Mishra, D. (2009). Excess control, corporate governance, and implied cost of equity: International evidence. *Financial Review, 44*, 489–524.
Guedhami, O., Attig, N., & El Ghoul, S. (2009). Do multiple large shareholders play a corporate governance role? Evidence from East Asia. *Journal of Financial Research, 32*, 395–422.
Guidry, F., Leone, J., & Rock, S. (1999). Earnings-based bonus plans and earnings management by business-unit managers. *Journal of Accounting and Economics, 26*, 113–142.
Healy, P. (1985). The impact of bonus schemes on the selection of accounting principles. *Journal of Accounting and Economics, 7*, 85–107.
Healy, P., & Palepu, K. (2003). The fall of Enron. *Journal of Economic Perspectives, 17*, 3–26.
Himmelberg, C., Hubbard, R., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership structure and performance. *Journal of Financial Economics, 53*, 353–384.
Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations and states*. Cambridge, MA: Harvard University Press.

Holderness, C., & Sheehan, D. (1985). Raiders or saviors? The evidence in six controversial investors. *Journal of Financial Economics, 14*(4), 555–580.

Holderness, C., & Sheehan, D. (1988). The role of majority shareholders in public held corporations. *Journal of Financial Economics, 20*(1), 317–346.

Hoshi, T., Kashyap, A., & Sharfstein, D. (1990). The role of banks in reducing the costs of financial distress in Japan. *Journal of Financial Economics, 27*(1), 67–88.

Hutton, A. (2007). A discussion of 'corporate disclosures by family firms'. *Journal of Accounting and Economics, 44*, 287–297.

Hwang, J., & Hu, B. (2009). Private benefits: Ownership versus control. *Journal of Financial Research, 32*(4), 365–393.

Jara-Bertín, M., López-Iturriaga, F., & López de Foronda, O. (2008). The contest to the control in European family firms: How other shareholders affect firm value. *Corporate Governance: An International Review, 16*(3), 146–159.

Jensen, M. (1986). Agency cost of free cash flow, corporate finance, and takeovers. *American Economic Review, 76*, 323–329.

Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 58*(1–2), 113–139.

Johnson, S., La Porta, R., Lopez de Silanes, F., & Shleifer, A. (2000). Tunneling. *Journal of Accounting and Economics, 44*, 238–286.

Kahn, C., & Winton, A. (1998). Ownership structure, speculation, and shareholder intervention. *Journal of Finance, 53*, 99–129.

Kalcheva, I., & Lins, K. V. (2007). International evidence on cash holdings and expected managerial agency problems. *Review of Financial Studies, 20*, 1087–1112.

Khan, R., Dharwadkar, R., & Brandes, P. (2005). Institutional ownership and CEO compensation: A longitudinal examination. *Journal of Business Research, 58*(8), 1078–1088.

La Porta, R., Lopez de Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political, Economy, 106*, 1113–1155.

La Porta, R., Lopez de Silanes, F., Shleifer, A., & Vishny, R. W. (1999). Corporate ownership around the world. *Journal of Finance, 54*(2), 471–519.

La Porta, R., Lopez de Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate valuation. *Journal of Financial Economics, 58*, 3–27.

La Porta, R., Lopez de Silanes, F., Shleifer, A., & Vishny, R. W. (2002). Investor protection and corporate valuation. *Journal of Finance, 57*, 1147–1170.

La Porta, R., Lopez de Silanes, F., & Shleifer, A. (2006). What works in securities laws? *Journal of Finance, 61*, 1–32.

Laeven, L., & Levine, R. (2008). Complex ownership structures and corporate valuations. *Review of Financial Studies, 21*(2), 579–604.

Lehmann, E., & Weigand, J. (2000). Does the governed corporation perform better? Governance structures and corporate performance in Germany. *European Finance Review, 4*(2), 157–195.

Lewellen, W., Loderer, C., & Rosenfeld, A. (1985). Merger decisions and executive stock ownership in acquiring firms. *Journal of Accounting and Economics, 7*, 209–231.

Li, D., Moshirian, F., Pham, P., & Zein, J. (2006). When financial institutions are large shareholders: The role of macro corporate governance environments. *Journal of Finance, 61*(6), 2975–3007.

Loderer, C., & Martin, K. (1997). Executive stock ownership and performance. *Journal of Financial Economics, 45*, 223–255.

López de Foronda, O., López-Iturriaga, F., & Santamaría Mariscal, M. (2007). Ownership structure, sharing of control and legal framework: International evidence. *Corporate Governance: An International Review, 15*(6), 1130–1143.

Masulis, R. W., Wang, C., & Xie, F. (2009). Agency problems at dual-class companies. *Journal of Finance, 64*, 1697–1727.

Maug, E. (1998). Large shareholders as monitors: Is there a trade-off between liquidity and control? *Journal of Finance, 53*, 65–98.

Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance, 12*, 321–341.
Maury, B., & Pajuste, A. (2005). Multiple large shareholders and firm value. *Journal of Banking and Finance, 29*, 1813–1834.
McConaughy, D., Walker, M., Henderson, G., & Mishra, C. (1998). Founding family controlled firms: Efficiency and value. *Review of Financial Economics, 7*, 1–19.
McConnell, J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics, 27*, 595–612.
McConnell, J., & Servaes, H. (1995). Equity ownership and the two faces of debt. *Journal of Financial Economics, 39*, 131–157.
Mehran, H. (1995). Executive compensation structure, ownership and firm performance. *Journal of Financial Economics, 38*, 163–184.
Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. Boston: Harvard Business School Press.
Miller, D., Miller, I., Lester, R., Cannella, J., & Albert, A. (2007). Are family firms really superior performers? *Journal of Corporate Finance, 13*, 829–858.
Moeller, T. (2005). Let's make a deal! How shareholder control impacts merger payoffs. *Journal of Financial Economics, 76*, 167–190.
Morck, R., Shleifer, A., & Vishny, R. (1988). Management ownership and firm value: An empirical analysis. *Journal of Financial Economics, 20*(1), 293–315.
Myers, S., & Majluf, N. (1984). Corporate financing and investment decisions when firms have information investors do not have. *Journal of Financial Economics, 13*, 187–222.
Myers, S., & Rajan, R. (1998). The paradox of liquidity. *Quarterly Journal of Economics, 3*, 733–771.
Nickel, S., Nicolistsas, D., & Dryden, N. (1997). What makes firms perform well? *European Economic Review, 41*(3), 783–796.
Pagano, M., & Roëll, A. (1998). The choice of stock ownership structure: Agency costs, monitoring and the decision to go public. *Quarterly Journal of Economics, 113*, 187–225.
Parrino, R., Richard, W., & Starks, L. (2003). Voting with their feet: Institutional ownership changes around forced CEO turnover. *Journal of Financial Economics, 68*, 3–46.
Pedersen, T., & Thomsen, S. (1999). Economic and systemic explanations of ownership concentration among Europe's largest companies. *International Journal of Economics Business, 6*(3), 367–381.
Pedersen, T., & Thomsen, S. (2003). Ownership structure and value of the largest European firms: The importance of owner identity. *Journal of Management and Governance, 7*, 27–55.
Pérez-González, F. (2006). Inherited control and firm performance. *American Economic Review, 96*, 1559–1588.
Perry, S., & Williams, T. (1994). Earnings management preceding management buyout offers. *Journal of Accounting and Economics, 18*, 157–179.
Randoy, T., & Goel, S. (2003). Ownership structure, founder leadership and performance in Norwegian SMEs: Implications for financing entrepreneurial opportunities. *Journal of Business Venturing, 18*, 619–637.
Renneborg, L. (2000). Ownership, managerial control and the governance of poorly performing companies listed on the Brussels stock exchange. *Journal of Banking and Finance, 24*(2), 1959–1995.
Schnatterly, K., Shaw, K., & Jennings, W. (2008). Information advantages of large institutional owners. *Strategic Management Journal, 29*, 219–227.
Shleifer, A., & Vishny, R. (1986). Large shareholders and corporate control. *Journal of Political Economy, 94*(3), 461–488.
Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance, 52*(2), 737–783.
Slovin, M., & Sushka, M. (1993). Ownership concentration, corporate control activity, and firm value: Evidence from the death of inside blockholders. *Journal of Finance, 48*(4), 1293–1322.

Smith, B., & Amoako-Adu, B. (1999). Management succession and financial performance of family controlled firms. *Journal of Corporate Finance, 5*(4), 341–368.

Song, M., & Walking, R. (1993). The impact of managerial ownership on acquisition attempts and target shareholder wealth. *Journal of Financial and Quantitative Analysis, 28*(4), 439–457.

Sraer, D., & Thesmar, D. (2007). Performance and behavior of family firms: Evidence from the French stock market. *Journal of the European Economic Association, 5*, 709–751.

Steen, T. (2005). Conflicts of interests or aligned incentives? Blockholder ownership, dividends and firm value in the US and the EU. *European Business Organization Law Review, 6*, 201–225.

Stoughton, N., & Zechner, J. (1998). IPO-mechanisms, monitoring and ownership structure. *Journal of Financial Economics, 49*, 45–47.

Thomsen, S., & Pedersen, T. (2000). Ownership structure and economic performance in the largest European countries. *Strategic Management Journal, 21*, 689–705.

Thomsen, S., Pedersen, T., & Kvist, H. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance, 12*, 246–269.

Tribó, J., & Casasola, M. (2010). Banks as firm's blockholders: A study in Spain. *Applied Financial Economics, 20*, 425–438.

Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics, 80*(2), 385–417.

Wang, D. (2006). Founding family ownership and earnings management. *Journal of Accounting Research, 44*, 619–656.

Warfield, T., Wild, J., & Wild, K. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics, 20*, 61–91.

Watts, R., & Zimmerman, J. (1986). *Positive accounting theory*. Englewood Cliffs: Prentice Hall.

Weinstein, D. E., & Yafeh, Y. (1998). On the costs of the bank-centred financial system: Evidence from the changing main bank relations in Japan. *Journal of Finance, 53*, 635–672.

Winton, A. (1993). Limitation of liability and the ownership structure of the firm. *Journal of Finance, 48*, 487–512.

Zeckhouser, R., & Pound, J. (1990). Are large shareholders effective monitors? An investigation of share ownership and corporate performance. In G. R. Hubbard (Ed.), *Asymmetric information, corporate finance and investment*. Chicago: University of Chicago Press.

Zhong, K., Gribbin, D., & Zheng, X. (2007). The effect of monitoring by outside blockholders on earnings management. *Quarterly Journal of Business Economics, 46*(1), 37–60.

Zhou, X. (2001). Understanding the determinants of a managerial ownership and the link between ownership and performance: Comment. *Journal of Financial Economics, 62*, 559–571.

Zwiebel, J. (1995). Block investment and partial benefits of corporate control. *Review of Economic Studies, 62*, 161–185.

Shareholder Activism in Canada: The Emergence of a New Tool for Improving Corporate Governance Practices

Vanessa Serret and Sylvie Berthelot

Abstract Shareholder democracy is gaining ground the world over. This chapter analyses the emergence of shareholder activism in Canada as a tool for improving corporate governance practices and explains the reasons underlying the recent apparition of activism in this country. In addition, it describes the nature of proposals according to filer type and targeted firms, which in turn provides a complete overview of shareholder democracy since its early beginnings and from 2000 to 2009. Finally, a review of activism in other countries offers some elements of comparison.

1 Introduction

Spectacular governance failures such as Enron in the United States, Parmalat in Europe and Nortel in Canada have led to ever-increasing demands on firm governance practices. But how can firms be encouraged to implement these governance practices? Admittedly, financial market authorities in most Western countries have significantly tightened up their requirements, but there's still room for improvement.

The origin of the academic debate underlying shareholder activism goes back to the controversy raised by the seminal work of Berle and Means (1932), in which the authors explain that the shareholders of publicly listed firms on the American market have lost control of their property to the benefit of the CEO. Several decades later, Jensen and Meckling (1976) formalized the issue into the agency theory.

V. Serret (✉)
University of Southern Brittany, Vannes, France
e-mail: vanessa.serret@univ-ubs.fr

S. Berthelot
University of Sherbrooke, Sherbrooke, Québec, Canada
e-mail: sylvie.berthelot@usherbrooke.ca

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_4,

Shareholder activism is becoming increasingly widespread on the international scene. This phenomenon, which traces its roots to the 1940s (Marens 2003), was first well known in the United States. When compared to American[1] or European[2] academic studies, shareholder activism in Canada[3] has been very poorly documented.

No real consensus has been reached on the formal definition of shareholder activism. Generally speaking, it may be defined as shareholders' expressing their opinions in an attempt to influence a targeted firm. In other words, shareholder activists disagree with some practices of a company's management and say so.

Shareholder activism encompasses a wide range of activities (Gillan and Starks 2007) and shareholders can express their disagreements with the firm in question in a number of ways. First of all, they can vote with their feet by selling their shares for discipline corporate management: this is the well-known "exit" strategy (Hirschman 1971) or "walk strategy" (Chung and Talaulicar 2010). Or they can decide to hold on to their shares (Hirschman 1971). At this time, shareholders have a variety of options open to them. For instance, if they suffer damages, they can bring a lawsuit against the company's management. They can also informally negotiate a change with the firm ("behind the scenes" according to Gillan and Starks 2007); or they can issue shareholder proposals to exert pressure on the firm ("voice" according to Hirschman 1971). Following the submission of proposals, they can engage in a proxy fight. And lastly, they may have recourse to the extreme option of the takeover market (Gillan and Starks 2007; Martynova and Renneboog 2008).

In this chapter, the authors provide an overview of the evolution of shareholder dissident activism through proxy proposals in the Canadian context. The first section reviews the historical and institutional background of the development of shareholder activism in Canada. The nature of the proposals, the type of filer and the targeted firms are subsequently examined over a 10-year period from 2000 to 2009. The last section analyses major global trends in shareholder activism and provides some elements of comparison in different countries.

2 The Emergence of Shareholder Activism in Canada

To further understanding of the emergence of shareholder activism in Canada, this section discusses the leading role played by Yves Michaud and his Mouvement d'Éducation et de Défence des Actionnaire Minoritaire (MÉDAC). Secondly, we take a look at the set of rules allowing shareholder proposals, which is also a major factor in promoting the development of activism through proxy proposals.

[1] Marler and Faugère (2010); Renneboog and Szilagyi (2011); Buchanan et al. (2010); Greenwood and Schor (2009); Gillan and Starks (2007); Ertimur et al. (2010); Klein and Zur (2009); Brav et al. (2008a; b); Smith (1996).

[2] Huynh (2010); Poulsen et al. (2010); Betch et al. (2009); Conyon and Sadler (2010); Cziraki et al. (2010); Franks and Mayers (2001); Crespi and Renneboog (2010); Buchanan et al. (2010).

[3] Serret and Berthelot (2012); Bates and Hennessy (2010); Wang et al. (2005).

2.1 Historical Facts: The Leading Role of Yves Michaud and His MEDAC Movement

Shareholder activism is a recent phenomenon in Canada. It dates back to 1997 with the ruling of Justice Rayle in favour of Yves Michaud, politician, Quebec journalist, and above all founding president of MÉDAC (Education movement for the defence of minority shareholders), when he appealed to the Quebec Superior Court. For Yves Michaud, better known in Quebec as "Robin Hood of the banks", one of the issues involved making proxy proposals respecting Board of Directors' compensation at the annual general meetings of two major banks (the National Bank of Canada and the Royal Bank of Canada), as follows:

> It is proposed that the overall compensation paid to the highest-ranking bank official, including annual salary, bonuses, incentives, payments under long-term incentive programs and any other form of compensation, not exceed 20 times the average salary, including fringe benefits, earned by bank employees". And respecting the members of the Board of Directors: "It is proposed that a person who is related to the Bank as a provider of services not be eligible to become a member of the board.

However, in the late 1990s, the banks refused to include such proposals in their proxy circulars, claiming that the so-called "Robin Hood of the banks" was not motivated by the interest of a real shareholder. The matter was subsequently referred to Justice Rayle, who forced the banks to reintroduce the proposals that had been initially brought up not only in the shareholders' interest, but also in that of the stakeholders. In the wake of this judgment, the shareholders of Canadian firms have more freely intervened in annual general meetings (AGM). In recent years, MEDAC has been responsible for over 40 % of the proposals submitted at the AGMs of Canadian companies. Its key priorities today are set out in Table 1 below.

As will be seen later in this chapter, MEDAC is a leader in the combat for improving corporate practices (Serret and Berthelot 2012). However, the legal context also plays a role in determining the emergence of shareholder activism in a given country.

2.2 The Role of the Legal Context in Canada

Since shareholder access to the proxy process is dependent on the institutional context, the legal opportunities to submit a proposal are crucial for shareholders to be able to defend their interests (Betch et al. 2009). Legal and financial academic literature (La Porta et al. 1997, 1998, 2000) maintains that English common law is superior to French civil law because common law countries (United Kingdom, United States, Canada, Australia, etc.) are better able to protect their investors.

Canadian law closely follows American regulations (Bates and Hennessy 2010). The Canadian system allows any shareholder to submit a proposal if he or she has held $2,000 in shares or 1 % of capital for a period of at least 6 months (versus

Table 1 MEDAC's key priorities

To prohibit audit firms from carrying out engagements other than audits
To establish the compulsory rotation of auditors after a period of 5 years
To eliminate purchase options for senior executives and replace them with shares as a form of performance bonus
To prohibit senior executives from selling more than half of their shares or options as long as they are employed by the company
To record the purchase options granted as expenses
To put an end to outrageous executive compensation by establishing reasonable performance bonus standards
To require human resources committees to present the parameters of senior executives' compensation policy prior to the shareholder vote
To claim through the courts or through pension deductions any form of wealth obtained without reason, from insider trading, fraud or other fraudulent behaviour
To require senior executives (insiders) to give ten business days public notice of their intention to sell or purchase shares of their company
To require signatures from the CEO and CFO attesting to the accuracy, transparency and integrity of the financial statements
To establish senior executives' pensions at 70 % of the average over the last 5 years based on 2 % per year of service

Source: www.medac.qc.ca

1 year in the United States), providing the proposal does not contain more than 500 words (similar to the US). Furthermore, a company is not required to include a proposal in its management proxy circular if it "does not relate in a significant way to the business or affairs of the association" or even if it relates to a "personal grievance". In addition, to submit a proposal a second or a third time if it has already been presented at an AGM within the last 5 years, the initial proposal must have achieved a certain threshold of support during the shareholder voting process. This threshold is 3 % for proposals presented at only one previous meeting, increases to 6 % for proposals that have already been presented twice, and then climbs to 10 % for those that have been submitted at at least three AGMs.

Once a proposal has been submitted, three outcomes are possible. First, the filers may withdraw it before the AGM (about 20.61 % from 2000 to 2009). One of the main reasons for this solution is that the firm may commit to amending its practices after negotiating with the filers. Otherwise, the proposal may be omitted by the firm if it does not conform to the legal framework or the directors decide not to submit it to a vote (few proposals, about 3.55 % from 2000 to 2009). Or finally, the proposal may be voted on (the majority, 75.85 % from 2000 to 2009) with a certain measure of success (percentage of vote expressed in favour of the proposal).

During the 1990s, proxy solicitation rules were contested in several cases. In 1999, the Senate Banking Committee recommended changes for corporations under federal jurisdiction (Bates and Hennessy 2010). According to Bates and Hennessy (2010), "in 2001 amendments under the *Canada Business Corporations Act* removed the restriction on investors that required them to prepare a formal proxy circular for dissident proxies and bear the expense of distributing it. A similar restriction was removed in the US in 1992".

The role of Canadian shareholders has been reinforced since 2001. In addition, federal legislation governing Canadian shareholders was amended in 2001 allowing for, among other things, a greater diversity of subject matter in submitted proposals. Thus, the proposals address two questions: the first concerns governance issues in the interest of shareholders, while the second focuses on defending stakeholders' interests.

Using the data provided by the Shareholders Association for Research and Education (SHARE), we show that the development of shareholder activism in Canada is similar to the development of the movement at the international level.

3 The Characteristics of Canadian Shareholder Activism

The Canadian market is also affected by the general global trend toward increasing activism. The graph below indicates all the proxy proposals voted on, withdrawn or omitted over the 10-year period from 2000 to 2009. The increase is irregular: for example, a maximum progression was noted between 2002 and 2003 (+176 %), consistent with the amendment of the law in 2001. Moreover, an annual record of 178 proxy proposals was observed during the midst of the financial crisis in 2008 (Serret and Berthelot 2012) (Fig. 1).

Given the influence of certain major shareholder activists, we will analyse the nature of the proposals, the type of filers and the targeted firms.

3.1 The Nature of the Proposals

Furthermore, MEDAC and the Shareholder Association for Research and Education (SHARE) lay considerable emphasis on the issue debated at the AGM (Serret and Berthelot 2012). SHARE is a not-for-profit organization that offers services to institutional investors to help them integrate environmental, social and governance issues into their investment management practices. Both SHARE and MEDAC take part in investor training.

Like in other countries, there are two main kinds of shareholder proposals on the Canadian market. Most of these proposals are governance-oriented, while others relate to social issues (e.g., proposals may address matters such as refusing to deal with countries that fail to respect human rights, Wen 2009). Our discussion focuses on the governance-oriented proposals, which represent around 78 % over 10 years (2000–2009).

SHARE provides a guideline for activists to help them draft their proxy voting policies and procedures. In Table 2 below, SHARE has developed an accurate list of different corporate governance-oriented proposals in its proxy-voting guidelines. The guideline sets out the following themes: a general theme (approval of financial reports, allocation of profits/dividends, etc.), capital structure (share issuances,

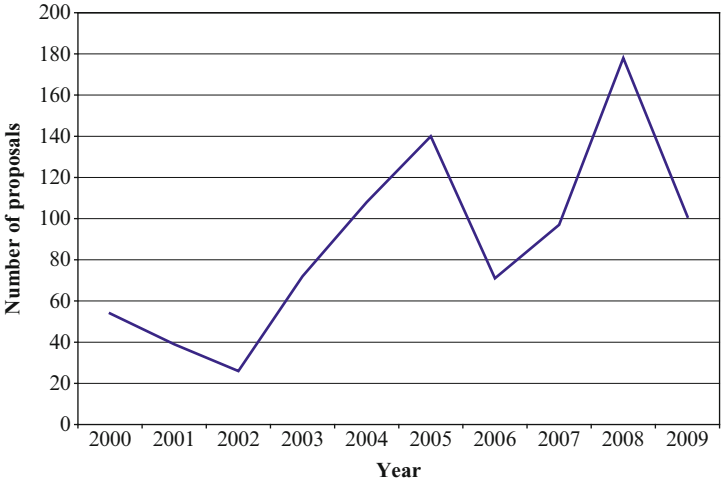

Fig. 1 Number of proxy proposals in Canada (2000–2009)

repurchased shares, etc.), boards of directors (voting for directors, independent board, etc.), term limits for directors (diversity on boards, cumulative voting, etc.), executive compensation (stock option plan, etc.), takeover protection (poison pill takeover defences, etc.), and protection of shareholder rights and interests (shareholders' voting rights, etc.). Different Tables (2, 3, 4, 5, 6, and 7) present the list of subjects by theme according to SHARE. Compared to the effective proxy proposals from 2000 to 2009, some subjects are more relevant than others. In this last period, the theme of capital structure (Table 2) is rarely treated in any proposals (except those on dual class shares).

Since the 1990s, large corporations have been encouraged to appoint more independent directors to their boards. Over 26 countries have also published guidelines on the minimum number of independent directors that a board should contain (Dahya and McConnell 2007). The relevance of establishing more independent boards is based on the hypothesis that this type of board better fulfils its oversight role than one where the directors are not independent. However, the empirical results are still controversial (Rhoades et al. 2000). Nevertheless, several proposals along these lines have been encouraged by SHARE (Table 3) and Canadian shareholders have submitted some of them.

Limiting the number of boards of different companies on which a director may sit is an issue that is being increasingly raised. This initiative is based on the hypothesis that executives serving on several boards of directors could affect the quality of governance of these boards because these members would be so busy. Several studies seem to support this hypothesis (Fich and Shivdanasi 2006). SHARE has made recommendations to limit the number of terms for directors and proposed a list of subjects of proposals relating to limiting directors' terms (Table 4).

Table 2 Corporate governance-oriented proposals: capital structure

Theme 1: capital structure
Share issuances
Pre-emptive rights
Waiving pre-emptive rights
Blank cheque preferred share issues
Share buybacks or repurchases
Reissue repurchased shares
Stock splits and reverse stock splits
Unequal voting shares and dual classes shares

Table 3 Corporate governance-oriented proposals: boards of directors

Theme 2: boards of directors
Voting for directors
Independent boards of directors
Definition of an independent director
Independent chair of the board: independent lead directors
Key board committees: independent audit committee, independent compensation committee, etc.
Statutory auditors
Supervisory boards: committees of supervisory boards
Shareholder nominations for director
Majority vote for elections of directors: cumulative voting and majority elections for directors, elections for individual directors, contested elections for directors

Table 4 Corporate governance-oriented proposals: terms limits for directors

Theme 3: terms limits for directors
Directors' ability to devote sufficient time and energy: attendance
Diversity on boards of directors
Classified boards/staggered terms of directors
Cumulative voting
Size of boards of directors
Director indemnification
Ratification of the acts of the board and/or auditors
Director compensation: directors' equity-based compensation, retirement benefits for directors and statutory auditors, severance pay and/or bonuses for directors and statutory auditors, supervisory board compensation, disclosure of director's compensation...
Performance evaluations of directors and board
Training for directors
Shareholder representatives on the board
Auditor independence: the appointment of auditors, disclosure of audit fees
Approval of auditors' fees
Rotation of auditors: certification of financial statements

Table 5 Corporate governance-oriented proposals: executive compensation

Theme 4: executive compensation
Executive compensation and performance
Executive performance and corporate social responsibility
Performance-based compensation and restated financial reports
Executive salaries and employee wages
Executive compensation during layoffs
Approve compensation committee report and/or compensation policies
Annual approval of compensation reports or plans
Share-based compensation plans
Stock option plans
Price and repricing
Reload grants
Restricted shares
Share subscription rights
Other kinds of equity-based compensations plans
Omnibus equity-based compensation plans: expiry, dilution, grant rate, vesting, concentration of stocks
Severance benefits
Bonuses
Tax "gross-up"
Compensation caps
Disclosure of executive compensation

In many countries, companies face growing pressure to increase the number of women on their boards of directors (Adam and Ferreira 2009). The percentage of female directors in Canada is low (10.6 % according to Adam and Ferreira 2009), and several boards include only one woman among their members. Few studies have been able to establish a link between the presence of female directors and corporate financial performance (Francoeur et al. 2008), but there is growing pressure to increase the participation of women on boards (see Table 4 on "diversity"). In Canada, the percentage of proxy proposals to "increase the number of women" was about 5.2 % from 2000 to 2009.

With the advent of the financial crisis, executive pay has become a crucial issue in the governance debate. More and more proposals are being submitted to mandate an annual advisory shareholder vote on executive compensation (Conyon and Sadler 2010). On the Canadian market (2000–2009), nearly 30 % of the governance-oriented proposals are related to executive compensation (Serret and Berthelot 2012). Again, SHARE provides an accurate list (Table 5) of the different subjects relating to executive compensation.

Gillan and Starks (2007) include the market for corporate control, "where investors initiate takeovers and LBOs aimed at accomplishing fundamental corporate changes". SHARE has a list of proposals aimed at facilitating this extreme form of activism (Table 6). However, few proposals of this nature have been noted on the Canadian market.

Table 6 Corporate governance-oriented proposals: takeover protection

Theme 5: takeover protection
Poison pill takeover defences
Shareholder rights plans
Crown jewel takeover defence
Lock-up agreements
Private and targeted share placements
Opting out of takeover laws (United States)
Reincorporation
Greenmail
Fair price proposals
Considering the effects of takeovers and mergers
Shareholder approval of takeover defences, mergers, and acquisitions

Table 7 Corporate governance-oriented proposals: protection of shareholder rights and interests

Theme 6: protection of shareholder rights and interests
Supermajority approval of transactions
Omnibus or linked proposals
Confidential voting
Related-party transactions
Quorum requirements for shareholders' meetings
Shareholder-called meetings
Shareholder proposals
Shareholder action by written consent
Shareholders' meetings
Shareholders' voting rights
Shareholder access to proxy information

The protection of shareholder rights (Table 7) is also an important issue. On the Canadian market, most proposals on this theme are tied to "shareholders' voting rights".

3.2 The Filers and the Targets

Over the entire period under study, only 60 dissident shareholders wrote 886 proposals (Serret and Berthelot 2012). Filers have been broken down into the following categories: MEDAC, individuals, institutional investors, churches, unions, and others such as non-governmental organizations and charitable foundations. The graph below shows the evolution of proposals by filers from 2000 to 2009 (the category "others" is not represented because it is too small for the scale) (Fig. 2).

However the proportion of proposals submitted by institutional investors gradually increased over the period, with MEDAC remaining in first position in terms of

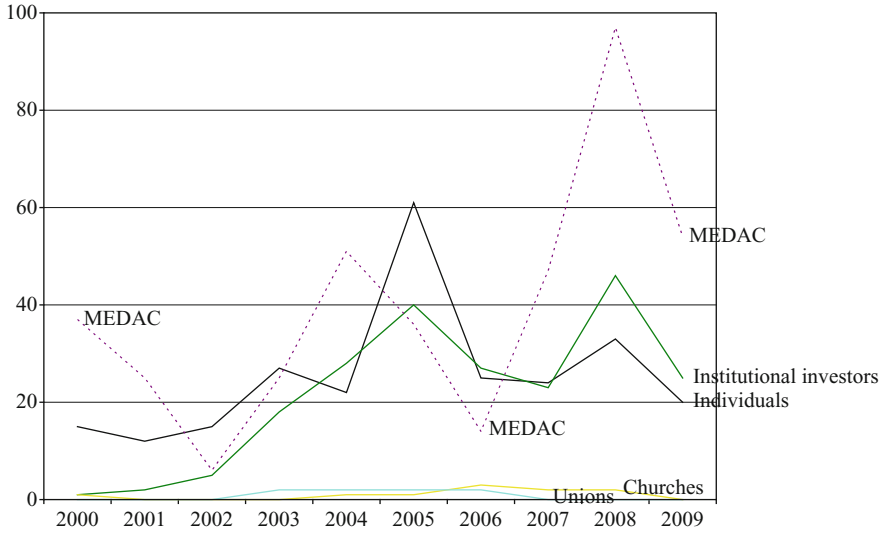

Fig. 2 The number of proxy proposals by filers (2000–2009)

the number of submitted proposals for historical reasons (see above). Individuals are in the second position. Shareholder proposals are easy to initiate under Canadian law because all that is required is a small percentage of shareholdings to start the process (unlike in France for instance).

As documented in academic studies, institutional shareholders (pension funds [particularly public pension funds], mutual funds, hedge funds, and insurance companies) have more chance of exerting effective influence (Gillan and Starks 2000, 2007). One reason for their efficient impact is that they are often large shareholders (i.e., they own a significant portion of a firm's shares). Note that given the free-rider issue (Grossman and Hart 1980; Smith 1996), activism is costly. Institutional investors can easily build coalitions, especially with MEDAC and individuals. Building shareholders coalitions (Cziraki et al. 2010) helps to accrue voting rights.

Over the period, the activism from institutional investors progressed remarkably (18.06 % of the proposals between 2000 and 2004 and 27.43 % of the proposals between 2005 and 2009). Among institutional investors, Canadian public pension funds are very well represented and one American pension fund is represented (AFL-CIO Reserve Funds). AFL-CIO Reserve Funds made just one proposal on the issue of "approval of dual class structure" in the firm Quebecor World in 2005. In general, foreign investors are not filers.

In Canada, the 102 observed targets are all publicly traded companies and the majority are in the financial, insurance, and real estate sector. This sector represents 70.4 % of the companies targeted from 2000 to 2009. The pie chart below illustrates the different sectors. These figures remain fairly steady year after year. This stability is most likely due to the need to know the firm in-depth in order to be

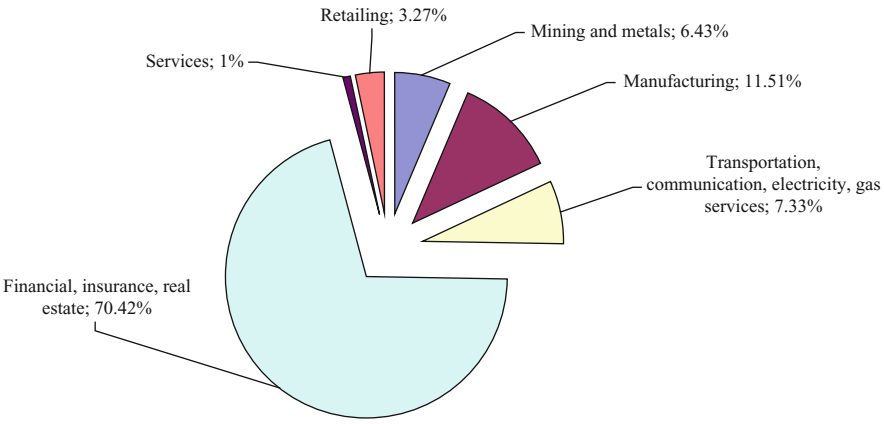

Fig. 3 Targeted firms by sector (2000–2009)

able to monitor it regularly and efficiently (Serret and Berthelot 2012). Wang et al. (2005) show that Canadian targets are mostly large, as is the case in the U.S market (Rehbein et al. 2004) (Fig. 3).

According to the data for 2000–2009 (and in line with Bates and Hennessy 2010) getting a shareholder proposal passed (percentage of votes higher than 50 %) at an annual general is a low probability event. Passed proposals constitute less than 5 % of the total sample and most of these are proposals on information disclosure. It seems that MEDAC is behind the filing of these proposals. MEDAC's work is popular and the organization has sometimes been able to obtain support from other investors during its campaigns. As well, website and information technology (Bogoslaw 2010) make it easier for dissident shareholders to form coalitions.

Furthermore, even though the majority of proxy proposals fail, corporate management can take this form of shareholder protest into account. At this point, and unlike in others areas, we noted a scarcity of Canadian studies about the effectiveness of proxy proposals.

Serret and Berthelot (2012) provide partial results (results of the proposal votes) of the campaigns in the targeted firms. The proposals are mainly voted (75.85 %). Some are withdrawn by the filers before the annual general meetings (20.61 %). Few are omitted[4] (3.55 %).

The percentage of withdrawn proposals remains an imperfect proxy that takes into account the negotiations held during the process. Withdrawal may indicate concessions made by the management, thus success for the activist (Logson and Van Buren 2009).

Between 2000 and 2009, more than 75 % of proposals were voted on during annual general meetings. The average approval rate of the resolutions is 12.19 %

[4] The proposal project can be omitted by the stock market authorities in the case of nonconformity to the set legal framework or the directors of the firm can even decide not to submit it to the vote.

and only 4.8 % obtained a percentage of votes higher than 50 %. Despite these generally low scores, Canadian activists sometimes succeeded with some corporate governance practices, such as the auditing costs disclosure that the Canadian Securities Administrators have asked companies to disclose and the separation of the Chairman of the board and chief of Executive Office positions, or the adoption by the board of advisory shareholder vote on executive compensation that some the companies have introduced on their own initiative.

In the third part of this article, we focus on other parts of the globe and draw some comparisons.

4 Shareholder Activism: An International Perspective

The aim of this last section is not to describe shareholder activism in every part of the world, but to provide the main elements of comparison through the different perspectives. Current literature on shareholder activism is mainly present in common law countries and illustrates the American and the British perspective. Although other perspectives are far less well documented, we have attempted to glean enough information to make a few comparisons.

4.1 The Anglo-American Perspective

In a study focusing on financial and governance issues, Gillan and Starks (2007) provide an overview on the evolution of shareholder activism in the American context. They conclude that the voting success of shareholder proposals is fundamentally driven by the objective of the proposal and the type of proposal sponsor. They also note that the proposals targeting anti-takeover devices sponsored by institutional investors have been most successful.

Speaking of the American market, Gillan and Starks (2007) describe hedge funds as "the new kids on the block". This type of institutional investor seems to be very effective in leading fundamental corporate changes with large positive returns (Greenwood and Schor 2009). As new players on the activism playing field, they appear to be able to bring about better control over the firm's executive officers and an increase in firm value (Klein and Zur 2009; Brav et al. 2008a, b)

Although many researchers have attempted to assess the impact of shareholder activism, the results are inconclusive. Some recent studies have found that certain elements do influence companies in their implementation of shareholders proposals. The most recent studies concluded that the probability of the implementation of proposals is positive and significantly linked to the percentage of votes in favour of the said proposal (Ertimur, Ferri and Stubben 2010; Thomas and Cotter 2007). Ertimur, Ferri and Stubben (2010) have also noted that proposals submitted by institutional investors or unions were more likely to be implemented. The most encouraging result of these studies is that the proposal implementation rate has increased in recent years on

the American market: the frequency of proposal implementation almost doubled after 2002, climbing from 22 % to 40 %. These results are also supported by Buchanan et al. (2010) and Renneboog and Szilagyi (2011).

The motivations of shareholder activists are to improve corporate governance. Frequent issues are executive compensation, director accountability, and the independence of boards and committees. The results of the studies on the positive impact of shareholder activists are still fragmented, but the increasing phenomenon in the world suggests that activists believe in this mechanism. For example, among the current issues, shareholders are interested in an advisory vote on executive compensation. Through the activists, advisory votes on executive compensation have been adopted by companies in the United Kingdom since the early 2000s, in the United States since 2006 and in Canada since 2009.

4.2 The Continental European Perspective

As indicated above, the Anglo-American lessons on shareholder proposals are not easily applicable in the continental European context. Similar to the practice in the UK, proposals in most European countries are legally binding. Moreover, the laws governing shareholder access to the proxy vary from one country to the next. Continental European firms often infringe the one-share-one-vote rule by issuing multiple classes of stocks. In Continental Europe, corporate ownership is also more concentrated and banks (passive investors in the Anglo-American context) seem to be dissident shareholders in some European countries, such as Germany for instance (Franks and Mayer 2001). Major creditors and unions are also important players in activism (Roe 2004).

Cziraki et al. (2010) were among the first to investigate the corporate role of shareholder proposals across Europe using a small sample (compared to US, UK and Canadian studies) of 95 proposals submitted in eight countries (France, Germany, Austria, the Netherlands, Norway, Russia, Portugal, and Switzerland). Close to 70 % (65/95) of these proposals were directed at corporate governance issues, and of these several related to board characteristics and shareholders rights. Note that 27 proposals called for a special audit on past matters. Another 10 % was related to director's elections, while only 3 % targeted corporate social responsibility. Interestingly, five proposals (5 %) favoured the management or the board rather than shareholders (Cziraki et al. 2010); three of them aimed at limiting the number of mandates for directors representing shareholders, waiving claims against directors and a counterproposal on calling a special audit. The mean percentage of votes cast in favour of the shareholder proposals was 21.1 % and only 15.8 % passed. Lastly, Cziraki et al. (2010) report a significant negative abnormal return of −1.2 % when the proposals are voted at the AGM.

To sum up this international perspective, proposal submissions remain relatively infrequent in Continental Europe compared to the United States. In the UK, proposals typically related to a proxy contest seeking personal changes on the

board to force a change in corporate strategy. In Continental Europe, proposal objectives are more focused on specific governance issues, corresponding to the conventional use of shareholder proposals in the USA. Shareholder proposals enjoy relatively modest voting success in both the UK and Continental Europe. The different ways shareholder proposals are used on the two continents can be attributed to the cost of activism, as well to as disparities in legislation respecting shareholder proposals, which are non-binding in the United States and Canada and binding in most of Europe.

5 Conclusion

Shareholder activism is now widespread. It may be defined as the different actions undertaken by shareholders to influence corporate practices and force corporations to change their attitude toward corporate social responsibility and/or increase their financial outcomes. More specifically, shareholder-initiated proxy proposals have recently been the focus of strong interest. Bebchuk (2005) sees shareholder proposals as a useful tool to solve agency problems between shareholders and management, and the most recent models (Harris and Raviv 2010) support this position.

According to the traditional view expressed in legal and financial literature, in common law countries investors are generally better protected than in the countries where the legal system is tied to French civil law (civil law countries). As a result, the ownership structures of publicly traded firms are often dispersed in common law countries (United Kingdom, Canada, United States). Minority shareholders in these countries have fairly easy access to proxy proposals to defend their rights.

Emerging in the late twentieth century, shareholder activism in Canada has generally been poorly documented. In Canada, MEDAC has played a leading role as the principal historical filer, closely followed by institutional investors. The role of these investors has grown because they have more money and professional networks than individuals, which enables them to play a more active role. For instance, if you own a small amount of stock in a company, the increase in your wealth resulting from an improvement in this stock's performance is smaller than the cost of eliciting a change. By helping investors (collecting data and training people), MEDAC and SHARE are two Canadian organizations that facilitate activism.

Internationally, shareholders are mainly concerned to change corporate management and the board of directors in order to enhance financial performance. However, a growing body of research reflects shareholder activism's more recent interest in corporate social and environmental responsibility (Sjöström 2008; Rojas et al. 2009; Wen 2009).

Finally, should we give minority shareholders more power? This question is closely linked to the effectiveness of shareholder activism. Indeed, the effectiveness of such activism continues to be an important question (Nelson 2006) in terms of short-term market reactions to announcements of shareholder activism as well as in terms of improving the long-term financial performance of the targeted firms.

References

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics, 94*(2), 291–309.

Bates, K., & Hennessy, D. (2010). Tilting at windmills or contested norms? Dissident proxy initiatives in Canada. *Corporate Governance: An International Review, 18*(4), 360–375.

Bebchuk, L. A. (2005). The case for increasing shareholder power. *Harvard Law Review, 118*(3), 835–914.

Berle, A., & Means, G. (1932). *The modern theory of the firm*. New York: Macmillan.

Betch, M., Franks, J., Mayer, C., & Rossi, S. (2009). Returns to shareholder activism: Evidence from a clinical study of the Hermes UK focus fund. *Review of Financial Studies, 22*(8), 3093–3129.

Bogoslaw, D. (2010). Proxy voting made easy. Business Week Online, 2 Nov 2010.

Brav, A., Jiang, W., Partnoy, F., & Thomas, R. S. (2008a). Hedge fund activism, corporate governance, and firm performance. *The Journal of Finance, 63*(4), 1729–1775.

Brav, A., Jiang, W., Partnoy, F., & Thomas, R. S. (2008b). The returns to hedge fund activism. *Financial Analysts Journal, 64*(6), 45–61.

Buchanan, B., Netter, J. M., Yand, T. (2010). *Are shareholders proposals an important corporate governance device? Evidence from US and UK shareholders proposals* (WP), University of Georgia.

Chung, H., & Talaulicar, T. (2010). Forms and effects of shareholder activism. *Corporate Governance: An International Review, 18*(4), 253–257.

Conyon, M., & Sadler, G. (2010). Shareholder voting and directors' remuneration report legislation: Say on pay in the UK. *Corporate Governance: An International Review, 18*(4), 296–312.

Crespi, R., & Renneboog, L. (2010). Is (institutional) shareholder activism new? Evidence from UK shareholder coalitions in the pre-Cadbury era. *Corporate Governance: An International Review, 18*(4), 274–295.

Cziraki, P., Renneboog, L., & Szilagyi, P. G. (2010). Shareholder activism through proxy proposals: The European perspective. *European Financial Management, 16*(5), 738–777.

Dahya, J., & McConnell, J. J. (2007). Board Composition, Corporate Performance, and the Cadbury Committee Recommendation. *Journal of Financial and Quantitative Analysis, 42*(3), 535–564.

Ertimur, Y., Ferri, F., & Stubben, S. R. (2010). Boards of directors' responsiveness to shareholders: Evidence from shareholders proposals. *Journal of Corporate Finance, 16*(1), 53–72.

Fich, E. M., & Shivdasani, A. (2006). Are busy boards effective monitors? *The Journal of Finance, 61*(2), 689–724.

Francoeur, C., Labelle, R., & Sinclair-Desgagné, B. (2008). Gender diversity on corporate governance and top management. *Journal of Business Ethics, 81*(1), 83–95.

Franks, J., & Mayer, C. (2001). Ownership and control of German corporations. *Review of Financial Studies, 14*(3), 943–977.

Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: The role of institutional investors. *Journal of Financial Economics, 57*(2), 275–305.

Gillan, S. L., & Starks, L. T. (2007). The evolution of shareholder activism in the United States. *Journal of Applied Corporate Finance, 19*(1), 55–68.

Greenwood, R., & Schor, M. (2009). Investor activism and takeovers. *Journal of Financial Economics, 92*(3), 362–375.

Grossman, S. J., & Hart, O. D. (1980). Takeover bids, the free rider problem and the theory of corporation. *The Bell Journal of Economics, 11*(1), 55–73.

Harris, M., & Raviv, A. (2010). Control of corporate decisions: Shareholders versus management. *Review of Financial Studies, 23*(11), 4115–4147.

Hirschman, A. (1971). *Exit, voice, loyalty: responses to decline in firms, organizations, and states*. Cambridge, MA: Harvard University Press.

Huynh, Q. T. (2010). Les déterminants de l'activisme des actionnaires minoritaires: insuffisance de gouvernance affichée ou de résultats financiers ? *Finance Contrôle Stratégie, 13*(3), 95–114.
Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and capital structure. *Journal of Financial Economics, 3*(4), 305–360.
Klein, A., & Zur, E. (2009). Entrepreneurial shareholder activism: Hedge funds and other private investors. *The Journal of Finance, 64*(1), 187–229.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1997). Legal determinants of external finance. *Journal of Finance, 52*(3), 1131–1150.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1998). Law and finance. *Journal of Political Economy, 106*(6), 1113–1155.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Law, Economic, and Organization, 15*(1), 222–279.
Logson, J. M., & Van Buren, H. J. (2009). Beyond the proxy vote: Dialogues between shareholders activist and corporation. *Journal of Business Ethics, 87*, 353–365.
Marens, R. (2003). Evolution du gouvernement des entreprises: l'émergence de l'activisme actionnarial au milieu du XXème siècle. *Finance Contrôle Stratégie, 4*(6), 97–131.
Marler, J. H., & Faugère, C. (2010). Shareholder activism and middle management equity incentives. *Corporate Governance: An International Review, 18*(4), 313–328.
Martynova, M., & Renneboog, L. (2008). Spillover of corporate governance standards in cross-border mergers and acquisitions. *Journal of Corporate Finance, 14*(3), 200–223.
Nelson, J. M. (2006). The "CalPERS effect" revisited again. *Journal of Corporate Finance, 12*(2), 187–213.
Poulsen, T., Strand, T., & Thomsen, S. (2010). Voting power and shareholder activism: A study of Swedish shareholder meetings. *Corporate Governance: An International Review, 18*(4), 329–343.
Rehbein, K., Waddock, S., & Graves, S. (2004). Understanding shareholder activist: Which corporations are targeted? *Business and Society, 3*, 239–267.
Renneboog, L., & Szilagyi, P. G. (2011). The role of shareholder proposals in corporate governance. *Journal of Corporate Finance, 17*(1), 167–188.
Rhoades, D. L., Rechner, P. L., & Sundaramurthy, C. (2000). Board composition and financial performance: A meta-analysis of the influence of outside directors. *Journal of Managerial Issues, 12*(1), 76–92.
Roe, M. (2004). Explaining Western securities markets. In A. Grandori (Ed.), *Corporate governance and firm organization: Microfoundations and structural forms* (pp. 279–296). New York: Oxford University Press.
Rojas, M., M'Zali, B., Turcotte, M.-F., & Merrigan, P. (2009). Bringing about changes to corporate social policy through shareholder activism: Filers, issues, targets, and success. *Business and Society Review, 114*(2), 217–257.
Serret, V., & Berthelot, S. (2012). Naissance de l'activisme actionnarial au Canada : un portrait des projets de résolution de 2000 à 2009, Revue française de gouvernance d'entreprise, *1*, 67–91.
Sjöström, E. (2008). Shareholder activism for corporate social responsibility: What do we know? *Sustainable Development, 16*(3), 141–154.
Smith, D. G. (1996). Shareholders activism by institutional investors: Evidence from Calpers. *Journal of Finance, 51*(1), 227–252.
Thomas, R., & Cotter, J. F. (2007). Shareholders proposals on the new millennium: Shareholder support, board response and market reaction. *Journal of Corporate Finance, 13*(2/3), 368–391.
Wang E., Musila J., Chowdhury S. D. (2005). How shareholders pick their targets, Ivey Business Journal. 11 Jan 2005.
Wen, S. (2009). Institutional investor on socially responsible investment: Effects and expectations. *Business Ethics: A European Review, 18*(3), 308–333.

Part II
Issues in Executive Compensation

Corporate Governance and Firm Cash Holdings in the U.S.

Jarrad Harford, Sattar A. Mansi, and William F. Maxwell

Abstract Using governance metrics based on antitakeover provisions and inside ownership, we find that firms with weaker corporate governance structures actually have smaller cash reserves. When distributing cash to shareholders, firms with weaker governance structures choose to repurchase instead of increasing dividends, avoiding future payout commitments. The combination of excess cash and weak shareholder rights leads to increases in capital expenditures and acquisitions. Firms with low shareholder rights and excess cash have lower profitability and valuations. However, there is only limited evidence that the presence of excess cash alters the overall relation between governance and profitability. In the U.S., weakly controlled managers choose to spend cash quickly on acquisitions and capital expenditures, rather than hoard it.

1 Introduction

The decision of how to deploy internal funds is central to the conflict between shareholders and managers (Jensen 1986). Any discussion of the efficacy of corporate governance mechanisms to control managers must address this issue. During an economic expansion, as cash reserves increase, managers make strategic decisions

Full Bibliographic Citation: Harford, J., Mansi, S.A., Maxwell, W.F., 2008. Corporate governance and firm cash holdings in the U.S. *Journal of Financial Economics* 87, 535–555. *Reprinted with permission from Elsevier Science B.V.*

J. Harford (✉)
Foster School of Business, University of Washington, 98195 Seattle, WA, USA
e-mail: jarrad@u.washington.edu

S.A. Mansi
Pamplin College of Business, Virginia Tech, 24061 Blacksburg, VA, USA

W.F. Maxwell
Cox School of Business, Southern Methodist University, Dallas, TX 75275, USA

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_5,

about whether to disburse the cash to shareholders, spend it internally, use it for external acquisition, or continue to hold it. It is theoretically not clear how self-interested managers will choose between spending free cash flow and stockpiling it as cash reserves. Managers must trade off private benefits of current spending against the flexibility provided by accumulating excess cash reserves. Further, self-interested managers must weigh whether the likelihood of discipline is greater from excess spending or from visibly holding too much cash.

We study how agency problems affect the propensity to stockpile cash in the U.S. To measure agency problems, we use multiple governance measures, which encompass ownership concentration (managerial ownership and institutional holdings), executive compensation, board composition, and an index (and subsets) of shareholder rights developed by Gompers et al. (2003), referred to hereafter as the GIndex. Since these measures may substitute for each other in controlling the firm's agency problems, using multiple measures provides a more complete picture and allows us to measure their differential impact on cash holdings. In doing so, we provide evidence on the following three main questions: (1) Do higher agency conflicts, as indicated by a weak governance structure, lead managers to stockpile cash reserves in the U.S.?, (2) How do weak governance structures change the way cash stockpiles are deployed by managers?, and (3) Are the differences in the deployment of cash reflected in differences in firm profitability and ultimately valuation?

Jensen (1986) and Stulz (1990) develop the free cash flow hypothesis, predicting that shareholders will choose to limit managers' access to free cash flow to mitigate agency conflicts over its deployment. The central tradeoff in these papers is providing sufficient internal capital for managers to efficiently fund all good projects, while not providing excess internal capital that allows managers to fund projects, acquisitions, or perquisite consumption that benefit managers at the expense of shareholders. Without a control threat, it is difficult, if not impossible, to convince self-interested managers to disgorge cash reserves to shareholders.

While extant research provides ample evidence on the relation between cash holdings and shareholder rights from an international perspective, there is little if any evidence on this relation in the U.S. Cross-country evidence shows that greater shareholder rights are associated with lower cash holdings (Dittmar et al. 2003; Lins and Kalcheva 2004; Pinkowitz et al. 2004). This suggests that shareholders want managers to disgorge cash (presumably to the shareholders) and that they force them to do so when they are so empowered.[1] In this paper, we hold constant the country-level legal setting and use multiple measures of agency problems within the U.S. to further examine the balance of power between shareholders and managers and how this relates to corporate cash holdings. In addition to providing direct evidence of this relation in the U.S., we argue that our results

[1] Additional evidence by La Porta et al. (2000) supports the conjecture that higher shareholder rights are associated with higher dividend payouts.

also bear on the importance of country-level protection of rights relative to firm-level restrictions of shareholder power.

Prior work on cash reserves in the U.S. provides mixed evidence on whether shareholders should be concerned about large reserves. For example, Opler et al. (1999) find that the transitional probabilities out of the high cash group are slow, suggesting that managers hold cash as part of a precautionary motive. Similarly, Mikkelson and Partch (2003) find that persistent extreme cash holdings do not lead to poor performance and do not represent conflicts of interests between managers and shareholders, evidence consistent with cash reserves enhancing firm value. Alternatively, Harford (1999) suggests that there is reason for shareholders to be concerned about managers' stewardship of large pools of internal funds. He shows that cash-rich firms are more likely to make acquisitions and their acquisitions are more likely to be value-decreasing. More broadly, Dittmar and Mahrt-Smith (2007) document that shareholders assign a lower value to an additional dollar of cash reserves when agency problems are likely to be greater at the firm.

From a self-interested manager's perspective, the issue of whether to spend generated cash flow or whether to accumulate it instead is a question of the benefits of excess spending today or additional flexibility in the future versus the costs associated with the potential for discipline. While the quality of investments made is often known only ex post with delay, large stockpiles of cash can become an immediate focal point for shareholders. Kirk Kerkorian's attack on Chrysler in the mid-1990s demonstrated that large accumulations of cash reserves can draw the attention of activist shareholders who could threaten managers' positions. Faleye (2004) shows that proxy contests are increasing in excess cash reserves, and following such contests, executive turnover and cash distributions to shareholders increase while cash holdings significantly decline. Thus, both anecdotal and large sample evidence points to an incentive for managers in the U.S. to avoid visible accumulations of excess cash.

Using a sample of 11,645 firm-year observations for 1,872 firms in the Compustat database, we examine the relation between cash holdings and firm governance structure. We find in the cross-section and over time that firms with higher insider ownership have higher cash holdings, while firms with weaker shareholder rights (higher GIndex) have lower cash holdings. Overall, firms with weaker shareholder rights and low insider ownership have lower cash reserves than those with stronger shareholder rights (low GIndex) and high insider ownership. We find no evidence that manager pay sensitivity or institutional ownership is related to the change in cash holdings.

To explain the differences in cash holdings, we first study the investment behavior of our sample firms. We find that firms with a high GIndex increase capital expenditures more and this difference is exacerbated with higher levels of excess cash. Similarly, we find that firms with excess cash are more likely to increase acquisition activity and this is exacerbated when the excess cash is combined with a high GIndex. On the other hand, we find that R&D is generally unrelated to the firm's cash position, but negatively related to its GIndex (stronger shareholder rights are related to higher R&D). However, firms with low shareholder

rights and high cash invest less in R&D. Turning to payout policy, we find that the presence of excess cash alters the relation between governance and payout. While firms with weak shareholder rights tend to increase dividends in general, it is the firms with stronger shareholder rights and higher insider ownership that distribute excess cash through dividends. Conversely, for repurchases, we find that firms with strong shareholder rights or low insider ownership are more likely to increase repurchases in general. However, the low shareholder rights firms are most likely to use repurchases specifically to distribute excess cash. The payout results suggest that poor governance leads managers choosing to distribute some of the excess cash to do so in the way that establishes the least commitment.

When examining whether these differences are reflected in future profitability, we find that shareholder rights are positively related to profitability. While both a firm's cash position and its governance affect future profitability, the results show little in the way of an incremental effect of the interaction of the two on future profitability. However, we do find an effect on the value of the firm. We find that weaker shareholder rights are negatively related to firm value and that this relation is more pronounced when combined with excess cash holdings. While low insider ownership is also negatively related to firm value, the presence of excess cash does not exacerbate the relation.

Overall, we find evidence consistent with the *spending hypothesis*. That is, for a given set of firms with high levels of cash, all else equal, the firms with weaker governance will spend that cash more quickly than those with stronger governance. Our tests show that this spending is on acquisitions and capital expenditures rather than on R&D. We also test and reject the alternative hypothesis that the observed relation reflects an outcome in which shareholders with strong governance allow their managers to hold more cash because they have strong oversight of how it is deployed and the ability to punish managers who waste that cash.

While the evidence of a negative effect on value is not overwhelming, on net, the evidence here and elsewhere is most consistent with the spending decisions of poorly governed firms being suboptimal. The conclusion we draw from our study is that lower cash reserves in poorly governed firms are the result of a decision by managers to spend the cash flow and any accumulated cash quickly, rather than allowing it to accumulate even though such accumulation might provide future flexibility. Their spending, often on capital expenditures and acquisitions, reduces firm value. Nonetheless, as documented in Bliss and Rosen (2001) for acquisitions and Harford and Li (2007) for both acquisitions and large capital expenditures, CEO compensation and wealth increase after such investments, even if those investments destroy value. Given these incentives and the potential for external discipline arising from accumulating large cash reserves, weakly controlled managers choose to spend the cash quickly on acquisitions or capital expenditures.

Our results, in the context of the international findings (e.g., La Porta et al. 2000; Dittmar et al. 2003), also bear on country-level and firm-level limitations on shareholder rights. The question is how the two interact and which dominates? We show that in the U.S. managers who appear to be entrenched act to avoid drawing the attention of activists and raiders. Thus, in a country such as the U.S.,

with strong shareholder protection and strong enforcement of that protection, measures of managerial entrenchment may be better viewed as signals of managers' propensity toward self-interested action rather than as indications of their complete invulnerability to oversight.[2]

Comparing our results with those from other countries suggests that true entrenchment requires low legal shareholder rights. In the U.S. firm-imposed restrictions on shareholder rights only go so far; there is always a point at which shareholders will move to replace managers. In contrast, in firms in countries with poor shareholder protection, managers can hoard cash and pay low dividends with relative impunity. Dittmar et al. (2003) compare average cash holdings across countries to a variety of shareholder protection and capital market development measures and find that firms hold less cash in countries where shareholders have greater rights and when external capital markets are highly developed. This indicates that shareholders want to limit the cash at managers' discretion and move to do so when they have sufficient power. Pinkowitz et al. (2004) also examine the effect that country-level protection of rights has on cash holdings and show that cash is worth less to the minority shareholders of firms in countries with low investor protection. This finding is consistent with the hypothesis that poor protection of investor rights makes it easier for management and controlling shareholders to expropriate corporate resources for their own benefit. Lins and Kalcheva (2004) include corporate governance controls at the firm level and examine how country-level investor protection marginally affects cash holdings. They find that internationally, firms with weaker shareholder rights hold more cash and this relation is especially magnified in countries with weak shareholder protection. In addition, they find that cash holdings are more negatively related to firm value, the greater the managerial control (a proxy for poor firm-level governance) and the lesser the external shareholder protection.

The differences we find in the way managers behave in the U.S. imply that country-level granting and enforcing of shareholder rights are more important than firm-level variation determinants of managerial incentives in controlling agency conflicts. More research in this area is needed to confirm or refute our interpretation of the implications of the results for understanding country-level versus firm-level constraints on managers.

The remainder of the paper is organized as follows. Section 2 develops the hypotheses. Section 3 describes the data, variables, and control measures, and provides descriptive statistics for the sample. Section 4 presents univariate as well as multivariate results of our empirical tests and provides alternative specifications. Section 5 discusses the implications of this research and concludes.

[2] In a contemporaneous paper, John and Knyazeva (2006) make a similar argument to explain why U.S. firms with low shareholder rights pay higher dividends, a result also shown here.

2 Hypothesis Development

We test the following three hypotheses related to the control of agency conflicts and the management of firm cash resources.

Flexibility Hypothesis: Self-interested managers value flexibility and freedom from capital market discipline (Easterbrook 1984; Jensen 1986). In trading off current overinvestment vs. future flexibility, they put some weight on the latter. Thus, when the firm generates excess cash flow, these managers do not invest it all. Rather, they stockpile some of it, preferring to hold large cash reserves. The less effective is shareholders' control of managers, the greater will be the cash reserves.

Spending Hypothesis: Self-interested managers prefer expansion of the firm and will spend excess cash flow when generated (Jensen and Meckling 1976). In the event that these managers accumulate excess cash reserves, they will look for an acquisition or other means to quickly deploy the cash. In general, they will prefer spending in the present and will discount the ability to invest more in the future.

Shareholder Power Hypothesis: Shareholders who have more effective control of managers will allow those managers to stockpile excess internal funds to prevent underinvestment due to potentially costly external funds (because of capital market frictions including, for example, information asymmetry). The models in Stulz (1990) and Myers and Majluf (1984) demonstrate the tradeoffs facing shareholders in determining how much liquidity should be at managers' disposal and of the potential for underinvestment due to information asymmetry between managers and capital providers.

The flexibility and spending hypotheses predict opposite relations between the control of agency conflicts and cash reserves. The flexibility hypothesis predicts that poorly controlled managers will be observed to have larger cash reserves and the spending hypothesis predicts they will have smaller cash reserves. As we noted in the introduction, which one is correct depends on managers' tradeoff between current overinvestment versus future flexibility and the probability of discipline associated with each alternative. The shareholder power hypothesis predicts that there will be a negative relation between agency problems and cash reserves, similar to the spending hypothesis, but its prediction is primarily driven by better-controlled managers holding larger cash reserves rather than worse-controlled managers holding smaller reserves.

3 Data Description

3.1 Cash Holdings

For our analysis, we view cash as a liquid investment necessary to support the working capital needs of the firm, which is closely related to its sales. Therefore, the

primary ratio that we examine in our study is the ratio of cash to sales, computed as the log of cash and cash equivalents to total sales. Though not tabulated, we also look at two alternative methods to measure cash holdings. First, we compute cash holdings using the ratio of cash and marketable securities to net assets computed as total assets minus cash and marketable securities, similar to Opler et al. (1999). Second, given that industry classification is a significant factor in the determination of cash holdings, we also create an industry-adjusted measure of the firm's cash to sales ratio (cash holdings). To do this, we compute the median levels of the ratio of cash to sales within the Fama and French 48 industry categories (described below). The industry-adjusted measure is then calculated as the firm's variable minus the median industry level of the cash to sales ratio. Using either measure, we find similar results to those reported using the cash to sales ratio.

3.2 Measuring Corporate Governance

We use a number of corporate governance measures to gauge the severity of the firm's agency costs. These include: an index of antitakeover provisions, ownership concentration (insider and institutional), compensation to top management (pay sensitivity), and board structure (size and independence). We describe each in more detail below.

3.2.1 Antitakeover Provisions and Governance

The first set of governance proxies is related to the prevalence of antitakeover provisions. There is debate on whether antitakeover provisions isolate managers from the discipline of the market for corporate control or in fact are optimal devices that allow managers to maximize takeover bids and minimize opportunism. The inclusion or exclusion of these provisions is commonly used in the literature to measure the balance of power between shareholders and managers. Gompers et al. (2003) construct a broad index (GIndex) of antitakeover provisions using five governance rules (delay, protection, voting, state, and other) for a total of 24 possible provisions. The delay rules contain four provisions designed to slow down a hostile bidder. The protection rules contain six provisions designed to insure officers and directors against liability, or compensate them following termination. The voting rules contain six provisions related to shareholder rights in election. The state rules contain provisions designed to protect firms incorporated in certain states (e.g., Delaware). The remaining six provisions not included in the above rules are included in the other group category. The index uses a point scale from 1 to 24, where for every firm the index adds one point for every added provision that restricts shareholder rights (increases managerial power). The

index with highest values has the weakest shareholder rights, and the index with the lowest values has the strongest shareholder rights.[3]

Recently, Bebchuk et al. (2005) construct an alternative antitakeover index based on a subsample of relevant variables shown to impact shareholder value from the Gompers et al. (2003) index. These include: blank check preferred stock, classified board, limits to amend charter, limits to amend bylaws, supermajority, and poison pill. They label this index an entrenchment index (EIndex). In a separate paper, Bebchuk and Cohen (2005) refine their earlier specification and examine the role of classified boards in isolation arguing that it is the most significant antitakeover provision in terms of impact on firm value. We follow both articles and use the entrenchment index of Bebchuk et al. (2005) and classified board in isolation as a robustness check.

While there is debate on how antitakeover provisions impact stockholders, the GIndex and the EIndex are related to the economic fundamentals of the firm and its decision making. Gompers et al. (2003) and Core et al. (2006) document that firms with a large number of antitakeover provisions have lower operating performance compared to those with a small number of provisions. Consistent with this notion, Bebchuk et al. (2005), use a subset of the antitakeover provisions and find that firms with a high number of provisions have lower valuations, measured by Tobin's Q, and Bebchuk and Cohen (2005) document a similar relation between Q and classified boards. Masulis et al. (2007) find that the GIndex is related to stockholder reaction of merger announcements, with high GIndex firms suffering larger losses on the announcement of a takeover attempt. Litov (2005) finds that firms with large antitakeover provisions have higher debt ratios than those with low provisions, while John and Knyazeva (2006) find that the GIndex is related to firm payout policy. Overall, the evidence suggests that antitakeover provisions have an impact on various aspects of firm decisions and therefore provide researchers a view of the overall balance of power between shareholders and managers.

3.2.2 Ownership Concentration and Executive Compensation

We attempt to control for the agency problems that arise as a result of ownership concentration and executive compensation using insider ownership, institutional holdings, and top management pay mix. Jensen and Meckling (1976) suggest that because of the separation of ownership and control, managers have power over the firm's resources and with this vast discretion managers are free to pursue activities that can directly expropriate wealth from other stakeholders and from the firm. Therefore, to mitigate some of the problems associated with managerial opportunism, firms should increase managerial equity ownership (Jensen 1993), and as a result we expect that the incentives of managers to retain higher cash levels diminishes.

[3] For a complete description on the construction of the GIndex see Gompers et al. (2003).

The presence of a large shareholder, or blockholder, plays an important role in resolving (or exacerbating) some of the firm's agency problems. Shleifer and Vishny (1986) suggest that blockholders mitigate the free-rider problem, perform a monitoring function, and reduce the scope of managerial opportunism. Alternatively, large shareholders can also act to promote their self interest (Shleifer and Vishny 1997), reduce managerial initiative (Burkart et al. 1997), or suffer from under-diversification (Demsetz and Lehn 1985). Overall, the use of ownership concentration in our analysis provides a gauge of managerial opportunism.

We measure insider ownership as the ratio of top-five insider holdings of common stocks to the total shares outstanding, and institutional ownership as the ratio of shares that institutions owned in the firm divided by the total number of shares outstanding. We measure top management pay mix, or the fraction of top pay for the top five managers received in equity-based forms, as the ratio of stock option grants (SOG) divided by the summation of SOG, salary, and bonus compensation.

3.2.3 Board Characteristics and Governance

A firm's board of directors is responsible for monitoring and evaluating senior management. Central to the board's effectiveness is the question of board structure (size and independence). The literature on the impact of board size on firm value is mixed. The literature suggests that increased board size has two competing effects: greater monitoring versus more rigid decision-making. Yermack (1996) finds that smaller, more efficient boards provide greater decision making. In contrast, Harris and Raviv's (2008) model of boards trades off additional monitoring services with free-riding and predicts that larger boards will provide optimal monitoring when managers' opportunities to consume private benefits are high. Boone et al. (2007) find evidence consistent with Harris and Raviv's predictions.

In addition to board size, board independence should also have an impact on firm value. Inside directors provide firm- and project-specific knowledge that assists the board in understanding the detailed aspects of the firm's business. In contrast, outside (or independent) directors contribute expertise and objectivity that ostensibly mitigates managerial entrenchment and expropriation of firm resources. The governance literature generally suggests that as boards become increasingly independent of managers, their monitoring effectiveness increases, thereby decreasing managerial opportunism and enhancing firm performance.

To control for board-of-directors effects we use both board size and independence. Board size is generally measured using the number of directors on the board. However, because of the high correlation between board size and firm size, we divide board size by the log of total assets. We measure board independence as the ratio of independent directors to total directors.

3.2.4 Control Variables

The remaining variables are firm-specific controls motivated by Opler et al. (1999). These variables include firm size, leverage, market to book, cash flow to total assets, standard deviation of cash flow for the past 10 years, net working capital to total assets, research and development (R&D) to sales, capital expenditures to assets, acquisition spending to assets, a dividend dummy that takes a value of one if a company pays a dividend and zero otherwise, and a bond dummy that takes a value of one if the firm has S&P long-term ratings and zero otherwise. For the purpose of this research, assets are defined as total assets net of cash and cash equivalents.

Firm size, a proxy for takeover deterrent, is measured as the natural log of total assets. Firm leverage is measured as the ratio of total debt (short- and long-term debt) to assets. The market to book ratio, a proxy for growth opportunities, is measured as (book value of assets minus book value of equity plus the market value of equity)/book value of assets. The cash flow ratio is measured as earnings after interest, dividend, and taxes, but before depreciation, divided by assets. The standard deviation of the firm's cash flows, a proxy for business conditions, is computed using the firm's standard deviation of the cash flow ratio for the past 10 years. Net working capital to total assets, a proxy for liquidity, is the ratio of current assets net of cash minus current liabilities divided by assets. The ratio of R&D to sales is used as a proxy for financial distress costs. The ratios of capital expenditures to assets and acquisition to assets indicate whether managers attempt to increase the size of their firms.[4] Given a small number of extreme observations and to ensure that outliers are not driving any of our results, we winsorize the variables cash to sales, leverage, market to book, cash flow to assets, standard deviation of cash flow to assets, net working capital to assets, R&D to sales, capital expenditures to assets, and acquisition to assets at the 0.5 % level on each tail. Though not reported, we also estimate all reported models using the unadjusted variables and find similar results.

Given that cash holdings are time period specific as they are related to economic conditions, and that cash holdings are industry specific, we include indicator variables for both the time period and the industry. We report our results using the Fama and French (1997) 48 industry categories, although, using a two-digit SIC classification instead does not impact our inferences.

3.2.5 The Sample

We utilize four databases to create our sample: the Investor Responsibility Research Center (IRRC) database, the Compustat Industrial Annual database, the

[4] For robustness, we also include two additional variables, namely, the number of business segments the firm operates in and a dividend payout ratio, and find consistent results. We do not tabulate the corresponding findings.

executive compensation (Execucomp) database, and the Thomson Financial Institutional Ownership (Thomson) database.

The IRRC database provides annual data for the years 1990, 1993, 1995, 1998, 2000, 2002, and 2004 on corporate antitakeover provisions for about 1,500 firms primarily drawn from the S&P 500 and other large corporations, derived from proxy statements, annual reports, and SEC filings such as 10-Ks and 10-Qs.[5] Following Gompers et al. (2003) and Bebchuk and Cohen (2005), we fill in observations of the GIndex in missing years. We use this data to construct the GIndex, EIndex (described above), and an indicator variable for firms with classified boards. In addition, we use the IRRC data to collect director information continuously for the period from 1996 through 2004.

We use the Compustat database to collect firm-specific financial information such as total assets, sales, book and market value of equity, free cash flow, research and development expenditures, capital expenditures, acquisition spending, dividend distribution, and S&P long-term ratings. Additional information regarding insider and institutional holdings is collected from Compustat's Execucomp database and Thomson Financial database (Form 13-F), respectively. Variables include insider holdings of CEO and five top officers, institutional holdings of firms, and top management pay mix information.

To include a firm-year observation in our analysis, the GIndex data must be available in the IRRC data set. Information on the book and market value of equity, total assets, sales, long-term debt, common shares outstanding, net working capital, research and development expenditures, capital expenditures, acquisitions, dividends, and repurchases must be available in the Compustat database. Additional information on institutional ownership, insider ownership, and executive compensation must also be available from the Execucomp and Thomson Financial databases. Finally, we delete all firms that are subject to regulation and firms with SIC codes between 6,000 and 6,999 because of their involvement in inventories of marketable securities. Merging the databases and applying these requirements yields a data set of 11,645 firm-year observations on 1,872 firms for the years 1993 through 2004.[6]

3.2.6 Descriptive Statistics

Table 1 provides statistics for the sample. Included are the mean, median, standard deviation, and 25th and 75th percentiles. Our main variable in the analysis, cash holdings, has a mean of 18 % and a median of 4.9 % with a standard deviation of 47.9 %. Because of the skewness of the variable, we use the log of cash holdings. The GIndex in the sample has a mean and a median of about nine, and 75th and 25th

[5] We exclude the year 1990 from our analysis since our insider holdings data starts in the year 1992.

[6] To minimize survivorship bias, we allow firms to exit and reenter the data set.

Table 1 Sample statistics. This panel provides summary statistics for the sample. The data set comprises 11,645 firm-year observations from 1,872 firms covering the period from 1993 to 2004. The descriptive statistics include: ratio of cash to sales (Cash Holdings), the Gompers et al. (2003) antitakeover index (GIndex), the Bebchuk et al. (2005) entrenchment index (EIndex), classified board, equity ownership of the top five officers (Inside Ownership), institutional ownership, top management pay for performance (Pay Sensitivity), ratio of number of directors to natural log of assets (Board Size), ratio of independent directors on the board to total directors (Board Independence), sales, total assets, firm leverage (Leverage), ratio of the market value to book value of assets (Market-to-Book), ratio of cash flow to net assets (CF/Assets), ratio of net working capital to net assets (Working Capital/Assets), standard deviation of cash flows for the past 5 years (CF Volatility), ratio of research and development to sales (R&D/Sales), ratio of capital expenditures to net assets (CapEx/Assets), and ratio of acquisition to sales (Acquisition/Sales). Net assets comprise total assets minus cash holdings. The variables Cash Holdings, Leverage, Market-to-Book, CF/Assets, CF Volatility, Working Capital/Assets, R&D/Sales, CapEx/Assets, Acquisition/Sales, and Institutional Ownership are winsorized at the 0.5 % level on either tail

	Mean	Median	Standard deviation	25th percentile	75th percentile
Cash holdings	0.180	0.049	0.479	0.015	0.153
GIndex	9.23	9.00	2.69	7.00	11.00
EIndex	2.42	2.00	1.18	2.00	3.00
Classified board	0.60	1.00	0.49	0.00	1.00
Inside ownership	0.039	0.007	0.079	0.003	0.029
Institutional ownership Ownership	0.600	0.619	0.213	0.471	0.749
Pay sensitivity	0.369	0.355	0.260	0.153	0.569
Board size	9.38	9.00	2.55	11.00	7.00
Board independence	0.645	0.667	0.175	0.538	0.778
Sales($MM)	4,749	1,351	13,365	551	3,800
Assets($MM)	5,762	1,350	21,952	539	3,944
Leverage	0.205	0.195	0.165	0.062	0.306
Market-to-book	1.95	1.53	1.28	1.20	2.20
Cash flow/assets	0.164	0.151	0.145	0.104	0.214
Working capital/assets	0.066	0.051	0.158	−0.035	0.16
CF volatility	0.040	0.027	0.042	0.015	0.049
R&D/sales	0.043	0.000	0.134	0.000	0.035
CapEx/assets	0.062	0.049	0.049	0.029	0.078
Acquisition/sales	0.024	0.000	0.055	0.000	0.019

percentile values of 11 and 7. A similar pattern is observed for the EIndex since it is a subset of the GIndex. The majority of the firms in the sample, about 60 %, have classified boards. Insiders, on average, own about 4 % of the outstanding shares, while institutions hold about 60 % of the outstanding shares. The insider ownership variable is highly skewed (median ownership of 0.7 %), as expected. Top management pay mix is more symmetric with mean and median values of about 37 % and 35.5 %. Turning to board characteristics, the mean board size is about nine directors and the ratio of independent to total directors on the board is about 65 %. In terms of financial data, the average firm in the sample has sales of about $4.7 billion, with assets of about $5.8 billion, leverage ratio of 21 %, market to book of about 1.95,

cash flows to assets of about 16 %, capital expenditures to assets of about 6.2 %, and acquisition to assets of about 2.4 %.

4 Firm Cash Holdings and Shareholder Rights

4.1 Univariate Analysis

Prior work suggests a strong relation between firm size and cash holdings. We posit that a similar relation exists between size and governance variables. To examine if this in fact the case, we sort firms into size quintiles each year. The median levels of cash holdings and the governance variables within the first, third, and fifth size quintiles are then reported in Panel A of Table 2 (to keep the table manageable, we do not report the second and fourth quintiles). We perform the Wilcoxon rank-sum test to examine whether the reported medians are significantly different across the first and fifth quintiles. The results suggest significant differences between the first and fifth quintiles for all of the variables. Smaller firms have more cash, higher inside ownership, lower institutional ownership, lower pay mix, lower board independence, and smaller boards. Though not reported, when examining all the quintiles, we find a monotonic relation between all of the variables with the exception of institutional ownership which has an inverted u-shaped distribution.

Next, we examine the relation among the governance variables using a double sort. We sort using firm size quintiles and then the GIndex. We sort the GIndex into quartiles and examine the median levels of the other governance variables between the first (strong shareholder rights) and the fourth (weak shareholder rights) quartiles within each of the five size quintiles (again for brevity, we only report the extreme quartiles).[7] To test for significance across GIndex quartiles, we perform the Wilcoxon rank-sum test and bold the reported statistics when they differ significantly, at a minimum 95 % confidence level. Panel B of Table 2 presents the results of this analysis. We find that firms with stronger shareholder rights (first quartile GIndex) have higher inside ownership, lower board independence across all size quintiles, and generally higher pay for performance and smaller boards across quintiles.

The panel also provides evidence on the univariate relation between cash holdings and the governance variables while controlling for firm size. In the first column, we report the median cash holdings by GIndex quartiles within the size quintiles. We find large, statistically significant differences between cash holdings based on GIndex quartiles. For example, in the smallest size quintile, firms with strong shareholder rights (first quartile) have median cash holdings of 14 % relative to 6 % with weak shareholder rights. In fact, firms with strong shareholder rights

[7] We use GIndex quartiles because of sample size when looking within size quintiles.

Table 2 Cash holdings and governance variables relative to firm size. In Panel A, we examine the relation between cash holdings and the governance metrics based on firm size. We sort firms into size quintiles each year. We report the median levels of cash holdings and the governance variables within the first, third, and fifth size quintiles. In Panel B, we sort the data within each size quintile based on GIndex quartiles. We report the median levels for the first (low) and fourth quartiles (high) of the GIndex within each size quintile. In both panels, we use the Wilcoxon rank-sum test to examine whether the medians are significantly different between the first and fifth quintiles for Panel A, and the first and fourth quartiles in Panel B. The data set comprises 11,645 firm-year observations from 1,872 firms covering the period from 1993 to 2004. The variables of interest include: ratio of cash to sales (Cash Holdings), Gompers et al. (2003) antitakeover index (GIndex), institutional ownership, equity ownership of the top five officers (Inside Ownership), top management pay for performance (Pay Sensitivity), ratio of number of directors to natural log of assets (Board Size), and ratio of independent directors on the board to total directors (Board Independence). Data in bold represent statistical significance at the 95 % confidence level

	Cash holdings	Inside ownership	Institutional ownership	Pay sensitivity	Board independence	Board size
Panel A: Cash and governance variables by yearly size quintiles						
Size quintile = 1 (smallest)	**11.96 %**	**2.05 %**	**54.46 %**	**29.22 %**	**62.50 %**	**7**
Size quintile = 3	4.41 %	0.98 %	64.64 %	34.97 %	66.67 %	9
Size quintile = 5 (largest)	**3.79 %**	**0.24 %**	**61.46 %**	**42.91 %**	**72.73 %**	**11**
Panel B: Cash and governance variables within GIndex quartiles controlling for firm size (by size quintile)						
Size quintile = 1						
Low GIndex (strong rights)	**14.40 %**	**2.53 %**	**51.45 %**	**29.64 %**	**60.00 %**	7
High GIndex (weak rights)	**5.83 %**	**1.37 %**	**54.08 %**	**23.20 %**	**66.67 %**	9
Size quintile = 2						
Low GIndex (strong rights)	**7.31 %**	**2.16 %**	**62.36 %**	36.30 %	**57.14 %**	**7**
High GIndex (weak rights)	**3.18 %**	**1.15 %**	**58.29 %**	23.99 %	**70.00 %**	**9**
Size quintile = 3						
Low GIndex (strong rights)	**4.50 %**	**1.48 %**	**61.41 %**	**37.08 %**	**57.14 %**	**8**
High GIndex (weak rights)	**2.76 %**	**0.84 %**	**64.14 %**	**31.89 %**	**71.43 %**	**9**
Size quintile = 4						
Low GIndex (strong rights)	**5.27 %**	**0.90 %**	**59.09 %**	34.50 %	**57.14 %**	**9**
High GIndex (weak rights)	**3.16 %**	**0.49 %**	**65.72 %**	35.51 %	**72.73 %**	**10**
Size quintile = 5						
Low GIndex (strong rights)	**5.58 %**	**0.19 %**	**55.61 %**	**45.18 %**	**66.67 %**	**11**
High GIndex (weak rights)	**2.35 %**	**0.31 %**	**63.92 %**	**40.17 %**	**75.00 %**	**12**

hold significantly more cash across all size quintiles, and though not reported in the table, we find a monotonic relation across all GIndex quartiles. Thus, these univariate results are consistent with the spending and shareholder power hypotheses, but inconsistent with the flexibility hypothesis.

4.2 Multivariate Analysis

We examine the relation between shareholder rights and cash holdings and various controls for firm- specific variables in a multivariate setting using cross-sectional time-series models. For estimation methods, we follow Petersen (2006) and report *t*-statistics for the pooled results using standard errors corrected for clustering at the firm level.[8] The dependent variable is corporate cash holdings, the log of the cash to sales ratio. The independent variables are governance-related variables and firm specific factors affecting cash holdings. The variables of interest in this study are the governance proxies discussed above. The coefficients on the governance variables directly address the predictions of our hypotheses relating governance to cash ratios.

4.2.1 Cash Holdings and Shareholder Rights

Model 1 of Table 3 provides the analysis of the general relation between corporate cash holdings and the governance variables. The results in model 1 suggest that cash holdings is negatively related to the GIndex and positively related to inside ownership and pay sensitivity, all significant at the 99 % confidence level. We find a positive relation between cash holdings and institutional ownership but the *t*-statistic is only marginally significant, at the 90 % confidence level. The nongovernance-related control variables have their expected signs. Firms with low cash holdings tend to have high leverage and net working capital, pay dividends, have a bond rating, and make significant investments through capital expenditures and acquisitions. On the other hand, high cash holding firms are characterized by higher growth options (market-to-book and R&D), cash flows, and cash flow volatility.

[8] In a prior version of the paper, we estimated all of our models correcting for serial and autocorrelation using a Newey and West (1987) procedure, which Petersen (2006) finds to be upwardly biased. While correcting for clustered errors resulted in the reduced t-statistics reported in this version of the paper, the results remain significant.

Table 3 Multivariate analysis of cash holdings, changes in cash holdings, and corporate governance. This table examines the relation of governance metrics to current cash holdings and the changes in cash holdings over time. To do this, we regress corporate cash holdings on various governance metrics and control variables in column 1. As an endogeneity control, we then include the lagged cash holdings of the firm in the remaining models. The data covers the period 1993 through 2004. The dependent variable is the natural log of the cash/sales ratio (Cash Holdings). The independent variables include: the lagged Gompers et al. (2003) antitakeover index ($GIndex_{t-1}$), lagged indicator variables for firms within the top (fourth) and bottom (first) quartiles of the GIndex, the lagged Bebchuk et al. (2005) entrenchment index ($EIndex_{t-1}$), a lagged variable that subtracts the EIndex from the GIndex (GIndex minus $EIndex_{t-1}$), a lagged classified board indicator (Classified $Board_{t-1}$), a lagged variable that includes all the variables in the EIndex but without classified board (EIndex minus Classified $Board_{t-1}$), lagged equity ownership of the top five officers (Inside $Ownership_{t-1}$), lagged ratio of number of directors to the natural log of assets (Board $Size_{t-1}$), lagged ratio of independent directors on the board to total directors (Board $Independence_{t-1}$), lagged top management pay for performance (Pay $Sensitivity_{t-1}$), and lagged intuitional equity holding (institutional $ownership_{t-1}$). Additional firm-specific controls include: sales, total assets, firm leverage (Leverage), ratio of the market value to book value of assets (Market-to-Book), ratio of cash flow to net assets (CF/Assets), ratio of net working capital to net assets (Working Capital/Assets), standard deviation of cash flows for the past 5 years (CF Volatility), ratio of research and development to sales (R&D/Sales), ratio of capital expenditures to net assets (CapEx/Assets), and ratio of acquisition to sales (Acquisition/Sales). Net assets comprises total assets minus cash holdings. Further, we include indicator variables for firms that pay dividends (Dividend) and for firms with long-term S&P ratings (Bond). Models 1 through 4 employ the same sample using different categories of the GIndex. Model 5 applies the primary specification (Model 1) but uses a subset of observations for which board characteristic information is available. Standard errors are estimated with clustered errors at the firm level. T-statistics are reported in parentheses. Superscripts a, b, and c indicate significance at the 1 %, 5 %, and 10 % levels, respectively. Though not reported, all models include industry and year indicators as well as an intercept term

Dependent variable: cash holdings	(1)	(2)	(3)	(4)	(5)	(6)
$Cash\ holdings_{(t-1)}$		0.727[a]	0.727[a]	0.727[a]	0.727[a]	0.728[a]
		(79.57)	(79.56)	(79.54)	(79.55)	(70.10)
$GIndex_{(t-1)}$	−0.037[a]	−0.011[a]				−0.010[a]
	(−3.61)	(3.18)				(2.77)
First Qtile $GIndex_{(t-1)}$					0.040[b]	
					(2.05)	
Fourth Qtile $GIndex_{(t-1)}$					−0.042[c]	
					(1.92)	
$EIndex_{(t-1)}$			−0.013			
			(1.62)			
GIndex minus $EIndex_{(t-1)}$			−0.010[b]	−0.010[b]		
			(2.11)	(2.13)		
$Classified\ board_{(t-1)}$				−0.014		
				(0.76)		
EIndex minus $classified\ board_{(t-1)}$				−0.016		
				(1.55)		
$Inside\ ownership_{(t-1)}$	1.315[a]	0.343[a]	0.342[a]	0.338[a]		0.389[a]
	(3.48)	(2.96)	(2.96)	(2.93)		(3.00)
First Qtile (size adj.) insider $ownership_{(t-1)}$					0.012	
					(0.60)	

(continued)

Table 3 (continued)

Dependent variable: cash holdings	(1)	(2)	(3)	(4)	(5)	(6)
Fourth Qtile (size adj.) insider ownership$_{(t-1)}$					0.062[a]	
					(2.92)	
Board size$_{(t-1)}$						−0.035
						(0.99)
Board independence$_{(t-1)}$						−0.021
						(0.33)
Pay sensitivity$_{(t-1)}$	0.292[a]	0.045	0.046	0.046	0.043	0.008
	(3.86)	(1.16)	(1.18)	(1.17)	(1.09)	(0.19)
Institutional ownership$_{(t-1)}$	0.201[c]	0.033	0.034	0.035	0.023	0.064
	(1.67)	(0.74)	(0.75)	(0.77)	(0.52)	(1.21)
Size	0.003	0.011	0.011	0.011	0.008	0.021[b]
	(0.16)	(1.39)	(1.36)	(1.37)	(0.92)	(2.19)
Leverage	−1.571[a]	−0.422[a]	−0.422[a]	−0.421[a]	−0.428[a]	−0.401[a]
	(−11.30)	(5.77)	(5.77)	(5.75)	(5.85)	(4.80)
Market-to-book	0.038[b]	0.003	0.003	0.003	0.003	0.010
	(2.31)	(0.36)	(0.35)	(0.35)	(0.32)	(1.04)
Cash flow/assets	1.224[a]	0.491[a]	0.490[a]	0.492[a]	0.500[a]	0.463[a]
	(7.83)	(6.17)	(6.17)	(6.17)	(6.27)	(5.03)
Working capital/assets	−1.478[a]	−0.657[a]	−0.658[a]	−0.657[a]	−0.654[a]	−0.509[a]
	(−10.25)	(8.06)	(8.06)	(8.06)	(8.02)	(5.36)
CF volatility	3.534[a]	0.582[b]	0.582[b]	0.587[b]	0.590[b]	0.789[b]
	(7.76)	(2.31)	(2.31)	(2.33)	(2.35)	(2.54)
R&D/sales	3.083[a]	0.913[a]	0.914[a]	0.914[a]	0.917[a]	0.919[a]
	(16.01)	(9.70)	(9.69)	(9.65)	(9.69)	(8.54)
CapEx/assets	−5.115[a]	−3.001[a]	−2.997[a]	−2.998[a]	−2.990[a]	−2.787[a]
	(−13.03)	(12.49)	(12.53)	(12.53)	(12.51)	(10.11)
Acquisition/sales	−1.741[a]	−2.150[a]	−2.150[a]	−2.149[a]	−2.161[a]	−2.084[a]
	(−7.33)	(11.56)	(11.55)	(11.56)	(11.61)	(10.21)
Dividend indicator	−0.289[a]	−0.084[a]	−0.084[a]	−0.085[a]	−0.082[a]	−0.076[a]
	(−7.06)	(3.91)	(3.92)	(3.93)	(3.81)	(3.11)
Bond indicator	−0.102[b]	−0.015	−0.015	−0.015	−0.017	−0.016
	(−2.37)	(0.68)	(0.68)	(0.67)	(0.76)	(0.63)
Firm-year observations	11,645	9,662	9,662	9,662	9,662	7,108
Adj. R^2	0.470	0.770	0.770	0.770	0.770	0.776

4.2.2 The Changes in Cash Holdings and Shareholder Rights

Although we find that weaker governance structures are negatively related to cash holdings, the OLS regressions may not fully account for potential endogeneity in the sample. Modeling the relation between governance and cash holdings may be problematic if there is an endogenous feedback from cash holdings to governance because cash holdings and governance are jointly determined. Prior theory suggests that the causality between governance and cash holdings is more likely to be influenced by the firm's governance structure than vice versa. Nevertheless,

estimation employing alternative methodology bolsters the integrity of the analysis. One common approach to controlling for endogeneity is two-stage least squares. However, the validity and sensitivity of the 2SLS estimation is related to the ability to identify exogenous variables in the first stage that are not related to the second-stage dependent variable. Unfortunately, prior empirical and theoretical work on corporate governance and cash holdings use similar control variables, which leaves us with little insight in determining reasonable instrument variables.

In a similar vein to the optimal capital structure literature, we use an alternative approach and examine whether the governance variables are related to the change in a firm's cash holdings. This provides evidence on the ability of a firm's governance variables to predict the future cash holdings of the firm by controlling for the lagged value of the firm's cash holdings. To implement this analysis, we add lagged cash holdings of the firm to our regression models. In addition, we lag the governance variables to represent the historical value, again controlling for the endogenous choice.

The results of this analysis are presented in models 2 through 6 found in Table 3. Model 2 is similar to the cash holdings analysis found in model 1 but the lagged cash holdings of the firm is included in the model. Not surprisingly, we find that lagged cash holdings explain a great deal of the current cash holdings (coefficient $= 0.73$ and t-statistic $= 80$). This is also reflected in the increase of the adjusted-R^2 from 0.47 in model 1–0.77 in model 2. We also note the drop in the t-statistics across the board for all the control variables when moving from model 1 to 2. When examining the results for the governance metrics in model 2, we find that the GIndex remains negative and statistically significant (at the 99 % confidence level). Insider ownership remains positive and statistically significant (at the 99 % confidence level). However, both pay for performance and institutional ownership are insignificant in this model.

In models 3 and 4, we break the GIndex down into smaller components. Model 3 reports the result using the Bebchuk et al. (2005) EIndex and the remaining antitakeover provisions (computed as the difference between the GIndex and EIndex), hereafter labeled as RIndex. We find that the EIndex is statistically insignificant but the RIndex is significant at the 95 % confidence level. Model 4 breaks down the GIndex into three subcategories: classified boards, EIndex (minus classified boards), and remaining antitakeover provisions. In this case, we find that both the classified board variable and the EIndex minus the classified board variable are insignificant but again the RIndex remains significant at the 95 % confidence level.

In models above, we assume a linear type of relation between cash holdings and the governance variables. Next, we examine if the relation is nonlinear. To do this, we classify firms using the GIndex into the highest and lowest quartiles. We similarly classify insider ownership (given the large variation of insider ownership by firm size documented in Table 2, we create the insider quartiles with the size quintiles). The results of this analysis are found in model 5. For the GIndex, the coefficients on both the first and fourth quartile variables are significant and similar in the size, which suggests that a linear specification may indeed correctly capture

the relation. For the inside ownership quartiles, we only find the coefficient representing the fourth quartile to be significant. This suggests that the true relation is asymmetric and that the inferences implied from the linear coefficient could be inaccurate. We further examine the similar types of cuts for both pay sensitivity and institutional ownership but find insignificant results, and as such we continue to report the linear specifications.

Finally, we add the board characteristics to our basic model. The results are reported in model 6 of Table 3. We find that the GIndex and the inside ownership variables remain significant. For board characteristics, we find that both board size and board independence are insignificantly related to cash holdings. The remaining control variables have the expected signs.

Overall, the results in Table 3 suggest that the GIndex and insider ownership not only provide information in the cross-section, but are also related to changes in a firm's cash position over time as cash holdings are negatively related to the GIndex and positively related to inside ownership. Firms with a higher GIndex hold less cash and firms with a lower GIndex hold more cash. For inside ownership, we document a positive relation between cash holdings and inside ownership. But the results are driven by firms with high inside ownership holding more cash and not by firms with low insider ownership holding less. Also, as it relates to cash holdings, researchers may be discarding valuable information by solely focusing on the EIndex or classified board, since the other factors in the GIndex provides information about a firm's cash holdings.

In addition to the results reported above, we perform a number of robustness checks but do not tabulate the results. We examine whether refined institutional blockholdings influence our results (e.g., Dlugosz et al. 2006). We obtain blockholder data from Andrew Metrick's website and reestimate the models using his measure of blockholders and find similar results. To assess the adequacy of accounting for industry specific factors, we estimate the different models but require that at least 30 firms are in the industry category to be included in the analysis. While this reduces the sample by one-third, the point estimates are similar to the reported values and both the *t*-statistics and model fit increases. Again, the results corroborate with our earlier findings that firms with weaker shareholder rights have lower cash holdings than firms with stronger shareholder rights.

4.3 Governance, Investment Decisions, and Valuation

From the analysis so far, we know that a firm's cash position is lower in firms with weak shareholder rights (captured by GIndex and insider ownership). The shareholder rights hypothesis states that equity holders with strong rights allow their managers to hold large cash reserves because they are confident about their ability to control how it will be spent. Our results so far are consistent with that hypothesis. However, we are unable to make any statements about the optimality of this outcome. Our results could be consistent with firms with weaker governance

structures spending the cash on suboptimal projects or it could be the case that firms with weaker governance structures hold low cash reserves to mitigate the potential agency problems associated with excess cash holdings. To address this issue, we first examine the relation between excess cash holdings, governance characteristics, and a firm's investment and payout decisions. Second, we assess the effect of governance characteristics and excess cash holdings on firm value.

While we present results based on multivariate tests, in untabulated analysis, we also examine our main variables of interest in subsamples formed based on the top and bottom quartiles of the governance variables GIndex and inside ownership. These include: cash holdings, change in industry-adjusted capital expenditure ratio, change in industry-adjusted R&D ratio, industry-adjusted acquisition spending, change in industry-adjusted repurchases, change in industry-adjusted profitability, and change in industry-adjusted market to book ratio. For the variables grouped by GIndex, the results show that firms in the top quartile of the GIndex have lower than average cash ratios, changes in industry-adjusted capital expenditures, industry-adjusted profitability ratios, and market to book ratios and higher than average industry-adjusted deal values. For the variables grouped by insider ownership, we find that firms in the top quartile of insider ownership have lower than average cash ratios and change in industry-adjusted repurchases, but higher than average change in industry-adjusted capital expenditure ratios, change in industry-adjusted R&D ratios, industry-adjusted deal values, change in industry-adjusted dividends, industry-adjusted profitability, and industry-adjusted market to book ratios.

4.3.1 Governance and Investment Decisions

In this section, we examine the relation between firms' investment decisions and governance variables. Specifically, we examine how excess cash, firm governance characteristics, and the interaction of these variables are related to firms' investment decisions. Given the insignificance of the board variables, pay sensitivity, and institutional ownership as a governance variable in Table 3, we drop these variables from the analysis. We focus on two measures to examine internal investment decisions that a firm makes: (1) capital expenditures, and (2) R&D expenditures. We then examine how governance variables are related to firms' external investment decisions (acquisitions). It is possible that a firm's investment levels and governance could be jointly co-determined. To mitigate this problem, we focus on the change in the underlying investment decisions and relate it to the pre-existing governance characteristics of the firm. Therefore, we are examining how governance characteristics are related to changes in future decisions of the firm. This also reflects the long-term nature of investment decisions since investments are often multiyear commitments. Hence, the analysis reflects how investment decisions change over time.

To account for industry-specific factors that may drive investment decisions, we calculate the investment variables relative to the industry median value on a yearly basis. The IRRC database contains the large and more profitable firms than the

universe of firms, IRRC essentially covers the S&P 500 until 1998, at which time it was expanded to the S&P 1500. If only firms in the IRRC sample were used to calculate industry average, a selection bias would occur. Hence, to mitigate this issue we calculate the industry averages and changes in these averages relative to all firms in COMPUSTAT, again defining industry at the Fama-French 48 industry level. We then examine how this measure is related to the governance variables, excess cash holdings, the interaction of the governance variables and excess cash holdings, and firm-specific control variables.

We define a firm's cash position as the unexplained portion of cash holdings as well as the change in the unexplained portion. Specifically, we define unexplained cash as the residual from a regression of cash holdings on firm size, leverage, growth options, profitability, ratio of working capital to assets, cash flow volatility, R&D to sales, Capital expenditures to assets, and acquisition to sales as well as industry and year indicator variables.

For the governance variables, we include zero or one indicator variables for the extreme quartiles of the GIndex and insider ownership variable (the insider ownership quartiles are adjusted to reflect the size of the firm by creating the quartiles within the size quintiles as in Table 2). Since we are interested in how governance variables are related to future decisions, the governance variables enter as their lagged values. To examine how governance and cash holdings are jointly related to firm decisions, we create a set of interaction variables. That is, the GIndex and inside ownership extreme quartiles are interacted with the cash residuals. Additional control variables are motivated by Comment and Schwert (1995), who examine the probability of acquisition activity. These variables include: the market model residual (calculated over the estimation period), average sales growth, average net working capital (minus cash), average leverage (long-term debt to market value), average price-earnings ratio, and lagged firm size (averages are calculated over the prior 4 years). We continue to estimate the models with clustered standard errors as in Petersen (2006) with the year effect captured in the yearly industry adjustment.

The results of the analysis are found in Table 4. Across all the models, we find low R^2s. This is not surprising as here we are focusing on changes in a firm's industry-adjusted position over time, which is likely to have a large idiosyncratic component. Model 1 reflects the results for the change in industry-adjusted capital expenditures. The level of the cash residual and the change in the cash residual are unrelated to the change in capital expenditures on their own. As to the governance variables, we find that firms with a high GIndex are more likely to increase capital investments. The interaction between high GIndex and cash residuals shows that this propensity to increase capital investments is greater in the presence of excess cash reserves. We do not find evidence relating inside ownership or the interaction of inside ownership with changes in capital expenditures. In terms of economic significance, we find that relative to their assets, firms with weak shareholder rights invest 1.6 % more in capital expenditures than their industry peers. A one-standard deviation increase in excess cash increases this amount to 4.16 %. Our results differ from Gompers et al. (2003). They find that firms with weak shareholder rights (high

Table 4 Governance and cash holdings as they relate to firms' investment and payout decisions. This table examines the relation between investment and payout decisions and governance metrics. For investment decisions, the dependent variables are the change in industry-adjusted capital expenditures, R&D expenditures (for firms with available R&D expenditures), and acquisitions. For payout decisions, the dependent variables are the change in industry-adjusted dividends and repurchases. All the dependent variables are industry-adjusted on a yearly basis using the Fama-French 48 industry classification system. The firm's cash position is the unexplained portion of cash holdings as well as the change in this cash position. Specifically, the residual from regressing cash holdings on firm-specific characteristics represents the firm's excess cash holdings. The control variables for the cash regression in the first stage include firm size, leverage, growth options, profitability, ratio of working capital to assets, cash flow volatility, R&D to sales, Capital expenditures to assets, and acquisition to sales as well as industry and year indicator variables. The governance variables include the extreme quartiles for the Gompers et al. (2003) antitakeover index (GIndex) and equity ownership of the top five officers (within the size quintiles found in Table 2). All governance metrics are lagged one period. The quartiles are interacted with the cash residuals to examine how the use of the excess cash flows and governance characteristics relate to profitability and firm valuation. Additional control variables include: the market model residual (calculated over the estimation period), average sales growth, average net working capital (minus cash), average leverage (long-term debt to market value), average price-earnings ratio, and lagged firm size (averages are calculated over the prior 4 years). Standard errors are estimated with clustered errors at the firm level. T-statistics are reported in parentheses below the coefficient. Superscripts a, b, and c indicate significance at the 1 %, 5 %, and 10 % levels, respectively. Though not reported, all models include industry and year indicators as well an intercept term

	Investment decisions			Payout policy	
	Δ Ind. adjusted capital exp.	Δ Ind. adjusted R&D	Δ Ind. adjusted acquisitions	Δ Ind. adjusted dividends	Δ Ind. adjusted repurchases
	(1)	(2)	(3)	(4)	(5)
Cash position of the firms					
Cash residual$_{(t-1)}$	−0.001	0.007	−0.001	0.001	0.003
	(0.15)	(0.81)	(0.67)	(0.36)	(0.59)
Change in cash residual$_{(t-1)}$	0.008	−0.002	0.004[a]	0.003[a]	−0.003
	(1.32)	(0.59)	(4.35)	(3.31)	(1.54)
GIndex variables					
First Qtile GIndex$_{(t-1)}$	−0.005	0.030[b]	−0.001	−0.001	0.022[a]
	(0.38)	(2.22)	(0.27)	(0.12)	(2.62)
First Qtile GIndex$_{(t-1)}$ * cash residual$_{(t-1)}$	−0.006	0.001	−0.001	0.013[b]	−0.005
	(0.51)	(0.10)	(0.60)	(2.53)	(0.92)
Fourth Qtile GIndex$_{(t-1)}$	0.016[c]	−0.008	0.001	0.022[a]	−0.002
	(1.71)	(0.58)	(0.39)	(3.97)	(0.25)
Fourth Qtile GIndex$_{(t-1)}$ * cash residual$_{(t-1)}$	0.022[c]	−0.017[b]	0.006[b]	−0.005[b]	0.011[c]
	(1.94)	(2.28)	(2.33)	(2.29)	(1.92)
Ownership variables					
First Qtile (size adjusted) insider ownership$_{(t-1)}$	−0.008	−0.017	−0.004	0.003	0.013[b]
	(0.55)	(1.27)	(1.36)	(0.58)	(2.28)
First Qtile insider$_{(t-1)}$ * cash residual$_{(t-1)}$	−0.003	0.005	−0.001	−0.004	−0.002
	(0.25)	(0.52)	(0.24)	(1.14)	(0.27)

(continued)

Table 4 (continued)

	Investment decisions			Payout policy	
	Δ Ind. adjusted capital exp.	Δ Ind. adjusted R&D	Δ Ind. adjusted acquisitions	Δ Ind. adjusted dividends	Δ Ind. adjusted repurchases
	(1)	(2)	(3)	(4)	(5)
Fourth Qtile (size adjusted) insider ownership$_{(t-1)}$	−0.010	−0.001	−0.001	0.003	−0.016[b]
	(0.83)	(0.06)	(0.40)	(0.64)	(2.11)
Fourth Qtile insider$_{(t-1)}$ * cash residual$_{(t-1)}$	0.006	0.009	0.003	0.009[b]	0.003
	(0.49)	(0.97)	(1.39)	2.00)	(0.59)
Other control variables					
Market residual	−0.025	0.024	−0.012	0.065[a]	−0.089
	(0.13)	(0.29)	(0.48)	(2.72)	(1.63)
Sales growth	0.105[b]	−0.022	0.016[b]	−0.116[a]	−0.059[a]
	(2.44)	(0.78)	(2.34)	(10.51)	(3.55)
Working capital (net of cash)	−0.011	−0.153[a]	−0.005	0.060[a]	−0.088[a]
	(0.33)	(2.91)	(0.64)	(3.02)	(3.28)
Leverage	−0.001	0.005	−0.001	−0.030[a]	−0.041[a]
	(0.11)	(1.14)	(0.87)	(4.13)	(4.00)
Price/earnings	0.000	0.000	0.000	0.000	0.000
	(0.13)	(0.43)	(0.56)	(0.71)	(1.08)
Size$_{(t-1)}$	−0.005	−0.021[a]	0.001	0.010[a]	0.003
	(1.38)	(3.71)	(0.81)	(4.43)	(1.08)
Observations	7,439	3,576	7,652	7434	7042
Adj R^2	0.01	0.04	0.01	0.12	0.04

GIndex) have higher capital expenditures (see, e.g., their Table 10). However, their focus is on the aggregate level of investing in a univariate setting.

Model 2 presents the results for the analysis of the change in industry-adjusted R&D. Since close to half the firms in the sample do not report R&D expenditures, we focus on firms for which R&D investments are meaningful investment decisions by restricting the sample to only firms with lagged R&D greater than zero. Though not tabulated, we find similar results if we reestimate the models for the full sample. Again, the two measures of the firm's cash position are insignificant on their own. We find that firms with strong shareholder rights (firms in the lowest GIndex quartile) increase R&D expenditures. The coefficient on highest GIndex quartile is insignificant, but the interaction of the highest GIndex quartile with the cash residuals of the firm is negative and significant, which suggests that firms with weak shareholder rights decrease investments in R&D relative to their industry peers as their cash position increases. In fact, we find that while a firm with weak shareholder rights invests an insignificant 0.8 % less in R&D than its industry peers, a one-standard deviation increase in excess cash results in that same firm investing 2.02 % less than its peers. We do not find evidence of a relation between inside ownership and changes in R&D.

For external investment decisions, we examine the relation between the governance variables, excess cash holdings, and acquisitions. Masulis et al. (2007) study the relation of bid premiums to the acquiring firms' GIndex scores. Our focus is on firms undertaking acquisitions. For this analysis, we use the SDC database to collect information on the acquisition activity of our sample firms. We follow Masulis et al. in forming our sample with the exception of not backfilling the data. The lagged governance variables must be available before the acquisition to be included in the sample. This leaves us with a sample of 1,492 unique firms and 7,922 firm-year observations. We identify 921 acquisitions for these firms over the sample period.

We scale the amount of acquisition spending by the lagged market value of the firm and, to control for year and industry related factors, we industry adjust this measure. The results of the acquisition analysis are reported in Column 3 of Table 4. The change in the firm's cash residual is positively related to acquisition activity. For the governance variables, the only significant variable is the interaction of the 4th quartile of the GIndex and the cash residual of the firm. The positive and significant coefficient suggests that firms with low shareholder rights are more likely to use excess cash to fund acquisitions. That is, a firm with weak shareholder rights spends an insignificant 0.1 % more in acquisitions than its industry peers and a one standard deviation increase in excess cash results in that same firm spending 0.71 % more than its peers.

Overall, governance affects the allocation of excess cash. Poorly governed firms acquire more assets through acquisition and capital expenditures, but reduce their R&D investment relative to their industry peers. We have not yet provided evidence on whether these spending differences are optimal or not. However, other studies (Harford 1999; Masulis et al. 2007) have shown that acquisitions by firms with excess cash or high GIndex scores tend to be value destroying. Further R&D on average is a value-increasing long-term investment from the shareholders' perspective (Eberhart et al. 2004). Thus, results elsewhere in the literature are suggestive that these decisions are more consistent with the spending hypothesis. Nonetheless, below we directly test for an effect on profitability and firm value.

4.3.2 Governance and Payout Policy

An alternative explanation for why firms with higher agency conflicts have low cash on average is that they distribute more to shareholders. To examine this issue, we investigate how the governance metrics are related to a firm's payout policy, specifically dividends and repurchases. Our analysis mirrors the analysis of the investment decisions. We examine changes in yearly industry-adjusted measures of dividends and repurchases. We focus on the changes in payout ratios (dividends or repurchases) to capture the slowly changing level of dividends caused by conservative dividend policy (see e.g., Brav et al. 2005). When examining the changes in dividends, we find that changes in a firm's cash position are positively related to changes in dividend policies; firms with an increase in their cash holdings are more likely to increase dividends (by about 2.2 % on average). For the governance

variables, we find that firms with a high GIndex are more likely in general to increase dividends, evidence consistent with Officer (2006). The interaction terms, however, show that this propensity does not explain their lower cash reserves. It is the low GIndex firms that react to an increase in cash by increasing dividends; in fact, high GIndex firms allocate less of any excess cash to an increase in dividend than do other firms. The results for the insider ownership interactions are consistent, indicating that firms with higher insider ownership react to high cash reserves by increasing dividends.

When we examine changes in industry-adjusted repurchases, we find no effect for cash position (using either the level or the change) on its own. For the governance variables, we find that firms in the lowest quartile of the GIndex (stronger shareholder rights) are more likely to increase repurchases in general. However, the interaction terms reveal that high GIndex firms tend to react to high cash reserves by increasing repurchases. In other words, the results suggest that while a firm with weak shareholder rights spends an insignificant amount of 0.2 % less on repurchases, a one-standard deviation increase in excess cash results in that same firm repurchasing 1.51 % more than its peers. Similarly, the standalone first and fourth Quartile Insider Ownership coefficients show that in general, while low insider ownership firms are more likely to use repurchases, high insider ownership firms are less likely to spend cash reserves on repurchases.

The payout results show that firms choosing to payout some of their excess cash differ in the method of payout depending upon their governance. Firms with stronger governance (lower GIndex or higher insider ownership) tend to choose to increase dividends, thereby committing to higher payouts in the long term. On the other hand, firms with a weaker governance structure select the more flexible option, choosing to repurchase instead and imposing no commitment to make future payouts. These results are consistent with the flexibility hypothesis. The results are generally not consistent with the shareholder power hypothesis. Firms with significant shareholder power should provide managers with flexibility, which is the opposite of what we document.

4.3.3 Governance and Profitability

Table 4 shows how investment and payout decisions differ based on governance characteristics and the firm's cash position. While these relations are instructive, they tell us nothing about their effect on shareholder wealth. In this section, we turn to the impact of these relations on firm performance. That is, we ask whether the difference in investment and payout decisions harm performance.

This type of analysis is subject to endogeneity concerns as governance characteristics and profitability may be jointly determined. Thus, we examine whether pre-determined governance characteristics are related to future profitability. By doing so, we answer the question of whether governance characteristics are related to future changes in firms' performance.

Specifically, we calculate the dependent variable, profitability, relative to the industry's median values on a yearly basis. Recognizing the selection bias noted above when working with the IRRC database, we calculate the industry medians relative to all firms in the COMPUSTAT database, which in turn captures industry and yearly fixed effects. To account for the fact that firm-level characteristics may be jointly determined, we include the lagged industry-adjusted profitability in our regression models and estimate the models using firm-level fixed effects. We include the same governance, cash, and interaction variables from the allocation analysis in the prior section as well as the same control variables.

We begin by examining how a firm's governance characteristics are related to its future profitability in Table 5. Naturally, lagged industry-adjusted profitability describes a significant portion of the firm's current profitability (t-statistic $= 34.6$). We find that both the lagged and the change in cash residuals are negatively related to current profitability. It is possible that this reflects long-run mean reversion in profitability or that when cash reserves accumulate, it is because the firm's growth prospects are declining. The fact that firms in the lowest quartile of the GIndex have significantly greater profitability and those in the highest quartile have significantly lower profitability demonstrates a direct relation between governance and profitability. Based on the results of model 1, firms with weak shareholder rights are 1.6 % less profitable than their industry peers and a one-standard deviation increase in excess cash decreases that amount further to 2.33 %. Similarly, firms with low insider ownership have significantly lower profitability and firms with high ownership having significantly higher profitability. While both a firm's cash position and its governance affect future profitability, the results show little in the way of an incremental effect of the interaction of the two on the following year's profitability. The only significant interaction is for low GIndex firms with excess cash, indicating that the generally higher profitability for low GIndex firms is mitigated in the presence of excess cash. However, this relation does not bear directly on the predictions of the shareholder power or spending hypothesis for high GIndex firms.

4.3.4 Governance and Market to Book

Excess cash can affect the value of the firm through reduced profitability, either in the following year or much longer run, or through value-reducing actions such as acquisitions. In this section, we extend our analysis to overall firm value, examining how, on net, the market perceives the optimality of the different spending choices identified earlier. To do this, we follow the same basic approach outlined in the prior section. That is, we examine whether governance metrics are related to firms' future market to book relative to industry peers. We include firms' lagged industry-adjusted market to book in the models, estimate the models using firm-level fixed effects, and lag the governance metrics. The dependent variable is industry-adjusted market to book. The industry median market to book is calculated using all firms with COMPUSTAT data. Additional control variables for sales growth, working capital, leverage, and firm size are included.

Table 5 Governance and cash holdings as they relate to firms' profitability and market-to-book. This table provides regression results on whether the governance variables are related to changes in firms' profitability and market-to-book relative to industry peers. Due to endogeneity concerns, we include firms' lagged profitability or market-to-book in the models, estimate the models using firm-level fixed effects, and lag all the governance metrics. The dependent variable in Models 1 and 2 are industry-adjusted profitability and industry-adjusted market-to-book, respectively. To control for a selection bias, industry medians are calculated on a yearly basis using all firms with COMPUSTAT data. The cash position of the firm is defined as the unexplained portion of cash holdings as well as the change in this position. Specifically, the residual from regressing cash holdings on firm-specific characteristics represents the firm's excess cash holdings. The control variables for the cash regression include: firm size, leverage, growth options, profitability, ratio of working capital to assets, cash flow volatility, R&D to sales, Capital expenditures to assets, and acquisition to sales as well as industry and year indicator variables. The governance variables include the extreme quartiles for the Gompers et al. (2003) antitakeover index (GIndex) and equity ownership of the top five officers (within the size quintiles found in Table 2). These quartiles are then interacted with the cash residuals to examine how the use of the excess cash flows and governance characteristics are related to profitability and valuation. Additional control variables include: average sales growth, average net working capital (minus cash), average leverage (long-term debt to market value), and lagged firm size (averages are calculated over the prior 4 years). The models are estimated using firm-level fixed effects, and standard errors are estimated with clustered errors at the firm level. T-statistics are reported in parentheses below the coefficient. Superscripts a, b, and c indicate significance at the 1 %, 5 %, and 10 % levels, respectively. Though not reported, all models include industry and year indicators as well an intercept term

	Industry-adjusted profitability	Industry-adjusted MtB
	(1)	(2)
Industry-adjusted profitability (1) or MtB (2)$_{(t-1)}$	0.420[a]	0.441[a]
	(34.62)	(39.06)
Cash position of the firms		
Cash residual$_{(t-1)}$	−0.007[a]	−0.006
	(3.87)	(0.28)
Change in cash residual$_{(t-1)}$	−0.002[b]	−0.020[b]
	(2.27)	(2.40)
GIndex variables		
First Qtile GIndex$_{(t-1)}$	0.010[b]	0.106[b]
	(2.52)	(2.38)
First Qtile GIndex$_{(t-1)}$ * cash residual$_{(t-1)}$	−0.005[b]	−0.011
	(2.46)	(0.44)
Fourth Qtile GIndex$_{(t-1)}$	−0.016[a]	−0.122[b]
	(3.98)	(2.50)
Fourth Qtile GIndex$_{(t-1)}$ * cash residual$_{(t-1)}$	0.001	−0.040[c]
	(0.67)	(1.69)
Ownership variables		
First Qtile (size adjusted) insider ownership$_{(t-1)}$	−0.005[c]	−0.045
	(1.86)	(1.53)
First Qtile insider$_{(t-1)}$ * cash residual$_{(t-1)}$	0.001	−0.025
	(0.41)	(1.12)
Fourth Qtile (size adjusted) insider ownership$_{(t-1)}$	0.006[b]	0.088[b]
	(2.03)	(2.33)
Fourth Qtile insider$_{(t-1)}$ * cash residual$_{(t-1)}$	0.001	0.010

(continued)

Table 5 (continued)

	Industry-adjusted profitability	Industry-adjusted MtB
	(1)	(2)
	(0.44)	(0.43)
Other control variables		
Sales growth	−0.004	−0.029
	(1.22)	(0.70)
Working capital (net of cash)	−0.014	0.222
	(0.80)	(1.09)
Leverage	−0.063[a]	−0.644[a]
	(6.94)	(5.97)
Size	0.002	−0.156[a]
	(1.22)	(8.34)
Observations	7,768	7,768
Adj. R^2	0.760	0.698

We present the results of this analysis in model 2 of Table 5. We find that lagged industry-adjusted market to book has the greatest explanatory power for the current market to book of the firm. The lagged change in the cash residual of the firm is negatively related to the current market to book, indicating a generally lower value for firms accumulating cash. For the governance variables, we find that the GIndex index quartiles are significantly related to market valuation as the firms in the lowest quartile of the GIndex have a significantly higher market to book ratio while those in the highest quartile have a significantly lower ratio. We also find the interaction of lagged cash residuals and the fourth quartile of the GIndex to be significantly negative, at the 90 % confidence level. In terms of economic significance, this suggest that firms with weak shareholder rights have 12.2 % lower valuations than their industry peers, and a one-standard deviation increase in excess cash decreases that amount further to 17.81 %. For the insider ownership variables, firms in the fourth quartile of ownership have a significantly higher market valuation. The interaction variables reveal that cash reserves do not alter this relation.

On the whole, the results in Table 5 show that poor governance, as measured by GIndex, is negatively related to firm value and that this relation strengthens in the presence of excess cash. While low insider ownership is also negatively related to firm value, the presence of excess cash does not enhance that relation. We cannot detect an impact of governance and cash reserves together on profitability, at least in the short run. This suggests that the reduction in value caused by the interaction of cash reserves and bad governance comes from dissipative actions such as overpaying for acquisition targets, rather than through ongoing reduced operating performance.

5 Discussion and Conclusions

Our results provide a comprehensive picture of how firm governance affects the use of cash. We start by establishing that U.S. firms with weaker governance structures tend to hold lower cash reserves. This comes about because of the way these firms spend their cash flow. While they actually invest less in R&D, they have greater capital expenditures and are more frequent acquirers. The payout results show that firms choosing to pay out some of their excess cash differ in the method of payout depending upon their governance. Firms with stronger governance structures tend to choose to increase dividends, thereby committing to higher payouts in the long term. On the other hand, firms with a weaker governance structure select the more flexible option, choosing to repurchase instead and imposing no commitment on themselves to make future payouts.

When examining if these differences are reflected in future profitability, we find a positive relation between shareholder rights and profitability. While both a firm's cash position and its governance affect future profitability, the results show little in the way of an incremental effect of the interaction of the two on future profitability. Finally, when examining valuation effects, we find that weaker governance structures are negatively related to firm value and that this relation is more pronounced when combined with excess cash holdings. While low insider ownership is also negatively related to firm value, the presence of excess cash does not exacerbate the relation. While the effect of these spending decisions on value and profitability is weak, on net, we interpret our results, especially in the context of results elsewhere in the literature, as indicating that the spending decisions of poorly governed firms with excess cash are suboptimal.

The results for the U.S. appear at first to be inconsistent with the results from international studies – namely, that as shareholder rights increase, cash balances decrease. However, we believe that these results help us understand how country-level shareholder rights interact with firm-level agency problems and shareholder power. The U.S. scores highly on shareholder rights and rule of law indices, indicating that it has both high legal protection of shareholder rights and strong enforcement of those rights. This implies that in such a setting even entrenched managers are not as entrenched as their counterparts in countries with less legal protection of minority shareholders. Thus, while fewer firm-level shareholder rights are indicative of an agency problem and relatively more entrenched management in the U.S., this does not mean that the managers are unassailable. Large, unused cash balances are too visible an indicator and could lead to shareholder agitation (as in the case of Kirk Kerkorian and Chrysler). Faleye (2004) shows that proxy contests are increasing in excess cash reserves and that managers often lose their jobs following such contests. Thus, managers would prefer to convert the cash into real assets relatively quickly. Even if these transactions destroy value, to the extent that they are within the bounds of the cost of removing the management, the managers can successfully execute them. Further, evidence in Bliss and Rosen (2001) and Harford and Li (2006) establishes that CEO compensation and wealth

increase after acquisitions, even if those acquisitions destroy value. Given these incentives and the potential penalty from accumulating large cash reserves, weakly controlled managers choose to spend the cash quickly on acquisitions and capital expenditures, rather than hoard it.

Our results, in the context of the international evidence of La Porta et al. (2000) and Dittmar et al. (2003), suggest that country-level granting and enforcing of shareholder rights is perhaps more important than firm-level attempts to limit shareholder rights. The level of entrenchment found in environments with poor shareholder protection is an order of magnitude greater than the average entrenched firm in countries with higher shareholder protection. In the former environment, managers can hoard cash and pay low dividends without fear of interference. In the latter environment, even entrenched managers are wary of actions that are too flagrant because their entrenchment only goes so far. In other words, measures of managerial entrenchment in the U.S. are better viewed as signals of managers' propensity toward self-interested action rather than indications of their complete invulnerability to oversight. More entrenched managers have increased the transaction cost bounds within which they can operate before it becomes worthwhile to remove them, but still must be careful not to accumulate large, unused cash stockpiles. In the U.S., these stockpiles not only draw the attention of shareholders, but can be used to self-finance a control action against the managers.[9] More research is needed to confirm or refute this interpretation of our results.

Acknowledgements The authors would like to thank Tom Bates, Murillo Campello, Mike Cliff, Amy Dittmar, Kathy Kahle, Sandy Klasa, Scott Lee, Karl Lins, Ed Rice, Jan Mahrt-Smith, Laura Starks, Mike Weisbach, an anonymous referee, and seminar participants at the 2006 American Finance Association Meetings and Penn State University for their helpful comments and suggestions. Harford gratefully acknowledges the support of the UW CFO Forum and the Reimers and McCabe fellowships. Mansi acknowledges receipt of partial funding from Virginia Tech's summer support. The remaining errors are the sole responsibility of the authors.

References

Bebchuk, L., & Cohen, A. (2005). The costs of entrenched boards. *Journal of Financial Economics, 78*, 409–433.

Bebchuk, L., Cohen, A., & Ferrell, A. (2005). What matters in corporate governance? Harvard law school John, M. Olin center discussion paper no. 491.

Bliss, R., & Rosen, R. (2001). CEO compensation and bank mergers. *Journal of Financial Economics, 61*, 107–138.

Boone, A., Field, L., Karpoff, J., & Raheja, C. (2007). The determinants of corporate board size and independence: An empirical analysis. *Journal of Financial Economics, 85*, 65–101.

[9] Kerkorian's 1995 tender offer for Chrysler was explicitly to be partly financed by the $8 billion in cash reserves that Chrysler had accumulated. Because U.S. law allows the debt of an acquiring shareholder to be assigned to the acquired company, this is possible.

Brav, A., Graham, J., Harvey, C., & Michaely, R. (2005). Payout policy in the 21st century. *Journal of Financial Economics, 77*, 483–527.

Burkart, M., Gromb, D., & Panunzi, F. (1997). Large shareholders, monitoring, and the value of the firm. *Quarterly Journal of Economics, 112*, 693–728.

Comment, J., & Schwert, G. W. (1995). Poison or placebo: Evidence on the deterrence and wealth effects of modern antitakeover measures. *Journal of Financial Economics, 39*, 3–43.

Core, J., Guay, W., & Rusticus, T. (2006). Does weak governance cause weak stock returns? An examination of firm operating performance and investors' expectations. *Journal of Finance, 61*, 655–687.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy, 93*, 1155–1177.

Dittmar, A., & Mahrt-Smith, J. (2007). Corporate governance and the value of cash holdings. *Journal of Financial Economics, 83*, 599–634.

Dittmar, A., Mahrt-Smith, J., & Servaes, H. (2003). International corporate governance and corporate cash holdings. *Journal of Financial and Quantitative Analysis, 38*, 111–133.

Dlugosz, J., Fahlenbrach, R., Gompers, P., & Metrick, A. (2006). Large blocks of stock: Prevalence, size, and measurement. *Journal of Corporate Finance, 12*, 594–618.

Easterbrook, F. (1984). Two agency-cost explanations of dividends. *American Economic Review, 74*, 650–659.

Eberhart, A., Maxwell, W., & Siddique, A. (2004). An examination of long-term abnormal stock returns and operating performance following R&D increases. *Journal of Finance, 59*, 623–650.

Faleye, O. (2004). Cash and corporate control. *Journal of Finance, 59*, 2041–2060.

Fama, E., & French, K. (1997). Industry costs of equity. *Journal of Financial Economics, 43*, 153–193.

Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics, 118*, 107–155.

Harford, J. (1999). Corporate cash reserves and acquisitions. *Journal of Finance, 54*, 1969–1997.

Harford, J., & Li, K. (2007). Decoupling CEO wealth and firm performance: The case of acquiring CEOs. *Journal of Finance, 62*, 917–949.

Harris, M., & Raviv, A. (2008). A theory of board control and size. Review of Financial Studies, *21*, 1797–832.

Jensen, M. (1986). Agency costs of the free cash flow, corporate finance and takeovers. *American Economic Review, 76*, 323–329.

Jensen, M. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance, 48*, 831–880.

Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*, 305–360.

John, K., & Knyazeva, A. (2006). Payout policy, agency conflicts, and corporate governance. Working paper, New York University.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics, 58*, 3–27.

Lins, K., & Kalcheva, I. (2004). International evidence on cash holdings and expected managerial agency problems. Working paper, University of Utah.

Litov, L. (2005). Corporate governance and financing policy: New evidence. Working paper, New York University.

Masulis, R., Wang, C., & Xie, F. (2007). Corporate governance and acquirer returns. *Journal of Finance, 62*, 1851–1889.

Mikkelson, W., & Partch, M. (2003). Do persistent large cash reserves hinder performance? *Journal of Financial and Quantitative Analysis, 38*, 275–294.

Myers, S., & Majluf, N. (1984). Corporate financing decisions when firms have investment information that investors do not. *Journal of Financial Economics, 13*, 187–221.

Newey, W., & West, K. (1987). A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix. *Econometrica, 55*, 703–708.

Officer, M. (2006). Dividend policy, dividend initiations, and governance. Working paper, University of Southern California.
Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. *Journal of Financial Economics, 52*, 3–46.
Petersen, M. (2006). Estimating standard errors in finance panel datasets: Comparing approaches. Working paper, Northwestern University and NBER.
Pinkowitz, L., Stulz, R., & Williamson, R. (2004). Do firms with poor protection of investor rights hold more cash? Working paper, Georgetown University.
Shleifer, A., & Vishny, R. (1986). Large shareholders and corporate control. *Journal of Political Economy, 94*, 461–488.
Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance, 52*, 737–783.
Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of Financial Economics, 26*, 3–27.
Yermack, D. (1996). Higher market valuation companies with a small board of directors. *Journal of Financial Economics, 40*, 185–212.

Executive Debt-Like Compensation

Divya Anantharaman and Vivian W. Fang

Abstract While executive compensation in the United States is believed to consist primarily of cash- and equity-based components, a nascent literature argues that compensation accrued by executives under pension and other deferred compensation (DC) plans has debt-like payoffs, and could function as "inside debt". Inside debt holdings are predicted to counteract the risk-taking incentives created by inside equity holdings, and align top managers closer to outside debtholders vis-à-vis equityholders. Recent empirical studies suggest that pension and DC plan balances serve the role of inside debt to some extent, and are effective at mitigating equityholder-debtholder conflicts in leveraged firms. These findings not only change our understanding of the composition of top executive compensation, but also have implications for the recent debate on reforming executive compensation to mitigate excessive risk-taking by top executives.

1 Introduction

The extant literature on executive compensation has focused on annual cash-based compensation (e.g., salary and bonus) and equity-based compensation (e.g., stock and option grants). While a great deal of effort has gone into explaining the existence and consequences of equity-based compensation for top executives, very little attention has been paid to a question that challenges the maintained assumption of this literature: "why are managers' monetary incentives traditionally correlated with the value of equity rather than the value of debt?" (Dewatripont and Tirole 1994).

Recent work by Sundaram and Yermack (2007) reintroduces this question and argues that top managers in the United States are in fact frequently compensated with debt – a practice that has been overlooked almost entirely by earlier literature.

D. Anantharaman (✉) • V.W. Fang
University of Minnesota, Minneapolis, MN, USA
e-mail: divyaa@rutgers.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_6,

This debt compensation refers to payments due to executives for benefits accrued under defined-benefit pension plans and other deferred compensation contracts. These plans offer fixed payoffs on a pre-specified schedule in the future, as long as the firm remains solvent. If the firm becomes insolvent, beneficiaries have the same status as unsecured creditors of the firm and receive proportionally lower payouts. The payoffs to these plans, therefore, closely resemble the payoffs to unsecured corporate debt, making this compensation debt-like to some degree. If these plans indeed function similarly to debt claims on the firm, then many executives hold not only inside equity in the firm (through stock, restricted stock and option grants) but also "inside debt" (through defined-benefit pension and other deferred compensation plans). Perceiving executive compensation as consisting of both inside equity and inside debt alters our understanding of why compensation packages take the form they do; it also has implications for the incentives top executives derive from their compensation.

1.1 Why Inside Debt?

Jensen and Meckling (1976) make a brief reference to inside debt in their seminal work on the agency costs of outside equity and outside debt. They conjecture that agency conflicts between equityholders and debtholders in leveraged firms can be resolved by having the manager hold equal proportions of the firm's equity and debt. Edmans and Liu (2011) are the first to formally model this idea and rigorously analyze the role of inside debt in the optimal compensation contract. They build a model in which the manager makes both an effort decision and a project selection decision, and thereby consider agency costs of outside equity and agency costs of outside debt. Allowing the manager to hold a full menu of securities on the firm: equity, debt and a bonus that pays off only in solvency, they find that the optimal compensation contract includes not only inside equity but also inside debt.

In the Edmans and Liu (2011) model, inside debt enters the optimal contract as an efficient solution to the agency costs of debt; its presence mitigates risk-shifting incentives arising from the manager's equity stake. The optimal mix of inside equity and inside debt in the manager's contract depends on the relative importance of the two agency problems – shirking and risk-shifting. Therefore, the optimal debt-to-equity ratio in the manager's compensation is higher when agency costs of debt are high (for example, when leverage is high, or the firm is close to default), and lower when agency costs of equity are high (for example, when the firm has substantial growth opportunities). The Edmans and Liu (2011) model therefore suggests that the literature's focus on equity-based compensation can be justified for firms in which inducing managerial effort is the primary concern for equityholders, such as young firms with many investment opportunities. In these firms, the agency costs of debt might not be economically important, and the optimal contract therefore includes a high proportion of inside equity but not inside debt.

As part of the optimal compensation contract, inside debt is a more efficient solution to agency costs of debt than the mechanisms advocated by prior research,

such as bonuses that pay off only in solvency (e.g., John and John 1993). This arises from the fact that the payoffs from inside debt are sensitive not only to the incidence of insolvency but also to the firm's liquidation value in insolvency, as inside debt offers some positive payoff in insolvency that is proportional to liquidation value (exactly what creditors, who have similar payoffs, would desire). Therefore, inside debt provides managers with incentives to avoid insolvency as well as to maximize liquidation value once the firm is headed into insolvency. In contrast, solvency-contingent bonuses are effective only in encouraging the manager to avoid insolvency. In fact, the Edmans and Liu (2011) model shows that under some conditions, the all-or-nothing payoffs to solvency-contingent bonuses could even exacerbate risk-shifting tendencies, as the manager is incentivized to take extreme risks to gamble the firm back into solvency, so as to retain the bonus – an action that could inefficiently sacrifice liquidation value. Moreover, even in situations where solvency-contingent bonuses mitigate risk-shifting, inside debt offers a more powerful and efficient solution as it is more sensitive to ultimate liquidation value. A similar comparison applies to other proposed solutions to agency costs of debt, such as salary or the manager's concern for his reputation (Hirshleifer and Thakor 1992), as these instruments generally pay off only in solvency, and have zero payoffs in insolvency.

1.2 Is Inside Debt Observed in Practice?

Sundaram and Yermack (2007) point out that defined-benefit pension plans and other deferred compensation (DC) contracts offer executives debt-like payoffs. That is, the beneficiary receives fixed payoffs under these plans on a pre-determined schedule in the future, as long as the firm remains solvent. In insolvency, these plans offer lower payoffs proportional to the firm's liquidation value, as benefits under these plans are usually unfunded and unsecured. In that sense, executives who participate in these plans have the same status as unsecured general creditors of the firm and essentially hold debt claims on the firm.

Our understanding of how pervasive these plans are was obscured for a long time by the limited disclosure requirements for these types of compensation. Prior to 2006, firms were only required to disclose annual pension benefits payable to executives, classified by years of service and compensation levels; no disclosure was required of the accumulated present value of corporate obligations under these plans. As a result, approximating the present value of accumulated pension benefits for each executive using public data required several assumptions and considerable financial sophistication (Sundaram and Yermack 2007). Sundaram and Yermack (2007) combine the limited information in proxy statements with their own assumptions to estimate the accumulated present value of CEO pension balances for 237 firms from 1996 to 2002. For the mean (median) CEO in their sample, accumulated pension values are $4.2 m ($2.6 m), amounting to 17 % (7 %) of accumulated equity holdings of these executives. Disclosure of other deferred compensation plans was even less transparent – while most top executives

participated in such plans, firms were not required to report their existence or balances accrued under them. The only requirement was to report any "above-market interest" earned on deferred compensation account balances.

On August 29, 2006, the SEC issued Regulation S-K, a comprehensive rule that expanded proxy disclosure requirements for compensation and corporate governance practices. Regulation S-K required all firms to report balances accumulated till date under pension and other deferred compensation plans for their named executives. The first wave of proxy statements subject to Regulation S-K provides large-scale evidence on the economic importance of these plans. Using data from the Standard & Poor's Execucomp database (which covers the S&P 1500 firms), we compute statistics on the distribution of pension and DC plans in the S&P 1500, and summarize them in Tables 1 and 2. As shown in Table 1, Panel A, pension and DC plan balances, in total, are approximately $6.4 m ($1.4 m) for the mean (median) Execucomp CEO in 2006, moving to $5.6 m ($1.1 m) in 2007, and $5.1 m ($0.9 m) in 2008. About 70 % of all firms covered by Execucomp have non-zero pension and DC balances. About half of all Execucomp firms have pension plans for their CEOs; the mean pension balance is $3.2 m ($2.8 m, $3.1 m) in 2006 (2007, 2008) while the median CEO has no pension balance in all three years. DC plans are found in a larger group of about 60 % of all Execucomp firms. The mean DC balance is $3.2 m ($2.8 m, $2.1 m) in 2006 (2007, 2008) while the median CEO has a smaller balance of $0.27 m ($0.24 m, $0.18 m).

Table 1, Panel B describes the distribution of pension and DC balances for only those CEOs that have some non-zero balance in each category. Amongst the CEOs that have pension plans, the mean (median) pension balance is $6.8 m ($3.6 m) in 2006, $6.4 m ($3.4 m) in 2007 and $6.9 m ($3.7 m) in 2008. Amongst CEOs that have DC plans, the mean (median) balance is $5.4 m ($1.6 m) in 2006, $4.9 m ($1.6 m) in 2007 and $3.6 m ($1.1 m) in 2008. DC plans are therefore more prevalent, but on average smaller, than pension plans.

Table 2 describes pension and DC holdings as a proportion of inside equity holdings, where inside equity is the market value of accumulated stock, restricted stock and option grants held by the CEO. The mean (median) ratio of inside debt holdings to inside equity holdings in the entire Execucomp sample is 34 % (6 %). About 8 % of all Execucomp firms have a debt bias, i.e. their CEOs hold more pension and DC balances than inside equity. Amongst firms with non-zero balances in these plans, pension and DC balances are 50 % (17 %) of inside equity. Therefore, the Regulation S-K disclosures reveal that these plans are an economically substantial part of CEO compensation packages.

2 The Institutional Features of Pension and Other Deferred Compensation Plans

Broadly speaking, defined-benefit pension plans and other deferred compensation (DC) plans both offer debt-like payoffs. There is, however, substantial heterogeneity in the way these plans are designed in practice, and the institutional features of

Table 1 Pension and other deferred compensation holdings of Execucomp CEOs

Panel A: all Execucomp firms								
	N	Mean	SD	5 %	25 %	50 %	75 %	95 %
Year 2006								
Pension and DC plans	1,223	6,409	14,608	0	0	1,433	6,608	30,169
Pension plans	1,223	3,226	7,356	0	0	0	3,217	17,158
DC plans	1,223	3,183	10,938	0	0	270	2,152	13,360
Year 2007								
Pension and DC plans	1,429	5,646	11,968	0	0	1,119	5,676	26,324
Pension plans	1,429	2,849	6,579	0	0	0	2,792	15,092
DC plans	1,429	2,797	8,477	0	0	240	2,023	12,469
Year 2008								
Pension and DC plans	1,279	5,149	10,524	0	0	905	5,463	24,716
Pension plans	1,279	3,090	7,110	0	0	0	3,061	16,378
DC plans	1,279	2,058	5,982	0	0	176	1,533	10,176
Whole sample								
Pension and DC plans	3,931	8,229	14,207	112	902	3,363	9,300	34,196
Pension plans	3,931	3,045	7,001	0	0	0	2,981	16,152
DC plans	3,931	2,677	8,669	0	0	224	1,914	12,211
Panel B: all Execucomp CEOs with non-zero holdings in each category								
	N	Mean	SD	5 %	25 %	50 %	75 %	95 %
Year 2006								
Pension and DC plans	864	9,072	16,672	107	1,120	3,578	9,797	37,107
Pension plans	581	6,791	9,473	102	1,191	3,562	8,453	24,104
DC plans	722	5,392	13,815	65	518	1,588	4,327	21,188
Year 2007								
Pension and DC plans	986	8,182	13,670	135	928	3,458	9,227	36,160
Pension plans	637	6,391	8,633	83	909	3,409	8,048	23,797
DC plans	824	4,851	10,710	90	522	1,560	4,446	19,416
Year 2008								
Pension and DC plans	883	7,457	11,968	102	717	2,896	8,764	30,595
Pension plans	573	6,898	9,308	96	1,074	3,717	8,758	24,110
DC plans	738	3,567	7,527	46	366	1,141	3,192	15,812
Whole sample								
Pension and DC plans	2,733	8,229	14,207	112	902	3,363	9,300	34,196
Pension plans	1,791	6,683	9,127	89	1,060	3,539	8,480	24,073
DC plans	2,284	4,607	10,976	65	452	1,418	3,986	18,481

Notes: All numbers are in $000 s. 'SD' refers to standard deviation. 5 %, 25 %, 50 %, 75 % and 95 % refer to the relevant percentiles of the distribution. 'Pension and DC plans' refers to the accumulated present value of pension benefits and balances in other deferred compensation contracts. 'Pension plans' refers to the accumulated present value of pension benefits. 'DC plans' refers to balances in other deferred compensation contracts

each type of plan affect the extent to which its payoffs are indeed debt-like. We review the design and features of each broad category of potentially debt-like compensation below.

Table 2 Inside debt holdings of Execucomp CEOs as proportion of inside equity holdings

Panel A: inside debt-to-inside equity ratios for all Execucomp CEOs								
	N	Mean	SD	5 %	25 %	50 %	75 %	95 %
Year 2006	1,223	0.25	0.75	0	0	0.05	0.26	1.13
Year 2007	1,429	0.26	0.69	0	0	0.05	0.27	1.12
Year 2008	1,279	0.53	1.85	0	0	0.08	0.41	2.32
Whole sample	3,931	0.34	1.22	0	0	0.06	0.30	1.40
Panel B: inside debt-to-inside equity ratios for all Execucomp CEOs with non-zero inside debt								
	N	Mean	SD	5 %	25 %	50 %	75 %	95 %
Year 2006	864	0.35	0.87	.01	0.04	0.13	0.38	1.30
Year 2007	986	0.38	0.80	0.01	0.04	0.16	0.41	1.52
Year 2008	883	0.76	2.19	0.01	0.07	0.21	0.69	2.92
Whole sample	2,733	0.50	1.43	0.01	0.05	0.17	0.47	1.80

Notes: 'SD' refers to standard deviation. 5 %, 25 %, 50 %, 75 % and 95 % refer to the relevant percentiles of the distribution. Inside debt is the total accumulated present value of pension benefits plus balances in other deferred compensation contracts. Inside equity is the fair market value of stock, restricted stock and option holdings

2.1 Defined-Benefit Pension Plans

Defined-benefit pension plans promise employees fixed payoffs starting at retirement, typically as a life annuity. Each employee's annual benefit is a function of her salary (the career-average or the average over the last 'n' years of service), the number of years of service, and a predetermined benefit formula. Defined-benefit pension plans in the United States can be of a few types, based on their tax and regulatory treatment.

The pension plans discussed in the labor economics literature (e.g. Ippolito 1985a, b; Gustman et al. 1994) are the broad-based plans that cover all (or substantially all) employees, including the rank-and-file employees as well as the most highly-paid executives. These broad-based plans are regulated by the Employee Retirement Income Security Act of 1974 (ERISA), which seeks to ensure benefit security for beneficiaries of private pension plans. ERISA covers all broad-based pension plans set up by private employers that have at least 100 beneficiaries. All plans covered by ERISA are required to be funded to a certain minimum percentage of liabilities, and the assets set aside to fund benefits are to be secured in a trust and cannot be withdrawn to settle other corporate obligations. Plans covered by ERISA are also insured by the Pension Benefit Guaranty Corporation (PBGC); therefore, if any firm sponsoring a pension plan goes into bankruptcy with an underfunded plan (i.e. with insufficient assets to meet plan liabilities), the PBGC takes over the plan and guarantees payments to beneficiaries, up to a limit reset by federal law annually (as of 2011, the PBGC guaranteed up to $54,000 per beneficiary-year). Contributions made into ERISA-qualified plans are tax-deductible, and all pension assets accrue returns tax-free. As balances in ERISA-qualified plans are funded, secured and guaranteed up to a limit, any claims held by

top executives through such plans are hence exposed only to a limited risk of loss in insolvency.

ERISA-qualified plans are however subject to limits on the maximum benefits that can be accrued for any individual beneficiary (a maximum of $195,000 annual benefit in 2011). Therefore, corporations that wish to accrue additional benefits for their most highly-paid executives resort to creating additional plans for these executives, which could be of two broad types: "restoration plans" or "supplemental plans". Restoration plans are broad-based plans that cover all employees earning above the allowed ERISA maximum, and accrue benefits that these employees would otherwise have earned if not for ERISA limits, using the same formulae as used in the qualified plans (Cadman and Vincent 2011). Supplemental plans, on the other hand, include only a few top executives, and provide additional benefits using formulae that need not be linked to the terms of the qualified plan. Hereafter, we use the term SERP (Supplemental Executive Retirement Plan) to refer broadly to supplemental plans as well as restoration plans. SERPs do not fall within the scope of ERISA regulation; consequently, they are not required to be funded, and are not eligible for PBGC guarantees. Therefore, executives with SERP balances are unsecured creditors of the firm, and are exposed to potential risk of loss if the firm should become insolvent or otherwise unwilling to pay benefits in the future.

2.1.1 Ensuring Benefit Security for SERPs

As SERP balances are potentially exposed to risk of loss due to firms' inability or unwillingness to pay in the future, many firms set up special arrangements to improve benefit security for top executive SERP claims. For example, while SERPs do not have to be funded, some firms voluntarily fund SERPs either through company-owned life insurance policies or through trusts that separate SERP funds from the general assets of the corporation. The most commonly used trusts are 'rabbi' trusts, which protect SERP funds in all circumstances (e.g., change of control) except corporate bankruptcy, in which case trust assets are subject to the claims of unsecured creditors. Therefore, rabbi trusts cannot shield executive SERP benefits from the risk of loss in insolvency.

A less frequently used alternative is to fund SERPs through a 'secular' trust, which protects assets even in the event of bankruptcy. Unlike contributions to a rabbi trust, contributions to a secular trust are treated as taxable income of the beneficiary in the period in which assets are transferred, as the beneficiary has 'constructively' received the income and is not subject to any risk of forfeiture of the income in the future. Secular trusts are believed to be rare, not only because beneficiaries incur an immediate tax liability on funding, but also because this type of trust is extremely controversial with stockholders, employees and other creditors (Sundaram and Yermack 2007). For example, the former American Airlines CEO and Chairman Donald J. Carty resigned after the company disclosed that he and other executives had received guarantees through secular trusts in 2003. The

disclosure drew criticism from stakeholders and led directly to the union votes on layoffs and wage and benefit cuts that aimed at helping American Airlines avert a bankruptcy filing.

Many SERPs also offer executives the option to claim their entire benefit in a lump sum at retirement, at which point they are entitled to the discounted present value of the future stream of benefits they would otherwise have received. A lump-sum option effectively shortens the maturity of the executive's claim and allows her to demand payment earlier than scheduled. Such lump-sum options, combined with early retirement options, also serve to increase benefit security for executives by allowing them considerable flexibility in timing the withdrawal of their benefits. Wei and Yermack (2011) conjecture that such options may create the potential for moral hazard, in which managers who expect the firm to fail may take early retirement and request a lump-sum settlement of their benefits.

Even in the post-2006 Regulation S-K era, conclusively assessing SERP benefit security remains difficult. While Regulation S-K requires all firms to disclose the balances accrued under pension and DC plans, disclosure requirements regarding the special arrangements firms may have made for SERPs (such as trusts or withdrawal options) are not comprehensive. Regulation S-K requires all firms to provide "a succinct narrative of the material factors necessary to an understanding of each plan" but does not specify an exhaustive list of what these factors might be, casting doubt on how comprehensive public disclosures on these special features are. However, some summary statistics of proprietary data on SERPs exist in the literature. Gerakos (2007) obtains proprietary data on pension plans for 172 firms in 2003 from a compensation consulting firm. Fifty-eight percent of this sample allows the CEO to take a lump-sum pension payout at retirement. Of such firms, however, only 38 % disclose the lump-sum option in proxy filings. Furthermore, 36 % of the entire sample funds SERP claims through a rabbi or secular trust, but amongst the firms that fund, only 10 % provide public disclosure.

More recent data on these special arrangements for both pension and DC plans is available through the Executive Benefits survey conducted every two years by Clark Consulting, most recently available for 2009 (Clark Consulting 2009). Out of a sample of approximately 100 Fortune 1000 firms that responded to the survey, 50 % of respondents reported allowing lump-sum withdrawal of SERP benefits at retirement, and 39 % reported funding SERPs informally through various vehicles. Almost 100 % of respondents reported allowing lump-sum withdrawal of DC balances, while 71 % of respondents reported funding DC claims. For a limited sample of 1,267 firm-year observations (restricted to firms that issue private debt in 2006–2008), Anantharaman et al. (2011) hand-collect data on these features from public proxy disclosures, only for SERPs. 44 % of their sample reports the existence of lump-sum withdrawal options, and only about 10 % reports voluntary funding. Therefore, disclosure of lump-sum withdrawal options appears to be more comprehensive than disclosure of funding arrangements.

2.2 Other Deferred Compensation (DC) Plans

DC plans involve current compensation that has been earned but voluntarily deferred by the executive; the executive essentially decides to lend the amount back to the firm, under an agreement to withdraw on a pre-specified schedule in the future. The compensation deferred is usually salary and incentive bonuses, but could also include restricted stock grants (Edmans and Gabaix 2009; Clark Consulting 2009). Clark Consulting (2009) reports that base salary and bonuses are deferrable for almost all their respondents, while restricted stock grants are deferrable for 25 % of respondents. Balances held under these plans are either credited with a fixed rate of return, or invested in a combination of asset classes that usually mirrors the investment choices offered to employees for their 401(k) plans.

Akin to SERPs, balances under DC plans do not have to be funded; executives that defer income therefore become unsecured creditors of the firm and are exposed to risk of loss in insolvency. While DC plans share some debt-like features with SERPs, there are important differences between the two types of plans. First, pension benefits can be withdrawn only at retirement (at the earliest) but DC balances can be withdrawn on a pre-specified schedule that often starts before retirement. The Clark Consulting (2009) survey reports that 75 % of respondents allow executives to withdraw DC balances on a pre-specified schedule that could start before retirement. Therefore, DC claims are often shorter in maturity than pension claims. Second, DC balances are often allowed and sometimes even required to be invested in the firm's own equity. The investment is typically made by crediting the executive with phantom stock, without any actual transfer of voting rights. The executive's account is then credited or debited with subsequent gains or losses on the firm's stock periodically, and the eventual settlement may be in cash or in stock. While the flexibility in withdrawal makes DC balances shorter-term claims, the option to invest balances in the firm's own equity makes DC payoffs less debt-like to begin with.

Section 409A of the Internal Revenue Code, enacted in October 2004, changed the legal framework surrounding SERPs and DC plans significantly. Prior to this reform, executives had considerable freedom to accelerate payment of benefits from such plans at any time, or even upon the occurrence of certain specified events, such as a credit rating downgrade. Any amounts deferred after Dec 31, 2004, however, can only be distributed in the event of (a) separation from service (b) disability (c) death (d) change in control (e) unforeseeable emergency, or (f) according to the time or schedule specified in the plan when the deferral is made. Therefore, while executives can still withdraw DC balances prior to retirement, they can only do so according to the schedule already agreed upon at the point of deferral, and cannot accelerate withdrawals to an earlier date once the deferral election has been made, except in rare situations such as an unforeseeable personal financial emergency.

3 Determinants of Pension and Other Deferred Compensation Plans

A fundamental question in this literature is why pension and other deferred compensation contracts enter executive compensation packages, and why they play a more important role in some CEO contracts than in others. There are two competing views on the determinants of pension and DC plans. The first and most relevant to the inside debt literature is the optimal contracting view, which predicts that pensions and similar debt-like mechanisms enter the optimal compensation contract when there are gains from aligning managers' interests with those of outside lenders (Gerakos 2007; Sundaram and Yermack 2007; Edmans and Liu 2011). The second is the rent extraction view, which argues that pensions are a mechanism for powerful CEOs to extract rents, particularly in the pre-2006 era when the disclosures required of these plans were sparse, making them opaque to outside stakeholders (Bebchuk and Fried 2004; Bebchuk and Jackson 2005). This implied that CEOs could extract additional compensation stealthily by taking them in the form of pension benefits. This argument is compelling in light of findings that the annual level of pension benefits is not associated with operating performance or stock return (Cadman and Vincent 2011). There is empirical evidence for both views.

3.1 The Optimal Contracting View

Gerakos (2007) and Sundaram and Yermack (2007) provide evidence in support of the optimal contracting view. Gerakos (2007) finds that firms with greater investment opportunities provide lower SERP benefits, consistent with the notion that equity compensation is more efficient at incentivizing managers to exploit investment opportunities. Sundaram and Yermack (2007) document substantial CEO pensions for highly leveraged firms, pointing to an incentive-alignment role for pensions, as agency costs of debt (and the need for mechanisms to mitigate them) are likely to be greater in highly leveraged firms.

The optimal contracting view also predicts that debt-like compensation will be higher in firms close to default, as equityholder-debtholder conflicts and the resulting agency costs of debt are most intense in these firms (Edmans and Liu 2011). However, the empirical evidence on this association is mixed. Lee and Tang (2010) find that firms closer to default tend to have larger pension and DC balances, consistent with the optimal contracting view. However, Gerakos (2007) and Cadman and Vincent (2011) find that firms with stronger credit ratings and lower stock return volatility are more likely to provide CEO pensions. While not exactly consistent with the optimal contracting perspective, this evidence is consistent with managers in financially secure firms being more willing to accept such unsecured, unfunded

obligations, and alternatively with managers with large pension packages making more conservative investing and financing choices.

3.2 The Rent Extraction View

Many studies have also investigated the rent extraction (or "stealth compensation" or "compensation camouflage") hypothesis by examining whether the existence of executive pension plans is associated with indicators of high CEO power and/or weak board monitoring. There is some supportive evidence. Gerakos (2007) finds that larger boards (believed to be less effective due to co-ordination problems) award greater pension packages to their CEOs. Kalyta (2009), using a small sample of Canadian firms from 1997, finds that various measures of CEO power over the board (board size, the proportion of inside directors, the presence of large blockholders to monitor the CEO, separation of the roles of CEO and chairman, the CEO's tenure vis-à-vis board tenure) are strongly positively associated with CEO pension compensation, but not with more transparent components of compensation such as cash and stock. To the extent that the use of pension plans is a mechanism to extract compensation stealthily, the substantially more transparent disclosure requirements imposed in 2006 may weaken the stealth compensation rationale.

3.3 Other Determinants of Pension Benefits

Sundaram and Yermack (2007) find further that pension balances are highly positively associated with CEO tenure. They also find that CEOs hired from outside tend to have larger pension packages than those promoted from within the firm, possibly because the firm needs to make whole any unvested pensions sacrificed by the CEO at her old firm, and because there is greater need to bond the outsider with the current firm. Older firms also tend to pay larger pensions. Cadman and Vincent (2011) find that the existence of a defined-benefit pension plan for rank-and-file employees is a strong predictor of the existence of SERPs. They find also that most firms that provide SERPs to their CEOs pay them salaries of at least a million dollars. As this is the maximum allowable deduction for non-incentive-based compensation under IRC Section 162(m), it suggests that compensation committees use pension plans as a tool to avoid exceeding the limits on tax-deductible compensation.

Most studies that examine the determinants of debt-like compensation restrict their focus only to pension plans, and do not examine the determinants of DC plans separately. One exception is Cen (2011), who confirms that CEO pensions are larger in highly leveraged firms, but finds no such association between leverage and DC balances. Lee and Tang (2010) find that pension and DC balances are

negatively correlated. Identifying in more detail the economic factors that drive variation in the existence and size of DC plans – and distinguishing these factors from the drivers of pension benefits – will be useful while examining the consequences of each type of plan.

4 Economic Consequences of Debt-Like Compensation

4.1 Compensation Structure and Equityholder-Debtholder Conflicts

An extensive literature examines the economic consequences of equity-based executive compensation. On the one hand, awarding managers equity-based compensation aligns their incentives closer to those of outside equityholders, inducing managerial effort. On the other hand, equity-based compensation incentivizes greater risk-taking by managers, potentially exacerbating equityholder-debtholder conflicts (John and John 1993).

Equityholder-debtholder conflicts in leveraged firms arise from the fundamentally different payoffs to equity versus debt: equityholders are residual claimants to firm assets, whereas debtholders are fixed claimants. The convexity of the payoffs to equity may incentivize equityholders to increase the value of their claim at the expense of debtholders in many ways, once the debt has been issued – for example, by issuing more debt of higher priority, by disgorging assets from the firm in the form of dividends, by shifting assets from low-risk to high-risk projects, or by withholding investment in positive-NPV projects because the returns accrue primarily to debtholders (Jensen and Meckling 1976; Myers 1977).

A rich literature documents that managers with substantial equity-based compensation engage in greater risk-taking (e.g., Knopf et al. 2002; Coles et al. 2006). As risk-taking increases the value of equityholders' claims at the expense of debtholders, lenders rely on various mechanisms to protect themselves – they charge a higher cost when lending to firms that provide their managers higher levels of equity-based compensation (John and John 1993; Ortiz-Molina 2006). Lenders may also include more restrictive covenants in contracts, aiming to limit the actions managers can take after the debt has been issued (Smith and Warner 1979; Begley and Feltham 1999; Chava et al. 2010), or only issue short-term debt that allows for more intensive monitoring of managers' actions (Brockman et al. 2010).

When managers are compensated not only with equity but also with debt-like claims on the firm, their incentives may be very different. Theory predicts that debt-like compensation dampens managerial appetite for risk-taking (Jensen and Meckling 1976; Sundaram and Yermack 2007; Edmans and Liu 2011). The more important debt-like claims are (relative to equity claims) in the manager's personal portfolio, the more closely her interests are aligned with the interests of outside

debtholders vis-à-vis equityholders. An emerging literature documents the consequences of debt-like compensation.

4.2 Measures of CEO Alignment

This literature uses three measures to capture the extent to which the CEO is aligned with firm debtholders vis-à-vis equityholders. The first measure is the CEO's "inside leverage", computed as her accumulated inside debt holdings divided by her accumulated inside equity holdings. Inside debt holdings are measured as the actuarial present value of defined-benefit pension and DC balances with the firm. Inside equity holdings are represented by the fair market value of stock, restricted stock and option holdings in the firm. The second measure is the CEO's "relative leverage". Relative leverage is computed as the CEO's inside leverage divided by the firm's debt-to-equity ratio. It can also be interpreted as the proportion of the firm's total debt held as inside debt by the CEO, divided by the proportion of the firm's total equity held as inside equity by the CEO. Relative leverage, which corresponds to Edmans and Liu (2011)'s "k" ratio, is a more correct measure of the CEO's relative alignment with equityholders vis-à-vis debtholders. Jensen and Meckling (1976) conjecture that when the manager holds equal proportions of the firm's debt and equity, her incentives to transfer wealth from equityholders to debtholders vanish – such holdings imply relative leverage of one. When CEO relative leverage is higher than one (i.e. she holds a greater proportion of firm debt than equity), she may even have incentives to engage in risk-reducing activities (Sundaram and Yermack 2007).

Both these measures capture only levels but not changes in the values of debt and equity, and so strictly speaking, do not measure incentives. Wei and Yermack (2011) develop a CEO relative incentive ratio "k*" that aims to capture the marginal change in CEO inside debt over the marginal change in inside equity for a unit change in overall firm value; scaled by the ratio of marginal change in firm total debt to marginal change in total equity, for the same unit change in firm value. The relative incentive ratio is closest to a theoretically appropriate measure of CEO incentives derived from inside debt and inside equity holdings.

4.3 Debt-Like Compensation and Equityholder-Debtholder Conflicts

Sundaram and Yermack (2007) are the first to provide empirical evidence on the economic consequences of debt-like compensation. For the 237 firms in their hand-collected sample from 1996–2002, they find that firm default risk is lower when CEO inside leverage is large or when relative leverage is greater than one. This

suggests that CEOs with substantial pension compensation run the firm conservatively and take actions that reduce the risk of default, so as to minimize risk to their own pension values. Cassell et al. (2011) illustrate the specific mechanisms through which these implications may be realized, with post-Regulation S-K data. They find that high CEO relative leverage corresponds to lower research and development expense, a higher degree of diversification, higher asset liquidity and lower financial leverage. Chen et al. (2010) find in a similar vein that firms with high CEO inside leverage tend to have higher liquidation values in bankruptcy.

Tung and Wang (2010) extend the investigation to the financial services industry, where high leverage and deposit guarantees create strong incentives for risk-shifting behavior from equityholders (or managers on behalf of equityholders). They find that banks with CEOs who have high inside (or relative) leverage have lower idiosyncratic stock volatility during the crisis, signaling lower overall risk exposure. They also find that these banks tend to have higher asset quality in this period, measured by lower levels of loan loss provisions and private mortgage-backed securities. These banks tend to perform better during the financial crisis.

Another stream of literature examines whether outside debtholders perceive inside debt holdings as aligning managers' interests closer to their own. Wei and Yermack (2011) investigate whether the first comprehensive disclosures of pension and deferred compensation balances under Regulation S-K affected stakeholders' perceptions of the value of their claims. They find that when firms disclosed substantial pension and deferred compensation balances for the fiscal year 2006 under Regulation S-K, the value of their public debt securities rose, the value of their equity fell, and the volatility of both securities decreased. This suggests that these disclosures generated a perceived reduction in firm risk and consequent wealth transfer from equity to debt. Furthermore, the fall in equity values was larger than the gain in debt values, indicating a reduction of overall firm value when inside debt holdings are large, possibly due to excessively conservative behavior from the CEO. Bolton et al. (2010) document a similar market reaction in banking stocks.

Anantharaman et al. (2011) examine how private lenders perceive inside debt holdings while contracting with the firm, at the inception of the loan. They find that high CEO relative leverage, as a whole, associates with lower loan spreads at loan inception and fewer covenants that restrict managerial actions after loan issuance, indicating that private lenders perceive an incentive-alignment effect from inside debt.

Anantharaman et al. (2011) find, however, that the perceived incentive alignment is driven entirely by SERPs, which most closely resemble unsecured corporate debt in payoffs. In contrast, private lenders perceive no significant incentive alignment from either rank-and-file pension balances (which are secured, funded and guaranteed) or from DC plan balances. They conjecture that the lack of incentive alignment from DC balances could be due to the flexible withdrawal options embedded in these plans, which make them relatively short-maturity and could allow CEOs to withdraw balances ahead of a deterioration in firm creditworthiness. Having isolated the perceived incentive-alignment effects as coming from

SERPs, they also examine variation in SERP features. They find that the incentive-alignment effect from SERPs is substantially lower when SERPs contain the option to be withdrawn in a lump sum, potentially ahead of outside debtholders. They do not find that SERP balances are perceived differently when they are voluntarily funded, suggesting that the rabbi trusts commonly observed in practice do not provide sufficient protection for SERP funds in bankruptcy. These findings suggest that some portion of debt-like compensation is, in practice, shielded from the risk of loss in insolvency, or subject to some institutional modifications that make its payoffs less truly debt-like.

Conservative financial reporting has also been shown to be an effective mechanism to mitigate equityholder-debtholder conflicts (e.g., Ahmed et al. 2002). Chen et al. (2010) demonstrate that high CEO inside leverage corresponds to lower conservatism, suggesting that inside leverage substitutes for conservative reporting in mitigating equityholder-debtholder conflicts, thereby reducing the demand for conservative reporting.

Overall, a consensus is emerging in empirical studies that pension and DC plans serve the role of inside debt in practice, and that they are effective at mitigating equityholder-debtholder conflicts in leveraged firms. However, the majority of this literature – with the exception of Anantharaman et al. (2011) – examines pensions and other deferred compensation plans as a whole, and is silent on the variety of institutional features these plans carry that could make their payoffs less debt-like. Anantharaman et al. (2011)'s findings tentatively suggest that DC plans have very different effects from pension plans, and that both types of plans may not be effective at mitigating risk-taking if balances are secured or shielded from risk of loss. Furthermore, these plans may not bring about incentive alignment between managers and *outside* lenders if inside debt claims have shorter effective maturity or higher seniority than outside lenders' claims. Finally, the prevalence of special arrangements that shield pension and DC claims from risk of loss in insolvency implies that the practical features of these plans need to be taken into account before interpreting their existence as being consistent with the use of inside debt.

5 Implications for Future Research and Executive Compensation Reform

Many fundamental questions remain unanswered in the literature on inside debt. For example, Bebchuk and Jackson (2005) argue that even if it were desirable to align the incentives of managers with debtholders, it is unclear why these incentives need to be provided through pensions and DC plans, as opposed to providing executives with a mix of equity and debt securities of the firm, which would align managers with debtholders much more precisely. In this regard, Edmans and Liu (2011) comment that for many firms, pension holdings might be sufficiently large (and their payoffs sufficiently similar to the payoffs on debt), that they effectively serve as inside debt, obviating the need for executives to hold actual debt securities of the firm in addition. They note however that if these conditions are not satisfied, there could

be a demand for supplementing current executive compensation with actual debt. Some such examples have been observed in recent times – for example, in the summer of 2010, AIG adopted a bonus plan whereby bonuses are paid out in "long-term performance units". Eighty percent of the value of these units is linked to the value of AIG junior debt and the rest is tied to the value of AIG common stock.

A related question that deserves further investigation is what determines the existence of special arrangements that protect pension and DC plan payoffs from the risk of loss in insolvency, and whether these arrangements effectively make these plan balances less debt-like. If pension or DC balances are shielded from losses in insolvency, it is unclear whether or to what extent they serve the role of inside debt advocated by theory. This issue has implications for research as well as for the ongoing policy debate on regulating executive compensation in the wake of the financial crisis, with a particular focus on reining in excessive risk-taking. Some implications have been drawn from the inside debt literature for this debate: for example, a group of 15 leading financial economists suggest, in a prominent proposal for financial sector reform, that structuring executive pay towards greater deferred compensation could play a valuable role in disciplining undesirable risk-taking (French et al. 2011). Understanding *when* deferred compensation is most effective at constraining risk-taking could be crucial in this context.

Furthermore, current compensation reforms mandated by the Dodd-Frank Wall Street Reform and Consumer Protection Act require large financial services firms in the United States to hold back (i.e. defer) at least 50 % of the incentive compensation of executive officers over a minimum period of 3 years. Deferred amounts would then be adjusted downward for actual losses realized over the deferral period. The European Parliament has instituted similar rules for European bank executives, and some non-financial firms are voluntarily adopting such deferrals. As these hold-backs bear some resemblance in payoffs to the debt-like compensation examined by the inside debt literature, it is important to understand exactly how much debt-like incentives executives already derive from the other components of their compensation package, before mandating further deferrals.

In summary, current research provides some insight into the role played by pensions and other deferred compensation plans in executive compensation. However, our understanding of the role of inside debt in executive compensation, and of how well these plans serve that role, remains far from complete. Further investigation into the rationale for the existence of pensions and other deferred compensation plans and the effectiveness of these plans at mitigating equityholder-debtholder conflicts is an important and promising area for future research.

References

Ahmed, A., Billings, B., Morton, R. M., & Stanford-Harris, M. (2002). The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review, 77*(4), 867–890.

Anantharaman, D., Fang, V. W., & Gong, G. (2011). Executive debt-like compensation and the design of corporate loan contracts. Rutgers University, University of Minnesota and The Pennsylvania State University (unpublished manuscript).

Bebchuk, L. A., & Fried, J. M. (2004). Stealth compensation via retirement benefits. *Berkeley Business Law Journal*, *291*(1) 291–326.

Bebchuk, L. A., & Jackson, R. J. (2005). Executive pensions. *Journal of Corporation Law, 30*, 823–855.

Begley, J., & Feltham, G. A. (1999). An empirical examination of the relation between debt contracts and management incentives. *Journal of Accounting and Economics, 27*, 229–259.

Bolton, P., Mehran, H., & Shapiro, J. (2010). Executive compensation and risk taking. *Federal Reserve Bank of New York Staff Reports*.

Brockman, P., Martin, X., & Unlu, E. (2010). Executive compensation and the maturity structure of corporate debt. *The Journal of Finance, 65*(3), 1123–1161.

Cadman, B., & Vincent, L. (2011). The role of defined benefit pension plans in executive compensation, University of Utah and Northwestern University (unpublished manuscript).

Cassell, C., Huang, S., Sanchez, J. M., & Stuart, M. D. (2011). Seeking safety: The relation between CEO inside debt holdings and the riskiness of firm investment and financial policies. *Journal of Financial Economics, 103*, 588–610.

Cen, W. (2011). The determinants of CEO inside debt and its components. *Unpublished dissertation*, Cornell University.

Chava, S., Kumar, P., & Warga, A. (2010). Managerial agency and bond covenants. *Review of Financial Studies, 23*, 1120–1148.

Chen, F., Dou, Y., & Wang, X. (2010). Executive inside debt holdings and creditors' demand for pricing and non-pricing protections. University of Toronto, University of Toronto and University of Hong Kong (unpublished manuscript).

Clark Consulting. (2009). A survey of current trends. *Executive Benefits Surveys* (14th Ed).

Coles, J. L., Daniel, N. D., & Naveen, L. (2006). Managerial incentives and risk-taking. *Journal of Financial Economics, 79*, 431–468.

Dewatripont, M., & Tirole, J. (1994). A theory of debt and equity: Diversity of securities and manager shareholder congruence. *Quarterly Journal of Economics, 109*, 1027–1054.

Edmans, A., & Gabaix, X. (2009). Is CEO pay really inefficient? A survey of new optimal contracting theories. *European Financial Management, 15*(3), 486–496.

Edmans, A., & Liu, Q. (2011). Inside debt. *Review of Finance, 15*, 75–102.

French, K. R., Baily, M. N., Campbell, J. Y., Cochrane, J. H., Diamond, D. W., Duffie, D., Kashyap, A. K., Mishkin, F. S., Rajan, R. G., Sharfstein, D. S., Schiller, R. J., Shin, H. S., Slaughter, M. J., Stein, J. C., & Stulz, R. M. (2011). *The Squam Lake report: Fixing the financial system*. Princeton/Oxford, United Kingdom: Princeton University Press.

Gerakos, J. (2007). CEO pensions: Disclosure, managerial power and optimal contracting, University of Chicago (unpublished manuscript).

Gustman, A., Mitchell, O., & Steinmeier, T. (1994). The role of pensions in the labor market: A survey of the literature. *Industrial and Labor Relations Review, 47*(3), 417–438.

Hirshleifer, D., & Thakor, A. (1992). Managerial conservatism, project choice, and debt. *The Review of Financial Studies, 5*(3), 437–470.

Ippolito, R. A. (1985a). The labor contract and true economic pension liabilities. *American Economic Review, 75*(5), 1031–1043.

Ippolito, R. A. (1985b). The economic function of underfunded pension plans. *Journal of Law and Economics, 28*(3), 611–651.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *The Journal of Financial Economics, 3*(4), 305–360.

John, K., & John, T. (1993). Top management compensation and capital structure. *The Journal of Finance, 48*(3), 949–974.

Kalyta, P. (2009). Compensation transparency and managerial opportunism: A study of supplemental retirement plans. *Strategic Management Journal, 30*, 405–423.

Knopf, J., Nam, J., & Thornton, J. (2002). The price and volatility sensitivities of managerial stock option portfolios and corporate hedging. *The Journal of Finance, 57*, 801–813.

Lee, G., & Tang, H. (2010). CEO pension and deferred compensation. Seton Hall University (unpublished manuscript).

Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics, 5*, 147–175.

Ortiz-Molina, H. (2006). Top management incentives and the pricing of corporate public debt. *Journal of Financial and Quantitative Analysis, 41*(2), 317–340.

Smith, C. W., & Warner, J. B. (1979). On financial contracting: An analysis of bond covenants. *Journal of Financial Economics, 7*, 117–161.

Sundaram, R. K., & Yermack, D. L. (2007). Pay me later: Inside debt and its role in managerial compensation. *The Journal of Finance, 62*(4), 1551–1587.

Tung, F., & Wang, X. (2010). Bank CEOs, inside debt compensation and the financial crisis. Boston University and Emory University (unpublished manuscript).

Wei, C., & Yermack, D. (2011). Investors' reactions to CEOs' inside debt incentives. *Review of Financial Studies, 24*, 3813–3840.

Pay More Stocks and Options to Directors? Theory and Evidence of Board Compensation

Gang Nathan Dong

Abstract The compensation of board directors has received much attention, along with the growing debates on corporate governance in recent years, partly due to the ongoing financial crisis. While prior studies including Hall and Liebman (1998) have shown evidence of a dramatic increase in the use of equity-based incentives, resulting in an increase in the sensitivity of executive pay to firm performance, we ask whether it benefits shareholders to offer similar incentive contracts to board directors. This paper suggests that equity-based compensation for board directors is necessary and the level of incentives depends on directors' effectiveness in monitoring and friendliness in advising CEOs. Using the market competition and pay correlation to proxy for monitoring effectiveness and advisory friendliness, we report empirical evidence supporting our hypotheses.

> *IBM is cutting off stock option grants to its board of directors but doubling their cash pay, calling the move an improvement in its governance practices. "We think it's a sound principle of governance," IBM spokesman John Bukovinsky said. "Less reliance on stock options is conducive to encouraging longer-term strategic decisions."*
> – USA Today (December 21, 2006)

1 Introduction

In large publicly owned firms shareholders delegate decision rights to top executives, who have the ability to manage resources to their own advantage but often hold insignificant ownership positions. Executives may have the incentive to

G.N. Dong (✉)
Department of Health Policy and Management, Columbia University, 600 W 168th Street, New York, NY 10032
e-mail: gd2243@columbia.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_7,

pursue activities that maximize their own utility, but decrease the firm value. The separation of ownership and control has induced potential conflicts and incentive problems between the interests of executives and shareholders, generally referred to as the agency problem (Jensen and Meckling 1976). To alleviate the agency problem, shareholders can directly monitor the management or offer them incentive plans that align managerial interests with shareholders' interests as commonly known as ISO (Incentive Stock Options) in practice. A large theoretical literature, which includes Harris and Raviv (1978), Holmstrom (1979) and Holmstrom and Milgrom (1987), studies this issue using principal-agent models. In these models, the principal offers the agent an incentive plan that induces the agent to act in the principal's best interest. However, public firms are generally widely held by a large number of shareholders, and hence shareholders have neither the incentive nor the ability to effectively monitor and evaluate top executives.[1] Instead, shareholders delegate these roles to a group of elected directors. Due to their fiduciary responsibility and access to proprietary information, the board of directors potentially represents the most efficient method of monitoring and evaluating executives. However, directors have received substantial criticism (see Lorsch 1989) for a lack of effective governance and for designing managerial contracts with a weak relationship between managerial pay and firm performance. Recently, institutional investors and other stakeholders have placed pressure on firms to institute specific governance aimed to increase board accountability and independence as an attempt to improve managerial oversight (see evidences in Guercio et al. 2008).

Prior studies including Hall and Liebman (1998) have shown evidence of a dramatic increase in the use of equity-based incentives, resulting in an increase in the sensitivity of executive pay to firm performance during the 1990s. These findings suggest that managerial incentives are arguably more closely aligned with the shareholders' goal of firm value maximization now than in the past. If the managerial incentive compensation has worked for executives in terms of maximizing their efforts to run the firms on behalf of shareholders, do we need to offer similar incentive contracts to board directors in order to maximize their efforts to monitor and advise executives? This is the research question we are trying to address theoretically and empirically in this paper. Specifically, we argue that the level of incentives embedded in the compensation contracts of board directors depends on their effectiveness in monitoring and friendliness in advising executives.

This is not the first paper to report the increasing use of incentive contracts for board directors, but it is among the first ones to systemically address the relationship among the effective monitoring, friendly advising, and incentive contract of board directors in large publicly owned firms (see Adams and Ferreira 2007 for the theory of friendly boards). In prior research, Yermack (2004) reports a rising equity ownership by outside directors after studying a panel of 734 directors elected to the

[1] It is similar to the debt renegotiation problem with many creditors as analyzed in Bolton and Scharfstein (1996) using an optimal contracting framework.

boards of Fortune 500 firms in 1994–1996. Farrell et al. (2008) document a trend towards more equity compensation and away from cash only compensation by extending Yermack (2004)'s dataset to a period from 1998 to 2004. Motivated by these empirical findings of rising incentive pay for board directors, this paper investigates the effects of equity-based compensation on board directors' effort to monitor and advise executives. Theoretically, we set up a principal-agent problem with a simplifying assumption that the efforts of both the director and the CEO will affect the firm's outcome. We characterize the effects of board directors on firm performance by two factors, namely effective monitoring and friendly advising the CEO, as Adams et al. (2010) show that the board of directors functions as both a monitor and an advisor. The optimal contract suggests that the director's profit sharing is positively related to its effectiveness in monitoring and friendliness in advising the CEO.

The economic interpretation of this result is straightforward. A more friendly board is given higher incentive compensation to exert more effort to play the advisory role, even though its monitoring effectiveness might be very poor. A board that can effectively monitor the CEO is given higher incentive compensation for the same reason. While measuring the friendliness between directors and CEOs is difficult, Brick et al. (2006) report a significant positive relationship between the director compensation and CEO compensation after controlling for firm characteristics. One possible reason for this positive correlation is that director and CEO compensation levels are positively related to firm complexity and the talent and effort that are needed to manage and direct such companies.[2] An alternative explanation is that the positive relationship between these variables reflects cronyism, whereby the board and CEO are more concerned with selfish objectives than with protecting shareholder interests. Although the authors provide evidence of negative relationship between firm performance and excessive pay of directors and CEOs, and attribute it to cronyism, we do not take a stand to argue which interpretation is correct, instead, we are interested in using the pay correlation to measure the director's friendliness in advising the CEO. Specifically in the empirical section of this paper, we use the difference between excessive CEO pay and excessive director pay to proxy for the friendliness between CEOs and board directors.[3]

On the other hand, a well-functioning competitive market plays the external monitoring role and hence reduces the effectiveness of monitoring by the board directors. Randøy and Jenssen (2004) have a similar argument that firms in highly competitive industries should have fewer outside board members, whereas companies in less competitive industries should have more outside directors. We use market competitiveness to proxy for directors' effectiveness in monitoring executives and pay correlation to proxy for friendliness in advising CEOs. We

[2] This implies that the control variables and firm fixed effects used in their regressions cannot fully capture the real firm characteristics.

[3] The excessive pays of board directors and CEOs are similar to Brick et al. (2006).

empirically test the hypothesis that market competition reduces the need of incentive contract, and board directors' friendliness to CEOs induces more equity in directors' compensation contract. The results of multivariate regression and quasi-experiment design using the entire sample and the sub-sample of industrial firms from 2006 to 2010 provide empirical evidence supporting the hypothesis, but the result using the sub-sample of financial institutions is not significant for the same period. The inconsistency in the empirical findings between industrial firms and financial institutions raises the question of whether managerial pay for bank directors is optimal.[4]

This paper suggests, theoretically and empirically, that aligning board directors' interests with shareholders' interests using equity-based compensation is necessary; however, the level is subject to board directors' effectiveness in monitoring and friendliness in advising top executives. The remainder of the paper is organized as follows. Section 2 reviews the relevant prior research and develop the hypotheses. Section 3 describes the data and empirical tests. Section 4 reports and discusses the empirical results. Section 5 designs a quasi-experiment to address the endogeneity concern and draws causal inference, and Sect. 6 concludes.

2 Hypotheses and Related Literature

Before we analyze the compensation design of board directors, we need to explore their roles and responsibilities. There are a variety of views about what a board of directors really is in a for-profit corporation and most of these views share a common theme: it is a group of people legally charged with the responsibility to govern a corporation. The board of directors is responsible to the stockholders or sometimes even to the stakeholders, that is, to everyone who is interested and/or can be effected by the firm. Adams et al. (2010) define the responsibilities of board directors as: advisory role, disciplinary role, management selection, performance assessment, and strategy setting.[5]

The modern industrial firms can be characterized by a separation of ownership and control, a situation that produces both costs and benefits. One benefit arises from the owners' ability to hire agents with specialized managerial skills, and thus delegate the operation of the company. The conflict arises out of the owners' inability to directly monitor and evaluate all actions taken by management, and

[4] Competition in banking industry should drive down the incentive pays for directors due to the external monitoring and disciplining by the competitive market. But what we observed is the rising incentive pays for bank directors. This might be due to the global war for financial talents (Chambers et al. 1998) and the rise of hedge funds (Kostovetsky 2009).

[5] In some European Union and Asian countries, there are two separate boards: an executive board, also called corporate executive team, for day-to-day business and a supervisory board, also called board of directors (elected by the shareholders) for supervising the executive board. To simply the analysis, this paper considers the boards of directors as a single entity.

thus prevent managers from taking actions that maximize their own utility while lowering firm value (Jensen and Meckling 1976). This conflict, referred to as the agency or moral hazard problem, can be alleviated by directly monitoring top management or by aligning managers' interests with those of the firm's shareholders through effective incentive compensation contracts (Harris and Raviv 1978, Holmstrom 1979, Holmstrom and Milgrom 1987).

The board of directors represents the most direct, and potentially most efficient method of mitigating the agency problem. The shareholders elect a board of directors to serve as their agent in overseeing top management and guiding the strategic direction of the firm. The directors have a fiduciary duty to protect the shareholders' investment in the company. Furthermore, directors' access to strategic and proprietary information not available to outside stakeholders enables them to be informed evaluators of top management's actions. In spite of this legal obligation, corporate governance critics argue that the directorial nomination and election process may result in the election of directors whose incentives are more closely aligned with the firm's management than with those of the firm's shareholders. As Lorsch (1989) and Blair (1995) documented that board directors have been criticized for their lack of oversight and strategic guidance, and for designing executive compensation plans which reward short-term financial results.

The emergence of institutional investor and other stakeholder activist groups in the mid-1980s, however, placed pressure on firms to institute board governance structures designed to facilitate more active monitoring and evaluation of managers' stewardship of the firm's assets (see evidences in Guercio et al. 2008). Furthermore, new regulations instituted by the SEC in the early 1990s required that executive pay be disclosed in more detail in the company's proxy statements and be approved by a compensation committee composed entirely of independent directors. The collective force of these events increased the likelihood that the board of directors has the incentive and ability to be a more effective monitor and evaluator of management's stewardship of the firm's assets.

However, a well-functioning competitive market also plays an important external monitoring role and hence it might reduce the effectiveness of monitoring by the board of directors. Randøy and Jenssen (2004) have a similar argument that firms in highly competitive industries should have fewer outside board members, whereas companies in less competitive industries should have more outside directors. We hypothesize that the increasing market competition in an industry reduces the need of incentive contract for the board of directors.

Monitoring by the board of directors and the use of incentive pay are only two of the control mechanisms suggested by the corporate governance literature, for example, Shleifer and Vishny (1997). However, as the Economist (2001) suggests, "too much emphasis on monitoring tends to create a rift between non-executive and executive directors, whereas the more traditional job of forming strategy requires close collaboration. In both activities, though, independent directors face the same problem: they depend largely on the chief executive and the company's management for information." It is noted by Adams and Ferreira (2007) that the advisory role of the board exists not only in the sole board system in the United States but

also in Europe where boards are usually separated into a management and a supervisory board. While the monitoring role of the board has been studied extensively in a large, mostly empirical, literature (Hermalin and Weisbach 2003), the advisory role has received little attention. Song and Thakor (2006) and Adams and Ferreira (2007) develop and analyze the theoretical models of combining the board's two roles (monitoring and advisory) in the sole board system. Warther (1998), Herman (1981), Whisler (1984) and Mace (1986) argue that individual board members are reluctant to step forward and oppose management, because management's power to select and eject board members affects the behavior of the board. Therefore, the more friendly a director to the top executives the more likely his advice is accepted by them.

Tirole (1986 and 1992) discuss the three-level hierarchy of shareholder-director-manager to analyze the organization behavior with possible collusion between directors and management. Particularly in finance literature, Kumar and Sivaramakrishnan (2008) examine the role of the board in setting the CEO's incentive compensation, and study the role of incentive pay for directors with respect to the performance of their duties. They find that board independence and board incentive pay could be substitutes; independent boards could be less diligent monitors than less-independent boards, thus, having a maximally independent board need not to be optimal for shareholders. In a similar fashion but a much simpler model, we argue that the optimal incentive contract for board directors depends on its effectiveness in monitoring and advisory efforts. It is different to Kumar and Sivaramakrishnan (2008) in the sense that it focuses on the optimal compensation of both the CEO and the director, versus their interest in board design. We assume that the adverse selection problem and bargaining problem between these two players in this parsimonious model is not as severe as the moral hazard problem between the shareholder and the director-manager as a whole; therefore, we are able to simplify the three-level principal-agent problem to a two-level three-party principal-agent problem. The result of this paper is consistent to Adams and Ferreira (2007)'s conclusion that shareholders can sometime be better off with a friendly board. In our model, shareholders are better off with a friendly board when the monitoring channel is not effective. Finally, this paper does not deal with the hiring and firing of CEO as extensively analyzed and surveyed by Hermalin and Weisbach (1998, 2003). The main interest of this paper is to address the question of how to compensate the director so that all parties are better off. In the Appendix section, we formally develop a model with one-principal and two-agents based on the standard principal-agent problem of Holmstrom and Milgrom (1987). The solutions of the model suggest that aligning outside directors' interest with shareholders' interest using equity-based compensation such as stocks and options is necessary but the level of such incentive pay is subject to the director's effectiveness in monitoring and friendliness in advising top executives.

Compared to the number of empirical studies on executive compensation, there are relatively few studies on board compensation. Yermack (2004) finds evidence that the average pay-for-performance sensitivity of an outside director of a Fortune 500 firm is 0.011 %, or equivalently the director gains 11 cents for each $1,000

increase in firm value. This incentive contract is much lower than the average pay-for-performance sensitivity of a CEO which is estimated by Gao (2010) as 2.6 % and by Hall and Liebman (1998) as 1.1 %. Yermack (2004) also reports that a one standard deviation change or $2.6 million in the market capitalization of the median sample firm results in a $285,000 change in an outside director's wealth. Farrell et al. (2008) document a trend towards fixed-value equity compensation and away from cash only and fixed-number equity compensation.

Most of empirical research in board compensation has focused on the determinants of board compensation rather than the effects of compensation on director behavior. Boyd (1996), Tufano and Sevick (1997), and Linn and Park (2005) find that firm and board size are positively associated with higher board compensation. Ryan and Wiggins (2004) report that boards with more outside directors are awarded more equity-based compensation. Vafeas (1999) and Bryan and Klein (2004) suggest that firms with greater agency problems use more contingent compensation. On the other hand, it is possible that, instead of being a solution to an agency problem, director compensation plans are evidence of an unsolved agency problem. Brick et al. (2006) suggest that outside directors' excessive compensation is largely due to mutual back scratching or cronyism.

There is some empirical evidence that directors respond to incentives. Hempel and Fay (1994) find that the amount of work required by a particular board is positively associated with director compensation. Yermack (2004) and Fich and Shivdasani (2005) report that directors receive significant performance-based compensation that helps align the directors' incentives with shareholders and positively impacts firm value. Adams and Ferreira (2008) suggest that even relatively small sums of money can influence director behavior because meeting fees increase directors' attendance.

3 Empirical Analysis

In this section, we will empirically test the hypothesis that the use of incentive pay for directors is positively associated with their effectiveness in monitoring and friendliness in advising CEOs. We use the pay-for-performance sensitivity to measure the incentive embedded in the director compensation, the level of market competitiveness to measure the director's effectiveness in monitoring the CEO, and the pay correlation in excessive compensation between the director and the CEO to measure the director's friendliness in advising the CEO. The regression specification is straightforward with the pay-for-performance sensitivity on LHS, and the level of market competiveness and the pay correlation of excessive compensation on RHS. The endogeneity concern is addressed using a quasi-experimental design with the shocks indentified from sudden changes in market competitiveness and pay correlation. The pay-for-performance sensitivity is measured as the board director's ownership of the firm, or the number of shares granted to him every year divided by the firm's total number of shares outstanding during the same year. The number of

shares includes both stocks and options adjusted by the option delta. Gerhart and Milkovich (1990) found that incentive pay is related to financial performance, but salary is not. Leonard (1990) also found that the presence of long-term incentive plans was associated with greater increases in ROE than in those firms without long-term incentive plans during the 1980s. Hence, the ownership in board directors' compensation incentivizes them to monitor and advise CEOs under the optimal contract.

We obtain the executive and director compensation data of 2006–2010 from Standard & Poor's ExecuComp database,[6] which provides information on firms in the S&P 500, the Midcap 400, and the Smallcap 600. We are only interested in the equity compensation which includes restricted and unrestricted shares, and the pay-for-performance sensitivity for each director is estimated by summing up the number of equity grants with option delta adjustment and divided by the firm's total number of shares outstanding of the previous fiscal year. We then collect each firm' market data and financial accounting data including year-end stock price, shares outstanding, total asset, long-term debt, market to book, net income, R&D and total revenue from CRSP and Computstat databases. The two datasets of managerial compensation and company fundamentals are merged using CCMXPF_LINKTABLE.

Firms that offer their directors equity-based compensation generally award stock and stock option grants on a regular annual schedule. Some firms only pay cash to directors in a fiscal year, and we include these samples as well since we do not want to ignore a source of compensation that does not aligns the interests of directors and shareholders. The structure and level of equity-based compensation vary across different industries, in particular the difference between industrial firms and financial institutions is dramatic. We use an industry fixed effect of two-digit SIC code to control for the heterogeneity in board compensation. As we present later in the robustness section, we split the sample to two and repeat our analysis on these two samples based only on industrial firms and financial institutions with results similar to those reported in the tables.

The director can be both insider and outsider. Directors who are also officers of the firm are usually classified as *insiders*, whereas directors who work for service firms can obtain fee income from the firm, which creates an incentive conflict, are commonly classified as *outsiders*[7]. In this study, we exclude the *insiders* and only consider the *outsiders* in our sample of directors. To measure the incentives embedded in the equity-based compensation we calculate the pay-for-performance sensitivity by summing up the total equity grants in stocks and options adjusted by option delta, and divided by the total number of common shares outstanding. To

[6] The ExecuComp database reports detailed information of director compensation from 2006 onwards.

[7] Harris and Raviv (2008) studies the optimal condition for inside versus outside directors to control the board, and show that shareholders can sometimes be better off with an insider-controlled board.

control for the firm's characteristics and the nonlinearity effect of firm size, we choose the total assets, the square of total assets, financial leverage, R&D and return on assets as our main control variables. We use the positive relationship between CEO and director compensation of Brick et al. (2006) to measure the friendliness of board director to firm executives, as the authors provide evidence of cronyism based on the correlation between the compensation of CEOs and directors, and we call this variable *Pay Correlation*. Specifically, it is the difference between the excessive CEO pay and the excessive director pay. The excessive pay is the difference between the observed pay and the optimal pay. We calculate the optimal pay in two stages: the first stage estimates the coefficients for a pooled regression with executive or director pays on LHS and firm characteristics on RHS, and the second state predicts the optimal pay for each director using the estimated coefficients from the first stage. This is similar to Brick et al. (2006). The director's friendliness to executives has two effects on the compensation design and firm performance. First, cronyism tends to offer directors more compensation, and second, a friendly director provides more ideas and advices to the CEOs and this can in turn improve the firm's outcome. We hence hypothesize that the correlation between the pay correlation and the director's PPS is positive. To measure the board director's monitoring effectiveness on top executives, we take the Herfindahl index (HHI) of firms' sales revenue in a sub-industry (4-digit SIC) as a proxy for the efficiency of a representative board director to monitor the agent (CEO).[8] As Randøy and Jenssen (2004) argue that firms in highly competitive industries should have fewer outside board members, whereas companies in less competitive industries should have more outside directors. We hypothesize that market competition provides monitoring mechanism and hence reduces the efficiency of monitoring from the directors. The correlation between the *HHI* and the director's PPS is positive. Reference Table 1 for detailed definition of all variables.

Because the market competition is measured by revenue HHI for each sub-industry, we aggregate the director compensation data within four-digit SIC code and the final sample comprises 1,250 observations. The summary statistics on director compensation and control variables are shown in Table 2.

On average, total asset is $14 million, market value of equity is $8.9 billion and market-to-book ratio is 3.8. Most of firms are leveraged with asset-to-equity ratio of 5.3 and have R&D-to-asset ratio of 6.22 %. Within each sub-industry, the HHI is 0.46 and on average each director receives roughly 68.7×10^{-6} shares equity of his firm's total common shares outstanding, which is about six times of Yermack (2004)'s $11 \times 10-^{6}$ in the 1990s. The correlation matrix is reported in Table 3.

Notably, the director's pay-for-performance sensitivity is negatively correlated with the market value, total assets and the market competition.[9] The friendliness of

[8] The extant literature on product market competition, strategic alliances and joint ventures generally uses SIC codes to assess whether two companies are competitors. The approach used in the existing literature (e.g., Grullon et al. 2006) treats two companies as competitors if they have the same 4-digit SIC code. Masulis and Nahata (2009) discuss the pros and cons of this approach.

[9] The higher the HHI, the lower the competition, and vice versa.

Table 1 Variable definition

Variable	Definition	Data source
Total asset	Total asset (AT)	Compustat fundamental annual
Market value	Stock price (PRC) × shares outstanding (SHROUT)	CRSP
Market-to-book	Market value/book equity (SEQ)	Compustat fundamental annual, CRSP
Financial leverage	Total asset (AT)/book equity (SEQ)	Compustat fundamental annual, CRSP
R&D-to-asset	R&D expense (XRD)/Total asset (AT)	Compustat fundamental annual
ROA	Net income (NI)/total asset (AT)	Compustat fundamental annual
Director PPS	Total stocks and options adjusted by option delta/ shares outstanding (SHROUT)	Compustat ExecuComp
HHI	Σ_i Revenue^2, for total revenue (REVT) of firm i to N	Compustat fundamental annual
Pay correlation	Difference between excessive director pay and excessive pay, where Excessive pay = actual pay – predicted pay The predicted pay is based on the regressions in Brick et al. (2006)	Compustat ExecuComp

Table 2 Summary statistics

Variable	N	Mean	Std Dev	Min	Max	Median
log(Total asset)	1,250	9.49	2.248	3.59	15.53	9.55
log(Market value)	1,250	16.0	2.003	9.58	20.81	16.15
Market-to-book	1,250	3.77	20.5	0.11	688.9	2.17
Financial Leverage	1,250	5.26	39.9	1.13	1341	2.47
R&D-to-asset (%)	1,250	6.22	2.04	0	28.5	1.8
ROA	1,250	0.0083	0.298	−1.73	9.243	0.025
Director PPS (10^{-6})	1,250	68.7	293.2	0	5280	6.88
HHI	1,250	0.462	0.2542	0.018	0.9	0.43
Pay correlation	1,250	2.61	2.40	0 .0051	25.24	2.06

the director to top executives as measured by *Pay Correlation* of excessive compensation between directors and CEOs is positively related to the firm's size and market competition (HHI). The positive correlation among HHI, Pay Correlation and PPS is consistent with our hypothesis that market competition reduces the director's monitoring effectiveness due to the external monitoring force from the market (Randøy and Jenssen 2004), whereas the director's friendliness in advising

Table 3 Correlation matrix

Variable	log(Market value)	Market-to-book	Financial leverage	R&D-to-asset (%)	ROA	Director PPS	HHI	Pay correlation
Market-to-book	−0.03							
Financial leverage	−0.06	0.93						
R&D-to-asset	0.25	−0.01	−0.02					
ROA	0.10	0.19	−0.01	0.02				
Director PPS	−0.46	0.01	0.02	−0.07	−0.02			
HHI	−0.50	0.05	0.06	−0.03	−0.06	0.16		
Pay correlation	0.30	0.01	0.01	0.15	0.04	0.01	−0.13	
log(total asset)	0.93	−0.04	−0.03	0.28	0.10	−0.41	−0.45	0.30

CEOs improves the firm's performance because of coordination and cooperation (Warther 1998).[10]

4 Empirical Results

Whereas the above correlations were suggestive, we hence run a multivariate regression, the results of which are given in Table 4. The dependent variable is the board director's pay-for-performance sensitivity (PPS) as measured by the number of granted equities, including stocks and options (beta adjusted), divided by the firm's total shares outstanding. The regression includes year and industry (two-digit SIC) fixed-effects. The t-statistics are calculated using Newey-West standard errors which rectifies for heteroskedasticity.

We first examine columns 1–3 where we only include our main variable of analysis, namely, the Herfindahl Index (HHI) and Pay Correlation, and only control for the firm size. In doing so, we ensure that our results are not due to some spurious correlation between the various independent variables. We find that both HHI and Pay Correlation are significantly negative related to directors' PPS, suggesting that weaker market competition requires higher incentives for directors to monitor CEOs and better relationship between directors and CEOs encourages friendly advising which improves the firm's performance or simply higher pay due to cronyism. In columns 4–6 we include two additional control variables, namely the ratios of Market-to-book and Asset-to-equity (Financial Leverage) to check if our results change. We still find that both HHI and Pay Correlation are significantly negative related to directors' PPS, and their economic magnitudes remain almost

[10] It is consistent with the arguments of Herman (1981), Whisler (1984) and Mace (1986) that individual board members are reluctant to step forward and oppose management, because management's power to select and eject board members affects the behavior of the board. Therefore, the more friendly a director to the CEO the more likely his advice is accepted by the CEO.

Table 4 All firms: Market competition, pay correlation and pay-for-performance sensitivity

Dependent variable: Director PPS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
log(Total asset)	−245.0***	−226.2***	−230.6***	−245.3***	−226.3***	−230.8***	−243.5***	−224.8***	−230.0***
	(−12.06)	(−11.55)	(−11.75)	(−12.06)	(−11.55)	(−11.75)	(−11.84)	(−11.37)	(−11.59)
log(Total asset)-square	10.18***	8.805***	9.261***	10.19***	8.812***	9.272***	10.03***	8.669***	9.197***
	(9.180)	(8.285)	(8.609)	(9.181)	(8.284)	(8.610)	(8.770)	(7.962)	(8.304)
Market-to-book				−0.464	−0.475	−0.435	−0.377	−0.684	−0.629
				(−0.422)	(−0.448)	(−0.412)	(−0.297)	(−0.560)	(−0.515)
Financial Leverage				0.136	0.163	0.125	0.0922	0.263	0.219
				(0.240)	(0.299)	(0.230)	(0.143)	(0.424)	(0.353)
ROA							−4.705	12.11	11.00
							(−0.132)	(0.353)	(0.321)
R&D-to-asset							0.0253	0.0265	0.0126
							(0.573)	(0.628)	(0.296)
HHI	94.48***		87.80**	94.97***		88.28**	92.21**		86.74**
	(2.602)		(2.514)	(2.612)		(2.524)	(2.511)		(2.456)
Pay correlation		13.67***	13.64***		13.66***	13.63***		13.56***	13.59***
		(4.073)	(4.072)		(4.066)	(4.067)		(4.026)	(4.044)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,250	1,249	1,249	1,250	1,249	1,249	1,250	1,249	1,249
R-square	0.330	0.337	0.340	0.330	0.337	0.340	0.331	0.337	0.341

Note: This sample contains all firms including both industrial firms and financial institutions. The dependent variable is board directors' pay-for-performance sensitivity (PPS) as measured by the number of granted equities, including stocks and options (beta adjusted), divided by the firm's total shares outstanding. To control for the firm's characteristics and the nonlinearity effect of firm size, we choose the total asset, the square of total asset, financial leverage, R&D and return on assets as our main control variables. We use the difference between excessive CEO pay and excessive director pay based on Brick, Palmon and Wald (2006) to measure the friendliness of board director to firm executives, as the authors provide evidence of cronyism based on the correlation between the compensation of CEOs and directors, and we call this variable *Pay Correlation*. To measure board directors' monitoring effectiveness on top executives, we take the Herfindahl index (HHI) of firms' sales revenue in a sub-industry (4-digit SIC) as a proxy for the efficiency of board directors to monitor the agent (CEO). The regression includes year and industry (two-digit SIC) fixed-effects. The t-statistics based on Newey-West standard error is shown in the parenthesis with ***, ** and * indicating its statistical significant level of 1 %, 5 % and 10 % respectively.

unchanged. Specifically, a one standard deviation positive shock to HHI (increasing monitoring effectiveness due to decreasing competition) increases the directors' PPS by 32.5 %, and a one standard deviation positive shock to Pay Correlation (increasing advising friendliness or cronyism) increases directors' PPS by 47.6 %. In columns 7–9 we include two more control variables, namely the ratios of profit-to-asset (ROA) and R&D-to-asset, and still find the same relationship and magnitude among the HHI, Pay Correlation and directors' PPS. Examining the control variables we find that both small firms (log total asset) and super-large firms (squared log total asset) are associated with high pay incentives of board directors.

In the previous regression analysis we pooled all of the firms in one sample, and now we split the sample to industrial firms and financial institutions to address the concern that our results might be driven by large investment banks and investment companies that have been affected by the financial boom and crisis from 2006 to 2010. We repeat the same regressions for the sub-samples of industrial firms and financial institutions, and the results are reported in Tables 5 and 6 respectively.

For non-financial industrial firms, the significantly negative relationship among HHI, Pay Correlation and directors' PPS remain unchanged although the economic magnitude of HHI is 30 % smaller and the economic magnitude of Pay Correlation is 7 % higher. However, the results change dramatically for financial institutions, and this brings up the concern that our previous results might be driven by firms in the tails of the distribution.

To address the outlier issue, we apply Winsorization to three of our samples, namely all firms, non-financial industrials and financial institutions, and repeat our regression analysis. Winsorization is the transformation of statistics by limiting extreme values in the statistical data to reduce the effect of possibly spurious outliers (Dixon 1960 and Hasings et al. 1947). Because the distribution of our sample statistics can be heavily influenced by outliers, our strategy is to set all outliers to a specified percentile of the data. In this case we use 90 % Winsorisation such that all data below the 5th percentile set to the 5th percentile, and data above the 95th percentile set to the 95th percentile. The regression results are reported in Dong (2012).

We find that the HHI and Pay Correlation are statistically positive related to the director' PPS but with a much smaller economic magnitude comparing to previous regression results. Specifically, a one standard deviation positive shock to HHI (increasing monitoring effectiveness due to decreasing competition) increases directors' PPS by 5.6 % for the sample of all firms, whereas a one standard deviation positive shock to Pay Correlation (increasing advising friendliness or cronyism) increases directors' PPS by 12.2 %. The sample of non-financial industrials has similar regression results, but the sample of financial institutions report much higher economic magnitude (three times of non-financial firms) for the effect of HHI on directors' PPS and insignificant coefficient for the Pay Correlation. This insignificant effect of Pay Correlation could be due to the increased public scrutiny of bank executive compensation in the 2007–2009 financial crisis. During this turmoil period, a major criticism was that many bank CEOs' executive pay packages incentivized excessive risk taking which contributed to the financial

Table 5 Industrial firms: Market competition, pay correlation and pay-for-performance sensitivity

Dependent variable: Director PPS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
log(Total asset)	−224.2***	−201.4***	−207.2***	−224.5***	−201.7***	−207.4***	−224.2***	−201.5***	−209.0***
	(−10.33)	(−9.817)	(−9.981)	(−10.33)	(−9.818)	(−9.982)	(−9.937)	(−9.531)	(−9.700)
log(Total asset)-square	9.376***	7.800***	8.280***	9.391***	7.813***	8.294***	9.364***	7.793***	8.409***
	(7.624)	(6.775)	(7.003)	(7.627)	(6.777)	(7.007)	(7.092)	(6.406)	(6.649)
Market-to-book				−0.373	−0.351	−0.318	−0.515	−0.822	−0.788
				(−0.341)	(−0.336)	(−0.306)	(−0.401)	(−0.672)	(−0.645)
Financial leverage				0.116	0.116	0.0898	0.185	0.347	0.321
				(0.205)	(0.217)	(0.167)	(0.283)	(0.558)	(0.516)
ROA							7.387	24.40	23.89
							(0.215)	(0.745)	(0.730)
R&D-to-asset							0.00321	0.00468	−0.00893
							(0.0729)	(0.113)	(−0.213)
HHI	69.40*		60.87*	69.67*		61.16*	69.10*		62.29*
	(1.905)		(1.755)	(1.909)		(1.761)	(1.859)		(1.761)
Pay correlation		14.67***	14.61***		14.65***	14.60***		14.66***	14.66***
		(4.409)	(4.397)		(4.401)	(4.390)		(4.396)	(4.400)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,133	1,132	1,132	1,133	1,132	1,132	1,133	1,132	1,132
R-square	0.311	0.323	0.325	0.312	0.323	0.325	0.312	0.323	0.325

Note: This sample includes only industrial firms and excludes financial institutions. The dependent variable is board directors' pay-for-performance sensitivity (PPS) as measured by the number of granted equities, including stocks and options (beta adjusted), divided by the firm's total shares outstanding. To control for the firm's characteristics and the nonlinearity effect of firm size, we choose the total asset, the square of total asset, financial leverage, R&D and return on assets as our main control variables. We use the difference between excessive CEO pay and excessive director pay based on Brick, Palmon and Wald (2006) to measure the friendliness of board director to firm executives, as the authors provide evidence of cronyism based on the correlation between the compensation of CEOs and directors, and we call this variable *Pay Correlation*. To measure board directors' monitoring effectiveness on top executives, we take the Herfindahl index (HHI) of firms' sales revenue in a sub-industry (4-digit SIC) as a proxy for the efficiency of board directors to monitor the agent (CEO). The regression includes year and industry (two-digit SIC) fixed-effects. The t-statistics are calculated using Newey-West standard errors which rectifies for heteroskedasticity. The t-statistics based on Newey-West standard error is shown in the parenthesis with ***, ** and * indicating its statistical significant level of 1 %, 5 % and 10 % respectively.

Table 6 Financial institutions: Market competition, pay correlation and pay-for-performance sensitivity

Dependent variable: Director PPS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
log(Total asset)	−913.0***	−920.8***	−917.8***	−910.4***	−924.8***	−915.4***	−852.4***	−874.3***	−856.5***
	(−9.565)	(−10.24)	(−9.503)	(−9.358)	(−10.09)	(−9.301)	(−9.014)	(−10.02)	(−8.913)
log(Total asset)-square	37.53***	37.91***	37.80***	37.58***	38.18***	37.87***	35.34***	36.13***	35.55***
	(9.027)	(9.420)	(8.940)	(8.864)	(9.228)	(8.779)	(8.719)	(9.215)	(8.586)
Market-to-book				−2.296	−1.668	−2.338	−3.852	−2.944	−3.883
				(−0.342)	(−0.268)	(−0.347)	(−0.611)	(−0.495)	(−0.613)
Financial leverage				−0.937	−0.837	−0.988	−1.594	−1.313	−1.611
				(−0.328)	(−0.299)	(−0.344)	(−0.587)	(−0.497)	(−0.590)
ROA							−2,257***	−2,197***	−2,244***
							(−3.794)	(−3.737)	(−3.744)
R&D-to-asset							74.08	83.50*	75.49
							(1.429)	(1.704)	(1.442)
HHI	18.03		13.57	48.20		44.43	80.63		75.98
	(0.121)		(0.0903)	(0.292)		(0.267)	(0.482)		(0.450)
Pay correlation		−5.284	−5.198		−5.630	−5.441		−4.042	−3.508
		(−0.413)	(−0.403)		(−0.435)	(−0.418)		(−0.331)	(−0.285)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	117	117	117	117	117	117	117	117	117
R-square	0.645	0.645	0.645	0.646	0.646	0.646	0.695	0.695	0.695

Note: This sample only includes financial institutions and excludes industrial firms. The dependent variable is board directors' pay-for-performance sensitivity (PPS) as measured by the number of granted equities, including stocks and options (beta adjusted), divided by the firm's total shares outstanding. To control for the firm's characteristics and the nonlinearity effect of firm size, we choose the total asset, the square of total asset, financial leverage, R&D and return on assets as our main control variables. We use the difference between excessive CEO pay and excessive director pay based on Brick, Palmon and Wald (2006) to measure the friendliness of board director to firm executives, as the authors provide evidence of cronyism based on the correlation between the compensation of CEOs and directors, and we call this variable *Pay Correlation*. To measure board directors' monitoring effectiveness on top executives, we take the Herfindahl index (HHI) of firms' sales revenue in a sub-industry (4-digit SIC) as a proxy for the efficiency of board directors to monitor the agent (CEO). The regression includes year and industry (two-digit SIC) fixed-effects. The t-statistics based on Newey-West standard error is shown in the parenthesis with ***, ** and * indicating its statistical significant level of 1 %, 5 % and 10 % respectively.

turmoil. To respond to these concerns, governments and regulators have taken steps to restrict executive pay arrangements in banking industries. For example, under the economic stimulus bill passed in mid-February 2009, TARP recipients are not allowed to deduct for tax purposes senior executive compensation in excess of sum fixed level, and this "cap" on CEO pay might make the PPS of top executives and directors deviate from their historical correlations. Hence, the measure of Brick et al. (2006) might lose track of the real "friendliness" of director-CEO relationship in financial industries during the financial crisis of 2007–2009.

5 Robustness: Quasi-experimental Design

We now examine if the above results are driven by endogeneity concerns. Specifically, are significant omitted variable(s) correlated with both market competition and pay-for-performance sensitivity driving our results spuriously? In order to do so, we consider the dramatic decrease in market competition in each sub-industry as an exogenous shock. This shock could be due to the sudden bankruptcy of firms in that sub-industry. We employ a difference-in-differences (DID) approach (see Meyer 1995; Angrist and Krueger 1999 for detailed explanations of this methodology). We specifically analyze whether firms change their board directors' pay-for-performance sensitivity when they face the unexpected shock of market competition. We rank the change of each sub-industry (four-digit SIC)'s Herfindahl index (HHI) every year and assume that sub-industries in the top-quartile (75-percentile and above) of the distribution face a severe shock of market competition in that year, namely a sudden decrease in market competition. Accordingly, the sub-industries categorized by the four-digit SIC code that have such shocks are defined as the treatment group, whereas the sub-industries in the bottom quartile (25-percentile and below) of the distribution are the control or non-treated group. The dummy variable of *Lower Competition* is set to unity if the sub-industry is in the top-quartile, and zero if it is in the bottom-quartile. The dummy variable of *Post-Shock* is set to unity if the date is the year after the shock (dramatic decrease of market competition in the sub-industry), and zero if the date is the year before the shock. A third dummy variable *Lower Competition* × *Post-Shock* is the cross-product of the previous two dummy variables. The industry (two-digit SIC) fixed effect is still used but the year fixed effect is no longer needed because the dummy variable of *Post-Shock* serves for the same purpose.

The DID regression results are reported in Table 7. Columns 1–3 are for the shocks of decreasing market competition in all firms, industrial firms and financial institutions respectively. The DID coefficient estimates of the cross-product dummy (*Lower Competition* × *Post-Shock*) in all firms and industrial firms are significantly positive, suggesting that firms increase their board directors' pay-for-performance sensitivity when they face the unexpected shock of market

Table 7 Robustness: DID regression using exogenous shocks

Dependent variable: Director PPS	(1)	(2)	(3)	(4)	(5)	(6)
log(Total asset)	−67.75***	−58.96***	−74.43***	−94.14***	−83.74***	−81.72***
	(−7.489)	(−5.621)	(−5.922)	(−6.817)	(−5.241)	(−7.160)
log(Total asset)-square	1.890***	1.252**	2.738***	2.787***	2.021**	3.128***
	(3.715)	(2.037)	(4.905)	(3.558)	(2.148)	(6.173)
Market-to-book	1.244	1.595	−0.663	0.689	0.543	−0.456
	(0.934)	(1.030)	(−1.008)	(0.353)	(0.221)	(−0.974)
Financial leverage	0.157	−0.0684	1.825**	0.265	0.109	0.568
	(0.270)	(−0.109)	(2.030)	(0.302)	(0.115)	(0.643)
ROA	−26.18	−31.16	−103.8*	−17.39	−14.66	−110.0**
	(−0.951)	(−1.011)	(−1.802)	(−0.428)	(−0.308)	(−2.060)
R&D-to-asset	0.0539	0.0725	0.543	0.200	0.235	0.378
	(0.455)	(0.571)	(1.324)	(1.123)	(1.214)	(1.025)
Post-shock dummy	33.03**	37.24**	−5.949	28.35*	29.56*	10.41
	(2.553)	(2.563)	(−0.772)	(1.783)	(1.672)	(1.501)
Lower competition dummy	19.74	21.53	−3.914			
	(1.544)	(1.494)	(−0.522)			
Lower independence dummy				14.30	15.06	1.166
				(0.758)	(0.706)	(0.177)
Post dummy × lower dummy	38.50**	44.73**	14.08	21.64*	21.03*	13.36
	(2.193)	(2.263)	(1.378)	(1.829)	(1.712)	(1.452)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1,242	1,096	146	1,282	1,130	152
R-square	0.316	0.318	0.639	0.232	0.233	0.691

Note: In columns 1–3 we consider the dramatic decrease in market competition in each sub-industry as an exogenous shock. This shock could be due to the sudden bankruptcy of firms in that sub-industry. We employ a difference-in-differences (DID) approach (see Meyer 1995, and Angrist and Krueger 1999 for detailed explanations of this methodology). We specifically analyze whether firms change their board directors' pay-for-performance sensitivity when they face the unexpected shock of market competition. We rank the change of each sub-industry (four-digit SIC)'s Herfindahl index (*HHI*) every year and assume that sub-industries in the top-quartile (75-percentile and above) of the distribution face a severe shock of market competition in that year, namely a sudden decrease in market competition. Accordingly, the sub-industries categorized by the four-digit SIC code have such shocks are defined as the treatment group, whereas the sub-industries in the bottom quartile (25-percentile and below) of the distribution are the control or non-treated group. The dummy variable of *Lower Competition* is set to unity if the sub-industry is in the top-quartile, and zero if it is in the bottom-quartile. The dummy variable of *Post-Shock* is set to unity if the date is the year after the shock (dramatic decrease of market competition in the sub-industry), and zero if the date is the year before the shock. A third dummy variable *Lower Competition* × *Post-Shock* is the cross-product of the previous two dummy variables. Similarly in columns 4–6, we rank the change of each sub-industry's *Pay Correlation* every year and assume that sub-industries in the top-quartile of the distribution face a severe positive shock of CEO-director relationship or cronyism in that year, probably due to the hiring of friends as new CEOs or directors. The dummy variable of *Lower Independence* is set to unity if the sub-industry is in the top-quartile, and zero if it is in the bottom-quartile. The dummy variable of *Post-Shock* is set to unity if the date is the year after the shock (dramatic increase of *Pay Correlation* between CEOs and directors in the sub-industry), and zero if the date is the year before the shock. A third dummy variable *Lower Independence* × *Post-Shock* is the cross-product of the previous two dummy variables. The industry (two-digit SIC) fixed effect is still used but the year fixed effect is no longer needed because the dummy variable of Post-Shock serves for the same purpose. The t-statistics based on Newey-West standard error is shown in the parenthesis with ***, ** and * indicating its statistical significant level of 1 %, 5 % and 10 % respectively.

competition. However, such effect doesn't exist in the financial service industries as the insignificant coefficient estimates indicate.

Similarly, we design another set of DID regressions to check whether the significant omitted variable(s) correlated with both pay correlation and pay-for-performance sensitivity are driving our results spuriously. We rank the change of each sub-industry (four-digit SIC's) *Pay Correlation* every year and assume that sub-industries in the top-quartile (75-percentile and above) of the distribution face a severe positive shock of CEO-director relationship or cronyism in that year, probably due to the hiring of friends as new CEOs or directors. Accordingly, the sub-industries categorized by the four-digit SIC code that have such shocks are defined as the treatment group, whereas the sub-industries in the bottom quartile (25-percentile and below) of the distribution are the control or non-treated group. The dummy variable of *Lower Independence* is set to unity if the sub-industry is in the top-quartile, and zero if it is in the bottom-quartile. The dummy variable of *Post-Shock* is set to unity if the date is the year after the shock (dramatic increase of pay correlation between CEOs and directors in the sub-industry), and zero if the date is the year before the shock. A third dummy variable *Lower Independence* × *Post-Shock* is the cross-product of the previous two dummy variables. Columns 4–6 in Table X are for the shocks of increasing *Pay Correlation* in all firms, industrial firms and financial institutions respectively. The DID coefficient estimates of the cross-product dummy (*Lower Independence* × *Post-Shock*) in all firms and industrial firms are significantly positive, suggesting that firms increase their directors' pay-for-performance sensitivity when they face the unexpected shock of cronyism. Again, the financial service industries don't have such effect.

Before we conclude that the statistical results of our robustness checks using identified positive shocks of market competition and pay correlation support the hypothesis that both factors of monitor effectiveness and friendly advising affect the optimal compensation of independent board directors, the design of such quasi-experiments deserves caution. As Shadish et al. (2001) point out, without proper randomization these difference-in-difference (DID) tests could be meaningless because they might not take into account any pre-existing firm characteristics (although we control for size and performance) or recognize that influences outside the experiment may have affected the results (like trade war or financial crisis). However, we acknowledge that it is a common problem in any causal inference using observational data.

6 Conclusion

The compensation of directors has received much attention, along with the growing debates on corporate governance in recent years, partly due to the ongoing financial crisis. While prior studies including Hall and Liebman (1998) have shown evidence of a dramatic increase in the use of equity-based incentives, resulting in an increase in the sensitivity of executive pay to firm performance during the 1990s. These

findings suggest that managerial incentives are arguably more closely aligned with the shareholders' goal of firm value maximization now than in the past. If the managerial incentive compensation has worked for top executives in terms of maximizing their efforts to run the firms on behalf of shareholders, do we need to offer similar incentive contracts to directors in order to maximize their efforts to monitor and advise top executives? This paper specifically addresses this question theoretically and empirically. We argue that the equity-based compensation for directors is necessary and the level of incentives embedded in the contracts depends on directors' effectiveness in monitoring and friendliness in advising CEOs.

On the one hand, a well-functioning competitive market reduces the monitoring effectiveness of outside directors, whereas directors in an oligopoly industry can monitor executives more effectively, therefore directors are offered higher incentive pay to exert more efforts in monitoring, even if they might be less friendly to top executives. On the other hand, friendly directors are given higher incentive compensation to work harder to advise executives, even if their monitoring effectiveness might be very poor. Specifically, we hypothesize that the pay-for-performance sensitivity of board directors is positively associated to pay correlation in excessive compensation between directors and CEOs and the level of competition in the industry. This paper is among the first ones to systemically address the relationship between directors' effectiveness of monitoring and friendliness in advising CEOs and the design of incentive contracts for directors in large publicly owned firms. We report empirical evidence supporting the hypothesis using compensation data of U.S. executives and directors. However, the statistical significance disappears for the subsample of financial institutions, whereas the significance remains for the subsample of industrial firms. This inconsistency in the empirical findings between industrial firms and financial institutions raises the question of whether managerial pays for bank directors are optimal. The results are robust after controlling for the endogeneity bias with a quasi-experimental design.

Acknowledgement I am grateful to conference participants at SEA (Atlanta), SWFA (San Antonio) and WEA (San Diego). I thank Frederick Bereskin, Ivan Brick, Simi Kedia, Yigitcan Karabulut, Jin-Mo Kim, Peter Klein, Tom Nohel, Darius Palia, Abraham Ravid, Nitish Sinha and Tim Zhou for helpful comments. I acknowledge the research financial support from Rutgers University Graduate School and Rutgers Business School. All errors and omissions remain my own.

Appendix

We formally develop a model to provide theoretical support for the hypothesis. This model is a one-principal and two-agents model based on the standard principal-agent problem of Holmstrom and Milgrom (1987). The time sequence of this 2-period game is the following. At time 0, shareholders design one compensation contract $\{\phi_m, \alpha_m\}$ for the manager and another compensation contract $\{\phi_d, \alpha_d\}$ for

the outside director. The sharing rules are restricted to the firm's total final cash flow: $\alpha_m \in [0,1]$ and $\alpha_d \in [0,1]$. At time 1, the manager exerts effort a_m to make business decisions and the outside director exerts effort a_d to monitor the manager. At Time 2, terminal cashflow x is realized and all claims are settled.

The manager (agent 1) is risk-averse and works as a CEO for a firm owned by a representative shareholder (principal) who is risk-neutral. The director (agent 2) is also risk-averse and works for the same firm. The firm's final cash flow or profit is x after deducting initial investment I, and it is the sum of manager's effort a_m, the director's effort a_d and a noise ε term which is normally distributed with mean zero and variance σ^2: $x = a_m + \rho a_d - I + \varepsilon$. Here, $\rho \in [0,1]$ is a measure of the monitoring effectiveness by the director, $\rho = 1$ being very effective and $\rho = 0$ having no impact on firm's outcome. For simplification purposes, we assume zero initial investment cost: $I = 0$, the profit function then can be rewritten as: $x = a_m + \rho a_d + \varepsilon$.

The manager has an exponential utility function, which depends on the final wealth, the cost of effort and how friendly the director is to the manager: $U_m(w_m, a_m, a_d) = -e^{-\gamma_m\left(w_m - \frac{c_m}{2}{a_m}^2 + \beta a_d\right)}$, where γ_m is risk-aversion coefficient, a_m is manager's effort, $c_m > 0$ is manager's cost of effort, a_d is the director's effort, $\beta \in [-1,1]$ is a measure of cooperation between the manager and the director or how friendly the director is to the manager in terms of exchanging information and providing advices, and w_m is total wealth of the manager including wage ϕ and equity (of both stock and option) compensation. With a linear contract as in Holmstrom and Milgrom (1987), the equity compensation can be modeled as a performance based compensation or as a profit-sharing rule α_m: $w_m = \phi_m + \alpha_m x$. The manager receives α_m fraction of the firm's profit. The manager's objective function is his certainty equivalent wealth:

$$\phi_m + \alpha_m x - \frac{c_m}{2}{a_m}^2 + \beta a_d - \frac{\gamma_m}{2}\alpha_m \sigma^2 \tag{1}$$

The manager (agent 1)'s problem is to choose her effort level a_m to maximize his certainty equivalent wealth minus the cost of effort and unfriendliness from the director:

$$\underset{a_m}{Max}\left(\phi_m + \alpha_m x - \frac{c_m}{2}{a_m}^2 + \beta a_d - \frac{\gamma_m}{2}\alpha_m \sigma^2\right) \tag{2}$$

The director has an exponential utility function, which depends on the final wealth and the cost of effort: $U_d(w_m, a_d) = -e^{-\gamma_d\left(w_d - \frac{c_d}{2}{a_d}^2\right)}$, where γ_d is risk-aversion coefficient, a_d is the director's effort, $c_d > 0$ is the director's cost of effort, and w_d is total wealth of the director including wage ϕ and equity compensations. With a linear contract the equity compensation can be modeled as: $w_d = \phi_d + \alpha_d x$. The director receives α_d fraction of the firm's profit. The director's objective function is his certainty equivalent wealth:

$$\phi_d + \alpha_d x - \frac{c_d}{2} a_d{}^2 - \frac{\gamma_d}{2} \alpha_d \sigma^2 \tag{3}$$

The director (agent 2's) problem is to choose her effort level a_d to maximize his certainty equivalent wealth minus the cost of effort:

$$\underset{a_d}{Max} \left(\phi_d + \alpha_d x - \frac{c_d}{2} a_d{}^2 - \frac{\gamma_d}{2} \alpha_d \sigma^2 \right) \tag{4}$$

The representative shareholder (principal's) problem is to choose the manager's profit-sharing rule α_m and the director's profit-sharing rule α_d to maximize his final payoff subject to incentive compatibility (IC) and participation constraint (PC):

$$\underset{\alpha}{Max} E[x - (\phi_m + \alpha_m x + \phi_d + \alpha_d x)] \tag{5}$$

$$\text{s.t. } a_m \in \arg\max \left(\phi_m + \alpha_m x - \tfrac{c_m}{2} a_m{}^2 + \beta a_d - \tfrac{\gamma_m}{2} \alpha_m \sigma^2 \right) \tag{IC1}$$

$$a_d \in \arg\max \left(\phi_d + \alpha_d x - \frac{c_d}{2} a_d{}^2 - \frac{\gamma_d}{2} \alpha_d \sigma^2 \right) \tag{IC2}$$

$$\phi_m + \alpha_m x - \frac{c_m}{2} a_m{}^2 + \beta a_d - \frac{\gamma_m}{2} \alpha_m \sigma^2 \geq \underline{W_m} \tag{PC1}$$

$$\phi_d + \alpha_d x - \frac{c_d}{2} a_d{}^2 - \frac{\gamma_d}{2} \alpha_d \sigma^2 \geq \underline{W_d} \tag{PC2}$$

where $\underline{W_m}$ and $\underline{W_d}$ are the minimum utility level from outside opportunity for manager and director respectively; these two participation constraints always bound such that the inequality becomes equality.

The solutions, comparative statistics and proofs can be found in Dong (2012), and the optimal contract of directors implies: (1) The board director's equity-based compensation (modeled as profit sharing rule) is positive related to his effectiveness of monitoring and friendliness in advising the CEO; (2) The relationship between the effectiveness of monitoring and the friendliness in advising is negative and convex. This result is similar to Kumar and Sivaramakrishnan (2008) and Adams and Ferreira (2007) which conclude that shareholders can sometime be better off with a friendly board.

References

Adams, R., & Ferreira, D. (2007). A theory of friendly boards. *Journal of Finance, 62*, 217–250.
Adams, R., & Ferreira, D. (2008). Do directors perform for pay? *Journal of Accounting and Economics, 46*, 154–71.

Adams, R., Hermalin, B., & Weibach, M. (2010). The role of boards of directors in corporate governance: a conceptual framework and survey. *Journal of Economic Literature, 48*, 58–107.
Angrist, J., & Krueger, A. (1999). Empirical Strategies in Labor Economics. *Handbook of Labor Economics* (Orley Ashenfelter and David Card, eds.) 3A, 1277–1366.
Blair, M. (1995). *Ownership and control: Rethinking corporate governance for the twenty-first century*. Washington, DC: Brookings Institution Press.
Bolton, P., & Scharfstein, D. (1996). Optimal debt structure and the number of creditors. *Journal of Political Economy, 104*, 1–25.
Boyd, B. (1996). Determinants of U.S. outsider director compensation. *Corporate Governance: An International Review, 4*, 202–211.
Brick, I., Palmon, O., & Wald, J. (2006). CEO compensation, director compensation, and firm performance: evidence of cronyism? *Journal of Corporate Finance, 12*, 403–423.
Bryan, S., & Klein, A. (2004). Non-management director options, board characteristics, and future firm investments and performance. NYU Working Paper No. 04–009.
Chambers, E., Foulon, M., Handfield-Jones, H., Hankin, S., & Michaels, E. (1998). The war for talent. *McKinsey Quarterly, 3*, 44.
Dixon, W. (1960). Simplified estimation from censored normal samples. *Annals of Mathematical Statistics, 31*, 385–391.
Dong, G. (2012). Pay more stocks to directors: Theory of corporate governance and board's compensation. Rutgers University Working Paper.
Economist. (2001). A survey by PWC of British boards. *The Economist Newspaper*, February 10, 68.
Farrell, K., Friesen, G., & Hersch, P. (2008). How do firms adjust director compensation? *Journal of Corporate Finance, 14*, 153–162.
Fich, E., & Shivdasani, A. (2005). The impact of stock-option compensation for outside directors on firm value. *Journal of Business, 78*, 2229–2254.
Gao, H. (2010). Optimal compensation contracts when managers can hedge. *Journal of Financial Economics, 97*, 218–238.
Gerhart, B., & Milkovich, G. (1990). Organizational differences in managerial compensation and financial performance. *Academy of Management Journal, 33*, 663–691.
Grullon, G., Kanatas, G., & Kumar, P. (2006). The impact of capital structure on advertising competition: An empirical study. *Journal of Business, 79*, 3101–3124.
Guercio, D., Seery, L., & Woidtke, T. (2008). Do boards pay attention when institutional investor activists just vote no. *Journal of Financial Economics, 90*, 84–103.
Hall, B., & Liebman, J. (1998). Are CEOs really paid like bureaucrats? *Quarterly Journal of Economics., 103*, 653–691.
Harris, M., & Raviv, A. (1978). Some results on incentive contracts with applications to education, insurance, and law enforcement. *American Economic Review, 68*, 20–30.
Harris, M., & Raviv, A. (2008). A theory of board control and size. *Review of Financial Studies, 21*, 1797–1832.
Hasings, C., Mosteller, F., Tukey, J., & Winsor, C. (1947). Low moments for small samples: A comparative study of order statistics. *Annals of Mathematical Statistics, 18*, 413–426.
Hempel, P., & Fay, C. (1994). Outside director compensation and firm performance. *Human Resource Management, 33*, 111–133.
Hermalin, B., & Weisbach, M. (1998). Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review, 88*, 96–118.
Hermalin, B., & Weisbach, M. (2003). Boards of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review, 9*, 7–26.
Herman, E. (1981). *Corporate control, corporate power*. New York: Cambridge University Press.
Holmstrom, B. (1979). Moral hazard and observability. *Bell Journal of Economics, 10*, 74–91.
Holmstrom, B., & Milgrom, P. (1987). Aggregation and linearity in the provision of intertemporal incentives. *Econometrica, 55*, 303–328.

Jensen, M., & Meckling, W. (1976). The theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*, 305–360.

Kostovetsky, L. (2009). Human capital flows and the financial industry. University of Rochester Working Paper.

Kumar, P., & Sivaramakrishnan, K. (2008). Who monitors the monitor? The effect of board independence on executive compensation and firm value. *Review of Financial Studies, 21*, 1371–1401.

Leonard, J. (1990). Executive pay and firm performance. *Industrial and Labor Relations Review, 43*, 13–29.

Linn, S., & Park, D. (2005). Outside director compensation policy and the investment opportunity set. *Journal of Corporate Finance, 11*, 680–715.

Lorsch, J. (1989). *Pawns or potentates*. Cambridge: Harvard Business School Press.

Mace, M. (1986). *Directors, myth and reality*. Cambridge: Harvard Business School Press.

Masulis, R., & Nahata, R. (2009). Financial contracting with strategic investors: evidence from corporate venture capital backed IPOs. *Journal of Financial Intermediation, 18*, 599–631.

Meyer, B. (1995). Natural and Quasi-experiments in Economics. *Journal of Business and Economic Statistics*, 13, 151–161.

Randøy, T., & Jenssen, J. (2004). Board independence and product market competition in Swedish firms. *Corporate Governance: An International Review, 12*, 281–289.

Ryan, H., & Wiggins, R. (2004). Who is in whose pocket? Director compensation, board independence, and barriers to effective monitoring. *Journal of Financial Economics, 73*, 497–524.

Shadish, W., Cook, T., & Campbell, D. (2001). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth Publishing. Cengage Learning, New York, USA.

Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance, 52*, 737–783.

Song, F., & Thakor, A. (2006). Information control, career concerns, and corporate governance. *Journal of Finance, 61*, 1845–1896.

Tirole, J. (1986). Hierarchies and bureaucracies, on the role of collusion in organization. *Journal of Law, Economics and Organization, 61*, 1845–1896.

Tirole, J. (1992). *Collusion and the theory of organization, advances in economic theory. Advances in economic theory: sixth world congress*. Cambridge University Press. Cambridge, UK.

Tufano, P., & Sevick, M. (1997). Board structure and fee-setting in the U.S. mutual fund industry. *Journal of Financial Economics, 46*, 321–355.

Vafeas, N. (1999). Determinants of the adoption of director incentive plans. *Journal of Accounting, Auditing and Finance, 14*, 453–474.

Warther, V. (1998). Board effectiveness and board dissent: a model of the board's relationship to management and shareholders. *Journal of Corporate Finance, 4*, 53–70.

Whisler, T. (1984). *The rules of the game*. Homewood: Dow Jones-Irwin.

Yermack, D. (2004). Remuneration, retention and reputation incentives for outside directors. *Journal of Finance, 59*, 2281–2308.

Directors in Banks: Compensation and Characteristics

Lisa Goh and Aditi Gupta

Abstract Banks are frequently excluded from studies on executive compensation and corporate governance even though they play a critical role in the economy. In this chapter, we examine whether and how compensation of CEOs and board members in UK banks differs from compensation practices in other firms, using a sample of UK banks, FTSE 100, and matched-sample firms. We also examine differences in individual characteristics of both executive and non-executive board members of banks and those in other firms. We find that, contrary to public perception, CEOs in banks receive lower total compensation than CEOs of other firms. However, their compensation packages are weighted significantly more towards short-term compensation than in other firms. We also find that non-executives in banks are more highly paid than those in other firms.

1 Introduction

In recent years, executives and boards of banks have been under significant scrutiny and criticism for the alleged role that they played in the ongoing financial crisis. In particular, they have been accused of short-termism, excessive risk-taking, or not having a complete understanding of key business models and risks taken by their institution, while at the same time being richly rewarded and receiving high levels

L. Goh (✉)
Department of Accounting, London School of Economics and Political Science, Houghton St., London, United Kingdom, WC2A 2AE
e-mail: l.goh@lse.ac.uk

A. Gupta
Department of Management, King's College London, Stamford St., London, United Kingdom, SE1 9NH
e-mail: aditi.gupta@kcl.ac.uk

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_8,

of compensation.[1] Banks play an important role in the UK economy (Office for National Statistics 2006; Treasury Committee 2010), performing a critical intermediary function in the flow of capital. Despite their importance, however, limited evidence exists about the level of compensation of directors in banks and incentives provided by the compensation packages for risk-taking, and the characteristics of these directors. In the wake of the financial crisis, significant regulatory debate has also emerged that focuses specifically on reforming governance and compensation practices in banks (Walker Review 2009). Therefore, understanding how bank executives are compensated is important, and relevant for the regulatory agenda.

In this chapter, we examine boards of banks in the United Kingdom, and the nature of compensation practices in banks. We present an overview of executive and non-executive directors on boards of banks in the UK, and their individual characteristics, such as age, tenure, experience, and formal qualifications, compared to directors in other firms.[2] We then examine the level and composition of both executive and non-executive director compensation packages in banks and compare these to other firms, using director-level data. We examine whether criticisms of rewards for failure in banks are warranted for CEOs and other executives (executive members of the board other than the CEO, such as the CFO). We provide evidence that prior to 2008, bank CEOs received lower total compensation compared to a sample of peers, while non-executives were paid more than those in other firms. We also find that boards of banks were significantly larger than those in other firms. This is consistent with less effective monitoring (Yermack 1996; Ryan and Wiggins 2004), but it could also be argued that banks invested more in governance with a larger and more highly paid board.

Much of the significant volume of research on executive compensation in the last two decades has focused on non-financial firms (Healy 1985; Holthausen et al. 1995; Tosi and Gomez-Mejia 1994; Mehran 1995). Murphy (1999) and Frydman and Jenter (2010) provide general overviews of this literature. Researchers have often excluded banks since they are subject to different regulations, have different financial reporting practices, and are believed to have different governance characteristics.

Research that has examined compensation in US banks has found that CEOs of banks are not compensated more than those in other types of firms (Dong 2011), and earn relatively less equity-based compensation (Houston and James 1995; Adams and Mehran 2003). More recently, however, Kaplan and Rauh (2010) find that financial sector employees comprise proportionately more of top earners in the US

[1] Submissions to the Treasury Select Committee, April 2009, http://www.publications.parliament.uk/pa/cm200809/cmselect/cmtreasy/144/144iii10.htm

[2] Firms in the United Kingdom typically have a unitary board of directors composed of both executive and non-executive directors. Executive directors, including the Chief Executive Officer (CEO), are commonly referred to in the United States as "inside" directors while non-executive directors are referred to as "outside" directors and in some jurisdictions as "supervisory" directors. For consistency, in this chapter we use the term "executive" and "non-executive," the terminology of firms and regulators in the UK.

than employees or executives from outside the financial sector. Mishra and Nielsen (2000) find that CEO pay-performance sensitivity and tenure of independent directors has a positive effect on firm performance (specifically in the banking sector).

Monitoring and oversight practices in the banking sector in the UK have been targeted for improvement on a number of fronts since the financial crisis, including more effective boards, governance of risk, and compensation practices (Walker Review 2009; Treasury Committee 2010). The board oversight and monitoring role in the UK is assigned to non-executive directors, who are members of the board alongside executive directors. Therefore, the structure of the board and the qualifications of these non-executives are critical to the governance of the firm and to their ability to fulfill monitoring duties. However, even though non-executive directors have been the subject of a number of important regulatory debates since the Cadbury Report (1992), relatively little is known about their characteristics, and limited research evidence exists in general about their compensation (Boyd 1996; Bryan et al. 2000; Adams and Ferreira 2008; Farrell et al. 2008). Furthermore, like research on compensation, studies on corporate governance and characteristics of boards of directors have, until recently, largely excluded banks because they are believed to have different governance structures, both in the US and in the UK (Young 2000; Yermack 2004; O'Sullivan 2005; Fich and Shivdasani 2005). The financial crisis has again drawn attention to effective governance, particularly in banks, with the recent Walker Review (2009) and the revised UK Corporate Governance Code (2010) contributing more guidelines.

We examine UK banks for a number of reasons. The UK is a leading world financial centre, and banks are a critical economic driver, with balance sheets comprising about 500% of GDP (Treasury Committee 2010), 25% of UK Gross Value Added (GVA) (ONS 2006), and 21% of the market capitalization of the FTSE 100 in 2006.[3] In addition, there has been a long-standing regulatory debate on corporate governance and compensation in the UK, which has received new attention in the wake of the financial crisis. Experience from the UK governance regime and contributions from UK regulators and standards-setters also influence developments in the European Union, such as the Green Paper on Corporate Governance (2011). Furthermore, in the UK, there is significant variation in compensation between and within boards, allowing variation that may be attributable to individual characteristics. Last, disclosures of compensation of both executive and non-executive members of the board have been required on an individual basis since Greenbury (1995).

The chapter is organized as follows. Section 2 outlines the institutional framework in the UK and related research. Section 3 discusses our sample selection and provides descriptive evidence of characteristics and compensation of CEOs, other

[3] This declined substantially during and after the financial crisis. However, banks still represented 16 % of the market capitalization of FTSE 100 firms at the end of 2009 (Source: FTSE All-Share Index, 2006; 2009).

executives, and non-executive directors. Section 4 presents our model of determinants of compensation and regression results, and Sect. 5 concludes.

2 Institutional Framework and Related Literature

2.1 Institutional Framework

Listed banks in the UK are subject to governance requirements for all listed companies, with additional requirements set by the Financial Services Authority (FSA). However, recent recommendations by the Walker Review (2009) on governance in banks recognizes that some of the governance needs in banks might necessitate relaxing certain principles set out in corporate governance guidelines, which are normally implemented on a comply-or-explain basis.

The current governance regime in the UK has largely been in place since the unification of requirements of the Cadbury (1992), Greenbury (1995), and Hampel (1998) reports on corporate governance into the Combined Code (2000). Key regulations requiring detailed individual compensation disclosures for all executive and non-executive directors have been in place since the Combined Code (2000) and the Directors' Remuneration Report Regulations (DRRR, 2002). Regulations governing the use of non-executive directors were largely initiated by the Cadbury Report (1992), and continued with the Greenbury Report (1995), Hampel Report (1998), Higgs Report (2003) and Combined Code (2003, 2006).

The Combined Code requires firms to have a balance of executive and non-executive directors, "such that no individual or small group of individuals can dominate the board's decision taking" (Combined Code 2006, §1A.3), with a clear separation of duties between the Chairman and the CEO. These principles are carried forward to the UK Corporate Governance Code (2010). The Walker Review (2009) questions whether boards in banks were too large, which made them difficult to manage (consistent with Yermack (1996) and Ryan and Wiggins (2004)), and whether smaller executive representation might reduce risk of "executive groupthink." It also highlights the need for financial sector expertise (Walker Review 2009, §3.3–3.6). However, recent evidence has found that financial sector expertise of US bank directors is negatively related to firm performance and is also related to higher risk-taking (Taillard et al. 2010), though this may be more related to capturing moral hazard gains created by government guarantees, rather than to poor monitoring.

In recent years, greater attention has also been paid to board diversity (Tyson Report 2003), motivating research on director characteristics and backgrounds. Sealy et al. (2008) find that women are consistently under-represented on corporate boards, while Mateos et al. (2009) find that women on the boards of European banks are even less represented, suggesting that executives prefer friendly boards and avoid hiring women.

2.2 Compensation

Compensation practices in banks have gained attention in recent years, with recent research in particular examining risk-taking incentives and investment decisions made by executives (Bebchuk and Spamann 2010; Dong 2011; Fahlenbrach and Stulz 2011; Gande and Kalpathy 2012). Underpinning this research is the use of equity instruments to mitigate risk-aversion and induce risk-taking, with existing research on non-financial firms showing a positive relationship between equity incentives and investment decisions (Rajgopal and Shevlin 2002; Coles et al. 2006).

Research on banks in particular has found mixed evidence: that executives with greater incentives have taken on greater risks, which were more likely to lead to bail outs (Gande and Kalpathy 2012); or that banks which paid high levels of option compensation and large cash bonuses did not perform worse during the crisis (Fahlenbrach and Stulz 2011). Dong (2011), in a related study to ours, finds that bank CEOs were not paid significantly more than their non-financial counterparts.

This recent research on compensation in banks has largely focused on CEO and executive compensation, rather than non-executive directors, reflecting the same pattern in overall executive compensation research. Evidence on non-executive directors' compensation has found that compensation of US non-executives is largely determined by firm characteristics such as size (Hempel and Fay 1994; Boyd 1996; Cordeiro et al. 2000), profitability, and growth opportunities (Linn and Park 2005), with more recent research suggesting that they may also be rewarded for their human and social capital, such as networks of connectedness, experience, and education (Horton et al. 2012).

Regulatory guidance from the Cadbury (1992) and the Greenbury (1995) Reports effectively suggests that fees to non-executives should reflect the time they spend performing their duties. This principle has been largely maintained through subsequent regulations, with regulations suggesting that "levels of remuneration for non-executive directors should reflect the time commitment and responsibilities of the role" (Combined Code 2006, §B1.3; UK Corporate Governance Code 2010, §D1.3). Under reforms proposed by the Walker Review (2009), non-executives in banks may be required to spend more time than comparable firms, up to 30–36 days per year (Walker Review 2009, Recommendation 3), compared to the typical 8–12 meeting days per year for non-executives in non-financial firms (Adams and Ferreira 2008). This suggests that in the future, we may see that non-executives in banks are paid more than they have been in the past, and compared to non-financial firms.

3 Characteristics of Boards of Directors in Banks

We first provide an overview of CEOs, other executives, and non-executive directors in banks, a matched sample of control firms, and FTSE 100 firms, before examining how they are compensated in Sect. 4.

3.1 Sample Selection and Firm Characteristics

Our sample consists of executive and non-executive directors of firms listed in the FTSE All-Share Index at the end of each year from 2000–2008, with the 8300 Industry Classification Benchmark (ICB) supersector code. We then match each bank to the nearest firm in the FTSE Index above and below in terms of gross market capitalization at the end of each calendar year, excluding other banks, investment trusts, and insurance companies. We choose to match by market capitalization instead of total assets and profitability since assets and revenues of banks are fundamentally different to those of non-financial firms. We obtain data on market capitalization, industry sector, and index membership directly from FTSE for each year. We obtain firm-level data from Datastream, and director-level data from BoardEx, a corporate governance intelligence provider.

Our sample consists of 83 bank firm-years and 166 matched-sample firm-years. Since the majority of our banks are members of the FTSE 100, we also create a larger sample using all FTSE 100 companies from 2000 to 2008, excluding investment trusts. When comparing banks to other FTSE 100 firms, we delete observations from bank firm-years outside the FTSE 100 index, of which there are very few.

Table 1 provides firm-level descriptive statistics for our sample of banks (Panel A), matched-sample firms (Panel B), and the FTSE 100 sample (Panel C). Our banks and matched-sample firms are not significantly different in size (p-value = 0.92), but the banks are larger than the average FTSE 100 firm (p-value = 0.00). Banks have significantly higher *Leverage*, with a mean leverage of 0.95, compared to 0.60 in matched firms (p-value = 0.02) and 0.64 in other FTSE 100 firms (p-value = 0.00). Banks have a lower ROA (p-value = 0.00 for both matched-sample and FTSE 100 firms), due to their larger asset base (untabulated), and consistent with their higher leverage. The median returns for banks (0.10) are similar to those of the matched sample (0.10) and FTSE 100 (0.08). The mean return for banks is much lower, driven by large negative returns in the 2000–02 and 2007–08 periods, but differences are not statistically significant. Banks also have significantly larger boards, with an average of 14.8 members compared to 12.3 members in matched firms and 11.3 in other FTSE 100 firms (p-value = 0.00 for both comparisons).

3.2 CEO, Executive, and Non-executive Director Characteristics

For each firm-year in our sample we then examine individual members of the board in three categories: the CEO, executives other than the CEO, and non-executives, comparing those in banks to those in matched-sample and FTSE 100 firms. These are shown in Table 2, Panel A. The CEOs of banks are significantly younger (50.2 years compared to 52.8 years for matched-sample and FTSE 100 CEOs), and have not spent as long in the sector as other CEOs (11.3 years compared to 14.1 years for the matched sample or 13.1 years for FTSE 100 CEOs). They are also significantly

Table 1 Firm characteristics, partitioned between sample firms, matched-sample, and FTSE100 firms

Panel A: banks									
Variable	N	Mean	Min	Q1	Med	Q3	Max	Std. Dev	
Market cap (£m)	83	27,048	404	4,128	20,772	39,959	107,709	27,730	
Leverage	83	0.95	0.92	0.94	0.96	0.96	0.98	0.02	
ROA	83	0.01	−0.01	0.01	0.01	0.01	0.02	0.00	
Return	83	0.02	−0.93	−0.12	0.10	0.21	0.57	0.28	
Board size	83	14.8	8	12	15	17	23	3.5	
Panel B: matched sample									
Variable	N	Mean	Min	Q1	Med	Q3	Max	Std. Dev	*p-value*
Market capitalization (£m)	166	27,467	402	4,062	16,113	36,608	131,681	32,184	0.92
Leverage	166	0.60	0.10	0.47	0.59	0.70	1.33	0.22	0.02
ROA	166	0.11	−0.07	0.06	0.10	0.15	0.57	0.08	0.00
Return	166	0.09	−0.82	−0.11	0.10	0.26	0.90	0.31	0.10
Board size	166	12.3	6	10	12	14	22	2.8	0.00
Panel C: FTSE 100 firms (excluding banks)									
Variable	N	Mean	Min	Q1	Med	Q3	Max	Std. Dev	*p-value*
Market capitalization (£m)	679	11,881	1,017	3,176	5,298	10,784	131,681	19,378	0.00
Leverage	679	0.64	0.10	0.50	0.63	0.76	1.33	0.22	0.00
ROA	679	0.10	−0.08	0.05	0.09	0.13	0.57	0.08	0.00
Return	679	0.09	−0.83	−0.11	0.08	0.26	2.07	0.32	0.23
Board size	679	11.3	5	9	11	13	22	2.5	0.00

Notes

This table presents descriptive statistics of sample banks, matched-sample firms, and FTSE 100 firms excluding banks. In our regression model we use the logarithmic transformation of market capitalization (£'000). The p–value denotes the significance level of t-tests for differences in means between banks and matched-sample firms (*Panel B*) and banks and FTSE 100 firms (*Panel C*). *Leverage* is calculated as Total Liabilities/Total Assets

Table 2 CEO, executive, and non–executive director characteristics, partitioned between sample firms, matched-sample, and FTSE100 firms

Panel A: CEOs

	Banks			Matched sample			FTSE 100 firms		
Variable	N	Mean	Med	N	Mean	Med	N	Mean	Med
Age	83	50.2	51.0	166	52.8	53.0	679	52.8	53.0
Qualifications	83	2.4	2.0	166	2.5	2.0	679	2.1	2.0
Years in sector	83	11.3	8.2	166	14.1	10.15	679	13.1	10.0
Female	83	0.00	N = 0	166	0.01	N = 1	679	0.02	N = 13
British	83	0.83	N = 69	166	0.61	N = 102	679	0.70	N = 475
NewDir	83	0.04	N = 3	166	0.05	N = 9	679	0.06	N = 43

Panel B: executives (excluding CEOs)

	Banks			Matched sample			FTSE 100 firms		
Variable	N	Mean	Med	N	Mean	Med	N	Mean	Med
Age	351	51.0	52	523	51.3	51.0	2,172	50.4	50.0
Qualifications	351	2.2	2	523	1.9	2.0	2,172	1.7	2.0
Years in sector	351	11.5	7.9	523	12.6	8.1	2,172	11.7	8.3
Female	351	0.06	N = 20	523	0.02	N = 8	2,172	0.04	N = 78
British	351	0.85	N = 298	523	0.72	N = 379	2,172	0.79	N = 1,714
NewDir	351	0.10	N = 35	523	0.07	N = 35	2,172	0.08	N = 169

Panel C: non–executives

	Banks			Matched sample			FTSE 100 firms		
Variable	N	Mean	Med	N	Mean	Med	N	Mean	Med
Age	776	58.5	59.0	1,356	59.2	60.0	4,809	59.0	60.0
Qualifications	776	2.1	2.0	1,356	2.3	2.0	4,809	2.2	2.0
Years in sector	776	6.1	4.3	1,356	5.3	3.7	4,809	5.7	3.8
Female	776	0.14	N = 112	1,356	0.13	N = 177	4,809	0.13	N = 605
British	776	0.81	N = 630	1,356	0.53	N = 723	4,809	0.64	N = 3,081
NewDir	776	0.15	N = 119	1,356	0.15	N = 198	4,809	0.15	N = 761

Notes

This table presents summary descriptive statistics for all CEOs (*Panel A*), other executives (*Panel B*), and non-executive directors (*Panel C*) in our banks, matched-sample, and FTSE 100 sample firms. *Female*, *British*, and *NewDir* are indicator variables with the mean representing the proportion of directors who are female, British, and new directors, along with the number of directors with this characteristic. New directors are defined as directors having a tenure in the firm of less than 1 year

more likely to be British than in control firms, and hold more formal qualifications, including a bachelor's degree, MBA, or PhD, or professional qualifications such as a CFA, accounting or actuarial designations. There are too few female CEOs for differences to be statistically significant.

Table 2, Panel B, examines the other executive members of the board. Interestingly, there is a statistically higher proportion of female and British executives on boards of banks than on both matched-sample and FTSE 100 boards. The greater proportion of female directors is in contrast to Mateos et al. (2009), though it is consistent with their finding that larger boards are more likely to have a female director than smaller boards, since banks have larger boards. Other executives in banks are also more likely to hold formal qualifications than their matched-sample and FTSE 100 counterparts. However, CEOs and other executives in banks have

less industry experience than CEOs and other executives of matched-sample or FTSE 100 firms.

Table 2, Panel C, compares non-executive directors of banks to matched-sample and FTSE 100 non-executives. The non-executives are of a similar age, though bank non-executives have spent slightly longer in the financial sector (6.1 years) than their counterparts in other firms (5.3–5.7 years). However, we note that given the age of the average non-executive director (58.5 years), this suggests that they have spent most of their career outside the financial sector, and have comparatively much less experience in the financial sector than executive members of the board (11.5 years). Furthermore, if this experience was as a non-executive, this would reflect only a part-time involvement in financial firm affairs. This raises the question of whether they had the pertinent industry experience to fully understand the risks associated with firm strategies, or to question decisions made by executives. Therefore, the concerns of the Walker Review (2009) about experience in the financial sector may well be relevant. We note also that there are proportionately more British non-executives than in other firms. This may suggests a closer network of local directors than in other firms, but this would need to be examined more closely with a network analysis of directors.

3.3 Descriptive Compensation Statistics of Bank Directors

Table 3, Panels A and B, show the mean and median compensation by element for CEOs and other executives in banks, matched-sample, and FTSE 100 firms. CEOs in banks have a mean *Total compensation* of £3.0 m, which is significantly less than their counterparts in the matched sample, who have an average *Total compensation* of £3.9 m. The mean compensation is similar to those in all FTSE 100 firms, even though most of the banks are near the top of the FTSE 100 index by market capitalization. Compared to matched-sample CEOs, bank CEOs also have a lower mean *Salary* (£668,000 and £732,000 for bank and matched-sample CEOs, respectively), but a higher *Bonus* (£626,000 compared to £597,000). The likely source of the difference in *Total compensation* is lower equity-based compensation, namely *Option grants* and *Long-term incentives*, which together with *Short-term incentives* comprise 46% of total compensation compared to 55% in matched-sample firms. *Short-term incentives* are not tabulated due to their relatively low occurrence and low value.

The descriptive statistics also show that there is little use among banks of stock options (mean *Option grants* to CEOs of £3,000), contrary to matched-sample and FTSE 100 firms (£467,000 and £159,000 respectively). This pattern is also evident in the compensation of executives other than the CEO. Our data also show that, in general, stock options are not granted as frequently as may be believed, since the median option grant is zero across all executives, in both banks and other firms. We observe that in many firms, stock options are not granted every year and not to all executives, while restricted share grants with performance conditions have become increasingly popular.

Table 3 CEO, executive, and non–executive director compensation, partitioned between sample firms, matched-sample, and FTSE100 firms

Panel A: CEOs									
	Banks			Matched sample			FTSE 100 firms		
Variable	N	Mean	Med	N	Mean	Med	N	Mean	Med
Salary	83	668	640	166	732	766.5	679	657	660
Bonus	83	626	534	166	597	503	679	486	387
Option grants	83	3	0	166	467	0	679	159	0
Long–term incentives	83	1,656	1,276	166	2,596	1,521.5	679	2,006	1,177
Total compensation	83	2,981	2,621	166	3,857	3,127.5	679	3,020	2,417
%Equity pay	83	0.46	0.48	166	0.55	0.57	678	0.47	0.50
Panel B: executives (excluding CEOs)									
	Banks			Matched sample			FTSE 100 firms		
Variable	N	Mean	Med	N	Mean	Med	N	Mean	Med
Salary	351	435	400	523	434	423	2,172	365	355
Bonus	351	390	270	523	311	240	2,172	240	166
Option grants	351	15	0	523	262	0	2,172	79	0
Long–term incentives	351	1,020	638	523	995	660	2,172	764	437
Total compensation	351	1,894	1,555	523	2,028	1,591	2,172	1,460	1106
%Equity pay	351	0.44	0.46	519	0.49	0.51	2,153	0.42	0.45
Panel C: non–executives									
	Banks			Matched sample			FTSE 100 firms		
Variable	N	Mean	Med	N	Mean	Med	N	Mean	Med
Total compensation	776	120	61	1,356	101	56	4,809	85	50

Notes

This table presents summary descriptive statistics of compensation for CEOs (*Panel A*), other executives (*Panel B*), and non-executive directors (Panel C). All compensation figures are in thousands of pounds (£000), while in our regression model we use the log of compensation. *%Equity pay* is calculated as the proportion of *Total compensation* composed of *Short-term incentive*s, *Option grants*, and *Long-term incentive*s. There is a small reduction when calculating *%Equity pay* due to directors whose total compensation is zero. *Short-term incentives* are not separately tabulated or analyzed due to their small and infrequent nature

Table 3, Panel C shows the mean and median. aggregate compensation of non-executive directors in banks, matched-sample firms, and FTSE 100 firms. It shows that, on average, non-executive directors are more highly compensated in banks (£120,000 compared to £101,000 in matched-sample firms and £85,000 for FTSE 100 firms). While the means are skewed to the upper tail, the medians are also of the same direction.

4 Regression Analysis of CEO, Executive, and Non-executive Compensation

Building on the descriptive analysis in Sect. 3, we next model the determinants of compensation for CEOs, other executives, and non-executives, and examine whether and how bank directors are compensated differently from those in other firms, after controlling for firm characteristics.

4.1 Research Design

Our regression analysis models the determinants of various elements of compensation for our sample of bank directors pooled together with directors from the matched sample, and for FTSE 100-indexed banks, pooled with the rest of the FTSE 100 index, excluding investment trusts.

Our model takes the following general specification:

$$\begin{aligned} Log(PAY)_{jit} = {} & \alpha + \beta_1 Bank + \beta_2 LogMarketCap + \beta_3 BoardSize + \beta_4 Leverage \\ & + \beta_5 ROA + \beta_6 Return + \beta_7 Age + \beta_8 British + \beta_9 NewDir \\ & + \beta_9 Years\,in\,Sector + \beta_9 Qualifications + YearDVs + \varepsilon_{jit} \end{aligned} \quad (1)$$

where PAY reflects different components of compensation, and is either *LogTotalComp*, *LogSalary*, *LogBonus*, or *LogEquity* compensation. *Bank* is an indicator variable for a director in a bank, *LogMarketCap* is the log of the gross market capitalization of the firm on the London Stock Exchange, and *Board Size* is the total size of the board including both executive and non-executive directors, *Leverage* is calculated as Total Liabilities/Total Assets, with Total Liabilities including both current and non-current liabilities, due to the large proportion of bank liabilities which are classified as current. *ROA* is calculated as operating income divided by total assets, and *Return* is the raw stock return over the past year. *Age* is the age of the director, *British* is an indicator variable equal to one if the director is British, and *NewDir* is an indicator variable equal to one if the director has been a member of the board for less than a year.[4] *Years in Sector* reflects the number of years of experience of a director in the sector, and *Qualifications* the number of post-secondary educational and professional qualifications held by the individual, both collected by BoardEx.

We run our tests separately for CEOs, other executives, and non-executives. For each category, we run our regression model twice: once with our bank directors and matched-sample directors, and once with bank directors and FTSE 100 directors, deleting any bank observations from outside the FTSE 100. In tests on other executives, we include an additional indicator variable, *CFO*, to allow for the possibility that the CFO is more highly paid than other executives. Similarly, in our sample of non-executives, we include the indicator *Chairman* to allow for higher compensation of the Chairman of the board, who is likely to earn significantly more (Higgs 2003; Horton et al. 2012). When examining CEOs, we report results that are clustered by individual. When we examine other executives and non-executives, we report results that are clustered by firm.

[4] We choose to include new directors in the sample with an indicator variable indicating that they are new, instead of excluding them from the sample, due to the number of observations that would be lost, though deleting these observations does not materially affect our results.

4.2 Results

4.2.1 CEOs

Table 4 presents the results of the regression model on the sample of CEOs. It shows that compared to CEOs from matched firms, bank CEOs receive a significantly lower total compensation package (*LogTotalComp*), and also receive a significantly lower base salary (*LogSalary*). The coefficients to *Bank* for other elements of compensation are not significant.

We find that the key determinants of compensation for CEOs in our sample are size (*LogMarketCap*), with some evidence that older CEOs are paid less (or younger CEOs paid more), as the coefficient to *Age* is negative, like new directors (*NewDir*), who have only had a partial year of compensation. Bonus appears to have different characteristics to the other elements of compensation, with *LogBonus* not significantly different between bank and control firm CEOs, and positively related to firm *Leverage* and to *Return*, providing some link between pay and performance in the short run. The positive coefficient to *Leverage* may be capturing some of the higher bonus in banks, as banks are more highly levered than control firms. Interestingly, *LogBonus* is positively related to the number of qualifications held. Though one might expect that *Qualifications* may affect the total compensation package instead of bonus, it is possible that a more highly qualified individual may be better at negotiating terms of their bonus, leading the firm to better performance, or extracting bonuses at times when performance may be poor. The R^2 of our model is relatively high, explaining 55% of the variation in total compensation.

Our findings of lower total compensation and salary also hold when we examine only FTSE 100 bank CEOs against other FTSE 100 CEOs. *Bank* is again negative and significant when examining *LogTotalComp* and *LogSalary*. We also find that the amount of equity pay (*LogEquity*) is significantly less for bank CEOs than for other FTSE 100 firms. Again, the coefficient to *Bank* using *LogBonus* as a dependent variable is positive but not significant, showing that bank CEOs have a bonus that behaves differently to other elements of their compensation.

4.2.2 Other Executives

Our findings on CEOs, above, suggest that CEOs receive an overall lower total compensation package (and lower salary and equity) compared to their peers. In Table 5, we examine the compensation of the rest of the executives on the board. We find that the other executives are not compensated significantly less than either their matched-sample peers or other FTSE 100 executives, unlike the CEOs of their firms. We find that CFOs are more highly compensated than the rest of the board, but that as the board increases in size, executives earn less. This may be the case if responsibility is divided among more individuals, or due to greater monitoring of

Table 4 Determinants of CEO compensation in banks, matched-sample, and FTSE 100 firms

	Bank and matched-sample CEOs					FTSE 100 CEOs				
Independent variables	LogTotalComp	LogSalary	LogBonus	LogEquity	%Equity pay	LogTotalComp	LogSalary	LogBonus	LogEquity	%Equity pay
Constant	2.50***	3.28***	−2.72	−1.84	−0.07	1.23*	3.09***	−2.07	−6.96***	−0.67***
	(3.29)	(6.11)	(−0.98)	(−0.61)	(−0.23)	(1.79)	(7.76)	(−0.91)	(−3.09)	(−3.04)
Bank	−0.34**	−0.17***	0.02	−0.53	−0.05	−0.28**	−0.19***	0.09	−0.84**	−0.07
	(−2.16)	(−2.70)	(0.04)	(−1.03)	(−0.91)	(−2.15)	(−3.47)	(0.23)	(−2.07)	(−1.60)
LogMarketCap	0.40***	0.19***	0.27	0.70***	0.07***	0.41***	0.18***	0.36**	0.86***	0.08***
	(10.13)	(7.56)	(1.47)	(5.04)	(4.57)	(9.76)	(7.10)	(2.36)	(8.18)	(7.58)
Board size	−0.03	0.00	−0.01	−0.09	−0.01**	−0.01	0.01	0.03	−0.06	−0.01**
	(−1.64)	(0.13)	(−0.19)	(−1.34)	(−2.08)	(−0.73)	(0.50)	(0.73)	(−1.40)	(−2.55)
Leverage	0.14	0.10	1.71*	−0.24	−0.08	0.06	0.13	0.25	0.70	0.02
	(0.62)	(0.85)	(1.92)	(−0.24)	(−0.80)	(0.32)	(1.21)	(0.43)	(1.20)	(0.35)
ROA	−0.88	−0.28	2.75	−2.71	−0.14	−0.76	−0.31	0.70	−3.86*	−0.30
	(−1.26)	(−1.00)	(0.76)	(−0.94)	(−0.44)	(−1.47)	(−1.31)	(0.32)	(−1.92)	(−1.63)
Return	0.04	−0.08	1.45***	−0.38	−0.03	0.12	−0.10**	0.68**	0.45	0.06*
	(0.30)	(−1.08)	(2.65)	(−0.73)	(−0.51)	(1.24)	(−2.00)	(2.08)	(1.13)	(1.66)
Age	−0.02**	0.00	0.03	−0.04	−0.01*	−0.00	0.00	−0.00	−0.01	−0.00
	(−2.14)	(0.27)	(0.89)	(−1.20)	(−1.67)	(−0.58)	(0.90)	(−0.07)	(−0.61)	(−1.13)
British	−0.15	0.00	0.40	0.33	0.00	−0.07	−0.05	0.55*	0.09	0.00
	(−1.62)	(0.05)	(1.09)	(1.05)	(0.13)	(−0.85)	(−1.10)	(1.75)	(0.38)	(0.14)
NewDir	−0.56*	−0.83**	−0.57	−0.79	0.04	−0.24	−0.55***	−0.08	−0.41	0.04
	(−1.83)	(−2.47)	(−1.00)	(−0.94)	(0.49)	(−1.15)	(−3.56)	(−0.24)	(−0.91)	(0.92)
Years in sector	0.01	0.00	0.01	0.02**	0.00	0.00	0.00	−0.02*	0.01	0.00
	(1.45)	(0.84)	(0.44)	(2.01)	(1.22)	(0.15)	(0.65)	(−1.67)	(0.68)	(1.17)
Qualifications	0.01	−0.01	0.14**	0.02	−0.00	0.03	−0.00	0.07	0.12	0.01
	(0.70)	(−0.44)	(2.56)	(0.32)	(−0.16)	(1.15)	(−0.06)	(0.92)	(1.52)	(1.30)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	249	249	249	249	249	753	753	753	753	752
Adjusted R^2	0.55	0.51	0.16	0.19	0.13	0.34	0.33	0.09	0.15	0.12

Notes

This table examines determinants of CEO compensation in banks and matched-sample firms, and in FTSE 100 firms, with the variable *Bank* identifying banks. Dependent variables are logged values of those in Table 3, except *Log Equity* (the log of *Option Grants, Short-* and *Long-Term Incentives*) and *%Equity Pay*, the proportion of total compensation that is equity-related. T-statistics and significance are reported after clustering standard errors by director. *** indicates $p < .01$, ** indicates $p < .05$, and * indicates $p < .10$

compensation, if additional board members are non-executives, subject to our discussion above about optimal board sizes. Again, bonuses show different characteristics to other elements of compensation, with a positive coefficient to *Leverage*, consistent with highly levered banks also awarding higher bonuses, even though *Bank* is not significant. The coefficient to *Age* is negative, suggesting that higher bonuses are earned by younger directors. Similarly, younger executives receive higher amounts of equity compensation, while older executives receive higher salary. As *LogTotalComp* does not appear to be significantly age-related, this would be consistent with a different balance of the compensation package for younger and older executives.

We note that British executives earn less than foreign executives in both samples. Since our banks sample consists of proportionately more British executives than matched-sample firms, we consider the possibility that this may affect our results. However, removing the variable *British* does not affect the significance of our other variables, and it is not nationality driving our findings on *Bank*.

4.2.3 Non-executives

Table 6 presents the results of our analysis on non-executive director compensation. Our findings show that non-executives in banks earn significantly more than their counterparts in both the matched sample and FTSE 100 firms. We observe a significantly higher compensation for the *Chairman* of the board, and we provide evidence that non-executive compensation is largely size-driven, consistent with prior literature. We also find that older directors are paid more, contrary to CEOs and executives. If we correlate *Age* with experience, this suggests that experience is valued.

Our findings on non-executive director compensation are consistent with recent regulatory guidance on time commitment. Though the recommendation in the Walker Review (2009) that non-executives in banks should be prepared to spend up to 30–36 days per year comes after the end of our sample time frame, it is possible that prior to 2009, non-executives in banks were already spending more time than those in other firms, and their compensation reflected this difference.

4.3 Alternative Specification and Limitations

We note above that *Leverage* may capture some of the cross-sectional differences between our sample of banks, which are highly leveraged, and matched-sample or FTSE 100 firms. We repeat our analyses without the *Leverage* variable, and our coefficient of interest, *Bank*, becomes stronger. However, for consistency with earlier research on compensation, which considers agency reasons that leverage may affect compensation, we keep *Leverage* in our primary analyses.

Table 5 Determinants of other executives' compensation in banks, matched-sample, and FTSE 100 firms

	Bank and matched-sample executives					FTSE 100 executives				
Independent variables	LogTotal Comp	LogSalary	LogBonus	LogEquity	%Equity pay	LogTotal Comp	LogSalary	LogBonus	LogEquity	%Equity pay
Constant	0.75	1.35***	0.02	0.36	0.09	0.33	1.22***	1.47	−4.04**	−0.42*
	(1.11)	(2.83)	(0.01)	(0.19)	(0.47)	(0.56)	(2.97)	(0.63)	(−2.25)	(−1.96)
Bank	−0.03	−0.01	0.05	0.38	−0.00	0.08	0.02	0.38	−0.07	−0.03
	(−0.12)	(−0.08)	(0.12)	(0.74)	(−0.05)	(0.60)	(0.19)	(1.22)	(−0.21)	(−0.68)
CFO	0.20***	0.17***	0.15	0.49***	0.04**	0.33***	0.24***	0.27***	0.57***	0.05***
	(2.92)	(3.09)	(1.16)	(2.87)	(2.21)	(5.20)	(4.97)	(3.06)	(4.86)	(4.22)
LogMarketCap	0.40***	0.24***	0.25	0.48***	0.05***	0.41***	0.23***	0.20	0.68***	0.07***
	(8.34)	(7.73)	(1.35)	(4.77)	(3.38)	(10.05)	(8.99)	(1.05)	(6.36)	(4.62)
Board size	−0.04*	−0.03*	0.00	−0.04	−0.01	−0.03	−0.02	0.04	−0.03	−0.01
	(−1.71)	(−1.68)	(0.06)	(−0.86)	(−1.34)	(−1.59)	(−1.33)	(0.78)	(−0.70)	(−1.33)
Leverage	−0.04	0.14	2.51***	−1.52*	−0.21**	−0.11	0.02	0.49	0.03	−0.03
	(−0.08)	(0.53)	(3.03)	(−1.74)	(−2.41)	(−0.53)	(0.10)	(0.89)	(0.07)	(−0.46)
ROA	−0.97	−0.42	6.10	−2.13	−0.39*	−1.14**	−0.72*	1.20	−2.96**	−0.28*
	(−1.13)	(−0.78)	(1.41)	(−1.30)	(−1.67)	(−2.41)	(−1.87)	(0.71)	(−2.11)	(−1.84)
Return	0.06	−0.05	0.97**	−0.07	−0.00	0.09	−0.07	0.47*	0.17	0.04
	(0.33)	(−0.45)	(2.54)	(−0.16)	(−0.03)	(0.62)	(−0.83)	(1.87)	(0.46)	(1.16)
Age	0.00	0.01***	−0.03*	−0.03**	−0.00***	0.01	0.02***	−0.02*	−0.03**	−0.00***
	(0.42)	(2.68)	(−1.91)	(−2.38)	(−2.81)	(1.27)	(4.50)	(−1.88)	(−2.31)	(−3.56)
British	−0.27**	−0.10	−0.19	−0.32	−0.01	−0.32***	−0.12**	−0.55***	−0.18	−0.01
	(−2.48)	(−1.61)	(−0.69)	(−1.35)	(−0.48)	(−4.24)	(−2.39)	(−3.49)	(−0.97)	(−0.37)
NewDir	−0.26**	−0.53***	−0.71***	−0.87*	0.00	−0.37***	−0.58***	−0.62***	−1.00***	−0.01
	(−2.13)	(−4.07)	(−2.72)	(−1.97)	(0.07)	(−2.84)	(−6.10)	(−3.57)	(−3.78)	(−0.45)
Years in sector	0.01**	0.01**	0.01	0.02***	0.00	0.01*	0.00***	−0.01	0.01	0.00
	(2.64)	(2.48)	(0.57)	(2.91)	(1.61)	(1.78)	(2.64)	(−1.01)	(0.91)	(0.82)

(continued)

Table 5 (continued)

	Bank and matched-sample executives					FTSE 100 executives				
Independent variables	LogTotal Comp	LogSalary	LogBonus	LogEquity	%Equity pay	LogTotal Comp	LogSalary	LogBonus	LogEquity	%Equity pay
Qualifications	0.04	0.03	0.04	−0.03	−0.00	0.00	0.01	0.01	−0.08	−0.01
	(1.22)	(1.58)	(0.55)	(−0.34)	(−0.32)	(0.07)	(0.40)	(0.12)	(−1.05)	(−0.76)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	874	874	874	874	870	2,502	2,502	2,502	2,502	2,481
Adjusted R^2	0.33	0.27	0.17	0.20	0.17	0.27	0.23	0.11	0.16	0.12

Notes

This table examines determinants of compensation for executives other than the CEO in banks and matched-sample firms, and in FTSE 100 firms, with the variable *Bank* identifying banks, and an additional variable, *CFO*, an indicator for the Chief Financial Officer or Finance Director. Dependent variables are logged values of those in Table 3, except *LogEquity* (the log of *Option grants, Short-* and *Long-term incentives*) and *%Equity pay*, the proportion of total compensation that is equity-related. T–statistics and significance are reported after clustering standard errors by firm. ***indicates $p < .01$, **indicates $p < .05$, and * indicates $p < .10$

Table 6 Determinants of non-executive compensation in banks, matched-sample, and FTSE 100 firms

Independent variables	Bank and matched- sample non-executive directors LogTotalComp	FTSE 100 non-executive directors LogTotalComp
Constant	−0.21	0.37
	(−0.35)	(0.83)
Bank	0.35*	0.29**
	(1.67)	(2.15)
Chairman	1.68***	1.59***
	(16.85)	(27.77)
LogMarketCap	0.20***	0.17***
	(5.96)	(5.48)
Board size	−0.02	−0.02
	(−0.89)	(−1.18)
Leverage	−0.29	−0.03
	(−1.19)	(−0.20)
ROA	0.08	−0.38
	(0.12)	(−1.25)
Return	0.04	−0.06
	(0.33)	(−0.86)
Age	0.01**	0.01***
	(2.34)	(3.40)
British	0.08	0.11**
	(1.66)	(2.44)
NewDir	−0.76***	−0.79***
	(−7.35)	(−10.34)
Years in sector	0.00	−0.01
	(0.57)	(−0.87)
Qualifications	0.02	0.03
	(1.07)	(1.63)
Year effects	Yes	Yes
Observations	2,132	5,527
Adjusted R^2	0.48	0.46

Notes

This table examines determinants of compensation for non-executive directors in banks and matched-sample firms, and in FTSE 100 firms, with the variable *Bank* identifying banks, and an additional variable, *Chairman*, an indicator for the individual who is Chairman of the board. T–statistics and significance are reported after clustering standard errors by firm. ***indicates $p < .01$, **indicates $p < .05$, and * indicates $p < .10$

We also consider the effect of inside ownership on compensation, as prior research has shown that ownership may affect the structure of the compensation package (Core et al. 1999). However, when we include measures of director ownership in the firm, it has no significant effect on our primary results of interest.

Our study has focused on the compensation of board members, of which the highest paid are CEOs and executives. One limitation of our analysis is that in the UK, firms are not required to disclose compensation of employees below board level, even if they are more highly paid than the CEO or other executives. Current disclosure requirements, in place since 2002, are largely based on a traditional model in which the CEO and other executives are the most highly–paid employees in the firm. However, there is some evidence that this is not the case in the financial sector, with Kaplan and Rauh (2010), resorting to other methods of estimating the level of pay of top earners. Anecdotal evidence also routinely appears of below-board level employees who are rewarded with significant bonuses or equity payouts. Furthermore, the relatively onerous disclosure requirements for board members and accompanying public visibility have been cited as one of the reasons why potential executive board members may be reluctant to join the board at all (BBC, 2009). Therefore, while examining the compensation of executives may provide a view of top management pay, it may not fully capture the incentives of the highest paid employees, who are likely to also play an important role in the firm.

5 Discussion and Conclusion

Our chapter contributes to research on boards and directors of banks, and captures more detailed information about individuals than commonly used measures in corporate governance research. We contribute to research on compensation of executives and non-executives in banks by providing descriptive evidence and examining determinants of compensation. We show that, contrary to popular perception, CEOs and other executives of banks are not compensated more than those in matched-sample or other FTSE 100 firms, in terms of salary and total compensation. Bonuses, however, are not significantly less and may be higher. Our findings are consistent with those of Adams (2011), and suggest that CEOs are incentivized for short-term performance, rather than long-term performance. In particular, the use of stock options is minimal, and the use of long-term equity incentives is significantly less in banks than in control firms. This may be of concern for investors, who are likely to be more interested in long-run performance.

Our finding that non-executives, who constitute a majority of the board, are more highly paid than those in control firms may be due to a higher time commitment, more complex task in understanding banking activities, or possibly higher personal risks, such as reputational risks. However, we find that non-executives in banks have significantly less experience in the industry than executives. While this is also the case in control firms, due to the critical role of banks, the nature of the risks taken and underlying products, this disparity is particularly important. This concern has also drawn regulatory attention, with the Walker Review (2009) recommending that banks seek to appoint non-executives with significant financial experience and expertise, who may be better able to understand the risks inherent in the business models of the firm, in order to strengthen their governance and oversight. However,

the boards should consider whether they are of an effective size, and sufficiently diverse, to more effectively question executive decision-making.

Our chapter contributes to knowledge about boards of banks and how executive and non-executives are compensated. Future studies on non-executives in banks might examine complexity of tasks, time commitment, and expertise of non-executives compared to those in other firms, and whether this has changed over time, particularly following new governance recommendations. Our results suggest that while banks may have invested more heavily in oversight (larger boards with more highly paid non-executives), these have produced mixed results during the financial crisis period.

References

Adams, R. (2011). Governance and the financial crisis. Working paper, University of New South Wales. Available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1945567.

Adams, R. B., & Ferreira, D. (2008). Do directors perform for pay? *Journal of Accounting and Economics, 46*(1), 154–171.

Adams, R., & Mehran, H. (2003). Is corporate governance different for bank holding companies? *Economic Policy Review, 9*(1), 123–142.

BBC News (2009). "Name and shame high paid – Cable." March 9, 2009. Available online at http://news.bbc.co.uk/1/hi/uk_politics/7929664.stm.

Bebchuk, L. A., & Spamann, H. (2010). Regulating bankers' pay. *Georgetown Law Journal, 98*(2), 247–287.

Boyd, B. K. (1996). Determinants of US outside director compensation. *Corporate Governance: An International Review, 4*(4), 202–211.

Bryan, S., Hwang, L.–S., Klein, A., & Lilien, S. (2000). Compensation of outside directors: an empirical analysis of economic determinants. Working paper, Baruch College.

Cadbury Committee. (1992). *The financial aspects of corporate governance*. London: Gee Publishing.

Coles, J. L., Daniel, N. D., & Naveen, L. (2006). Managerial incentives and risk-taking. *Journal of Financial Economics, 79*(2), 431–468.

Combined Code. (2000). *The combined code: Principles of good governance and code of best practice*. London: Gee Publishing.

Combined Code. (2003). *The combined code on corporate governance*. London: Financial Reporting Council.

Combined Code. (2006). *The combined code on corporate governance*. London: Financial Reporting Council.

Cordeiro, J., Veliyath, R., & Eramus, E. J. (2000). An empirical investigation of the determinants of outside director compensation. *Corporate Governance: An International Review, 8*(3), 268–279.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics, 51*(3), 371–406.

Corporate Governance Code. (2010). *The UK corporate governance code*. London: Financial Reporting Council.

de Cabo, R. M., Gimeno, R., & Nieto, M. J. (2009). Gender diversity on European banks' board of directors: Traces of discrimination. Working paper, Universidad San Pablo CEU. Available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1362593.

Dong, G. (2011). Are bank CEOs overpaid? Evidence from structural estimation. Working paper, Rutgers University. http://papers.ssrn.com/sol3/papers.cfm?abstract_id¼1746725.

DRRR. (2002). The directors' remuneration report regulations 2002.
European Commission. (2011). *Green paper: The EU corporate governance framework*. Brussels: European Commission.
Fahlenbrach, R., & Stulz, R. M. (2011). Bank CEO incentives and the credit crisis. *Journal of Financial Economics, 99*(1), 11–26.
Farrell, K. A., Friesen, G. C., & Hersch, P. L. (2008). How do firms adjust director compensation? *Journal of Corporate Finance, 14*(2), 153–162.
Fich, E. M., & Shivdasani, A. (2005). The impact of stock-option compensation for outside directors on firm value. *Journal of Business, 78*(6), 2229–2254.
Gande, A., & Kalpathy, S. (2012). CEO Compensation and Risk-taking at Financial Firms: Evidence from U.S. Federal Loan Assistance. Available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1865870.
Greenbury, R. (1995). *Directors' remuneration: Report of a study group chaired by Sir Richard Greenbury*. London: Gee Publishing.
Hampel, R. (1998). *Committee on corporate governance final report*. London: Gee Publishing.
Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics, 7*(1–3), 85–107.
Hempel, P., & Fay, C. (1994). Outside director compensation and firm performance. *Human Resource Management, 33*(1), 111.
Higgs, D. (2003). *Review of the role and effectiveness of non–executive directors*. London: Department of Trade and Industry.
Holthausen, R. W., Larcker, D. F., & Sloan, R. G. (1995). Annual bonus schemes and the manipulation of earnings. *Journal of Accounting and Economics, 19*(1), 29–74.
Horton, J., Millo, Y., & Serafeim, G. (2012). Resources or power? Implications of social networks on compensation and firm performance. *Journal of Business Finance and Accounting 39*(3–4), 399–426.
Houston, J. F., & James, C. (1995). CEO compensation and bank risk: Is compensation in banking structured to promote risk taking? *Journal of Monetary Economics, 36*(2), 405–432.
Frydman, D, & Jenter, C. (2010). *CEO compensation*. NBER Working Paper No. 16585. Available online at http://www.nber.org/papers/w16585.
Kaplan, S. N., & Rauh, J. (2010). Wall street and main street: What contributes to the rise in the highest incomes? *Review of Financial Studies, 23*(3), 1004–1050.
Linn, S. C., & Park, D. (2005). Outside director compensation policy and the investment opportunity set. *Journal of Corporate Finance, 11*(4), 680–715.
Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics, 38*(2), 163–184.
Mishra, C. S., & Nielsen, J. F. (2000). Board independence and compensation policies in large bank holding companies. *Financial Management, 29*(3), 51–70.
Murphy, K. J. (1999). Executive compensation. In O. Ashenfelter & D. Card (Eds.), *Handbook of labor economics* (pp. 2485–2563). Amsterdam: Oxford/Elsevier.
O'Sullivan, N. (2005). Why do executives serve as non–executives? Pre–Cadbury evidence from UK non–financial companies. *Accounting and Business Research, 35*(2), 161–176.
Office for National Statistics. (2006). *Regional, sub–regional, and local gross value added*. London: Office for National Statistics.
Rajgopal, S., & Shevlin, T. (2002). Empirical evidence on the relation between stock option compensation and risk taking. *Journal of Accounting and Economics, 33*(2), 145–171.
Ryan, H. E., Jr., & Wiggins, R. A., III. (2004). Who is in whose pocket? Director compensation, board independence, and barriers to effective monitoring. *Journal of Financial Economics, 73*(3), 497–524.
Sealy, R., Vinnicombe, S., & Singh, V. (2008). The female FTSE index and report 2008: A decade of delay, Cranfield School of Management

Taillard, J., Minton, B., & Williamson, R. (2010). Do independence and financial expertise of the board matter for risk taking and performance? Working paper, Boston College. Available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1695489.

Tosi, H. L., & Gomez-Mejia, L. R. (1994). CEO compensation monitoring and firm performance. *Academy of Management Journal, 37*(4), 1002–1016.

Treasury Committee. (2010). *Too important to fail–too important to ignore*. London: HM Treasury.

Tyson, L. D. A. (2003). *The Tyson report on the recruitment and development of non–executive directors*. London: London Business School.

Walker, D. (2009). *A review of corporate governance in UK banks and other financial industry entities: Final recommendations*. London: HM Treasury.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics, 40*(2), 185–211.

Yermack, D. (2004). Remuneration, retention, and reputation incentives for outside directors. *Journal of Finance, 59*(5), 2281–2308.

Young, S. (2000). The increasing use of non–executive directors: Its impact on UK board structure and governance arrangements. *Journal of Business Finance and Accounting, 27*(9), 1311–1342.

Intended and Unintended Consequences of CEO and Top Management Team Compensation

Jason W. Ridge

Abstract Executive compensation has become a major issue in contemporary society, particularly with the lavish compensatory packages that today seem to be the standard rather than the rule. The aims of this chapter are to discuss different components of executive compensation and more importantly the impact that these components have on executive behavior and firm performance. The chapter begins by addressing both the theoretical and practical intentions of different aspects of both individual aspects of executive compensation packages and then from a more macro view, the intentions of behind inequality of the overall executive level compensation structure within the firm. Following this discussion, focus is turned to the more ominous unanticipated outcomes that have been demonstrated to be produced through different aspects of compensatory packages and structures. Generally, this chapter addresses both how individual executive compensation packages and firm level compensation structure achieve intended benefits (i.e., goal and risk alignment between shareholder and executive) while also eliciting unintended consequences (i.e., negative effects of risk taking, fraudulent reporting, earnings manipulation, inter-team conflict, decreased employee satisfaction, decreased firm performance).

1 Compensatory Intents

> The road to hell is paved with good intentions.
> – Proverb

The above proverb suggests that even the best intended actions do not always achieve the intended outcomes. This is true in many contexts, but one in which this proverb plays out somewhat consistently is the outcomes of executive

J.W. Ridge (✉)
Clemson University, Clemson, USA
e-mail: jridge@clemson.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_9,

compensatory packages. In general, the intended outcome of executive compensation packages is to align the goals of the executive and the owners of the firm because of the existence of the possibility of self-interested action on behalf of employed executives. While stockholders are legally in control of firms in which they invest, it was management that actually exercised control. This is particularly important in a capitalistic economy where firms are growing ever larger and ownership is becoming ever more dispersed. Because of the dispersed holdings among a large number of small investors, shareholders lack individual influence and are removed from effective control and decision making for the firms in which they own. This separation of ownership and control provides managers with the ability to chase their own self-interested pursuits, even when these are not beneficial to the shareholders.

From a practical and theoretical perspective, the compensation packages that are awarded executives are intended to curb the above-mentioned opportunism. Namely, to align the interests of the owners of the firm with the individuals with whom are charged the daily firm operations (i.e., executives; Jensen and Meckling 1976). The following sections begin by discussing the theoretical underpinnings of the use of individual level incentive based aspects of executive compensation (i.e., stock and stock options). Throughout this discussion the intent and empirical evidence of the effectiveness in addressing the intentions of each of these aspects are discussed. Following discussion of the separable aspects of compensation packages for each executive, a discussion of the firm compensatory structure for all members of the firm/TMT (i.e., differences in pay between and across hierarchical levels within the organization) is addressed. Again the theoretical grounding and intent of differing compensation structures is discussed.

The early sections of this chapter are important for establishing the baseline for which compensation packages are able to achieve desired intentions. However, as Merton (1936) stated, there are always 'unanticipated consequences of purposive social action'. He suggested that all intended actions have unexpected positive or negative outcomes because even with the best of intentions, social actors either make errors, focus on their immediate interest, or are simply ignorant to all possible outcomes. Based on this exceptional observation, the remaining sections of this chapter addresses both the individual and firm levels aspects of compensation and how these lead to negative unintended consequences for the firm.

1.1 Agency Theory

The most often employed theoretical grounding for understanding individual components of executive compensation is agency theory. Agency theory views the firm as a nexus of implicit and explicit contracts between owners, managers, employees, and other entities (Jensen and Meckling 1976) who contribute to the firm and in return receive compensation from it. Owners are seen as principals who contract with and depend on the actions of the executive (i.e., the agent). Because agents in the firm act on behalf of the principal in the control and action of the

organization, they have greater information about the tasks that are performed, creating an information asymmetry between the principal and agent. Within this situation, agents are assumed to be rational, self-interested actors who, since they have greater information about the internal operations of the firm, may act in opportunistic ways that conflict with the best interests of the principal. This is one type of agency cost for the organization and some of the notable examples discussed in the literature include misstatements and nondisclosures that place non-management shareholders at a detriment; use of costly perquisites (Jensen and Meckling 1976); pursuit of increased compensation, through diversification and growth ventures (Jensen 1986); and not investing in positive net present value projects, to avoid the risk of being terminated if the project failed.

In addition to opportunistic decision-making, the interest of principals and agents also diverge in regards to each actors risk propensity. Modern portfolio theory suggests that investments should be diversified in order to minimize risk for a given level of expected return to the investors. The ability of individual shareholders to diversify their portfolio and thereby minimize overall portfolio risk is relatively easy. Because of this, shareholders are expected to be risk neutral in regards to individual firm holdings. Yet, on the contrary, the majority of each firm executives' personal wealth and human capital is tied directly to the firm in which they are employed, meaning that executives are exceedingly invested in their employing organizations and are much less able to diversify their investment. Therefore, through the preclusion of the ability to diversify wealth and employment risk effectively, executives are more risk averse in regards to firm level decisions to minimize potential substantial losses (Jensen and Meckling 1976). Because of this risk aversion, scholars argue that agency costs are incurred because executives avoid risk at the expense of possible large returns, particularly since large returns are assumed to accumulate following large risk.

To attempt to alleviate the above-discussed agency costs firms are suggested to implement appropriate outcome based contracts. The argument is that outcome based contracts align the preferences of agents with those of the principal because the rewards for both principal and agent depend on the same actions. Outcome based contracts are structured using two main forms of outcome-based incentives: stock ownership and stock options. Each of these different outcome based aspects of compensation is intended to affect each of the agency problems discussed above in unique ways.

1.1.1 Intended Outcomes of Stock Ownership

The common prescription for aligning interests between executives and principals is through ownership of the firm. Through the issuance of stock to the agent in the relationship, the agent is essentially becoming a principal as well, thereby directly tying the agent and principal's interests together. An interesting perspective on this issue is offered by Devers et al. (2007) who suggest that stock ownership does not simply minimize executive self interest and opportunism, but that stock ownership

harnesses the self interest of the executive to work in favor of the principal. Specifically, they state that stock ownership "is intended to take advantage of executives' self-interest by channeling their focus away from extracting opportunistic rents and toward maximizing shareholder wealth" (p. 1025).

In support of the intended interest alignment of principals and agents, Nagar et al. (2003) argue that in order to overcome the information asymmetry inherent in principal agent relationships and to incentivize managers to disseminate information to investors, the executive's compensation should be stock based. Their findings support this and show that firms disclosures, measured by management forecast frequency and analysts' subjective ratings of disclosure practice, are positively related to the proportion of CEO compensation affected by stock price and the value of shares held by the CEO. Mehran et al. (1998) also provide support for the goal alignment of stock based compensation. In a study of corporate liquidation policy the authors found that voluntary liquidations that increased shareholder value were positively related to the percentage of shares owned by the CEO. Additionally, they found that few of the top executives of liquidating firms subsequently take comparable jobs. This suggests that even though their human capital may have been damaged by the liquidation, they proceeded with the liquidation strategy to enhance shareholder value. Finally, in the accounting literature, Lafond and Roychowdhury (2008) found that accounting conservatism (i.e., stricter standards for recognizing bad news as losses than for recognizing good news as gains) is negatively related to managerial ownership, arguing that as managerial ownership declines the potential for agency problems increase, making the need for accounting based control more imperative. These findings in the accounting and finance literatures provide evidence of how stock ownership does indeed tie agent interests to the principals, minimizing to some degree the agency costs incurred by the firm.

1.1.2 Intended Outcomes of Stock Options

The common perspective in compensation research is that stock ownership and stock options provide analogous incentives. However, according to financial options theory, stock ownership and stock options differ in regard to risk properties (Devers et al. 2007) and tie executive wealth to the firm in different ways (Sanders 2001). Ownership of stock provides for both the upside and downside adjustments to executive wealth that comes with fluctuations in the firms stock price. Additionally, the stock owned by an executive has direct monetary value that can be extracted, meaning that stock ownership is direct, accessible wealth for the executives and therefore provides both upside and downside risk.

Alternatively, stock options are un-exercisable during a period of time following grant. During this time the value that is represented by the option is not accessible to the executive. Also, since stock options are the option and not the obligation to purchase stock, executives are not obliged to exercise the option when the stock price is below the strike price (i.e., the options are out-of-the-money). From these

distinctly different aspects of stock ownership and stock options, the assertion is that executives view stock options as providing asymmetric upside risk, without the potential downside risk that is associated with stock ownership (Sanders 2001). Because of these differences, the intent of stock options is to mitigate the agency problem of divergent risk propensities between principals and agents and incentivize risk taking on behalf of executives.

In an early study of the divergent effects of stock ownership and stock options, Sanders (2001) showed that the different aspects of CEO incentive pay had "diametrically opposite" effects on firms' acquisition and divestiture propensity. Since it is difficult to be certain of the outcomes of large acquisitions (making them inherently risky), CEO stock ownership had a negative relationship with acquisition activity, while CEO stock options had a positive relationship. Similarly, CEO stock ownership was shown to have a positive relationship with divestiture activity, while stock options were negatively related.

In further support of the risk inducing intentions of stock options Williams and Rao (2006) find that executive stock options have a positive relationship with future risk taking, while a more recent study by Devers et al. (2008) also finds this relationship between stock options and risk taking, however they show that as the value of those stock options becomes increasingly large, the relationship levels off and turns negative. Taking the analysis further, Sanders and Hambrick (2007) investigated the effect of CEO stock options on risk taking by breaking risk down into three distinct elements: the size of an outlay, the variance of potential outcomes, and the likelihood of extreme loss. They find that as CEO compensation increasingly consists of stock options, the more the firm engages in high levels of investments outlays that bring about extreme corporate performance. Generally, they interpret these findings as providing evidence that stock options do indeed influence CEOs to make high-variance, risky investments, and not simply larger investments. The above-discussed findings do suggest that stock option compensation does indeed begin to achieve the intended effect of risk propensity alignment.

1.2 Tournament Theory

While the majority of compensation research focuses on CEOs (Devers et al. 2007), the structure of the firm level compensation that affects the top management team (TMT) also has implications for actions taken by major decision makers. One such compensation structure component is the compensation differences that are prevalent both between executives in the same hierarchical level and between executives across different hierarchical levels. Researchers have demonstrated that these compensation differentials between executive levels increase as individuals move up the executive ladder, with the CEO's compensation being disproportionately large in comparison to lower level executives (e.g., Rosen 1986).

Economists argue that the increasingly large gaps in pay between executives create competition for pay and promotion. The intention of which is to turn the

hierarchical ladder of organizations into an occupational tournament that elicits increased effort from contestants (i.e., agents) who otherwise might be prone to shirking and free riding. Again, to a certain degree, large pay gaps are intended to minimize the different agency problems. In particular, tournament theory (Lazear and Rosen 1981; Rosen 1986), which is based on a game-theoretic view of principal-agent relations, considers a group of agents in an occupational tournament that are rewarded on their relative performance. Rosen (1986) argues that, within the circumstance of a tournament, contestants advancing through the rounds of the tournament require continually increasing proportional prizes to create incentives for survivors to provide increased effort.

The theory specifies that the tournament creates a context in which contestants expend effort to increase the likelihood of winning a prize. Contestants pre-commit their investments early in life, knowing the prizes and the rules of the game (Lazear and Rosen 1981). Since investment is pre-committed and a given contestant does not know who his opponents will be at the time of entrance, each person is considered to play against the field (i.e., other TMT members). Correspondingly, winning the tournament and receiving the winner's prize is like being promoted, over other TMT members, to CEO of a company and earning the CEO's salary. Attaining second place in the tournament is like making it as high as chief operating officer and receiving the corresponding salary, and so forth. The salary for each winner does not reflect personal output, but is chosen because the appeal of the salary makes all contestants more productive over their careers as they compete for the next promotion.

There are three features of this theory that should be noted. First, prizes are rank ordered, meaning that the awarding of the prize is based on a player's relative performance rather than absolute performance. In other words, the margin of winning does not affect earnings; promotions are awarded based on performance relative to the next best competitor. Second, the spread between the winner and loser's prize affects effort. If the prize money is split evenly between winner and loser, there is little incentive to win. However, if the CEO earns significantly more than lower-level TMT members, lower-level TMT members will work hard to win the CEO's job. Due to the incentive of winning the prize (i.e., the CEO position), executives are expected to increase both the amount and type of effort exerted and this additional effort is expected to increase overall firm performance (Henderson and Fredrickson 2001). Finally, there is an optimal spread in salaries to balance player effort and cost. Lazear (1991) points out that large spreads in salary between firm levels may create additional effort by players to increase output, however, this also imposes costs on contestants. The above description has implications for the overall firm. Succinctly, tournament theory proposes that pay gaps prompt increased executive effort and that organizations should benefit from the combined effort of higher performers and will improve commensurately. Overall this means that pay gaps induce higher performance on behalf of executives, a benefit that is desired from a principal's perspective, which minimizes agent opportunism and shirking.

1.2.1 Different Aspects of TMT Compensation Structure

There are two distinct aspects of a firm's overall TMT compensation structure: differences in compensation between executives *within* the same hierarchical levels (i.e., horizontal pay dispersion) and differences in compensation between executives *across* hierarchical levels (i.e., vertical pay dispersion). Interestingly, however, is that while these two different aspects of TMT compensation structure have distinct differences when juxtaposed, they have been suggested to provide similar outcomes. In other words, the view of executive pay inequality seems to be explained by similar theoretical mechanisms, even though there are very specific differences in the two. Because of this, both vertical and horizontal pay dispersion are discussed together below, but the differences are worth noting and further investigation of the possible different effects of these aspects of TMT compensation structure should be considered in future work.

1.2.2 Intended Outcomes of Vertical and Horizontal Pay Dispersion

Empirical work has surfaced in the economics and strategic management literature supporting the incentive notion of pay gaps. For example, in their specification of tournament theory, Lazear and Rosen (1981) found that compensating workers on the basis of their relative position in the firm can produce the same incentive structure to risk-neutral workers as does the optimal piece rate. Similarly, Rosen (1986) took a slightly different approach and suggested that contestants who succeed in attaining high ranks in occupational tournaments rest on their laurels in attempting to climb higher, unless prizes at additional hierarchical ranks where disproportionately weighted. More recently, Melton and Zorn (2000) found that in the Senior PGA Tour, the level of prizes in tournaments influences players' performance. Evidence they interpret as support for tournament compensation structures as motivating performance of competitors. Each of the above studies provides evidence to how the intent of large pay gaps in organizations is realized at an individual level. Specifically, through the large pay dispersion both individual effort and performance are shown to increase.

In addition to the individual effects of large pay dispersion, other research investigates firm level outcomes. In a more macro firm level view, the incentive effects of compensation dispersion is suggested to elicit greater effort from each individual TMT member, which in the aggregate has a firm level positive effect. The argument is that since organizations are run from a group level, an increase in effort and performance on behalf of all group members also increases firm level performance. This suggestion has been supported in the pay dispersion literature.

Additional refinements in the literature provide some context to the association between pay gaps and firm performance. For example, pay dispersion have been shown to be related to firm performance when combined with individual incentives as well as in firms with elevated managerial powers (Lin and Lu 2009). Similarly,

Henderson and Fredrickson (2001) found that in firms with higher levels of related diversification and a larger number of vice presidents, larger pay gaps were associated with higher performance. All of the above-discussed findings do indeed provide some support for the notion that larger executive pay disparity reduces the need for costly supervision and monitoring, and provides strong incentives that better align principal-agent interests. The above reviewed literature supports the underlying intentions prescribed by tournament theory.

2 Unintended Compensatory Consequences

While each of the above aspects of executive compensatory structure are generally well intentioned, this chapter now addresses the "unanticipated consequences of purposive social action" (Merton 1936, p. 894), when focusing on executive compensation packages. In this section, the different components of executive compensation are readdressed with a focus on the unintended consequences of each of those components.

2.1 Individual Executive Compensatory Components

Following a thorough review of the executive compensation literature, Devers et al. (2007) state "Although agency scholars argue that incentive pay positively influences interest alignment. . .our broad-based review of the literature suggested that goal misalignment might be one of the most reliable outcomes of executive pay" (p. 1026). This statement lays out the case that even with the best of intentions in mind, the structuring of executive compensation packages have unintended consequences. The following addresses each of the types of incentive pay that was previously discussed and provides insight into what unintended consequences may be elicited.

2.1.1 Unintended Consequences of Stock Ownership

While the intended benefits of executive compensation are apparent from the previous sections, stock ownership is not a 'magic bullet' to create goal alignment between principals and agents. For example, Wright et al. (2002) argue that stock based compensation initially induces executives to engage in risk-increasing corporate strategies but that over time, non-value-maximizing, risk-reducing strategies may be emphasized as executives expand their stock ownership. This may be because unlike stock options, restricted stock forces executives to endure both upside and downside risk. Because the executive's wealth is tied directly to both the upside and downside swings in stock price the executive becomes more risk averse. In line with

this reasoning, some researchers suggest that that executives place a higher value on restricted stock than they do on stock options. Indeed, Devers et al. (2008) showed that the value of restricted stock held by CEOs led to lower strategic risk investments.

From a portfolio theory perspective, Ofek and Yermack (2000) argue that the awarding of stock to executives limits their wealth diversification, creating increased personal wealth risk. Because of this they argue that executives will sell previously owned shares when awarded new shares to further diversify their personal portfolio and attenuate this personal wealth risk. Interestingly, the author's findings do support this contention. Specifically, they find that equity compensation succeeds in increasing incentives of lower ownership managers, but higher-ownership managers negate much of its impact by selling previously owned shares. Additionally, they find that when executives also exercise options to acquire stock, nearly all of the shares are sold. These findings suggest that even with the best of intentions of goal alignment, the awarding of restricted stock to executives does not totally achieve this effect because executives sell off previously owned shares, meaning that the awarding of restricted stock does not remain with the executive.

2.1.2 Unintended Consequences of Stock Options

To truly consider the risk alignment of managers and shareholders, it is vital to understand that the complete alignment of risk preferences is likely unachievable. In a rigorous analysis of incentive alignment, Holmstrom (1979) concluded that since executives will never be risk-neutral with respect to their employer, the complete alignment of risk preferences is unattainable. With that considered, it leads to the perspective that stock options may lead to unintended outcomes. For example, Sanders and Hambrick (2007) found that while risk taking was indeed induced through stock option grants to CEOs, the risk taking by those option-loaded CEOs had negative performance implications. These findings are in line with the mathematical model developed by Dow and Raposo (2005) who suggested that performance-related compensation creates an incentive for executives to seek out strategies that are overly ambition and ultimately difficult to implement. Moreover, Tian (2004) provided evidence suggesting that as more options are granted to an executive, the incentive to increase stock price does not always increase accordingly. In fact, Tian's findings suggest that granting more options creates greater incentives to increase stock price only if option wealth does not exceed a certain fraction of total wealth and in going beyond this critical level, granting more options actually reduces incentive effects and becomes counterproductive.

Above and beyond the unintended consequence of the risk leading to negative overall performance, stock options have also been shown to induce more self-interested behavior on the part of CEOs. For example, in a study by Yermack (1997), evidence was found that supports the idea that CEOs time corporate news to influence stock option grant price. Specifically, he found that CEOs receive stock option awards shortly before favorable corporate news, suggesting they influence

the timing of either stock option grants or the release of corporate news to be most beneficial for their stock option position. Chauvin and Shenoy (2001) provide additional evidence to this possibility and suggest that "executive stock option grants create a unique opportunity for insiders to profit by manipulating the timing of information flowing to the market without engaging in insider trading" (p. 53). They found that in the 10-day period immediately before stock option grants, there was a significant abnormal decrease in stock price. Similarly, Baker et al. (2003) provide evidence showing that relatively high option compensation is associated with income-decreasing discretionary accruals in periods leading up to option award dates and that this association is stronger when managers are able to publicly announce earnings prior to the option award date.

Along the same lines as the above research, Coles et al. (2006) found that in the period following announcements of cancellations of executive stock options, discretionary accruals were abnormally low, suggesting that executives manipulate their earnings to attempt to have a low stock price prior to reissuance of their stock options. In further support, Lie (2005) found that predicted stock returns are abnormally low before stock option awards and abnormally high afterward. Because of this, Lie suggests that executives manipulate the timing of stock option awards to their benefit retroactively. Based upon the findings reported above about stock price manipulation, one must conclude that the risk alignment intent of stock options is not necessarily being realized because the options are granted at times when they are already in-the-money or have a substantial chance of becoming in-the-money. In this case, the stock options already have value creating possible downside risk. This eliminates one of the key aspects that separates stock options from stock ownership.

In an interesting, and more disturbing line of research, scholars have investigated the impact that stock option compensation has on possible fraudulent behavior on behalf of executives. One such study by Burns and Kedia (2006) found that as CEO stock option portfolio becomes more sensitive to stock price, there is a greater propensity for the firm to have aggressive accounting practices that are associated with restatements, or more simply, to misreport financial earnings. Other work also has found a similar effect. For instance, O'Connor et al. (2006) suggested that CEO stock options may actually undermine sound corporate governance. In a study of 65 matched pairs of public U.S. firms they found that large CEO stock option grants were more likely to lead to fraudulent financial reporting when the CEO was also board chair but when at the same time board members did not own options.

The focus on the proportion of incentive pay contributable to stock options does begin to provide insight into the effect of stock options, however stock options have unique aspects (i.e., whether they are exercisable or whether they are in the money or not) that are beginning to take a front seat in the analysis of stock option effects. As was previously explained, stock options are only exercisable following a vesting period, therefore they may have a different influence on executive action when they are exercisable versus un-exercisable. For example, Devers et al. (2008) argued that executives perceive the risk properties of un-exercisable and exercisable stock options differently. They begin by arguing and finding that there is a linear

relationship between un-exercisable option value and firm risk. However, going farther, they argued that executives endow their personal wealth with a portion of the in-the-money value of stock options, so as stock options become in the money they are viewed as a portion of the executive's wealth, even before exercising their options. Therefore, after taking into account the concept of loss aversion, they suggest that as an executive's stock options become in the money, that executive will actually become more risk averse. Larraza Kintana et al. (2007) also found that unexercised in-the-money options negatively related to CEO risk taking.

Extending these findings further, Zhang and colleagues parsed stock options down to whether they were in-the-money or out-of-the-money. Their findings suggest that CEOs are more likely to manipulate firm earnings when they had more out of the money options and lower stock ownership. They argue this is due to the CEOs being in a loss situation, creating a situation in which they will attempt to bring out of the money options into the money through manipulating firm earnings.

The previous results suggest that while stock options do begin to alleviate the risk preference misalignment of managers and shareholders, it may actually induce the agency problem of executive opportunism and self interest while disregarding shareholder interests.

2.2 Team Management Team Compensatory Structure

Similarly, as the individual components of executive compensation have the possibility of creating unintended negative consequences, so too does the overall executive level compensation structure. However, the compensatory structure of the TMT can create more than just possible individual level negative actions, but the overall functioning of the TMT can also be diminished. And since operation of a complex organization is inherently a shared activity, diminished TMT functioning may have negative overall organizational performance consequences.

2.2.1 Unintended Consequences of TMT Pay Dispersion

As Sect. 1.2.1 suggests, there have been findings showing how pay dispersion achieves its intended goals of interest alignment from an economic perspective. Overall, empirical results suggest that both vertical and horizontal pay dispersion does indeed induce internal competition for promotion between executives. Yet, what is overlooked from the economic perspective of tournament theory is the possible negative consequences of increased internal competitions. The assumption that competition will only provide added effort on behalf of executives ignores one of the key aspects of the executives in which compensation is intended to control: self-interest. For example, the interests of the shareholders are to achieve a return on their investments through superior performance of the organization in which they own. However, in an internal competition for promotion, where promotions are

awarded on a relative basis as described by tournament theory, the executive's interests lie in winning the tournament to achieve the next promotion, not necessarily in ensuring greater firm performance. Simply, this means that executives may be promoted not only by performing well, but also by assuring that their rival's (i.e., other executives) performance suffers (Lazear 1989). "This means that they [executives] are disinclined toward cooperation and, at the extreme, may engage in outright sabotage" (Lazear 1991, p. 95). Among executives, sabotage has been suggested to include actions such as, attempting to damage the reputation of others, withholding information from other TMT members, attempting to influence superiors, and bolstering one's own reputation at the expense of organizational goals (Henderson and Fredrickson 2001). This possibility of sabotage has been offered some support in the literature. In fact, Kräkel (2000) showed that those workers that had lower compensation exerted more effort in counterproductive activities and sabotage.

While sabotage may be an extreme unintended activity that could lead to negative organizational outcomes, other self-interested behavior may provide negative consequences for individual and firm level performance. For instance, Becker and Huselid (1992) suggest and corroborate that the tournament prize differential indeed has the intended incentive effects. However, they also posit that contestants can focus so narrowly on individual achievements that they jeopardize the joint output of the organization and may take risks that the organization might not sanction. More specifically, they found that in the realm of professional automobile racers, hazardous behavior increased as the spread of the prize for winning increased but that after controlling for the dollar value of the tournament spread, the prize distribution had little influence on individual performance.

In addition to the negative unintended consequences suggested from an economic perspective, theory from a behavioral viewpoint provides additional insight into how executive pay dispersion may induce unintended consequences. The behavioral view, rooted in social comparison theory and the theory of relative deprivation (Crosby 1976), proposes that horizontal and vertical executive pay dispersion is a critical aspect of a firm's social-psychological and sociopolitical context (Henderson and Fredrickson 2001; Siegel and Hambrick 2005). Generally, individuals will compare themselves to similar others and this comparison may be initiated on many different aspects, one being compensation (e.g., Cowherd and Levine 1992; Crosby 1976; Henderson and Fredrickson 2001; Siegel and Hambrick 2005). In addition, members of a firm's TMT are typically achievement oriented, power-seeking, and status-driven and garner great concern with how their pay compares to that of other team members. Because of this, if TMT members believe that they are earning less than they deserve in relation to the comparison other, they may experience relative deprivation which is suggested to lead to declines in team member cohesiveness, commitment to organizational goals (Cowherd and Levine 1992; Crosby 1976), and cooperation (Henderson and Fredrickson 2001; Siegel and Hambrick 2005).

In addition to social comparison theoretical groundings, Siegel and Hambrick (2005) also suggest that pay dispersion between executive ranks creates distance

and barriers between hierarchical ranks, which "impair executive collaboration by creating perceptual and substantive barriers between levels that serve to reduce efficient information processing and coordination of effort" (p. 262). They find that both vertical and horizontal pay dispersion have negative implications for firm performance in firms competing in technologically intensive industries. Similarly, Cowherd and Levine (1992) argued and supported the notion that pay gaps between lower-level individuals and senior executives provoked feelings of relative deprivation, which subsequently diminished employee effort and collaboration leading to lower product quality.

Taking into account all of the previous findings of unintended negative consequences of TMT pay structure suggests that pay dispersion is indeed a critical aspect of a firm's social-psychological environment that does have the unintended effects of possibly promoting executive self-interested behavior and reducing TMT collaboration in the pursuit of the organizations goals (Henderson and Fredrickson 2001; Siegel and Hambrick 2005). In this manner, the evidence of negative outcomes of pay dispersion provides contradictions to an economic model of tournaments and suggests that increasing levels of pay dispersion create unintended cooperative costs for the TMT.

3 Conclusion

The value of using compensation to alleviate different agency costs is readily apparent in the early sections of this chapter. When there is separation of ownership and control that leads to asymmetric information and difficulty in monitoring, the task of interest alignment is daunting and the options of doing so are minimal. Therefore, the achieved intended outcomes of compensation that were previously discussed should not be discounted simply because of the unintended outcomes that were subsequently reported. After all, even the best-intentioned actions have outcomes that are not in accordance with their explicit purpose (Merton 1936) because all actors are boundedly rational and cannot possibly foresee all unintended outcomes. Accordingly, it is important to note that compensation packages to executives is but one part of the overall corporate governance mechanism to curb agent opportunism. So even with the negative outcomes of certain aspects of executive compensation, there are checks and balances to try and additionally attenuate negative outcomes.

References

Baker, T., Collins, D., & Reitenga, A. (2003). Stock option compensation and earnings management incentives. *Journal of Accounting, Auditing & Finance, 18*(4), 557–582.

Becker, B., & Huselid, M. (1992). The incentive effects of tournament compensation systems. *Administrative Science Quarterly, 37*(2), 336–350.

Burns, N., & Kedia, S. (2006). The impact of performance-based compensation on misreporting. *Journal of Financial Economics, 79*(1), 35–67.

Chauvin, K. W., & Shenoy, C. (2001). Stock price decreases prior to executive stock option grants. *Journal of Corporate Finance, 7*(1), 53–76.

Coles, J. L., Hertzel, M., & Kalpathy, S. (2006). Earnings management around employee stock option reissues. *Journal of Accounting and Economics, 41*(1–2), 173–200.

Cowherd, D., & Levine, D. (1992). Product quality and pay equity between lower-level employees and top management: An investigation of distributive justice theory. *Administrative Science Quarterly, 37*(2), 302–320.

Crosby, F. (1976). A model of egoistical relative deprivation. *Psychological Review, 83*(2), 85–113.

Devers, C. E., Cannella, A. A., Reilly, G. P., & Yoder, M. E. (2007). Executive compensation: A multidisciplinary review of recent developments. *Journal of Management, 33*(6), 1016.

Devers, C., McNamara, G., Wiseman, R., & Arrfelt, M. (2008). Moving closer to the action: Examining compensation design effects on firm risk. *Organization Science, 19*(4), 548.

Dow, J., & Raposo, C. C. (2005). CEO compensation, change, and corporate strategy. *The Journal of Finance, 60*(6), 2701–2727.

Henderson, A., & Fredrickson, J. (2001). Top management team coordination needs and the CEO pay gap: A competitive test of economic and behavioral views. *Academy of Management Journal, 44*(1), 96–117.

Holmstrom, B. (1979). Moral hazard and observability. *The Bell Journal of Economics, 10*, 74–91.

Jensen, M. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review, 76*(2), 323–329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*, 305–360.

Kräkel, M. (2000). Relative deprivation in rank-order tournaments. *Labour Economics, 7*(4), 385–407.

Lafond, R., & Roychowdhury, S. (2008). Managerial ownership and accounting conservatism. *Journal of Accounting Research, 46*(1), 101–135.

Larraza Kintana, M., Wiseman, R. M., Gomez Mejia, L. R., & Welbourne, T. M. (2007). Disentangling compensation and employment risks using the behavioral agency model. *Strategic Management Journal, 28*(10), 1001–1019.

Lazear, E. (1989). Pay equality and industrial politics. *Journal of political economy, 97*(3), 561–580.

Lazear, E. (1991). Labor economics and the psychology of organizations. *The Journal of Economic Perspectives, 5*, 89–110.

Lazear, E., & Rosen, S. (1981). Rank-order tournaments as optimum labor contracts. *The Journal of Political Economy, 89*(5), 841.

Lie, E. (2005). On the timing of CEO stock option awards. *Management Science, 51*, 802–812.

Lin, B., & Lu, R. (2009). Managerial power, compensation gap and firm performance—evidence from Chinese public listed companies. *Global Finance Journal, 20*(2), 153–164.

Mehran, H., Nogler, G. E., & Schwartz, K. B. (1998). CEO incentive plans and corporate liquidation policy1. *Journal of Financial Economics, 50*(3), 319–349.

Melton, M., & Zorn, T. S. (2000). An empirical test of tournament theory: The senior PGA tour. *Managerial Finance, 26*(7), 16–32.

Merton, R. K. (1936). The unanticipated consequences of purposive social action. *American Sociological Review, 1*(6), 894–904.

Nagar, V., Nanda, D., & Wysocki, P. (2003). Discretionary disclosure and stock-based incentives* 1. *Journal of Accounting and Economics, 34*(1–3), 283–309.

Ofek, E., & Yermack, D. (2000). Taking stock: Equity based compensation and the evolution of managerial ownership. *The Journal of Finance, 55*(3), 1367–1384.

O'Connor, J. P., Priem, R. L., Coombs, J. E., & Gilley, K. M. (2006). Do CEO stock options prevent or promote fraudulent financial reporting. *Academy of Management Journal, 49*, 483–500.

Rosen, S. (1986). Prizes and incentives in elimination tournaments. *The American Economic Review, 76*(4), 701–715.

Sanders, G. (2001). Behavioral responses of CEOs to stock ownership and stock option pay. *The Academy of Management Journal, 44*(3), 477–492.

Sanders, W., & Hambrick, D. (2007). Swinging for the fences: the effects of CEO stock options on company risk taking and performance. *The Academy of Management Journal (AMJ), 50*(5), 1055–1078.

Siegel, P., & Hambrick, D. (2005). Pay disparities within top management groups: Evidence of harmful effects on performance of high-technology firms. *Organization Science, 16*(3), 259.

Tian, H. L. (2004). Too much of a good incentive? The case of executive stock options. *Journal of Banking and Finance, 28*(6), 1225–1245.

Williams, M. A., & Rao, R. P. (2006). CEO stock options and equity risk incentives. *Journal of Business Finance & Accounting, 33*(1 & 2), 26–44.

Wright, P., Kroll, M., & Elenkov, D. (2002). Acquisition returns, increase in firm size, and chief executive officer compensation: the moderating role of monitoring. *Academy of Management Journal, 45*, 599–608.

Yermack, D. (1997). Good timing: CEO stock option awards and company news announcements. *Journal of Finance, 52*, 449–476.

Part III
Boards of Directors: Roles, Duties, and Responsibilities

Are Busy Boards Effective Monitors?

Eliezer M. Fich and Anil Shivdasani

Abstract Firms with busy boards, those in which a majority of outside directors hold three or more directorships, are associated with weak corporate governance. These firms exhibit lower market-to-book ratios, weaker profitability, and lower sensitivity of CEO turnover to firm performance. Independent but busy boards display CEO turnover-performance sensitivities indistinguishable from those of inside-dominated boards. Departures of busy outside directors generate positive abnormal returns. When directors become busy as a result of acquiring an additional directorship, other companies in which they hold board seats experience negative abnormal returns. Busy outside directors are more likely to depart boards following poor performance.

On December 28, 2000, the *Wall Street Journal* reported that Elaine L. Chao would be a nominee for President-elect George W. Bush's cabinet.[1] Only a few days prior to Ms. Chao's confirmation as labor secretary, another *Journal* article described a growing trend among firms to limit the number of board seats their directors sit on because serving on too many boards may be detrimental to the quality of corporate governance. Coincidentally, this article also featured Ms. Chao as one of the 10 busiest directors among large U.S. corporations.[2] As expected, upon her cabinet

[1] Cummings and Greg (2000).

[2] Lublin (2001).

Full Bibliographic Citation Fich, E., & Shivdasani, A. (2005). Are busy boards effective monitors? *Journal of Finance* 61, 689–724. Reprinted with permission from John Wiley and Sons.

E.M. Fich (✉)
Drexel University, Philadelphia, PA, USA
e-mail: eliezer.m.fich@drexel.edu

A. Shivdasani
University of North Carolina, Chapel Hill, North Carolina, USA

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_10,

Table 1 Investor reaction to Elaine Chao's cabinet nomination. Two-day cumulative abnormal returns (*CARs*) for the firms in which Elaine L. Chao served as an outside director. *CAR*s are computed for all firms around December 28, 2000 (day "0"), the day when the *Wall Street Journal* first announced that Elaine L. Chao would join President-elect George W. Bush's cabinet. The sample includes the following firms: C.R. Bard, Clorox, Columbia/HCA Healthcare, Dole Food, Northwest Airlines, and Protective Life. Following her confirmation as secretary of labor, Ms. Chao resigned her directorships in these firms. We report *t*-statistics and Wilcoxon rank *Z*- statistics using a two-tailed test for significance

Returns	Days	*N*	Mean return (%)	*t*-statistic	Positive: negative	Median return (%)	Wilcoxon *Z*
Raw return	(−1 + 0)	6	5.24	1.99	6:0	4.49	2.22
Cumulative abnormal return *(CAR)*	(−1 + 0)	6	3.80	2.22	6:0	3.05	1.81

confirmation, Ms. Chao resigned her directorships at C.R. Bard, Clorox, Columbia/HCA Healthcare, Dole Foods, Northwest Airlines, and Protective Life.

Ms. Chao's cabinet appointment permits a case study analysis of the increasingly popular notion among shareholder activists, institutional investors, regulators, and many corporations that serving on several boards causes directors to be busy, rendering them ineffective monitors of corporate management. Using standard event study methodology, we find that Ms. Chao's impending departure from the six boards in which she served as an outside director was viewed enthusiastically by investors. Table 1 shows that the mean 2-day cumulative abnormal return (*CAR*) is 3.8 % (*t*-statistic = 2.2) and the median *CAR* is 3.05 % (Wilcoxon $Z = 1.8$). All six firms in the study elicit positive investor reactions at announcement.[3]

While illustrative, this case study evidence is subject to a number of caveats. Investors might expect the six firms whose boards Ms. Chao vacated to benefit from her new political influence. Investors may also reassess the quality of the remaining board members due to a "halo effect" surrounding her nomination. Even if the stock price effect reflects the departure of a busy director, it is likely that the magnitude of this effect is exaggerated due to her status as one of America's busiest directors. Nonetheless, the evidence is suggestive of a negative impact of busy directors on firm value. Whether this effect holds in a systematic fashion across a broad sample of firms is the focus of this paper.

There is a growing literature that shows that serving on multiple boards can be a source of both valuable experience and reputational benefits for outside directors. Fama and Jensen (1983) note that reputational effects can be important incentives for outside directors. However, there is comparatively little evidence on the costs associated with serving on multiple boards, and the prior research on this topic is

[3] We check for whether other news events might explain the observed abnormal returns. However, a Lexis-Nexis search around the announcement date fails to uncover release of other significant corporate news.

inconclusive. Beasley (1996) reports that the probability of committing accounting fraud is positively related to the average number of directorships held by outside directors. Core, Holthausen, and Larcker (1999) report that busy directors set excessively high levels of CEO compensation, which in turn leads to poor firm performance. In contrast, Ferris, Jagannathan, and Pritchard (2003) find no relation between the average number of directorships held by outside directors and the firm's market-to-book ratio.

We extend this literature along several dimensions. We show that inferences on whether multiple board seats held by directors affect firm performance are sensitive to how one identifies busy directors. Using measures of the fraction of outside directors that are busy, we find that busy boards display patterns associated with weaker corporate governance. Our findings differ from those reported by Ferris, Jagannathan, and Pritchard (2003) who claim that busy boards are as effective as nonbusy boards at monitoring. We argue that their methodological choices and econometric specification lead to low statistical power for detecting the relation that we document between performance and busy outside directors.

Our base case results use the market-to-book ratio as a measure of firm performance. Given the long tradition of using the market-to-book ratio in this context, this specification enables us to directly compare our findings with prior studies. However, we are sensitive to the concern that market-to-book ratio models may be misspecified since this measure has a number of alternative interpretations. As a proxy for a firm's marginal Q ratio, market-to-book also measures a firm's incentive to invest. In addition, this ratio is also used as a systematic risk factor (Fama and French (1992)). To alleviate these concerns, we supplement our analysis with a number of additional tests that are relatively immune to the specification issues that arise in regressions using the market-to-book ratio.

Our results show that firms in which a majority of outside directors hold three or more board seats have significantly lower market-to-book ratios than firms in which a majority of outside directors hold fewer than three board seats; the magnitude of this effect is economically meaningful. The negative relation between market-to-book ratios and busy outside directors is robust to a wide range of sensitivity tests. We conduct tests to examine the potential endogeneity of busy outside directors with respect to firm performance. Using data on director appointments and departures, we are unable to detect any pattern indicating that poor firm performance influences board composition in a manner that cause a board's outside directors to become more busy.

As an alternative to using market-to-book ratios, we examine the effect of busy boards on measures of accounting performance. Using panel data regressions, we also find that an inverse relation holds between several accounting-based measures of operating performance and a majority of busy outside directors on the board.

Additional evidence that boards dominated by busy outside directors contribute to weaker corporate governance comes from an analysis of forced CEO turnover in our sample. We show that boards in which the majority of outside directors hold three or more directorships are less likely to remove a CEO for poor performance. Consistent with prior research, we find that outside-dominated boards are more

likely to remove CEOs for poor performance than inside-dominated boards. However, our results suggest that a significant relation between turnover and performance only holds when a majority of outside directors on the board are not regarded as busy. Our tests reveal that forced CEO turnover is insensitive to firm performance when the majority of outside directors are busy, even if the board is dominated by outside directors. Therefore, the extent to which outside directors are busy appears to be an important determinant of the effectiveness of outside-dominated boards in corporate governance.

Another piece of evidence comes from analysis of announcements of outside director departures in our broader sample. Similar to the case study evidence for Ms. Chao, abnormal returns related to departure announcements of busy outside directors are significantly positive. Indeed, these returns are significantly higher than the abnormal returns for departures of nonbusy outside directors. In addition, results also indicate that departures of busy outside directors are viewed particularly favorably when a majority of the remaining outside directors on the board is not busy. Finally, we examine how stock prices respond when an incumbent director acquires an additional board seat. We find that when directors become busy as a result of obtaining a new board seat, stock prices tend to drop for the firms in which they are incumbent directors. Moreover, we also find that the decrease in stock price tends to be greater for firms in which the appointment causes the majority of the board's outside directors to be reclassified as busy.

Collectively, our results indicate that when a majority of outside directors are busy, firm performance suffers. At the same time, substantial evidence from prior studies suggests that the number of boards seats held by directors is related to their performance as monitors and is correlated to their reputational capital. Ferris, Jagannathan, and Pritchard (2003) find that the first appointment of a busy director to a board is good news for shareholders, implying that the enhanced experience or reputation of such directors is beneficial. However, our results suggest that there is also a cost to holding numerous board seats. As the number of outside directors sitting on multiple boards increases, boards are inclined to become distracted and monitoring intensity is likely to suffer. Therefore, our results imply that it may not be optimal for firms to select directors primarily based on the number of other boards they sit on since this may lead to an overcommitted board.

Our results should not be interpreted as endorsing the recent efforts of institutional investors and corporate governance policy advocates in curbing the directorships held by outside directors for at least two reasons. First, there is substantial evidence that outside directorships tend to be correlated with a director's reputational capital and that the market for outside directorships provides an important source of incentives for outside directors to serve as monitors. Therefore, attempts to limit the number of outside directorships may reduce the strength of the incentives for some outside directors to engage in effective corporate governance. Second, our results relate primarily to the costs faced by firms that appoint busy outside directors – we are silent on the benefits that appointing companies might obtain when their executives join other boards as outside directors. Recent work by Perry and Peyer (2005) shows that sending firms benefit when their executives

receive additional directorships if measures of agency costs in these firms are relatively low. While our paper points to the potential benefits of limiting the number of board seats held by outside directors, policy recommendations on this issue should also incorporate the expected costs of curtailed director incentives and those borne by sending firms.

Our paper proceeds as follows. Section 1 reviews the relevant literature and formulates our research questions. Section 2 describes our sample. Section 3 studies whether busy boards affect firm performance. Section 4 details our empirical tests on appointments and departures of outside directors. Section 5 investigates whether busy boards play a role during events of CEO turnover. Section 6 analyzes investor reactions related to the departure of busy outside directors and also provides evidence on the impact of additional board seats on firms in which the director serves as an incumbent outside director. Section 7 concludes.

1 Prior Literature on Directorships

Fama (1980) and Fama and Jensen (1983) argue that the market for outside directorships serves as an important source of incentives for outside directors to develop reputations as monitoring specialists. Mace (1986) suggests that outside directorships are perceived to be valuable because they provide executives with prestige, visibility, and commercial contacts.

Support for the reputational capital view of directorships comes from several studies that show that the number of boards that outside directors sit on is tied to the performance of the firms in which these directors are incumbents, either as CEOs or outside directors. This pattern is documented for financially distressed companies (Gilson 1990), for firms that cut dividends (Kaplan and Reishus 1990), and opt out of stringent state anti-takeover provisions (Coles and Hoi 2003), for companies that fire their CEOs (Farrell and Whidbee 2000), for firms that are sold (Harford 2003), for CEOs following retirement (Brickley et al. 1999), as well as for broad samples of firms (Yermack 2004). Accordingly, several studies use the number of board seats held by an outside director as a proxy for the director's reputation in the external labor market (Shivdasani 1993; Vafeas 1999; Brown and Maloney 1999).

While the number of directorships appears to be closely linked to directors' reputational capital, other studies suggest that too many directorships may lower the effectiveness of outside directors as corporate monitors (see, for example, Core et al. 1999; Shivdasani and Yermack 1999). Core, Holthausen, and Larker (1999) find that busy outside directors provide CEOs with excessive compensation packages, which in turn leads to weaker firm performance. Consistent with such a view, the National Association of Corporate Directors and the Council for

Institutional Investors have adopted resolutions calling for limits on the number of directorships held by directors of publicly traded companies.[4]

Ferris, Jagannathan, and Pritchard (2003) test whether multiple board appointments by directors harm firm performance. They fail to detect any evidence of a systematic relation between the market-to-book ratio and the average number of board seats held by directors; they conclude that proposals calling for limits on multiple board appointments are misguided. However, several aspects of their research design prevent them from detecting the relation that we document between multiple directorships and firm performance.

First, market-to-book can measure both the value added by management as well as the value of intangible assets such as future investment opportunities. Ferris, Jagannathan, and Pritchard (2003) estimate cross-sectional regressions of the market-to-book ratio on director attributes but their regressions do not control for growth opportunities, which confounds the interpretation of their results.

Second, unlike Ferris, Jagannathan, and Pritchard (2003) who estimate a cross-sectional model using 1995 data, we analyze panel data using fixed effects regressions. The fixed effects approach is robust to the presence of omitted firm-specific variables that would lead to biased estimates in an ordinary least squares framework. Given the high correlation between the market-to-book ratio and corporate governance variables with numerous other company attributes, we view the fixed effects framework as offering significantly more reliable estimates than ordinary least squares regressions. [5]

A third distinction between our paper and Ferris, Jagannathan, and Pritchard (2003) is in the identification of busy boards. They employ four measures to capture busy boards – three of these focus on directorships held by both inside and outside directors, while only one relates specifically to outside directors. To measure busy outside directors, they calculate the average number of board seats held by outside directors. Our variables, however, focus exclusively on whether outside directors are busy under the premise that inside and gray directors sit on the board for reasons other than the monitoring of management. Further, as we describe below, there is wide dispersion in the number of board seats held by outside directors, thereby making the average number of directorships a noisy measure of whether outside directors as a group are busy. We therefore employ an alternative metric that treats boards as busy if a majority of the outside directors sit on three or more boards.

Our paper is complementary to recent work by Perry and Peyer (2005) who examine announcement effects of outside director appointments for sending firms. They find that when executives join other boards as outside directors, the announcement return for the sending firm is positive when the executive has high stock ownership or the firm has an independent board. They argue that when executives

[4] See the Report of the National Association of Corporate Directors Blue Ribbon Commission on Director Professionalism (1996), and the Core Policies, Positions and Explanatory Notes from the Council of Institutional Investors (1998).

[5] Ferris, Jagannathan, and Pritchard (2003) also use the average return on assets (ROA) over 1993–1995 as a measure of performance. As with their market-to-book ratio regressions, the ROA specifications do not control for firm-specific effects.

have strong incentives to enhance shareholder value, accumulation of board seats by these executives has a positive impact on firm value.

In sum, there is substantial evidence supporting the view that outside directorships serve as a measure of a director's reputational capital. However, there is disagreement on whether sitting on numerous boards detracts from the ability of outside directors to perform as effective monitors. Our tests are designed to address the question of whether directors that serve on numerous boards tend to contribute to weaker corporate governance at these firms.

2 Sample and Data

2.1 Sample Selection

Our sample consists of firms that appear in the 1992 *Forbes* 500 lists of largest corporations based on assets, sales, market capitalization, or net income during the 7-year period from 1989 to 1995. We impose three screening criteria. First, we require that each company in the sample have at least 2 consecutive years of financial data available from the Center for Research in Security Prices (CRSP) and from Compustat. Second, relevant Securities and Exchange Commission (SEC) filings have to be available on the Edgar data retrieval system. Third, utility and financial companies are excluded from the sample since regulatory effects may lead to a more limited role for their boards of directors. These criteria yield a final sample of 3,366 observations for 508 industrial companies across the 7 years.

For each firm, we collect data on corporate governance variables from proxy statements filed for each company during the sample period. Each director is classified according to his/her principal occupation. Full-time employees of the firm are designated as insiders. Directors associated with the company, former employees, those with existing family or commercial ties with the firm other than their directorship, or those with interlocking directorships with the CEO are designated as "gray." Directors that do not fit the description for inside or gray directors are classified as outside directors. We categorize boards as being interlocked if the CEO sits on the board of an outside director.

Descriptive statistics for key variables for the 508 companies are presented in Panel A of Table 2. On average, outside directors hold 3.11 directorships (the median is 2.89). We count directorships held in all publicly traded firms but do not consider directorships held in nonpublic firms, not-for-profit and charitable organizations, trusts, and associations.

We consider outside directors busy if they serve on three or more boards. Although the three-directorship criterion is admittedly somewhat arbitrary, we choose this cutoff for several reasons. First, the mean and median number of directorships in the sample is close to three, resulting in a roughly even split between busy and nonbusy outside directors. Second, it reflects the

Table 2 Data description. Panel A provides descriptive statistics for characteristics of our sample firms. The sample consists of 3,366 annual observations for 508 companies between 1989 and 1995. Companies are included in the sample if they are listed by *Forbes* magazine as one of the largest U.S. public corporations in its 1992 survey of the 500 largest U.S. public companies in any of the categories of market capitalization, sales, net income, or assets. The sample excludes private, utility, and financial companies. The table presents the mean, median, and standard deviation for each variable, as well as the Spearman sample correlation coefficient between all variables and a (0,1) indicator that equals one if is the board is defined as busy, which occurs when 50 % or more of the board's outside directors hold three or more directorships. a, b and c denote statistical significance at the 1 %, 5 %, and 10 % levels, respectively. Panel B shows characteristics of 2,314 outside directors appointed to the boards of our sample firms from 1989 to 1995. Outside directors are those that are not current or former employees of the firm, are not relatives of the CEO, have no business deals with the firm other than their directorship, and do not have interlocking directorships with the CEO. We classify boards as being interlocked if the CEO sits on the board of an outside director. Data on director characteristics are obtained from annual proxy statements

Panel A

Variable	Mean	Median	Standard deviation	Correlation with "Busy board"
Board characteristics				
Directorships per outside director	3.11	2.89	2.23	0.22[a]
Percentage of inside directors	29.67	26.05	15.03	−0.07[c]
Percentage of gray directors	15.02	9.21	13.32	−0.12[c]
Percentage of outside directors	55.33	56.23	17.12	0.68[a]
Percentage of directors who are other firms' CEOs	14.96	13.20	11.70	0.56[a]
Percentage of busy directors	52.26	–	–	–
Percentage of busy boards	21.42	–	–	–
Board size	11.88	12	2.95	0.15[a]
Presence of interlocked board	0.36	0	0.72	0.48[b]
Directors' fees (1995 dollars)	35,904	27,601	13,562	0.29[a]
Number of board meetings/year	7.56	7	2.56	0.31[a]
Governance structure				
CEO from founding family (0,1)	0.26	0	0.39	−0.28[c]
Non-CEO chairman of board (0,1)	0.15	0	0.33	−0.08[c]
CEO's tenure as CEO	8.68	7.5	7.68	0.12[b]
CEO's age	58.06	56	7.04	0.00
Insider ownership (% common)	6.97	2.22	13.67	−0.21[b]
Institutional ownership (% common)	49.13	33.33	13.92	−0.06[a]
Firm characteristics				
Total sales (1995 $MM)	9,016.01	3,444.72	21,100.23	0.31[a]
EBIT/total assets	0.191	0.150	0.128	0.10[a]
Firm age (years since incorporation)	23.6	12	9.33	0.45[a]

Panel B

	Mean	Median	Standard deviation
Directorships per director	3.04	2.00	1.99
Percentage of appointees with three or more directorships	17.11	–	–
Age of the appointee	57	55	3.82

(continued)

Table 2 (continued)

Panel B			
	Mean	Median	Standard deviation
Equity ownership appointee (% of common)	0.03	0.07	0.15
Percentage of appointees that represent a board expansion	33.03	–	–
Percentage of appointees that replace an independent director	52.23	–	–
Percentage of appointees that replace an inside director	9.81	–	–
Percentage of appointees that replace a gray director	4.92	–	–
Percentage of appointees without prior board experience	13.56	–	–
Percentage of appointees who are commercial or investment bankers	7.02	–	–
Percentage of appointees who are current *Forbes* 500 executives	20.04	–	–
Percentage of appointees who are current CEOs of other firms	42.05	–	–
Percentage of appointees who are retired CEOs of other firms	18.12	–	–

recommendation by the Council for Institutional Investors that directors should sit on no more than two boards. Finally, our definition is consistent with prior work by Core, Holthausen, and Larker (1999) and Ferris, Jagannathan, and Pritchard (2003) who also use the three-directorship benchmark for classifying executives as busy.

Using this definition, 52 % of the outside directors in the sample are classified as busy. Perry and Peyer (2005) report a comparable frequency of busy outside directors in their sample. To measure the prevalence of busy outside directors on the board, we construct a (0,1) indicator that takes the value of one if 50 % or more of the board's outside directors are busy. Throughout the paper we refer to this variable as the "busy board" indicator. Panel A shows that 21 % of the firms in the sample have busy boards.

A typical board has approximately 12 directors, 55.33 % of whom are outsiders. The average board meets just under eight times a year. In Table 2, we present the correlation of certain firm characteristics with the busy board indicator. This variable exhibits a positive correlation with the average directorships held by outside directors, the presence of an interlocking board, director fees, the frequency of board meetings, firm age, operating profit margin, and total sales. We observe a negative correlation between busy board and the percentage of inside and gray directors, ownership by insiders, and CEOs from founding families.

We track annual appointments of outside directors to the boards of the 508 firms during the 7-year period. Panel B of Table 2 presents key characteristics for the 2,314 individuals who are appointed as independent directors to the boards of these companies. A typical outsider is in her mid-50s and owns very little equity in the other boards on which she serves. Most of the appointees (52 %) replace another independent director. These characteristics are comparable to those reported by Shivdasani and Yermack (1999) who study director appointments between 1994 and 1996. About 20 % of all outside directors are current *Forbes* 500 executives, and almost 14 % have no prior board experience. This last statistic is comparable to

Table 3 Directorships by outside directors. Panels A through D report the total number of directorships held by outside directors, the mean directorships per outside director, and the percentage of outside directors holding three or more directorships for four companies in our data set during the 1993 proxy season. The total number of directorships simply counts the number of total boards of publicly traded firms on which the outside director serves. We do not count board service in private firms, charitable institutions, or not-for-profit organizations. The last row in each panel provide a (0,1) variable for whether boards are busy. We code boards as busy, with a one, if 50 % or more outside directors hold three or more total directorships. Panel E reports mean directorships per outside director and per board for our sample firms according to the percentage of outside directors holding three or more directorships. Directorships per outside director are estimated as the total directorships held by outside directors divided by the number of outside directors. Similarly, directorships per board are all directorships held by every director, regardless of his/her classification, divided by board size

Panel A: Host Marriott – outside directors 1993		
Director	**Main occupation**	**Total directorships**
R.T. Ammon	Former Partner, Kohlberg Kravis Roberts and Co.	4
A.D McLaughlin	President, Federal City Council (former U.S. secretary of labor)	8
H.L. Vincent, Jr.	Retired Vice-Chairman, Booz-Allen and Hamilton	1
A.J. Young	Vice Chairman, Law Companies Group, Inc.	1
	Total directorships	14
	Total directorships/outside directors	14/4 = 3.5
	Percentage with three or more directorships	50 %
	Is the board busy? (0 = No,1 = Yes)	Yes
Panel B: Gannett Newspapers – outside directors 1993		
Rosalyn Carter	Former First Lady of The United States of America	1
C.T. Rowan	President, CTR Productions	2
D.D. Wharton	CEO, Fund for Corporate Initiatives	3
A.F. Brimmer	Retired officer, Federal Reserve Bank	9
M.A. Brokaw	Owner, Penny Whistle Toys	2
	Total directorships	17
	Total directorships/outside directors	17/5 = 3.4
	Percentage with three or more directorships	40 %
	Is the board busy? (0 = No,1 = Yes)	No

(continued)

Table 3 (continued)

Panel C: Clorox – outside directors 1993		
D. Boggan	Vice Chancellor, U.C. Berkeley	1
D.O. Morton	Retired COO, Hewlett Packard	5
E.L. Scarff	Former CEO, Arcata Corporation	1
L.R. Scott	CEO, Carolina Freight	3
F.N. Shumway	Retired Chairman, Allied Signal	4
J.A. Vohs	Retired Chairman, Kaiser Health GP	2
	Total directorships	16
	Total directorships/outside directors	16/6 = 2.66
	Percentage with three or more directorships	50 %
	Is the board busy? (0 = No,1 = Yes)	Yes
Panel D: MGM Grand – outside directors 1993		
Willie D. Davis	President, All-Pro Broadcasting	8
Lee A. Iacocca	Chairman, Iacocca Capital GP (Retired CEO, Chrysler)	1
E. Parry	CEO, Valley Capital Corporation	2
	Total directorships	11
	Total directorships/outside directors	11/3 = 3.66
	Percentage with three or more directorships	33.33 %
	Is the board busy? (0 = No,1 = Yes)	No

Panel E

Boards with outside directors holding three or more directorships	Are outside directors busy?	Mean directorships per outside director	Mean directorships per board
$x \geq 75$ %	Yes	3.35	1.85
50 % $\leq x <$ 75 %	Yes	3.19	1.77
25 % $< x <$ 50 %	No	3.41	1.88
$x \leq 25$ %	No	2.36	1.38

that reported by Ferris, Jagannathan, and Pritchard (2003) who study director data for firms during the 1995 proxy season.

2.2 *Average Directorships Versus Busy Boards*

Understanding what constitutes a busy board is a central issue underlying our tests. We consider boards busy if 50 % or more of the outside directors hold three or more

board seats instead of using the average number of directorships by outside directors to identify busy boards. At issue is the extreme skewness in the distribution of board seats held by outside directors. An example is helpful in illustrating this measurement issue.

Panels A through D of Table 3 report board appointments held by outside directors at Host Marriott, Gannett Newspapers, The Clorox Company, and MGM Grand, Inc. as disclosed in their 1993 proxy statements. While the ratio of total directorships to outside directors for Host Marriott and Gannett Newspapers is similar, 3.5 and 3.4, respectively, we determine that Host Marriott has a busy board, but not Gannett Newspapers. Conversely, a comparison of MGM Grand and Clorox demonstrates that a high average number of directorships does not necessarily indicate that a majority of outside directors are busy. The average ratio of directorships by outside directors is 3.66 for MGM Grand and only 2.66 for Clorox. However, 50 % of the outside directors at Clorox are busy as compared to only 33 % at MGM.

Panel E of Table 3 shows that a one-to-one correspondence between the average number of directorships and busy boards also fails to hold in the full sample. We divide the sample into four groups based on the percentage of outside directors that are classified as busy. When more than 75 % of the outside directors are busy, the average number of directorships per outside director is 3.35. However, when only 25–50 % of the outside directors are busy, the average number of directorships held by outside directors is 3.41. Our measurement treats boards in the first group as busy, while Ferris, Jagannathan, and Pritchard (2003) would treat firms in the second group as having busier boards. As we illustrate later, our measurement appears to highlight a stronger link between busy boards and firm performance than using the average number of board seats variable.

3 Busy Boards and Firm Performance

Our first set of tests involves panel data estimates relating the market-to-book ratio to busy boards and other corporate governance and financial attributes. These models assume that a high market-to-book ratio is indicative of good management and governance. However, alternative interpretations of a high market-to-book ratio are equally plausible. In particular, if financial or liquidity constraints cause some firms to underinvest, the potential value of unexploited investments may lead to a high marginal Tobin's Q. If underinvestment is pervasive, our formulation would erroneously treat a high market-to-book as indicative of good governance. We address this issue by using a number of controls for investment opportunities. However, we recognize that all measures are subject to measurement error. Therefore, we also supplement the market-to-book ratio tests with similar models estimating operating performance. Since historical operating performance does not employ market prices, this measure is unlikely to reflect the value of future investment opportunities. In addition, we suspect that financial constraints are less

likely to be predominant in our sample, which consists of the largest U.S. corporations during the time period studied.

3.1 Market-to-Book Ratio Tests

We estimate firm-fixed effects regressions using the market-to-book ratio as the dependent variable. We calculate the market-to-book ratio as the market value of the firm's equity at the end of the year plus the difference between the book value of the firm's assets and the book value of the firm's equity at the end of the year, divided by the book value of the firm's assets at the end of the year. This calculation closely follows that of Smith and Watts (1992). The regressions control for corporate governance and financial characteristics likely to affect firm performance. Gilson (1990) finds that during periods of financial distress, firms reduce board size, and Yermack (1996) documents a negative and significant association between company valuation and board size. We include the log of board size in our tests. We control for firm size using the natural log of sales. Board composition is controlled for by scaling the number of outside directors by board size. We include the percentage of the firm's common shares beneficially owned by company insiders as an independent variable, because several studies link share ownership with firm value. We also include the natural log of meetings and the number of board committees as independent variables (Vafeas (1999)). We control for both the presence of interlocking directorships between outside directors and the CEO using an indicator variable, and for the number of outside directorships held by the CEO (Booth and Deli (1996)). Our regressions include the ratio of depreciation expenditures to sales as a measure of the firm's investment opportunity set (tests using alternative measures are described later), and also control for firm age. Throughout, the fixed effects specification is employed to control for unobservable attributes, such as company's history, culture, and product mix, that potentially affect firm performance.

The results of the multivariate models are reported in Table 4. Model (1) shows that the coefficient for the busy board indicator is negative and statistically significant at the 1 % level. In model (2), we use the percentage of outside directors that are busy and find a negative and significant coefficient on this variable as well. Therefore, both specifications indicate a negative and statistically significant relation between the presence of busy outside directors and the market-to-book ratio. Our estimates suggest that the impact of busy outside directors on firm performance is economically nontrivial. The coefficient estimate in model (1) indicates that a busy board reduces the market-to-book ratio by about 0.04.

We examine if the marginal impact of a busy outside director depends on whether or not a majority of the outside directors are busy. Model (3) includes an interaction term between the percentage of busy outside directors and the busy board indicator variable. The interaction term is negative and significant at the 6 % level, indicating that when a majority of outside directors are busy, the market-to-

Table 4 Busy outside directors and firm performance. This table presents fixed effects regressions of firm performance and busy outside directors. All regressions use market-to-book ratio as the dependent variable. We calculate the market-to-book ratio as the market value of the firm's equity at the end of the year plus the difference between the book value of the firm's assets and the book value of the firm's equity at the end of the year, divided by the book value of the firm's assets at the end of the year. This calculation closely follows that of Smith and Watts (1992). Regressions (1) uses a (0,1) dummy variable equal to one if 50 % or more of the board's outside directors individually hold three or more directorships as the key independent variable. Regression (2) uses the percentage of outside directors that hold three or more directorships (i.e., are busy) as the key independent variable. We classify boards as being interlocked if the CEO sits on the board of an outside director; all other variables are self-explanatory or are described in the main text. The sample is described in Panel A of Table 2. We report White (1980) heteroskedasticity-robust *p*-values in parentheses below each coefficient estimate

Variable	(1)	(2)	(3)	(4)	(5)
Board characteristics					
Average directorships by outside directors				−0.077	
				(0.26)	
Average directorships by board					−0.040
					(0.60)
Busy outside directors (0,1)	−0.042				
	(0.00)				
Percentage of busy outside directors		−0.152	−0.083		
		(0.00)	(0.00)		
Percentage of busy outside directors * Busy outside directors (0,1)			−0.071		
			(0.06)		
Log of the directorships held by the CEO	−0.166	−0.169	−0.160	−0.179	−0.177
	(0.16)	(0.13)	(0.13)	(0.09)	(0.12)
Firm has an industry director	0.050	0.049	0.044	0.048	0.049
	(0.28)	(0.54)	(0.60)	(0.32)	(0.23)
Directors' ownership (% of common)	0.187	0.122	0.124	0.188	0.188
	(0.09)	(0.08)	(0.07)	(0.10)	(0.08)
Board interlock (0,1)	−0.009	−0.008	−0.008	−0.014	−0.010
	(0.07)	(0.07)	(0.08)	(0.05)	(0.05)
CEO ownership (% of common)	0.008	0.015	0.016	0.009	0.009
	(0.12)	(0.08)	(0.09)	(0.13)	(0.13)
Log of board size	−0.314	−0.290	−0.298	−0.303	−0.299
	(0.01)	(0.05)	(0.05)	(0.01)	(0.05)
Log of board meetings	−0.091	−0.119	−0.100	−0.093	−0.090
	(0.26)	(0.40)	(0.27)	(0.22)	(0.29)
Board committees	−0.016	−0.013	−0.009	−0.011	−0.015
	(0.68)	(0.58)	(0.47)	(0.56)	(0.64)
Board composition (% outside directors)	0.165	0.147	0.149	0.161	0.161
	(0.06)	(0.24)	(0.20)	(0.06)	(0.06)
Firm characteristics					
Return on assets	2.002	2.044	2.029	1.996	2.004
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
Firm size (log of total sales)	0.433	0.436	0.441	0.430	0.438
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Firm age	−0.001	−0.001	−0.001	−0.001	−0.001

(continued)

Table 4 (continued)

Variable	(1)	(2)	(3)	(4)	(5)
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Growth opportunities (depreciation expense/ sales)	0.077	0.093	0.080	0.100	0.079
	(0.24)	(0.27)	(0.25)	(0.31)	(0.26)
Number of business segments	−0.049	−0.051	−0.048	−0.052	−0.049
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year (0,1) indicators	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	37.53 %	37.69 %	38.11 %	33.02 %	34.18 %

book ratio has a stronger negative association with the percentage of busy outside directors. This suggests that reducing the fraction of busy directors for boards in which a majority of outside directors are busy is likely to yield more meaningful valuation improvements.

Coefficient estimates for the control variables are in line with those reported by other studies. We obtain an inverse and statistically significant association between board size and firm performance (Yermack (1996)). The number of business segments is negatively related to performance (Berger and Ofek (1995)), while ownership by officers and directors yields positive coefficients (Yermack (1996)). As in Fich and Shivdasani (2005), we find that firm size is positively associated with market-to-book. Market-to-book ratios are also negatively related to firm age and the presence of an interlocking board, though the latter effect is significant at the 10 % level in some specifications.

Using the fixed effects framework, we are able to replicate the cross-sectional results of Ferris, Jagannathan, and Pritchard (2003) in our sample. Ferris, Jagannathan, and Pritchard (2003) measure the degree to which directors are busy by using the average numbers of directorships per director and directorships per outside director. Models (4) and (5) show that neither of these two variables displays a significant association with the market-to-book ratio; similar to the results obtained by Ferris, Jagannathan, and Pritchard (2003). The contrast between these results and those shown in models (1–3) suggest that inferences on the effects of busy boards are sensitive to how the presence of busy directors is measured.

3.2 Operating Performance Tests

The market-to-book ratio is also often used as a measure of growth opportunities. Despite our controls for investment opportunities in the regressions, and additional robustness tests described in Sect. 4, we are concerned about the possible impact that growth opportunities have on our coefficient estimates. To address this issue, we estimate the impact of busy boards on accounting measures of current

performance, since these measures are less likely to be mechanically driven by growth opportunities. The fixed effects regressions in Table 5 replace the market-to-book ratio with three different measures of operating performance.

Models (1) and (2) of Table 5 use the return on assets (ROA) as the dependent variable.[6] These regressions produce results that are consistent with those in Table 4. For example, in model (1), the coefficient for the busy board indicator variable is negative and statistically significant (−0.0024, p-value = 0.00). This estimate indicates that ROA is about 0.24 % points lower in firms with busy boards. Therefore, while the effect of a busy board on ROA is statistically significant, the economic magnitude of the relation is not particularly large.

We also measure firm performance using two additional financial ratios, namely, sales over assets (asset turnover ratio), and the return on sales, computed as operating income over net sales. We estimate fixed effects regressions using these ratios as dependent variables, and present them as models (3) and (4) of Table 5. The busy board indicator yields a negative and significant coefficient of −0.033 with a p-value = 0.02 in the sales over assets regression, and a −0.0027 coefficient with a p-value = 0.00 in the return on sales regression. These results are consistent with our earlier findings and suggest that companies with busy boards tend to display weaker operating profitability than firms in which boards are not busy.

3.3 Robustness Checks

3.3.1 Alternative Hypothesis

While the preceding results support the view that busy outside directors are associated with lower firm performance, the findings could be consistent with other explanations. Gilson (1990) reports that distressed firms revamp their boards by making them more independent and by appointing turnaround specialists. It is possible that busy outside directors tend to be appointed to boards of poorly performing companies if these directors are viewed as helpful in formulating turnaround strategies. To control for this potential endogeneity, we reestimate our regressions using 1- and 2-year lagged values of the busy board indicator and other corporate governance variables. These tests continue to yield an inverse and statistically significant association between firm performance and our busy board measures. We describe more detailed tests of this potential endogeneity in Sect. 4.

[6] We calculate ROA as operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72), and the decrease in other current assets (Compustat item 68). We scale this measure by the average of beginning- and ending-year book value of total assets (Compustat item 6).

Table 5 Fixed effects coefficient estimates: busy outside directors and firm profitability. In this table, the dependent variables are return on assets (ROA), sales over assets, and return on sales. We first sum operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72), and the decrease in other current assets (Compustat item 68). We scale this measure by the average of beginning- and ending-year book value of total assets (Compustat item 6) to find ROA. Similarly, we divide this measure by the average of beginning- and ending-year sales to compute ROS. We use the log of total capital as a proxy for firm size. Regressions (1), (2), and (3) use a (0,1) dummy variable that equals one if 50 % or more of the board's outside directors individually hold three or more directorships as the key independent variable. Regression (2) uses the percentage of outside directors that hold three or more directorships (i.e., are busy) as the key independent variable. All other variables are self-explanatory or are described in the main text. The sample consists of *Forbes* 500 firms from 1989 to 1995 described in Panel A of Table 2. White (1980) heteroskedasticity-robust *p*-values appear in *parentheses* below each coefficient estimate

	Dependent variable			
	(1)	(2)	(3)	(4)
Independent variables	ROA	ROA	Sales/ assets	ROS
Board characteristics				
Busy outside directors (0,1)	−0.00235		−0.033	−0.00272
	(0.00)		(0.02)	(0.00)
Percentage of busy outside directors		−0.0163		
		(0.01)		
Log of the directorships held by the CEO	−0.078	−0.071	−0.002	−0.041
	(0.27)	(0.20)	(0.61)	(0.33)
Firm has an industry director	0.020	0.015	0.004	0.018
	(0.31)	(0.33)	(0.40)	(0.39)
Directors' ownership (% of common)	0.022	0.025	0.222	0.024
	(0.17)	(0.11)	(0.09)	(0.11)
Board interlock (0,1)	−0.005	−0.005	−0.004	−0.005
	(0.10)	(0.13)	(0.06)	(0.08)
CEO ownership (% of common)	0.003	0.003	0.141	0.005
	(0.17)	(0.29)	(0.29)	(0.13)
Log of board size	−0.041	−0.043	−0.139	−0.032
	(0.01)	(0.01)	(0.04)	(0.01)
Log of board meetings	−0.129	−0.134	−0.099	−0.138
	(0.05)	(0.06)	(0.11)	(0.02)
Board committees	−0.000	−0.000	−0.005	−0.000
	(0.40)	(0.42)	(0.44)	(0.39)
Board composition (% outside directors)	0.002	0.002	0.003	0.007
	(0.35)	(0.38)	(0.45)	(0.11)
Firm characteristics				
Return on sales (1) and (2) return on capital (3) and (4)	1.841	1.967	3.671	4.698
	(0.00)	(0.00)	(0.00)	(0.00)
Firm size	0.048	0.047	0.166	0.094
	(0.00)	(0.00)	(0.01)	(0.03)
Firm age	−0.0008	−0.0008	−0.0006	−0.0008

(continued)

Table 5 (continued)

	Dependent variable			
	(1)	(2)	(3)	(4)
Independent variables	ROA	ROA	Sales/ assets	ROS
	(0.03)	(0.04)	(0.14)	(0.03)
Depreciation expense/sales	0.054	0.050	0.063	0.060
	(0.06)	(0.05)	(0.07)	(0.13)
Number of business segments	−0.006	−0.006	−0.003	−0.008
	(0.05)	(0.04)	(0.00)	(0.03)
Year (0,1) indicators	Yes	Yes	Yes	Yes
Adjusted R^2	26.36 %	27.10 %	13.90 %	25.01 %

3.3.2 Size and Performance Proxies

We repeat the analyses presented in Table 4 using different proxies for firm size, replacing the natural log of sales by both the natural log of capital and the natural log of assets.[7] These tests also yield an inverse association between busy board and performance. Our result continues to be robust to different constructions of the dependent variable. Instead of the Smith and Watts (1992) market-to-book ratio calculation, we use the Tobin's Q calculation of Perfect and Wiles (1994), and the Q calculation of Shin and Stulz (2000). These different constructions of the dependent variable do not qualitatively alter the results.

3.3.3 Characterizing Busy Outsiders

We use a less expansive definition of our key independent variable based on a slightly different procedure to identify busy outside directors. Core, Holthausen, and Larcker (1999) differentiate between outside directors that are currently employed and those that are retired. In their taxonomy, retired outside directors are considered busy if they serve on six or more publicly traded boards. We follow their definition and deem employed outside directors busy when they hold three or more directorships and retired outside directors busy when they hold six or more directorships. A board is defined as busy when 50 % or more of its outside directors are individually classified as busy. We construct a (0,1) indicator under this criterion and perform regressions similar to those in Table 4. The coefficient

[7] Total capital adds the market value of the firm's equity, book value, long-term debt, and an estimated market value of preferred stock. We calculate the market value of preferred stock by dividing preferred dividends over the prevailing yield on Moody's index of high-grade industrial preferred stocks.

estimate for a (0,1) independent variable under this taxonomy is −0.0401 (p-value = 0.06). This estimate is slightly smaller in magnitude than that reported in Table 4, but generates qualitatively similar inferences.

3.3.4 Investment Opportunities

Notwithstanding the results in Table 5, a concern with the regressions presented in Table 4 is whether we appropriately control for the role of the firm's investment opportunity set. As an alternative to using depreciation to control for investment opportunities, we use the ratio of capital expenditures to sales and obtain results similar to those reported earlier. We recognize the possibility that in the presence of financial constraints, growth opportunities may not be fully captured by capital expenditures. Therefore, we also use the ratio of research and development (R&D) to sales, the earnings-to-price ratio, and the variance of common stock returns as other control variables. The use of these different proxies for investment opportunities does not alter our results. Our proxies for busy outside directors continue to yield a negative and significant association with the market-to-book ratio in all specifications.

3.4 Summary

Results presented in this section indicate that firm performance, measured using both the market-to-book ratio as well as several measures of operating profitability, is inversely related to the presence of a majority of outside directors that serve on three or more boards. However, similar to Ferris, Jagannathan, and Pritchard (2003), we are unable to uncover such a relation using the average number of board seats held by all directors or by outside directors.

Our estimates suggest that a change in the board's status from busy to nonbusy is associated with an increase in the market-to-book ratio of 0.04. To put this result in perspective, findings in Gompers, Ishii, and Metrick (2003) imply that during the 1990–1995 period, a one point increase in their composite "Governance Index" reduces the market-to-book ratio by an average 3.37 % points. Yermack (1996) suggests that an increase in board size from eight to nine directors leads to a reduction in market-to-book of 0.04 and Daines (2001) finds that incorporation in Delaware leads to a 0.06 increase in market-to-book. Anderson and Reeb (2003) find market-to-book is about 0.15 higher for family-run firms and Fich and Shivdasani (2005) find it is about 0.14 higher for firms with stock option plans for outside directors.

4 Appointments and Departures of Busy Outside Directors

Results of Sect. 3 show a negative association between busy boards and firm performance. In this section, we turn to the potential endogeneity of busy outside directors with respect to performance. We explore whether firms tend to appoint busy directors when performance suffers and/or whether nonbusy directors are more likely to depart the board when firms perform well. We therefore conduct tests on the number of board seats held by directors and on appointments of new outside directors. We also examine the determinants of outside director departures. Our primary focus in these tests is whether patterns in appointments and departures of outside directors explain the negative relation between firm performance and busy boards described in Sect. 3.

There are several reasons why appointments of directors with multiple board seats might be linked to company performance. It is possible that poorly performing firms are more likely to seek out new outside directors that sit on several boards because such directors have valuable reputations and experience that can help reverse poor performance. An alternative possibility is that poorly performing firms may find it difficult to attract directors that have high reputations and significant opportunities to serve on other boards.[8]

Similarly, reputational concerns may also affect how firm performance influences the departure of outside directors. Brown and Maloney (1999) suggest that directors with significant reputational capital might choose to protect it by leaving boards of companies that perform poorly. Alternatively, if poor firm performance causes CEOs to favor busy directors that might be weaker monitors, they may choose to reappoint outside directors with multiple board seats, while denying reappointment to those serving on few boards. To understand how firm performance affects changes in board composition, we study board appointments and departures within our sample.

As described in Sect. 2, our sample firms appointed 2,314 outside directors during 1989–1995. We track each of these outside directors until the year 2000 to determine which of these directors remained on the board and which subsequently departed the board. For each outside director appointed, we review both the annual report and the firm's proxy statements to establish whether the appointed director remained on the board. We search the *Wall Street Journal Index* and *Lexis/Nexis* when we are able to identify a departure, and read newspaper stories and company press releases in order to ascertain the reason for the departure. We identify a total of 1,676 director departures among our sample. Of these, we are able to identify 360 voluntary departures. We classify a departure as voluntary if the reason given for the director's departure is either to pursue other interests or to take a position elsewhere. We also record 490 departures related to board term limits, normal retirements, health problems, or death. In 826 instances, we are unable to precisely

[8] This potential endogeneity, however, works against uncovering the negative relation that we document between firm performance and busy outside directors.

establish the reason for the departure. Of the 2,314 appointees, 638 continued serving as directors until the end of year 2000.

We conduct four tests using this sample of outside director appointments and departures. First, we estimate a maximum likelihood model of the number of board seats held by appointees. Second, we examine the factors that affect the likelihood that a busy director is appointed to the board. Third, we estimate a hazard model to understand the determinants of outside director departures. Our fourth test examines the probability that a busy director departs the board. In all tests, our primary focus is to understand whether firm performance has a significant impact on the types of outside directors that join and leave the board.

4.1 Multivariate Analysis of the Determinants of Directorships

We estimate a Poisson maximum likelihood regression to investigate the determinants of directorships for the 2,314 appointees. The dependent variable is the count of the directorships held by each outside director. We include the industry-adjusted stock return over the prior year as a measure of the appointing firm's performance as an independent variable. The regression includes appointee-specific characteristics such as age, gender, and educational and professional qualifications. We also include firm-specific attributes relating to the companies in which the individual serves as a director. Unless the appointee is the CEO of another firm, we compute the average stock ownership by the outside director for all of the boards on which he/she serves, as well as the average industry-adjusted return on assets (ROA), the market-adjusted stock return, and the average size (natural log of sales) of these firms. If the appointee is a CEO in another firm, we record the stock ownership, industry-adjusted ROA, the market-adjusted stock return, and the size of the firm in which he/she serves as CEO.

The results of the Poisson model are reported in the first column of Table 6.[9] We find that the performance of the appointing firm is unrelated to the count of directorships held by outside director appointees. In contrast, the average performance of the firms on whose boards the directors sit is positively associated with

[9] The Poisson model specifies that if λ is defined by $\log(\lambda) = X\beta$, where X is a vector of independent variables and β is a parameter vector, then the probability of n outside directors obtaining a directorship in a given year is given by: $\lambda^n e^{-\lambda}/\lambda!$ The log-likelihood function of this specification is maximized over β to produce maximum likelihood estimates and is given as,

$$L(\beta) = \sum_{i=1}^{N} \sum_{t=1}^{T} \left\{ C_1 - e^{Xit\beta} + n_{it} X_{it} \beta \right\},$$

where C_1 is a constant that does not change the maximization process, N is the number of firms, T is the number of time periods per firm, and n_{it} is the number of outside directors obtaining a directorship in firm i in year t.

Table 6 Determinants of directorships and appointments of busy outside directors. Model (1) presents poisson maximum likelihood estimates for the determinants of the number of directorships held by outside directors. The dependent variable counts the number of directorships held by the outside director. Model (2) presents logit estimates for busy directors. The dependent variable takes the value of one if the outside director holds three or more total directorships and the value of zero otherwise. The sample consists of 2,314 outside directors appointed to the boards of our 508 sample firms from 1989 to 1995. Unless the director is a CEO of another firm, we compute the average ownership of the outside director on all of the boards he serves, as well as the average industry-adjusted ROA and the size of these firms. If the appointee is a CEO in another firm, we simply record his ownership, the industry-adjusted ROA, and the size of the firm in which he is the CEO. We use the natural log of sales to proxy for firm size in model (1) and the natural log of the market value of assets in model (2). All industry adjustments are done by subtracting the median of the variable matching by the company's two-digit SIC code. We report *p*-values under *parentheses*

	(1)	(2)
Variable	Poisson	Logit
Constant	−0.197	−2.818
	(0.42)	(0.00)
Appointing firm's performance		
Industry-adjusted stock return $(R_t - R_{ind})_{t-1}$	0.108	0.152
	(0.36)	(0.34)
Sales growth [Log ($Sales_t$/$Sales_{t-1}$)]	−0.405	−0.121
	(0.49)	(0.53)
Appointee's characteristics		
Age	−0.057	−0.166
	(0.01)	(0.28)
Gender (female = 1, male = 0)	0.409	0.108
	(0.20)	(0.12)
Average directorship ownership (% of common stock)	0.006	−0.105
	(0.59)	(0.01)
Average directorship industry-adjusted ROA	0.190	0.377
	(0.03)	(0.00)
Average directorship change in the stock return $(R_t - R_{mkt})$	0.095	0.120
	(0.07)	(0.01)
Average directorship firm size	0.167	0.219
	(0.00)	(0.01)
CEO in another firm	0.202	0.883
	(0.00)	(0.00)
Retired CEO in another firm	0.288	1.659
	(0.00)	(0.00)
Gray director in another firm	−0.040	−0.199
	(0.05)	(0.01)
Law degree	−0.240	0.310
	(0.50)	(0.11)
MBA	0.194	−0.004
	(0.25)	(0.55)
Academic	−0.521	−0.184
	(0.28)	(0.05)
Politician (active or retired)	0.111	0.969
	(0.12)	(0.05)

(continued)

Table 6 (continued)

Variable	(1) Poisson	(2) Logit
Appointing board's characteristics		
Independent board	−0.329	−0.633
	(0.10)	(0.01)
Board size	0.189	0.327
	(0.04)	(0.02)
New CEO appointed	−0.041	−0.193
	(0.52)	(0.10)
Founder	−0.177	−1.041
	(0.20)	(0.28)
Pseudo R^2	0.03	0.11
N	2,314	2,314

their directorship count. The coefficients on both the average directorship industry-adjusted ROA and the market-adjusted stock return are positive, with *p*-values of 0.03 and 0.07, respectively.

We also observe that being a current or retired CEO of another firm positively affects the number of directorships held as does being a director at larger companies. Similar results are documented in Fich (2005) and Ferris, Jagannathan, and Pritchard (2003) and suggest that the increased visibility from sitting on boards of large companies may help some directors obtain more directorships. Finally, we find a lower count of directorships when directors have gray status at other boards, suggesting that firms avoid appointing board members that face potential conflicts of interest at other companies. Alternatively, extensive business dealings with a firm may leave gray directors with little time to serve on other boards.

Overall, the results of the Poisson model indicate that the accumulation of directorships is positively related to the performance of the firms in which the individual is an outside director, but we do not find evidence that poor performance increases the frequency of appointments of outside directors that serve on several boards.

4.2 Appointments of Busy Outside Directors

To study appointments of busy outside directors, we estimate a logit model using the 2,314 appointees, where the dependent variable is set equal to one if the director holds three or more total directorships (i.e., is busy), and is set equal to zero otherwise. Independent variables are similar to those used in the Poisson estimation.

Model (2) of Table 6 shows that firm performance for the appointing firm is not significantly associated with the probability of appointing a busy outside director. This result casts doubt on the idea that poor firm performance makes the

appointment of a busy outside director more likely. As with the Poisson model estimates, we find that appointments of busy outside directors are more likely when the other firms in which they hold directorships perform better. The coefficients are positive and statistically significant for variables that measure the average industry-adjusted ROA and the average market-adjusted stock return for companies in which the appointees are incumbent directors. In addition, busy outside directors are more likely to be appointed if they tend to sit on boards of larger firms, and are current or retired CEOs of other companies. Appointment of a busy director is less likely if the director is a gray director on another board or if the director is in academia. However, the probability of a busy director appointment is higher if the director is an active or retired politician.

Finally, we find that appointments of busy outside directors are less likely if these directors have relatively high stock ownership on the other boards on which they sit. One interpretation of this result is suggested by Perry and Peyer (2005), who argue that executives with high stock ownership at their own firms will be reluctant to assume outside board appointments if doing so detracts from maximizing value at their own companies. Our result suggests a similar interpretation – outside directors with strong ownership incentives on their current boards might be reluctant to take on additional board seats since that constrains their monitoring efforts on their current boards.

4.3 Departure Hazard for Outside Directors

We use a hazard model to investigate the annual risk of departure for each director. The hazard specification is appropriate because it censors all departures related to board term limits or death as well as the observations for directors that continue serving at the end of our coverage period.[10]

The results of the hazard model are presented in model (1) of Table 7. We find that poor firm performance is associated with a higher likelihood of outside director departure. The coefficient estimate on industry-adjusted stock return is negative and significant at the 1 % level, similar to the results in Hermalin and Weisbach (1988). The results also reveal that the number of directorships is significantly related

[10] The statistical significance of a covariate is given by the log-likelihood ratio statistic. Under the null hypothesis that $\beta = \beta_0$, $-2\log\left[\frac{L(\beta_0)}{L(\beta^{MLS})}\right]$ is distributed χ^2 with K degrees of freedom, where K is the number of elements of β, and $\frac{L(\beta)}{L(\beta^{MLS})}$ is the likelihood ratio statistic. For the hazard estimation, presented as model (1) of Table VII, we estimate p-values for the test that an individual covariate is zero. Below each covariate, we report its risk ratio in parenthesis, a transformation of the estimated coefficient that is easier to interpret. The risk ratio is defined as the ratio of the hazard function under one set of covariates (X') to the hazard under a base case set of covariates (X^0): $R(X', X^0) \equiv \frac{h_i(t|X')}{h_i(t|X^0)}$. For example, the percentage change in the hazard given a one-unit change in the k'th quantitative covariate is simply estimated as $\frac{h_i(t|X_k=X+1)}{h_i(t|X_k=\hat{X})} - 1 = \exp[\beta_k(\hat{X}+1) - \beta_k(\hat{X})] - 1 = \exp[\beta_k] - 1$.

Table 7 Outside director departure. Estimates for the departure of outside directors appointed to the boards of *Forbes* 500 firms. We follow directors appointed between 1989 and 1995 until the year 2000. We are able to identify a total of 360 voluntary departures during our coverage period. We classify a departure as voluntary if the reason given for the director's departure is either to pursue other interests or to take a position elsewhere. Model (1) estimates a departure hazard regression, where risk ratios appear in parentheses below each covariate estimate. Model (2) estimates a logit regression, where the dependent variable equals one if the departing director holds three or more directorships, and equals zero otherwise. In 826 instances we are unable to exactly establish the reason for the departure. From both models, we exclude observations related to 638 executives that continue serving as directors at the end of our coverage period. Excluded from the logit estimation are 490 departures related to board term limits, normal retirements, health problems, or death. We report risk ratios below each covariate estimate in the hazard model and heteroskedasticity-robust *p*-values below each logit estimate. In both models, *a*, *b*, and *c* denote significance at the 1 %, 5 %, and 10 % levels, respectively

	(1)	(2)
Variable	Hazard (all departures)	Logit (busy versus non-busy)
Constant		−7.200
		(0.00)
Departure firm's performance		
Industry-adjusted stock return ($R_t - R_{ind}$)	−0.882[a]	−0.579[b]
$_{t-1}$	(0.414)	(0.05)
Sales growth [Log ($Sales_t/Sales_{t-1}$)]	−0.130	−0.089
	(0.878)	(0.39)
Departing director characteristics		
Directorships	0.271[a]	
	(1.312)	
Age (years above 55 in the hazard)	0.078[c]	0.085
	(1.081)	(0.14)
Gender (female = 1, male = 0)	0.213	0.651[b]
	(1.238)	(0.04)
Ownership (% of common stock)	−0.398	0.332
	(0.671)	(0.64)
CEO of another firm	−0.526[b]	0.153
	(0.591)	(0.26)
Retired CEO of another firm	−0.243	−0.056
	(0.784)	(0.45)
Departure board characteristics		
Independent board	−0.108	0.128[a]
	(0.898)	(0.01)
Board size	0.019	−0.251[b]
	(1.019)	(0.05)
New CEO appointed	0.135[a]	1.055[a]
	(1.144)	(0.00)
Founder	−0.515	−0.611
	(0.597)	(0.15)
N	1,676	1,186
Year (0,1) indicators	No	Yes
Model's *p*-value	0.00	0.00

to the chance of departure. The coefficient for the number of directorships is positive and significant (0.27, p-value = 0.00) indicating that each additional directorship leads to a significant increase in the hazard of voluntary departure. In addition, departures are about 14.4 % more likely to occur in firms that appoint a new CEO during the year. However, directors that are CEOs of other companies are less likely to depart the board.

4.4 Firm Performance and Busy Outside Director Turnover

Though the results of the hazard model indicate that directors with multiple board seats are more likely to depart, it is unclear whether firm performance affects the probability of departure of busy outside directors. To investigate this issue, we exclude departures related to board term limits or death and divide the remaining 1,186 departures by whether or not the departing director holds three or more directorships. We estimate a logit model in column (2) of Table 7, where the dependent variable takes the value of one if the departing outside director holds three or more directorships (i.e., is busy) and takes the value of zero otherwise.

The results illustrate a clear link between company performance and the departure of busy outside directors. The coefficient estimate for industry-adjusted stock return is negative and statistically significant (p-value of 0.05). In terms of the marginal effects implied by the coefficient on stock returns, underperforming the industry by 50 % increases the probability of busy outside director departure by 1.54 % points. Though this effect is not large, it is meaningful when compared to the unconditional frequency of outside director turnover of 6.7 % in the sample.

In addition to performance measures, we find that aspects of the company's governance structure impact the probability of busy outside director departures. Busy directors are more likely to leave small and/or independent boards. These results suggest that their departures are more likely when the board is predisposed to stronger monitoring.

We also find that busy outside directors are more likely to depart when a new CEO takes office. In terms of the marginal effects implied by this coefficient estimate, if a new CEO is appointed, the probability of a simultaneous busy director departure increases by 4.78 % points. Hermalin and Weisbach (1988), Farrell and Whidbee (2000), and Yermack (2004) find that outside directors are more likely to leave the board when a new CEO is appointed. Our results illustrate that this effect is more pronounced for busy outside directors. To put our results in perspective, unconditionally, a new CEO increases the probability of an outside director departure in the same year by 2.98 % points. Therefore, our estimates suggest that busy outside directors are substantially more likely to leave the board than nonbusy outsiders when new CEOs are appointed.

In summary, we uncover evidence suggesting that the presence of busy outside directors is endogenous with respect to firm performance. However, since busy directors are more likely to depart following poor firm performance, the effect that we find works against our documented results on the inverse relation between performance and a majority of busy outside directors.

5 Busy Boards and Forced CEO Turnover

As an additional test of the impact of busy boards on the quality of corporate governance, we study the sensitivity of CEO turnover to firm performance in our sample. Besides providing direct evidence on how busy directors impact an important board decision, the advantage of this approach is that it is immune to the potentially confounding effect of growth opportunities that might be present in the market-to-book ratio regressions presented earlier.

We estimate logit models for the probability of forced CEO turnover while controlling for several firm and corporate governance attributes. We classify a turnover episode to be forced using a three-part rule similar to that in Parrino (1997). First, we classify turnover as forced if the *Wall Street Journal* reports that the CEO is fired, forced from office, or departs due to policy differences. Second, we classify turnover to be forced if the CEO is not close to retirement (60 years or more) and the *Wall Street Journal* does not report the reason for the departure as being death, poor health, or the assumption of another position (elsewhere or within the firm). Third, we classify a turnover episode as forced if the CEO is not of retirement age and the *Wall Street Journal* reports that the CEO is retiring, but does not announce the retirement at least 6 months prior to the departure.

CEO turnover episodes occur for 11.28 % (321 events) of the observations in our sample, a frequency similar to those in other studies such as Coughlan and Schmidt (1985) who report a 12 % frequency using 1978–1980 data, and Mehran and Yermack (1997) who report a 10.8 % frequency using 1984–1991 data. Approximately 63 % of departing CEOs (202 executives) leave office due to retirement, and 18 % (58 executives) are forced out of office, an incidence rate comparable to that in Parrino, Sias, and Starks (2003) who document a 19 % frequency using 1982–1993 data.

Our independent variable of interest is the busy board (0,1) indicator that takes the value of one if 50 % or more outside directors hold three or more directorships. As a measure of performance, we use the industry-adjusted ROA for the year preceding the turnover. We include a (0,1) variable to indicate an independent board, where a value of one denotes that 50 % or more of the directors are outside directors. Other control variables include company size, measured as the natural log of sales, the natural log of board size, and the percentage of shares owned by institutional investors, outside directors, and the CEO. The models control for the natural log of the years the CEO has been in office. Finally, Mehran and Yermack (1997) find an inverse association between the probability of voluntary CEO turnover and the value of stock option compensation in relation to total pay. Thus, we add the Black-Scholes (1973) value of the options granted to the CEO scaled by total pay as an independent variable in the regression.[11] All models include (0,1) year indicators.

[11] The option value is adjusted for dividend payouts (Merton 1973).

Table 8 Busy outside directors and forced CEO turnover. Logit coefficient estimates of forced CEO turnover. The dependent variable takes the value of one if the CEO is forced out of office and the value of zero otherwise. The independent variables are as follows. Busy outsiders is a dummy variable that equals one if 50 % or more of the outside directors hold three or more directorships. Return on assets (ROA) is operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72), and the decrease in other current assets (Compustat item 68). This measure is divided by the average of beginning- and ending-year book value of total assets (Compustat item 6). A board is classified as independent if 50 % or more of its directors are independent, thus, we construct an indicator that equals one in these cases and equals zero otherwise. Firm size is the natural logarithm of total sales (Compustat item 12). CEO stock compensation divides the Black-Scholes (1973) value of the options granted during the year by base pay. CEO tenure measures the years the CEO has held the chief executive job. Ownership for the CEO, institutions, and outside directors is measured as a percentage of common. The sample consists of 2,844 CEO-year observations drawn from 508 *Forbes* 500 firms from 1989 to 1995. White (1980) heteroskedasticity-robust *p*-values are reported in *parentheses* below each coefficient estimate

	(1)	(2)	(3)	(4)
Variable	Estimate	Estimate	Estimate	Estimate
Constant	−3.81	−3.87	−3.88	−3.88
	(0.00)	(0.00)	(0.00)	(0.00)
Busy outsiders (0,1) indicator			−0.23	−0.13
			(0.01)	(0.13)
Industry-adjusted ROA $_{t-1}$	−3.60	−2.95	−2.90	−2.88
	(0.00)	(0.00)	(0.00)	(0.00)
Independent board indicator		0.60	0.64	0.58
		(0.23)	(0.06)	(0.30)
Firm size		0.23	0.19	0.22
		(0.00)	(0.00)	(0.00)
CEO stock compensation		−0.15	−0.15	−0.17
		(0.48)	(0.46)	(0.40)
CEO tenure		−0.00	−0.00	−0.00
		(0.45)	(0.45)	(0.56)
CEO ownership		−2.83	−2.92	−2.86
		(0.00)	(0.00)	(0.00)
Institutional ownership		0.00	0.00	0.00
		(0.42)	(0.44)	(0.42)
CEO is member of the founding family		−2.41	−2.37	−2.39
		(0.00)	(0.00)	(0.00)
Outside director ownership		−0.30	−0.32	−0.27
		(0.06)	(0.04)	(0.01)
Total number of directors		0.00	0.00	0.00
		(0.28)	(0.23)	(0.27)
Independent board indicator *(industry-adjusted ROA $_{t-1}$)		−4.12		
		(0.06)		
Busy outsiders X indicator *(industry-adjusted ROA $_{t-1}$)			2.82	
			(0.05)	
Busy outsiders X indicator *independent board indicator *(industry-adjusted ROA$_{t-1}$)				1.54
				(0.07)

(continued)

Table 8 (continued)

Variable	(1) Estimate	(2) Estimate	(3) Estimate	(4) Estimate
Value of interaction term and industry-adjusted ROA $_{t-1}$ (p-value of F-test in parenthesis)		−7.07 (0.00)	−0.08 (0.71)	−1.34 (0.23)
Year (0,1) indicators	Yes	Yes	Yes	Yes
Number of forced turnovers	58	58	58	58
Pr $> \chi^2$	<0.001	<0.001	<0.001	<0.001

Table 8 presents the results of four logit models based on 2,844 CEO-year observations drawn from our 508 firms from 1989 to 1995. Below each estimate, we report heteroskedasticity-adjusted p-values in parentheses. Regression (1) confirms results from prior studies, namely, that forced CEO turnover is sensitive to firm performance. In terms of the marginal effects implied by the coefficient in model (1), underperforming the industry by 50 % in the prior year increases the probability of forced CEO turnover by 4.36 % points.

Regression (2) includes the control variables discussed earlier. In general, we find these variables influence CEO turnover in a manner consistent with that reported in previous research. For example, CEOs are less likely to be forced out of office if they own large amounts of stock or belong to the founding family (Denis et al. 1997). As in Mehran and Yermack (1997), we find no significant association between forced turnover and stock option compensation for the CEO.

Regression (2) also confirms the effect of independent boards on the turnover-performance relation in our sample by including an interaction term between firm performance and the independent board indicator. The coefficient for this interaction term is negative (−4.12, p-value = 0.06), and the sum of the coefficients on industry-adjusted stock return and the interaction term (−7.07 = −2.95 − 4.12) is significantly different from zero at the 1 % level. This finding indicates that the performance-turnover relation is stronger in the presence of independent boards, a result that is similar to that described in Weisbach (1988).

Regression (3) estimates the impact of the busy board indicator by including the interaction between the busy board indicator and firm performance. We find that busy boards have a significant impact on the sensitivity of forced CEO turnover to performance. The interaction term yields a positive and statistically significant coefficient (p-value = 0.05), implying that the turnover-performance sensitivity is significantly lower when the outside directors are busy than when they are not busy. In fact, inspection of coefficient estimates on firm performance and the busy board interaction variable shows that CEO turnover is completely insensitive to firm performance when a majority of outside directors are busy (−0.08 = −2.90 + 2.82, p-value = 0.71). The estimates suggest that a 50 % decline in industry-adjusted ROA increases the probability of CEO turnover by about 3.52 % points when outside directors are not busy, but only by 0.59 % points when outside directors are busy.

Regression (4) explores this result further in the context of Weisbach's (1988) findings on the importance of an independent board on turnover-performance sensitivities. We explore if the effect of independent boards on CEO turnover depends upon whether a majority of the outside directors are busy, by including a three-term interaction between firm performance, the busy board indicator, and the independent board indicator. The coefficient on this variable measures whether the turnover-performance sensitivity when both the board is independent and a majority of outside directors are busy differs from turnover-performance sensitivity in other firms. The interaction term is positive and significant at the 7 % level. The coefficient estimate implies that an independent board with busy outsiders weakens the turnover-performance relation ($-1.34 = -2.88 + 1.54$, p-value $= 0.23$). For a 50 % decline in industry-adjusted ROA, CEO turnover probability rises by 6.94 % points when the board is both independent and not busy, but by only 1.54 % points when the board is independent and busy. This result shows that busy outside directors severely ameliorate the effect of board independence on the turnover-performance relation.

6 Valuation Impact of Busy Outside Director Departures and Appointments

The case study evidence for Elaine Chao described in the introduction suggests that investors viewed her departure from the boards on which she served as favorable news. We use the incidence of outside director departures to study whether this pattern holds in a broader sample. If busy outside directors contribute to weaker corporate governance, we expect that their departure should be associated with a positive market reaction.

To focus on departures that are not perfectly anticipated due to retirements, term limits, etc., we study the 360 voluntary departure episodes in our sample. We drop observations coinciding with other major company announcements and those for which the exact date of departure cannot be established. To avoid confounding the results with information regarding a new board appointee, we also exclude 36 observations that announce a director's departure and the replacement simultaneously. This results in a sample of 243 departures. We use the standard event study methodology (Dodd and Warner 1983) to compute abnormal returns (*ARs)* for the announcement date. Market model parameters are computed from 1 year of trading data preceding the event window.[12]

Results of the event study are reported in Panel A of Table 9. We observe that positive and statistically significant *ARs* are associated with all voluntary departure

[12] To control for possible bias on the market model parameters, we reestimate our *ARs* with simple net-of-market returns in place of market model returns. This estimation generates similar results to those we obtain with the market model parameters.

Table 9 Investor reactions to voluntary departures of outside directors. Panels A and B present Day-0 abnormal returns (*ARs*) associated with departure announcements of outside directors from the boards of *Forbes* 500 firms. Reported below each estimate are *p*-values from two-tailed tests using a *t*-test for means, and a Wilcoxon *Z* signed-rank test for medians

Panel A

	All departures	Director has two or fewer directorships before departure	Director has three or more directorships before departure	*t*-statistic (mean differences)	*Z*-statistic (median differences)
Mean *AR*	0.0098 (0.06)	0.0090 (0.08)	0.0133 (0.00)	1.99	
Median *AR*	0.0053 (0.05)	0.0034 (0.07)	0.0080 (0.00)		3.16
N	243	198	45		

Panel B

Is board busy after departure?	*N*	Mean *AR*	Median *AR*	*t*-statistic (mean differences)	*Wilcoxon Z*-statistic (median differences)
Yes	27	0.0073 (0.05)	0.0045 (0.04)	2.02	1.98
No	18	0.0223 (0.00)	0.02145 (0.04)		

episodes; however, the mean and median *ARs* (1.33 % and 0.8 %, respectively) related to the departure of busy outside directors are larger than the *ARs* (0.9 % and 0.34 %, respectively) related to the departure of nonbusy outside directors. These differences are statistically significant with a *t*-statistic of 1.99 and a *Z*-statistic of 3.16. These results are in agreement with those presented in Table 1, and indicate that, on average, the departure of busy outside directors is welcome news to shareholders.

While the event study suggests that investors view the departure of busy outside directors favorably, it is possible that the departures trigger other changes that investors also favor. For example, the departure may change the balance of power between the CEO and the board (Hermalin and Weisbach 1998). In some circumstances, the departure may be advantageous for the firm because the director might be able to help the firm in his/her new position. It is also possible that busy outside director departures serve as a signal that additional governance reforms are forthcoming. Further, since we focus on departures that are not accompanied by a concurrent replacement, it is plausible that the positive *ARs* may reflect the valuation impact of a reduction in board size (Yermack 1996), though this explanation cannot account for the differential valuation effect associated with departures of busy and nonbusy directors.

Another explanation for these results, suggested by Shivdasani and Yermack (1999), is that some outside directors acquire conflicts of interest over time and switch status to gray directors. If this pattern is pervasive, our results might instead capture the effect of replacing gray directors on the board. To examine this possibility, we verify whether the status of outside directors changed to gray during

their tenure. We find that only five of the 198 nonbusy outside directors and two of the 45 busy outside directors in our subsample acquire conflicts of interest during their tenure warranting a change in classification to gray status. Using a different sample of director appointments, Yermack (2004) also reports that relatively few outside directors change their status to gray over their tenure. When we repeat the event study excluding these seven observations, we obtain returns similar to those tabulated.

Another possibility is that the remaining board is less likely to be busy after a busy director's departure. Of the 45 boards that lost a busy outside director, 18 firms switched status from a busy board to a nonbusy board. In these firms, the percentage of outside directors that were busy declined from above 50 % to less than 50 % after the departure.[13] We conduct an event study for the 45 companies that lost a busy director. Panel B of Table 9 summarizes the *ARs* for the 45 firms that lost a busy director, broken down according to whether the majority of the remaining outside directors on the board are busy or nonbusy. Mean and median *ARs* for firms in which a majority of outside directors are not busy after the departure are 2.2 % and 2.1 %, respectively. In contrast, *ARs* for the other 27 companies in which a majority of outside directors remain busy are 0.7 % (mean) and 0.45 % (median). The difference between the two subsamples is statistically significant using both the *t*-test and the Wilcoxon test. This suggests that investors react more favorably to busy outside director departures that have a significant impact on the extent to which outside directors as a group remain busy.

At first glance, our event study results appear to be at odds with those reported in Ferris, Jagannathan, and Pritchard (2003). Ferris, Jagannathan, and Pritchard report a significantly positive 2-day announcement effect around the first appointment of a busy director to the board. However, this discrepancy arises because Ferris, Jagannathan, and Pritchard do not focus on firms that already have busy directors on the board. Specifically, they study 84 firms that announced the appointment of a busy director and report a positive mean announcement return of 0.41 % for this sample. Among these 84 firms, 41 observations represent the first appointment of a busy director to the board, and for this subsample, the mean announcement return is 2.12 %. Though not reported by Ferris, Jagannathan, and Pritchard, one can infer that the mean announcement return for the remaining 43 firms that already had at least one busy director on the board is −1.22 %. Therefore, their data also suggest that director appointments that lead to several outside directors being busy have a negative effect on firm value.

[13] We determine that boards have switched status from busy to nonbusy by focusing on the remaining outside directors on the board. It is possible, of course, that a firm may replace a departing busy director with a busy appointee, leaving the board's status unchanged. To account for this, we also track changes in board composition for a 6-month period following the director's departure and consider these changes in determining the board's busy status. Using this process, we identify 19 firms that switched to nonbusy status and obtain virtually identical results to those reported herein.

Table 10 Investor reactions to additional board appointments for outside directors. Panels A and B present Day-0 abnormal returns (*ARs*) for shared-directorship firms around the announcement of an additional board appointment in publicly traded companies obtained by incumbent outside directors. Reported below each estimate are *p*-values from two-tailed tests using a *t*-test for means, and a Wilcoxon *Z* signed-rank test for medians

Panel A

	All appointments	Director has two or fewer directorships after appointment	Director has two or more directorships after appointment	*t*-statistic (mean differences)	*Z*-statistic (median differences)
Mean *AR*	−0.00224 (0.50)	−0.00102 (0.62)	−0.0104 (0.05)	2.04	
Median *AR*	−0.0025 (0.44)	−0.0010 (0.31)	−0.0093 (0.04)		2.78
N	818	712	106		

Panel B

Shared-directorship board switches to busy status after appointment	*N*	Mean *AR*	Median *AR*	*t*-statistic (mean differences)	*Wilcoxon Z*-statistic (median differences)
Yes	23	−0.018 (0.03)	−0.0146 (0.07)	1.86	1.69
No	83	−0.0083 (0.19)	−0.009 (0.24)		

We provide further evidence on the valuation impact of multiple directorships in Table 10. We focus on how the stock prices of a director's existing directorship firms react when the director receives an additional board seat. For this test, we use the sample of 2,314 appointments of outside directors to our sample firms' boards. For each of these appointments, we study the announcement return for the shared-directorship firms (i.e., other firms' board on which they sit). For the shared-directorship firms, we identify 818 distinct appointment announcement dates that are uncontaminated by other major news release. Panel A shows that for the 818 shared-directorship firms, the average announcement return is −0.22 % and is not significantly different from zero. However, the announcement effect depends on whether the outside director becomes busy as a result of the new board seat. In 106 cases, appointed directors held two or more board seats prior to the announcement, and are therefore classified as busy after obtaining the additional board seat. For these 106 shared-directorship firms, in which the outside director holds three or more board seats following the appointment, the average announcement return is −1.04 % (p-value = 0.05). In contrast, when the director is not busy following the appointment, shared-directorship firms have a statistically insignificant average announcement return of −0.1 %. The negative announcement return for shared-directorship firms when directors end up with three or more directorships suggests that the costs of the additional directorship outweigh the benefits of greater reputation or experience associated with the appointment.

In Panel B of Table 10 we investigate further the 106 appointments that cause outside directors of shared-directorship firms to become busy. In 23 cases, the classification of the overall board for the shared-directorship firms switches in status from nonbusy to busy as a result of the outside director's additional appointment. For these firms, the average announcement return is −1.8 % and is statistically significant at the 5 % level. However, the announcement return is muted in comparison and is statistically insignificant in the 83 cases for which the additional appointment does not move the board of the shared-directorship firm to busy status. Thus, the costs of an additional board seat appear to dominate the benefits for firms in which a majority of its outside directors are likely to be busy as a result of serving on multiple boards.

Overall, the results suggest that changes in busy status of the board are associated with relatively large revaluations in stock price. The departure of a busy outside director that leaves a majority of remaining outside directors as not busy leads to an average abnormal return of 2.2 %. Evidence from the shared-directorship firms indicates an average abnormal return of −1.8 % when their boards switch to busy status as the result of an outside director gaining a board seat. The magnitude of these effects is surprisingly large, considering that the appointment of an outside director typically has a relatively muted stock price effect. For example, Rosenstein and Wyatt (1990) find that appointments of outside directors are associated with an average abnormal return of only 0.22 %. We suspect that the large valuation effects associated with busy boards reflect both the reduced monitoring of operating performance, as indicated by our results on profitability, and the lower likelihood of specific board actions, such as CEO turnover, that may have implications for firm value. During 1989–1994, Huson, Parrino, and Starks (2001) find that forced CEO turnover announcements led to a 4 % increase in stock price, on average. We find such forced removals were less likely by busy boards. If busy boards are also distracted from monitoring managerial actions such as major acquisitions, investment proposals, and responses to takeover bids, the expected valuation effects from lax monitoring can be sizeable since these events can have a significant impact on shareholder value.

7 Conclusions

In an era of heightened corporate governance scrutiny, substantial debate has focused on the effectiveness of the monitoring by the board of directors in large, publicly traded corporations. A significant element of this debate is centered on whether outside directors serving on several boards should cut back on the number of their directorships or be required to do so. A common view among investors and policy advocates is that serving on numerous boards can result in overstretched directors that may not be effective monitors on any board.

We present evidence confirming this popular view using a panel of large U.S. industrial firms from 1989 to 1995. We focus on boards in which a majority of

outside directors sit on three or more boards, and we present several results that highlight the effect that these busy outside directors have on corporate value and governance.

We find that companies with a majority of busy outside directors display significantly lower market-to-book ratios. All else equal, firms with busy outside directors have market-to-book ratios about 4.2 % lower than other firms. Evidence of weaker performance by companies with busy outside directors is also obtained from tests of operating performance. We show that firms with busy boards display lower operating return on assets, lower asset turnover ratios, as well as lower operating return on sales, and that these effects are also economically meaningful.

We show that appointments of directors who hold three or more directorships are not more likely to occur in firms that are performing poorly, casting doubt on the idea that a tendency for poorly performing firms to appoint busy directors is responsible for our findings. In fact, we find that in underperforming firms, outside directors who hold three or more directorships are more likely to leave a board than other outside directors, suggesting that the potential endogeneity of the presence of busy directors might work against us uncovering the inverse relation between busy boards and performance.

Forced CEO turnover-performance sensitivities provide further evidence of the impact of busy outside directors on corporate governance. We find that a 50 % decline in industry-adjusted performance increases the probability of turnover by 3.52 % points when the board is not busy, but the probability rises by only 0.59 % points when a majority of outside directors are busy. The joint impact of a busy board and an independent board is particularly large. Independent boards in which outsiders are not busy are associated with a 6.94 % point higher likelihood of CEO turnover for a 50 % drop in industry-adjusted performance, but the corresponding change in CEO turnover probability is only about 1.5 % points higher for independent boards in which a majority of outside directors are busy.

Further support for the effects of busy outside directors comes from event study results of outside director departure announcements. We find that departures of busy outside directors are associated with significantly positive abnormal returns that average 1.33 % at the announcement. The abnormal returns are significantly more positive when fewer than 50 % of the remaining outside directors are busy after the departure.

While our tests focus on studying the costs of holding multiple board seats, findings in this paper and in the literature also point to the benefits of multiple directorships. For example, Ferris, Jagannathan, and Pritchard (2003) show that the initial appointment of a busy director to a board without an incumbent busy director is good news for shareholders, implying that the experience or reputational impact of such outside directors can be beneficial. We also show that outside directors that are associated with well-performing firms tend to hold more board seats, consistent with the view that well-performing directors are rewarded in the market for directorships. However, results also highlight a cost to holding numerous board seats, suggesting that as directors accumulate more directorships, they may become

increasingly constrained in being effective monitors, and that this effect is likely to be important when a majority of the outside directors are overcommitted.

Collectively, our results suggest that boards relying heavily on outside directors that serve on several boards are likely to experience a decline in their quality of corporate governance. However, we are reluctant to conclude with recommendations mandating limits on the number of boards on which directors should serve. Our analysis does not include other potential effects of such limits, such as the effect on directors' incentives to establish reputations as expert monitors in the market for directorships or the potential valuation effects for companies that send their executives to serve as outsiders on other boards. Nonetheless, based on the evidence in this paper, we are inclined to suggest that for some firms, the optimal board design entails a lower reliance on outside directors that serve on numerous boards.

Acknowledgements The paper benefited from comments by participants at the 2005 American Finance Association meetings, the 2004 Financial Research Association conference, and by seminar participants at Drexel, INSEAD, Seton Hall, North Carolina State, University of North Carolina, and Universidade Catolica de Portugal. The authors thank Anup Agrawal, Stuart Gillan, Bill Greene, Naveen Khanna, Robert Stambaugh, David Yermack, and an anonymous referee for helpful suggestions. The authors acknowledge financial support from the Wachovia Center for Corporate Finance.

References

Anderson, R., & Reeb, D. (2003). Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance, 58*, 1301–1328.

Beasley, M. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review, 71*, 443–465.

Berger, P., & Ofek, E. (1995). Diversification's effect on firm value. *Journal of Financial Economics, 37*, 39–66.

Black, F., & Scholes, M. (1973). The pricing of options and corporate liabilities. *Journal of Political Economy, 81*, 637–654.

Booth, J., & Deli, D. (1996). Factors affecting the number of outside directorships held by CEOs. *Journal of Financial Economics, 40*, 81–104.

Brickley, J., Link, J., & Coles, J. (1999). What happens to CEOs after they retire? New evidence on career concerns, horizon problems, and CEO incentives. *Journal of Financial Economics, 52*, 341–377.

Brown, W., & Maloney, M. (1999). *Exit, voice and the role of corporate directors: Evidence from acquisition performance*. Working paper, Claremont McKenna College.

Coles, J., & Hoi, C.-K. (2003). New evidence on the market for directors: Board membership and Pennsylvania Senate Bill 1310. *Journal of Finance, 58*, 197–230.

Core, J., Holthausen, R., & Larcker, D. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics, 51*, 371–406.

Coughlan, A., & Schmidt, R. (1985). Executive compensation, management turnover, and firm performance: An empirical investigation. *Journal of Accounting and Economics, 7*, 43–66.

Cummings, J. & Jaffe G. (2000). A floated name for cabinet lands with a thud. *Wall Street Journal*, Eastern Edition, 28 Dec 2000, A12.

Daines, R. (2001). Does Delaware law improve firm value? *Journal of Financial Economics, 62*, 525–558.

Denis, D., Denis, D., & Sarin, A. (1997). Ownership structure and top executive turnover. *Journal of Financial Economics, 45*, 193–221.

Dodd, P., & Warner, J. (1983). On corporate governance: A study of proxy contests. *Journal of Financial Economics, 11*, 401–438.

Fama, E. (1980). Agency problems and the theory of the firm. *Journal of Political Economy, 88*, 288–103.

Fama, E., & French, K. (1992). The cross-section of expected stock returns. *Journal of Finance, 47*, 427–465.

Fama, E., & Jensen, M. (1983). The separation of ownership and control. *Journal of Law and Economics, 26*, 301–325.

Farrell, K., & Whidbee, D. (2000). The consequences of forced CEO succession for outside directors. *Journal of Business, 73*, 597–628.

Ferris, S., Jagannathan, M., & Pritchard, A. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *Journal of Finance, 58*, 1087–1111.

Fich, E. M. (2005). Are some outside directors better than others? Evidence from director appointments by fortune 1000 firms. *Journal of Business, 78*(5), 1943–1971.

Fich, E. M., & Shivdasani, A. (2005). The impact of stock-option compensation for outside directors on firm value. Journal of Business 78, 2229–2254.

Gilson, S. (1990). Bankruptcy, boards, banks and blockholders: Evidence on changes on corporate ownership and control when firms default. *Journal of Financial Economics, 27*, 355–387.

Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics, 118*, 107–155.

Harford, J. (2003). Takeover bids and target directors' incentives: The impact on directors wealth and board seats. *Journal of Financial Economics, 69*, 51–83.

Hermalin, B., & Weisbach, M. (1988). The determinants of board composition. *Rand Journal of Economics, 19*, 589–606.

Hermalin, B., & Weisbach, M. (1998). Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review, 88*, 96–118.

Huson, M., Parrino, R., & Starks, L. (2001). Internal monitoring mechanisms and CEO turnover: A long-term perspective. *Journal of Finance, 56*, 2265–2297.

Kaplan, S., & Reishus, D. (1990). Outside directorships and corporate performance. *Journal of Financial Economics, 27*, 389–410.

Lublin, J. S. (2001). Multiple seats of power: Companies are cracking down on number of directorships board members can hold. *Wall Street Journal*, 23 Jan 2001, B1.

Mace, M. (1986). *Directors: Myth and reality*. Boston: Harvard University Press.

Mehran, H.,, & Yermack, D. (1997). *Compensation and top management turnover*. Working paper, New York University, Stern School of Business.

Merton, R. C. (1973). Theory of rational option pricing. *Bell Journal of Economics and Management Science, 4*, 141–183.

Parrino, R. (1997). CEO turnover and outside succession: A cross-sectional analysis. *Journal of Financial Economics, 46*, 165–197.

Parrino, R., Sias, R., & Starks, L. (2003). Voting with their feet: Institutional ownership changes around forced CEO turnover. *Journal of Financial Economics, 68*, 3–46.

Perfect, S., & Wiles, K. (1994). Alternative constructions of Tobin's Q: An empirical comparison. *Journal of Empirical Finance, 1*, 313–341.

Perry, T., & Peyer, U. (2005). Board seat accumulation by executives: A shareholder's perspective. *Journal of Finance, 60*, 2083–2123.

Rosenstein, S., & Wyatt, J. (1990). Outside directors, board independence, and shareholder wealth. *Journal of Financial Economics, 26*, 175–191.

Shin, H.-H., & Stulz, R. (2000). *Firm value, risk, and growth opportunities*. Working paper, National Bureau of Economic Research 7808.

Shivdasani, A. (1993). Board composition, ownership structure and hostile takeovers. *Journal of Accounting and Economics, 16*, 167–198.

Shivdasani, A., & Yermack, D. (1999). CEO involvement in the selection of new board members: An empirical analysis. *Journal of Finance, 54*, 1829–1853.

Smith, C., & Watts, R. (1992). The investment opportunity set and corporate financing, dividend and compensation policies. *Journal of Financial Economics, 40*, 263–292.

Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics, 53*, 113–142.

Weisbach, M. (1988). Outside directors and CEO turnover. *Journal of Financial Economics, 20*, 431–460.

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica, 48*, 431–460.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics, 40*, 185–211.

Yermack, D. (2004). Remuneration, retention, and reputation incentives for outside directors. *Journal of Finance, 59*, 2281–2308.

Board Diversity as a Shield During the Financial Crisis

Peter-Jan Engelen, Annette van den Berg, and Gerwin van der Laan

Abstract This chapter examines the link between board diversity and firm financial performance for a sample of Dutch listed companies during the recent financial crisis. We examine seven dimensions of diversity: nationality diversity, gender diversity, diversity with respect to the level of education, diversity with respect to the field of education, expertise diversity, socioeconomic background diversity and age diversity. Our empirical results show a hyperbolic relation between the focal variables age diversity, expertise diversity and background diversity and firm financial performance. We also find that gender diversity, nationality diversity and diversity with respect to education have no impact on firm performance during crisis times. Our empirical results show that focusing on only one dimension of the full diversity vector or on linear effects only can lead to detrimental economic effects.

1 Introduction

Diversity in the workforce has been a hot topic in the public debate and in academic research over recent years. Board diversity has received a lot of attention as well. The discussion of this aspect of board demography has mainly been focused on gender and ethnic diversity (Daily and Dalton 2003). Several European countries, such as Norway, Spain, France and the Netherlands, have introduced hard or soft gender quota through legislative initiatives as the outcome of this public debate. Some scholars observe that such quota are introduced "without knowing the impact of [such] actions on the firm's ability to create value" (Bohren and Strom 2010: 1281). The call for the representation of women and ethnic minorities on boards will therefore gain power if research supports a positive impact thereof on firm

P.-J. Engelen (✉) • A. van den Berg • G. van der Laan
Utrecht University School of Economics, Utrecht, Netherlands
e-mail: p.j.engelen@uu.nl

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_11,

performance. However, there is no consensus on the link between board diversity and firm performance in the literature. Carter et al. (2010) only come across nine studies that specifically analyze this link. Seven studies focused solely on gender diversity, of which two find a positive relationship, three find no relationship, and two a negative relationship. For instance, Shrader et al. (1997) analyzed the top 200 US firms and did not find any (or even a negative) relationship between the number of female board members and firm performance. No relationship was found by Erhardt et al. (2003) on a US sample, or by Rose (2007) on a Danish sample. Two studies analyzing the joint impact of gender and ethnic diversity showed no conclusive evidence either.

Studies on the demography of boards primarily appeared in the management literature (Bantel 1993; Milliken and Martins 1996; Robinson and Deschant 1997), whereas the economics and finance literature predominantly focused on the fraction of independent directors in boards (Adams et al. 2010; Agrawal and Knoeber 1996; Baysinger and Butler 1985; Bhagat and Black 1999; Hermalin and Weisbach 2003; Laux 2008; Rosenstein and Wyatt 1990; Yermack 1996). Recently, the diversity topic became increasingly important in the economics and finance literature too. Adams and Ferreira (2009) find that more gender-diverse boards have higher attendance records, higher CEO turnover after poor stock price performance and a higher fraction of equity-based directors' compensation. The authors interpret these results as improved monitoring by more gender-diverse boards. However, more gender-diverse boards also have a clear negative impact on firm performance. Farrell and Hersch (2005) find insignificant abnormal returns on the announcement of a woman added to the board, leading them to conclude that "adding women to the board does not result in value creation (or destruction)" (Ibidem: 86). Bohren and Strom (2010) and Ahern and Dittmar (2012) confirm the negative impact of more gender diversity on firm value creation. Carter et al. (2003) seems to be one of the few studies in the finance literature reporting a positive relationship between gender diversity and firm value.

Other work on board composition includes politically connected board members (Agrawal and Knoeber 2001; Goldman et al. 2009), board members with financial industry connections (Booth and Deli 1999; Kroszner and Strahan 2001), Anglo-Saxon board members (Oxelheim and Randoy 2003) and employee board members (Fauver and Fuerst 2006; Falaye et al. 2006). Overall, most studies on board composition could not provide a consistent link between composition and performance. Meta-studies have indeed found little evidence of significant positive relationships between firm financial performance and the number of directors (Dalton et al. 1999), the leadership structure (Dalton et al. 1998) or board independence (Van Essen et al. 2012). Thus, it appears that there is still much to gain in academic analyses of the diversity – performance nexus. A better understanding of board demography is indeed very important as the board of directors is the primary decision making organ within a public firm.

The mixed results might be explained by the contingent nature of board diversity. One can postulate that certain dimensions of board diversity may be beneficial in some companies, and not in others; or they may be important in certain times, and not

in others. In this chapter, we focus on this particular aspect and study whether board diversity leads to improved firm performance in times of crisis. We therefore assert that board diversity matters most during times of distress. The crux of our argument is that strategic decisions by boards are most needed in such critical times. As tomorrow's decision-making environment may indeed look very different from today's, out-of-the-box decision-making is warranted in crisis times. The study is particularly interesting because prior work has different propositions as to the effects of board diversity under these conditions. In a related literature on the impact of corporate governance on firm performance, Mitton (2002) finds that better corporate governance becomes crucial to preserve firm value during a financial crisis. One can assume that corporate governance matters most during crises as it is more difficult to realize the expected rate of return (Bae et al. 2002; Engelen and Van Essen 2010). Firms with weaker corporate governance are more vulnerable to the financial crisis and lose relatively more value during the crisis (Mitton 2002).

We take the recent financial crisis as our empirical setting and employ a rich dataset on supervisory board composition and diversity for Dutch listed companies. We manually collected and coded this detailed dataset during the period of 2006 until 2009. These years were selected because the financial crisis started off in 2007 and because the possible difference between firms which navigate the crisis well, and those that do not, are arguably present by 2009.

Our study contributes to the literature in four ways. First, to our knowledge, this is one of the very first studies to investigate the impact of board diversity on firm performance during a crisis. Previous studies analyzed board diversity during regular times, showing mixed results. Second, we use a rich and unique dataset on Dutch companies allowing us to consider multiple dimensions of board diversity. Previous studies only focused on one or two dimensions and ignored other dimensions of diversity. Analyzing multiple dimensions of board diversity might offer better insights into the link with firm performance. Using multiple diversity dimensions potentially allows answering the question whether one dimension of diversity substitutes or complements other dimensions. Third, we analyze whether any non-linear relationship exists between diversity indicators and firm performance. Finally, since Dutch supervisory boards consist only of non-executive members, our study measures the impact of board diversity on firm performance more precisely.[1] As prior work has been mainly US focused, it is more difficult to disentangle the impact of board independence and board diversity on firm performance due to the one tier board structure.

This chapter is organized as follows. Section 2 sketches the theoretical framework and introduces the hypotheses. Section 3 discusses the data collection, the calculation of the diversity indicators, the definition of focal and control variables

[1] The Netherlands have a two-tier board structure, consisting of a management board (Raad van Bestuur) in charge of the day-to-day operations of the firm and a supervisory board (Raad van Commissarissen). Dutch corporate law requires that all members of the supervisory board are non-executives.

and the sample description. Section 4 presents the empirical results. Finally, Sect. 5 concludes and discusses the limitations of the empirical study.

2 Hypotheses

Board diversity "relates to board composition and the varied combination of attributes, characteristics and expertise contributed by individual board members in relation to board process and decision-making" (Van der Walt and Ingley 2003: 219). The main theories in this field make different predictions on how board diversity can impact firm performance. The strongest theoretical support for a positive impact of board diversity on firm performance can be found in resource dependence theory (Pfeffer and Salanczik 1978). This strand of literature views the board as a boundary spanner between the company and the external resources important for its effectiveness. This includes resources such as links to business elites, access to capital, access to suppliers, connections to competitors, access to industry intelligence or connections to regulators and politicians (Van der Walt and Ingley 2003). A more diverse board is assumed to tap into different and wider resources, and thus to be better able to span the boundaries of the firm. Specific demographic characteristics of directors can therefore be very valuable to the firm. For instance, directors with experience in the financial industry might bring valuable access to certain sources of financing. Or, directors with a political background might bring connections with regulators to the company.

An example might illustrate this idea. In the Dutch banking sector the Van Lanschot Bank was diversely composed in 2006, comprising directors with different nationalities and genders, for example. According to the resource dependence theory argument, this diversity allowed the board to cope better with the challenges that arose during the financial crisis. Compared to the SNS Bank – which installed an all male and all Dutch board – this is indeed the case as the buy and hold return of the latter is significantly below that of the former.[2]

By providing key information and resources more diverse boards can provide a cushion against an uncertain environment (Siciliano 1996). As a key characteristic of a crisis is the environmental ambiguity, a wider portfolio of resources at the hands of the directors may allow the firm to move swiftly in any required direction. Earlier studies show that larger boards prove to be valuable during a crisis as a larger board opens up a larger network of expertise and resources (Chaganti et al. 1985; Dalton et al. 1999). A more diverse board can also offer a wider range of different perspectives and might stimulate creativity to find new solutions for the challenges ahead. Judge and Zeithaml (1992) and Daily and Dalton (1994) find that independent directors are valuable during crisis times as they are less likely to be

[2] This is not to say that the difference in diversity is the sole factor to explain the difference in the buy and hold return between both banks.

tied to the firm's current strategic choices. Board diversity contributes in this view to out-of-the-box thinking.

We thus analyze whether board diversity opens up a larger network of expertise and resources when needed most.

Hypothesis 1
A more diverse board has a positive impact on firm performance during a financial crisis as it links the firm to important resources

The alternative hypothesis builds upon two insights from social psychological theory and focuses on the disadvantages of more diverse boards. First, the availability of the increased resource base caused by diversity may lead to extensive discussions (Carter et al. 2010; Selby 2000). These discussions may slow down the decision-making process considerably. Such a process might be valuable in regular times, but too time-consuming in crisis times when immediate and rapid action is often vital for the survival of the company (Dowell et al. 2011). Research on group decision-making indeed reveals slower actions and more time and efforts to reach decisions (Hambrick et al. 1996; Knight et al. 1999). In crisis times more diverse boards might therefore be counterproductive. Dowell et al. (2011) find that a concentrated leadership structure with CEO duality allows firms to make faster decisions which might be a crucial factor during a financial crisis.

Second, diversity may incite social categorization, where individuals view their fellow directors as either belonging to their 'in group' or not (see Williams and O'Reilly 1998 for a review). Under conditions of social categorization, subgroups are thus likely to emerge. While individuals may have more diverse ideas, subgroup formation is likely not to elicit them. The power balance inside the board may lead to opinions of some subgroups to not be considered in decision-making. As diverse directors typically form a minority on the board, it is likely indeed that subgroup formation implies that their views are not heard. In crisis times, boards are under pressure to act swiftly, which may exacerbate the effects of social categorization. Closely related to this, Boone et al. (2004) find that in crisis times top teams are likely to become more homogeneous. This might indicate that boards tend to close ranks in times of increased environmental pressure.

Combining these two arguments, we test whether more diverse boards slow down the decision-making process when rapid action is vital for the survival of the company.

The Dutch banking sector again serves as an example: the board of the ABN AMRO Bank comprised ten directors in 2006, out of which five were non-Dutch. The supervisory board was unable to solve the performance crisis that arose just before the financial crisis hit. Consequently, the bank was unable to resist a hostile takeover attempt. The main competitor, ING Bank, faired much better, allegedly because only three out of its ten directors were non-Dutch. This example suggests that ING Bank benefitted from a more homogeneous board in crisis times.

Hypothesis 2
A more diverse board has a negative impact on firm performance during a financial crisis as it slows down the decision process

All in all, increasing board diversity may thus have different effects. On the one hand, diversity may increase the availability of diverse views. In this way it increases the abilities of the board to respond adequately to the challenges posed by a crisis situation. On the other hand, more diverse boards lengthen the decision process and reach a decision too late when circumstances change drastically or certain views may not be heard because of social categorization processes. If both effects work at the same time, it may well be that an optimal level of diversity exists during crisis times. With high levels of diversity come multiple possibilities for subgroup formation, and also the diverse backgrounds are likely to lead to an oversupply of solutions to decision problems. Reducing diversity somewhat may then reduce the risk of subgroup formation and increase cohesion which subsequently speeds up decision making. This will – according to our arguments – go at the expense of the supply of solutions to decision problems, yet under conditions of excess supply, the loss is likely not to be material. Beyond the optimal point, however, further homogenizing the board will add little in terms of decision speed, but will cost comparably more in terms of the solutions considered.

3 Data and Method

This section discusses the data collection, the calculation of our diversity indicators, the dependent and independent variables of our empirical model, and the description of the dataset.

3.1 Data Collection

To measure the impact of board diversity on firm performance we constructed a sample of 100 Dutch companies listed on Euronext Amsterdam. We included all constituents on the 1st of January 2009 of the large-cap index AEX, of the mid-cap index AMX and of the small-cap index AScX and complemented the sample with companies not included in any of the three indices, which we label the micro-cap segment. Our sample covers 99 % of the market capitalization of Euronext Amsterdam. Three AEX-companies (Royal Dutch Shell, Arcelor Mittal and Unibail-Rodamco) were excluded as they are not incorporated according to Dutch law, leading to a final sample size of 97 companies. Appendix 1 lists the companies included in the final sample.

We manually collected board diversity data from the 2006 annual report of each company. Data was collected by means of a special coding scheme. For each supervisory board member we hand collected the name, the age, the gender, the nationality, the level of education, the field of experience and the general

background. The coding scheme includes 24 different nationalities, five different levels of education (PhD, Master, Bachelor, lower than Bachelor, other), 12 fields of professional experience (e.g. commercial function, banking and finance, ICT, law, engineering) and five professional backgrounds (business, politics, governmental agency, academics and not-for-profit). When the annual report did not disclose a particular set of information, we searched the corporate website, social media such as LinkedIn, electronic newspaper archives (LexisNexis) and the internet. Any information still missing after the extended search was requested directly from the investor's relation department of the company. The extensive search for a missing data field is due to the measurement of the diversity indicators which can only be calculated when data on all board members of a company is available. For instance, if the field of education of all except one board member is known, the diversity indicator for the focal company has to be dropped from the dataset. Therefore, for some diversity dimensions the sample size will be smaller (see infra). Appendix 2 presents the coding scheme.

We furthermore collected information for the control variables supervisory board size and management board size from the 2006 annual reports. Ownership data was obtained from the transparency notifications at the end of 2006 to the Dutch supervisory agency AFM. Stock price data to calculate the buy and hold return over the crisis period was collected from Datastream and corrected for dividends, stock splits and stock dividends. The control variables firm size (the log-value of total assets) and firm leverage (the value of total debt over the value of total assets) and the six industry dummies were obtained from Datastream as well.

3.2 The Calculation of the Diversity Indicators

A frequently used measure of heterogeneity is the Blau indicator (Blau 1977).[3] This indicator is derived from the proportion of the board that belongs to a category k (with k = 1, . . ., K), such as the percentage of board members who are British, the percentage of board members with a political background or the fraction of female board members. In the case of gender diversity there are per definition only two categories, while our coding scheme included 24 categories for nationality and five categories for the background. More specifically, if in a board with n members, out of whom n_k are from category k, the Blau indicator for heterogeneity with K categories is:

$$B = 1 - \sum_{k=1}^{K} \left(\frac{n_k}{n}\right)^2 \tag{1}$$

[3] An alternative is the Teachman entropy measure (Teachman 1980). Instead of absolute proportions, this indicator uses a log-transformation. Essentially, the two indicators are very similar (Van der Laan et al. 2012).

The higher the Blau indicator, the higher the board diversity. The Blau indicator varies between its minimum value of 0 and its maximum value of 1; the former indicates complete homogeneity and the latter complete heterogeneity. In practice the indicator will often not reach its maximum value due to the size of the group (n), the number of categories (K) the attribute consists of, and indivisibilities (Van der Laan et al. 2012).

Only when the number of categories and group size is large, the Blau indicator will reach the value of 1. This implies that Eq. 1 cannot be compared across the different diversity indicators. For instance, the Blau indicator for gender diversity will never be higher than 0.50, while the maximum will be 0.92 for the field of expertise variable. As such, one cannot claim that a Blau indicator of 0.80 for the field of expertise is better than an indicator of 0.45 for the gender indicator.

To make our conclusions for diversity comparable across the different variables, one therefore needs to correct the Blau indicator. Equation 2 expresses the corrected Blau indicator which takes into account the maximum diversity each variable can reach. A corrected Blau indicator of 0.80 for gender diversity will be comparable with the same value for the field of expertise indicator. To calculate comparable diversity indicators across all six dimensions, we employ the following statistic in the empirical section:

$$B^{*} = \left(\frac{\min(n,K)}{\min(n,K)-1}\right)\left(1-\sum_{k=1}^{K}\left(\frac{n_k}{n}\right)^2\right) \tag{2}$$

With respect to the numerical variable of age, we will use the standard deviation and the coefficient of variation, which is the ratio of the standard deviation to the mean. The higher those values, the higher the diversity.

3.3 *Definition of Variables*

3.3.1 Dependent Variables

Our dependent variable of the firm performance measure is the *buy and hold return* (BHR) during the financial crisis. This return measure refers to the total return enjoyed by shareholders who hold the share over a certain period of time; including share price appreciation and dividend payouts. Following Beltratti and Stulz (2009), Fahlenbrach and Stulz (2010) and Engelen and Van Essen (2010), we count the crisis from July 2007 to January 2009.

3.3.2 Independent Focal Variables

Board diversity can be measured along several dimensions. The literature distinguishes between demographic and cognitive dimensions of diversity (Erhardt et al. 2003). Demographic diversity refers to gender, age or ethnicity, while

cognitive diversity refers to characteristics as knowledge, education and values. Most of the literature is only focused on demographic diversity, and more specifically on gender and ethnic diversity (Brammer et al. 2007). Our study uses a richer taxonomy of diversity. For each supervisory board of a Dutch company in our sample we hand collected the following characteristics:

1. Nationality diversity
2. Gender diversity
3. Human capital diversity
   (a) Level of education (BA, MA, PhD, etc.)
   (b) Field of education
   (c) Field of expertise
4. Socioeconomic diversity (background)
5. Age diversity

For each company we calculated a diversity index for each of the seven dimensions, except for age which is a continuous variable.

3.3.3 Independent Control Variables

We also included several other conventional corporate governance variables from the corporate governance literature. We include a measure to capture the strength of monitoring in a two-tier system: the relative board size of the supervisory board versus the management board. We label this variable *monitoring* to capture the intensity of the supervision. We include *board size* measured as the total number of directors who serve on the supervisory board to capture the scope of available resources.[4] In addition, we measured the impact of *ownership structure* on firm performance. We also constructed five dummy variables to distinguish the influence of concentrated and dispersed ownership on the one hand, and that of identities of concentrated owners on the other hand, on firm performance. Dispersed ownership is defined as a firm with no shareholder holding more than 10 % of the voting rights of the shares. The largest shareholders who reach this threshold level are divided in the following five identity categories: corporation, family, government, trust and institutional owner (Faccio and Lang 2002).

In order to assess the impact of general firm characteristics, we collected the following control variables: *firm size* measured as the log-value of total assets and *firm leverage* measured as the value of debt divided by the value of total assets. Finally, we include six *industry* dummies to control for industry effects, as Brammer et al. (2007) document industries with a close proximity to final consumers to have relatively more female directors.

[4] Board size is also used in one-tier systems as a traditional corporate governance variable to measure the strength of monitoring (Yermack 1996). In our dataset the correlation between board size and relative board size is only −0.24, indicating that both variables are not substitutes for the strength of monitoring. In the empirical part board size has to be dropped from the regression model due to its high correlation with firm size (see infra).

All our board diversity, corporate governance and firm-characteristic independent variables lag the dependent variable, and are measured before the financial crisis to avoid possible confounding effects that are associated with the crisis (Durnev and Kim 2005; Peng and Jiang 2010). We thus measure board diversity, corporate governance – and firm characteristics at the end of 2006 and relate it to the buy and hold return over the period 2007–2009.

For each dimension of board diversity we test hypothesis 1 and 2. We first run the following regression equation to measure any linear relationship between different dimensions of diversity and firm performance:

$$BHR_i = \alpha_i + \beta_{1,j} \cdot DIVERSITY_{i,j} + \beta_2 \cdot SIZE_i + \beta_3 \cdot LEV_i + \beta_4 \cdot MON_i + \beta_{5,m} \cdot industry\ dummy_{i,m} + \varepsilon_i \quad (3)$$

with BHR_i the buy and hold return for firm i in our sample, $DIVERSITY_{i,j}$ the corrected Blau-indicator for the focal dimension j of diversity (e.g. gender) of firm i, $SIZE_i$ the firm size as measured by the log-value of total assets and LEV_i the firm's leverage measured as the value of debt divided by the value of total assets, MON_i the strength of monitoring as measured by the relative board size of the supervisory board versus the management board and $industry\ dummy_{i,m}$ to capture any industry effect. Standard errors are robust.

As the effect of diversity on firm performance can have both a positive as well as a negative effect we extend our regression model to include for non-linear effects between the focal variables. We therefore include the square of each dimension variable in our regression equation:

$$BHR_i = \alpha_i + \beta_{1,j} \cdot DIVERSITY_{i,j} + \beta_{2,j} \cdot DIVERSITY_{i,j}^2 + \beta_3 \cdot SIZE_i + \beta_4 \cdot LEV_i + \beta_5 \cdot MON_i + \beta_{6,m} \cdot industry\ dummy_{i,m} + \varepsilon_i \quad (4)$$

3.4 Sample Description

3.4.1 Sample Population of Listed Firms

Our final sample of Dutch firms listed on Euronext Amsterdam includes 97 companies. On average the firm size as measured by the total assets amounts to 19 billion euro and is financed for 28 % by debt. The average market-to-book ratio of equity is equal to 2.99, with a minimum of 0.30 and a maximum of 13.10. The former implies that the firm's market value is below its book value, while the latter implies that the market value of equity is 13 times its book value. The average management board size is three board members and the average supervisory board includes five members. This average hides the variation as the number varies between a minimum of one and a maximum of eight for the management board, and two respectively ten for the supervisory board.

Table 1 Overview of the companies in our final sample

	Buy and hold return	Total assets (×1,000 euro)	Leverage	Management board size	Supervisory board size	M/B ratio
Panel A. Total sample						
Average	−0.53	19,172,178	0.28	3	5	2.99
Min	−0.90	3,096	0	1	2	0.30
Max	0.68	1,220,735,000	5.54	8	10	13.10
Median	−0.57	622,664	0.23	3	4	2.49
Number	97	97	97	97	97	95
Panel B. AEX market segment (large-caps)						
Average	−0.48	78,138,055	0.20	4	7	3.76
Median	−0.46	5,192,750	0.20	3	7	3.50
Panel C. AMX market segment (mid-caps)						
Average	−0.57	4,849,271	0.26	3	5	2.84
Median	−0.59	1,347,000	0.27	3	5	2.51
Panel D. AscX market segment (small-caps)						
Average	−0.61	1,175,701	0.29	3	4	3.15
Median	−0.62	439,600	0.24	3	4	2.73
Panel E. Other listed firms (micro-caps)						
Average	−0.50	681,091	0.35	2	4	2.47
Median	−0.63	50,392	0.19	2	4	2.13

When we break down the sample in different market segments we observe that large-cap firms typically have a larger management and supervisory board (4 resp. 7 members) than mid-caps (3 resp. 5 members), small-caps (3 resp. 4) and micro-caps (2 resp. 4). As can be expected the firm size drops significantly from 78 million euro for large-caps, to 4.8 million for mid-caps to 1.2 million for small-caps. Micro-caps have a total asset size of less than a million euro. Board size seems to be correlated with firm size, which is also confirmed in our correlation table in the next section. We also observe that firm leverage (total debt over total assets) increases as the firm size decreases: smaller firms tend to be on average more financed with debt (mid-caps 6 % points more than large-caps, while small-caps 9 % points more and micro-caps 15 % points more).

All firms seem to be hit significantly during the crisis: the average drop in firm value amounts to 53 % over the crisis period. On average, mid-cap and small-cap firms seem to be hit more severely than large-cap firms, while the percentage equity loss of micro-cap firms does not differ much from that of the large-caps. Table 1 summarizes the descriptive data for the firms in our sample.

3.4.2 Sample Population of Supervisory Board Members

As the relationship between board diversity and firm performance during the crisis period is the focal interest of this chapter, Table 2 also provides descriptive statistics for our sample population of board members. The final sample of 97 Dutch listed firms has in total 403 persons acting as supervisory board member

covering in total 482 board positions. For the current study the number of board positions is relevant as we measure the diversity at the board level.

The average age of the board members of Dutch listed firms amounts to 60 years (median of 61 years). Panel A of Table 2 furthermore shows that the standard deviation is almost 7 years and the coefficient of variation is 11 %. The majority of board members are in the age range between 60 and 64 years (147 members), followed by the age range 65–69 (115 members) and 55–59 (104 members). There are only 9 out of 482 board members who are younger than 45 years, while there are 26 board members of 70 years or older.

Panel B of Table 2 shows that about 94 % of the board members of Dutch firms in 2006 are men. Only 30 out of the 482 board members are female. Seventy-two firms have no women at all on their supervisory board. Twenty-two firms have one female board member and two firms have two female board members. One firm has four female board members.

On a total of 482 board members 371 have the Dutch nationality and 111 have a non-Dutch nationality (see Panel C of Table 2). The fraction of foreign board members in Dutch listed firms in 2006 is therefore equal to 23 %. The non-Dutch board members are concentrated in six nationalities: 23 % have a US nationality, 23 % a UK nationality, 15 % a Belgian nationality, 12 % a German nationality, 8 % a French nationality and 5 % a Swiss nationality. So, almost half of the non-Dutch board members have an Anglo-Saxon background.

The education level of the sample population is high. 87 % of the supervisory board members have at least a Master degree: 344 board members have a Master title (or equivalent) and 59 board members hold a PhD degree. About 9 % holds a Bachelor degree (or equivalent), while only 4 % has a degree lower than the bachelor level (Panel D of Table 2).

Panel E of Table 2 shows the field of education of the supervisory board members. The top three fields are business economics (30 %), a technical education (16 %) and law school (15 %). About 4 % has studied at a prestigious MBA institute.

About 43 % of the sample population possesses expertise in commercial functions (43 %), banking and financial services (11 %) and accounting and financial administration (10 %) (Panel F of Table 2).

Finally, Panel G shows the socio-economic background of the supervisory board members. Not surprisingly, about 89 % of the Dutch supervisory board members in 2006 have a business background. About 6 % has an academic background, 3 % has a political background and 1 % has a background as civil servant in a governmental agency. Only one board member of the total sample population has a background in the not-for-profit sector (e.g. NGO).

4 Empirical Results

We start the empirical analysis including only the control variables firm size, firm leverage, monitoring and industry dummies. We excluded the absolute size of the supervisory board as a control variable because it correlates very highly with firm

Table 2 Description of the sample population of supervisory board members in the Netherlands in 2006

Panel A. Age		**Panel B. Gender**			**Panel D. Level of education**			**Panel F. Expertise**		
Average	60	Men	452	93.8 %	Lower than bachelor	17	3.7 %	Commercial	204	43 %
Min	33	Women	30	6.2 %	Bachelor	41	8.9 %	Banking and financial services	52	11 %
Max	77				Master	344	74.6 %	Accounting	46	10 %
Median	61	**Panel C. Nationality**			Ph.D.	59	12.8 %	Others	176	37 %
Stdev	6.95	*Fraction of foreign board members*								
CoV	0.11	Domestic	371	77 %						
		Foreign	111	23 %						
Distribution		*Distribution of non-Dutch board members*			**Panel E. Field of education**			**Panel G. Background**		
$\geq$ 70 years	26	US	26	23 %	Business Economics	137	30 %	Business	429	89 %
65–69	115	UK	25	23 %	Technical	72	16 %	Academic	28	6 %
60–64	147	Belgian	17	15 %	Law	69	15 %	Politics	14	3 %
55–59	104	German	13	12 %	Economics	51	11 %	Governmental agency	6	1 %
50–54	45	French	9	8 %	Science	41	9 %	Others	2	0 %
45–49	36	Swiss	5	5 %	MBA	18	4 %	Not-for-profit sector	1	0 %
40–44	5	Others	13	12 %	Others	62	14 %			
<40 years	4									

Notes: Stdev is the standard deviation of the mean age, CoV refers to the coefficient of variation of the mean age, min refers to the lowest age, max refers to the highest age. Age distributions and Panels B until G refer to the number of board members per classification. Percentages might not sum up to 100 % due to rounding

Table 3 Impact of board diversity on stock price performance – linear effects

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Diversity indicators								
Gender		.1264601						
		(.1149734)						
Nationality			−.0875668					
			(.0728159)					
Age				.0612725				
				(.5260607)				
Level					−.1747736			
					(.1086604)			
Field						.0616359		
						(.1044011)		
Experience							.0841092	
							(.1000743)	
Background								.0539102
								(.0918387)
Control variables								
Monitoring	−.1837446**	−.1590993*	−.1838533**	−.1853653**	−.1910049*	−.1741577	−.197071**	−.1939053**
	(.0857966)	(.0877808)	(.0855994)	(.0898785)	(.1048649)	(.1117675)	(.0905109)	(.0866148)
Firm Size	−.0067255	−.012527	−.0012728	−.0066071	−.0118228	−.0061262	−.0059274	−.0067379
	(.0163359)	(.0156292)	(.0174529)	(.016222)	(.0189337)	(.022015)	(.0166189)	(.0167819)
Firm Leverage	−.0431549	−.0439166*	−.034336	−.0443519	−.031376	−.0414054	−.0441276	−.0406849
	(.0269648)	(.0262491)	(.0302608)	(.0297217)	(.0232634)	(.0283937)	(.0266121)	(.0276967)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	97	97	97	97	85	77	93	96
R^2	0.1988	0.2120	0.2097	0.1989	0.2301	0.1517	0.2025	0.2017

Notes: Robust standard errors between *brackets*. Significance: *** means significant at 1 % level, ** significant at 5 % level, * significant at 10 % level

size. In most specifications the Variance Inflation Factor (VIF) is above four. Appendix 3 presents the complete correlation table. Except from board size which correlates heavily with firm size and to a lesser extent with gender diversity and nationality diversity, none of the other variables in our model correlate in a problematic way. Model 1 of Table 3 serves as the benchmark model without the focal variables. The base model shows that firms with better monitoring have better stock price performance over the crisis period. Neither firm size nor leverage has any significant impact on firm performance.

Next, we include the different dimensions of board diversity to the benchmark model to test for the focal relationship as expressed in Eq. 3. Models 2–8 of Table 3 test for a linear relationship between an indicator of diversity and firm performance during the crisis. In most models R^2 is around 20–21 %, except for Model 6 where the number of observations drops to 77 due to data availability.[5]

We test for the impact of gender diversity (Model 2), nationality diversity (Model 3), age diversity (Model 4), diversity with respect to human capital as measured by the level of education in Model 5 and the field of education in Model 6, diversity of the field of experience of board members (Model 7) and diversity of the socioeconomic background (Model 8). In the linear model none of the diversity indicators is significant at the conventional levels. Based on the linear models there is no relationship between board diversity and firm performance during the crisis period. Both hypothesis 1 and 2 are therefore rejected. The linear model suggests that board diversity did not shield a Dutch listed firm from the recent financial crisis.

Next, we run the regressions based on Eq. 4 to test for the presence of any non-linear effects of board diversity on firm performance. After all, when hypotheses 1 and 2 jointly hold true, a linear model may not show any effect. Models 9 – 15 of Table 4 present the results. The non-linear models include the same control variables as in the linear model. The results show that the diversity dimensions of age, expertise and background have a significant impact on firm performance during the financial crisis (see Models 11, 14 and 15 of Table 4). In contrast, gender diversity, nationality diversity and diversity with respect to education have no impact on firm performance (see Models 9, 10, 12 and 13 of Table 4).

The results suggest that age diversity, diversity of expertise and background diversity shield a Dutch firm against crisis times compared to firms with a less optimal diversity score on those dimensions. Variations in other diversity dimensions will not contribute to better handling the impact of crisis times on the financial performance of firms. The observed relation between the focal variables age, expertise and background and firm performance is not linear, but hyperbolic. Adding more diversity on one of those three dimensions improves firm performance up to a maximum point. After this point increased diversity is detrimental for firm performance.

[5] In case of a missing data field for one or more board members, we cannot calculate the Blau indicator for this dimension. The company is therefore dropped from the dataset.

Table 4 Impact of board diversity on stock price performance – non-linear effects

Variable	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
Diversity indicators							
Gender	−.2790856						
	(.4872872)						
Gender^2	.5871731						
	(.7224627)						
Nationality		.0108314					
		(.2846117)					
Nationality^2		−.1301915					
		(.3858517)					
Age			**2.609095***				
			(1.324006)				
Age^2			**−10.67534****				
			(4.424712)				
Level				−.3469391			
				(.2769113)			
Level^2				.2123404			
				(.2904862)			
Field					.1690446		
					(.4775511)		
Field^2					−.088018		
					(.4259475)		
Experience						**.7129498*****	
						(.2242626)	
Experience^2						**−.5258951****	
						(.2264881)	
Background							**.3993782*****
							(.1396945)
Background^2							**−.4215029*****
							(.1128604)

Control variables							
Monitoring	−.1652297*	−.1804846**	−.1326476	−.2062909**	−.1731425	−.1911519**	−.1730217**
	(.0894174)	(.0861279)	(.0944675)	(.0971844)	(.1103956)	(.0889057)	(.0863322)
Firm Size	−.0092265	−.0020334	−.0075986	−.0087685	−.0067971	−.0111742	−.0160907
	(.0165502)	(.017381)	(.0160572)	(.0190834)	(.0236577)	(.0168441)	(.0170038)
Firm Leverage	−.0440336	−.0361506	−.041737	−.0256776	−.0421312	−.0440206*	−.0479283*
	(.027611)	(.0303894)	(.0320927)	(.0233839)	(.0300951)	(.025214)	(.0287369)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	97	97	97	85	77	93	96
R^2	0.2235	0.2108	0.2200	0.2347	0.1522	0.2260	0.2435

Notes: Robust standard errors between brackets. Significance: *** means significant at 1 % level, ** significant at 5 % level, * significant at 10 % level. *Bold* values are the chapter's focal significant coefficients

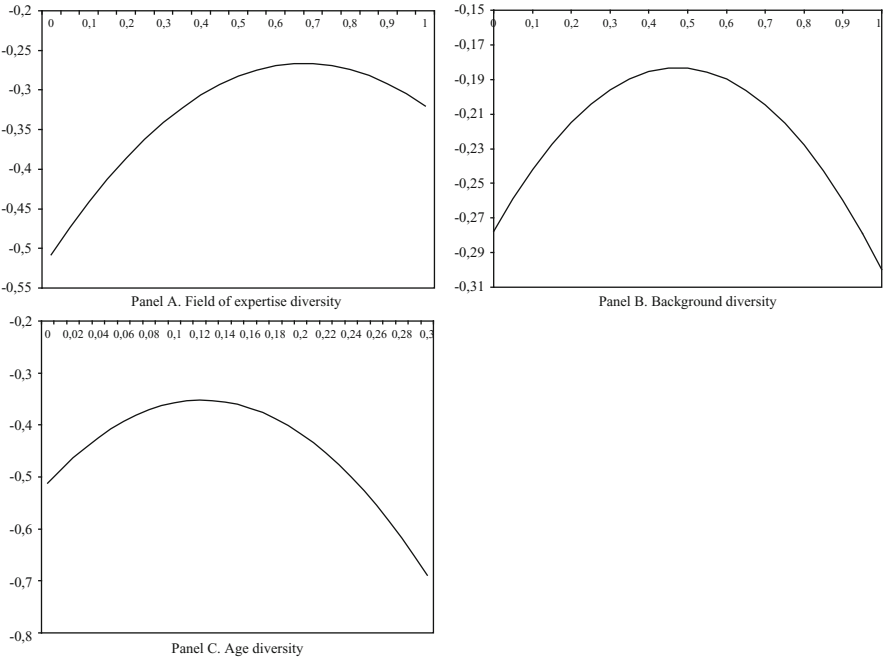

Fig. 1 Non-linear relationships between diversity indicators and firm performance

Expertise has a maximum impact on firm performance at a corrected Blau-indicator of 0.68 (see Panel A of Fig. 1). On a supervisory board size of eight members this would imply having, for instance, four board members with business expertise, three with banking expertise and one with law expertise. This combination would lead to a diversity score of 0.68 and maximum firm performance. Adding more expertise up till this maximum point clearly contributes to value creation in terms of firm performance. For instance, having four board members with business expertise and four board members with banking expertise would imply a diversity score of 0.57 and lower firm performance. Replacing one board member having banking expertise with a board member having legal expertise increases the diversity score to 0.68 and improves firm performance. After this point, investing in more expertise diversity is detrimental for firm performance. For instance, having four board members with business expertise, two with banking expertise, one with law expertise and one with ICT expertise would lead to a diversity score of 0.75 and to lower firm performance.

Hypothesis 1 indicates that increasing expertise diversity provides key information and resources as a cushion against an uncertain environment, but after some point a more diverse supervisory board might slow down the decision-making process and thus negatively impact firm performance, as predicted in hypothesis 2. Panel A of Fig. 1 shows that the impact of expertise diversity is also

economically highly relevant as moving from zero diversity to the top implies a difference in firm performance of 24 % points.

We find a similar picture for the two other significant diversity indicators. Adding more diversity with respect to background improves firm performance up till a diversity measure of 0.47. After this point adding more diversity to the board deteriorates again firm performance. Finally, age diversity contributes to firm performance up till a coefficient of variation of 0.12. More variation in age decreases firm performance again. The data suggest that Dutch listed firms can improve their performance during crisis times by fine-tuning the optimal diversity of the supervisory board with respect to age, expertise and background. Investing in other diversity dimensions such as gender, education or nationality will not pay off as it will not contribute to firm performance.

Finally, we run several robustness checks by including the ownership structure (dispersed versus concentrated) and largest ownership identity (corporation, family, government, institutional investor, trust), as well as the market segment on which the firm is listed (AEX, AMX, AscX and others), but this did not alter our results.[6] We also checked whether a problem of multicollinearity was present in the data.

5 Conclusion

This chapter examines the link between board diversity and firm financial performance. Previous research in this area showed mixed results, which might indicate the contingent nature of board diversity. In line with recent literature on corporate governance, we assert that board diversity will matter more during times of distress. Therefore, we examine the diversity of the supervisory boards of Dutch listed companies during the recent financial crisis. This chapter is one of the first studies to investigate the impact of board diversity on firm performance during a crisis. Our empirical setting and rich dataset allow us to consider multiple dimensions of board diversity in contrast to existing studies which only focus on one or two dimensions of diversity. For each supervisory board of a Dutch company in our sample we examine seven dimensions of diversity: nationality diversity, gender diversity, diversity with respect to the level of education, diversity with respect to the field of education, expertise diversity, socioeconomic background diversity and age diversity. Moreover, since Dutch supervisory boards consist only of non-executive members, our study measures the impact of board diversity on firm performance more precisely than the current one-tier studies.

In theory the relationship between board diversity and firm performance can go in two directions. On the one hand, diversity may increase the availability of diverse views. In this way it increases the ability of the board to respond more adequately to the challenges posed by a crisis situation. As crisis times might require different decision-making, out-of-the-box thinking is a true asset in such circumstances.

[6] Regression results not presented here to save on space. Tables are available upon request.

Under this theory board diversity contributes positively to firm performance. On the other hand, more diverse boards lengthen the decision process and will reach a decision too late. Diverse boards are an obstacle to fast responses necessary in crisis times. This theory therefore points to lower firm performance as board diversity increases. If both effects work at the same time, it may well be that an optimal level of diversity exists during crisis times.

Our empirical results indeed show a non-linear relationship between several of the focal variables of diversity and firm financial performance. We find a hyperbolic relation between the focal variables age diversity, expertise diversity and background diversity and firm performance. We also find that gender diversity, nationality diversity and diversity with respect to education have no impact on firm performance during crisis times.

The results suggest that diversity in age, expertise and background shield a Dutch firm against crisis times compared to firms with a less optimal diversity score on those dimensions. Our calculations indeed show a maximum point of diversity for each of those three dimensions. Adding more diversity on one of those three dimensions improves firm performance up to a maximum point. After this point increased diversity is detrimental for firm performance. This implies that Dutch listed firms can improve their performance during crisis times by fine-tuning the optimal diversity of the supervisory board with respect to age, expertise and background.

Variations in other diversity dimensions such as gender, education or nationality will not contribute to better firm financial performance. Investing in those diversity dimensions will therefore not pay off. This is an important finding given the recent policy focus in the Netherlands on gender diversity only. During the recent financial crisis other diversity dimensions mattered, while gender diversity had no effect on firm financial performance. Our empirical results show that focusing on only one dimension of the full vector of diversity or on linear effects only can lead to detrimental economic outcomes.

Along with the common limitations to empirical studies such as ours, relating to the validity of our findings outside the country of study and outside the particular crisis under consideration, there is one important limitation that warrants future research. A non-linear effect in a cross-sectional research design may imply that two mechanisms operate jointly, producing the findings discussed above and interpreted in line with our hypotheses, but an alternative interpretation is also possible: a contingency not included in our analyses may determine whether some firms experience a positive, whereas other experience a negative diversity-performance relationship. Firms experiencing frequent changes in leadership may be more accustomed to training new directors and thus more aware of the risk of subgroup formation. For such firms, as compared to firms with fewer changes in leadership, the positive effects of diversity predicted by resource dependence theory may materialize.

In the end, as crises come and go, a more dynamic view on optimal board composition over the course of good and bad times is required. This chapter is a

contribution to this view, which is important as crises often materially affect the course of a corporation.

Appendix 1: Final Sample of Dutch Companies Listed on Euronext Amsterdam

Aalberts	KPN
Accell Group	Macintosh retail
Aegon	Mediq (OPG)
AFC ajax	Nedap
Ahold	Nedsense Enterprises
Akzo nobel	Neways Elec.Intl.
Amsterdam Commodities	Nieuwe Steen Investments
AMT Holding	Nutreco
Arcadis	Oce
ASM International	Octoplus
ASML Holding	Ordina
Ballast Nedam	Pharming Group
BAM Groep	Philips
Batenburg Techniek	Porceleyne Fles
BE Semiconductor	Post nl
Beter Bed Holding	Punch graphix
Bever Holding	Qurius
Binckbank	Randstad Holding
Boskalis Westminster	Reed Elsevier
Brill	Rood Testhouse
Brunel Intl.	Roto Smeets
Corio	SBM Offshore
Crown Van Gelder	Simac Techniek
Crucell	Sligro Food Group
CSM	Smit Intl.
Ctac	SNS Reaal
DOC-data	Spyker Cars
DPA Group	Stern Groep
Draka	Telegraaf Media Groep
DSM	Ten Cate
Eurocomm Prop	Tie Holding
Exact Holding	TKH Group
Fornix Biosciences	Tom Tom
Fugro	Unilever
Gamma Holding	Unit 4
Grontmij	USG People
Groothandelsgeb.	Value8
Heijmans	Van Landschot

(continued)

Heineken	Vastned Offices
Hes – Beheer	Vastned Retail
Hitt Nm	Vivenda Media Groep
Holland Colours	Vopak
Hydratec Industries	Wavin
ICT Automatisering	Wegener
Imtech	Wereldhave
ING Groep	Wessanen
Innoconcepts	Witte Molen (Alanheri)
Kardan	Wolters Kluwer
KAS Bank	

Appendix 2: Coding Scheme for Board Diversity

Variable	First name
Description	Initials of all first names
Code	Alfanumerical
Variable	Last name
Description	Last name of the person
Code	Alfanumerical
Variable	Gender
Description	Gender of the board member
Code	0 = unknown
	1 = man
	2 = woman
Variable	Nationality
Description	Nationality of the board member
Code	1 = Dutch
	2 = German
	3 = Belgian
	4 = British
	5 = French
	6 = Italian
	7 = US
	8 = Canadian
	9 = Swedish
	10 = Irish
	11 = Spanish
	12 = Swiss
	13 = Brazilian
	14 = Indian
	15 = Mexican
	16 = Norvegian
	17 = Finnish

(continued)

	18 = Australian
	19 = Austrian
	20 = Asian
	21 = African
	22 = Israeli
	23 = Portugese
	24 = Other
	25 = Unknown
Variable	Year of birth
Description	Year of birth of the board member
Code	The calendar year of birth
Variable	Level of education
Description	Highest level of education of the board member
Code	0 = Unknown
	1 = Lower than bachelor
	2 = Bachelor degree
	3 = Master degree
	4 = Ph.D.
	5 = Other
Variable	Field of expertise
Description	Specific knowledge and experience of the board member
Code	0 = Unknown
	1 = Business
	2 = Politics or diplomacy
	3 = Macroeconomics or general economics
	4 = Investments and treasury
	5 = Banking, finance and financial services
	6 = ICT
	7 = Human resource management
	8 = Law and tax management
	9 = Accounting and financial administration
	10 = Sustainability/social affairs/CSR
	11 = Engineering
	12 = Other
Variable	Background
Description	Primary sector of origin of the board member
Code	1 = Business
	2 = Politics
	3 = Governmental agency
	4 = Not for profit
	5 = Academic
	6 = Other
	7 = Unknown

Appendix 3: Correlation Table of the Variables in Our Model

	BHR	Gender	Nationality	Age	Level educ	Field educ	Experience	Background	Board size	Monitoring	Owndisp	Owncor	Ownfam	Owngov	Owninst	Owntrust	Firm size	Leverage
BHR	1.0000																	
Gender	0.0799	1.0000																
Nationality	−0.1674	0.2235	1.0000															
Age	−0.0482	0.0488	0.1087	1.0000														
Level educ	−0.1905	0.0286	0.0204	−0.0499	1.0000													
Field educ	−0.0095	−0.1376	0.0115	−0.2244	−0.0433	1.0000												
Experience	0.0871	−0.0871	−0.0563	0.0183	−0.1108	−0.0956	1.0000											
Background	0.0018	0.1096	−0.0869	−0.0037	0.3650	−0.0110	−0.0586	1.0000										
Board size	0.0292	0.4657	0.4949	−0.1096	0.0653	0.0326	−0.0990	0.0889	1.0000									
Monitoring	−0.2104	−0.1856	−0.0116	0.1643	−0.0437	0.0488	0.1595	0.2103	−0.2417	1.0000								
Owndisp	−0.0499	0.0319	0.0458	−0.2336	0.0630	0.1291	−0.1746	−0.0166	0.1384	−0.0183	1.0000							
Owncor	0.0003	−0.0604	−0.1319	0.1649	−0.0431	0.0426	0.0362	−0.0590	−0.2185	0.0390	−0.2093	1.0000						
Ownfam	−0.0518	−0.0704	0.1011	0.1214	0.0195	−0.0231	0.1333	−0.0607	−0.1782	−0.0177	−0.2515	−0.2027	1.0000					
Owngov	−0.0164	0.0848	0.1483	−0.0420	−0.0056	−0.0054	0.0037	0.0836	0.2626	−0.0605	−0.0520	−0.0419	−0.0504	1.0000				
Owninst	0.0123	−0.0275	−0.1208	0.1027	−0.0891	0.0464	−0.1312	−0.0330	0.0068	0.0214	−0.2180	−0.1757	−0.2111	−0.0437	1.0000			
Owntrust	0.0835	0.0830	0.0361	−0.0982	0.0355	−0.1612	0.1131	0.1229	0.1381	−0.0020	−0.3247	−0.2616	−0.3144	−0.0650	−0.2725	1.0000		
Firm size	−0.0732	0.3804	0.3316	−0.1555	0.0038	−0.0057	−0.0634	0.1089	0.7745	−0.0086	0.1644	−0.3145	−0.3019	0.1171	0.0313	0.3104	1.0000	
Leverage	−0.1120	−0.0753	0.1075	0.2620	0.1160	0.0495	0.0861	−0.0784	0.0153	0.0779	−0.0663	−0.0508	0.1342	−0.0171	0.0206	−0.0316	−0.1511	1.0000

References

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics, 94*, 291–309.

Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature, 48*(1), 58–107.

Agrawal, A., & Knoeber, C. R. (1996). Firm value and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis, 31*, 377–397.

Agrawal, A., & Knoeber, C. R. (2001). Do some outside directors play a political role? *Journal of Law and Economics, 44*, 179–199.

Ahern, K. R., & Dittmar, A. K. (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *The Quarterly Journal of Economics, 127*(1), 137–197.

Bae, K.-H., Kang, J.-K., & Kim, J.-M. (2002). Tunneling or value added? Evidence from mergers by Korean business group. *Journal of Finance, 57*(6), 2695–2740.

Bantel, K. (1993). Strategic clarity in banking: Role of top management team demography. *Psychological Reports, 73*, 1187–1203.

Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law, Economics and Organization, 1*(1), 101–124.

Beltratti, A., & Stulz, R. M. (2009). Why did some banks perform better during the credit crisis? A cross-country study of the impact of governance and regulation. *NBER working paper series* no. 15180.

Bhagat, S., & Black, B. (1999). The uncertain relationship between board independence and long term firm performance. *The Business Lawyer, 54*, 921–963.

Blau, P. M. (1977). *Inequality and heterogeneity*. New York: Free Press.

Bohren, O., & Strom, R. O. (2010). Governance and politics: Regulating independence and diversity in the board room. *Journal of Business Finance and Accounting, 37*(9/10), 1281–1308.

Boone, C., Van Olffen, W., Van Witteloostuijn, A., & De Brabander, B. (2004). The genesis of top management team diversity: Selective turnover among top management teams in Dutch newspaper publishing, 1970–94. *Academy of Management Journal, 47*(5), 633–656.

Booth, J. R., & Deli, D. N. (1999). On executives of financial institutions as outside directors. *Journal of Corporate Finance, 5*, 227–250.

Brammer, S., Millington, A., & Pavelin, S. (2007). Gender and ethnic diversity among UK corporate boards. *Corporate Governance: An International Review, 15*(2), 393–403.

Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *The Financial Review, 38*, 33–53.

Carter, D. J., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review, 18*(5), 396–414.

Chaganti, R. S., Mahajan, V., & Sharma, S. (1985). Corporate board size, composition and corporate failures in retailing industry. *Journal of Management Studies, 22*(4), 400–417.

Daily, C. M., & Dalton, D. R. (1994). Bankruptcy and corporate governance: the impact of board composition and structure. *Academy of Management Journal, 37*(6), 1603–1617.

Daily, C. M., & Dalton, D. R. (2003). Women in the boardroom: A business imperative. *Journal of Business Strategy, 24*(5), 8–10.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal, 19*(3), 269–290.

Dalton, D. R., Daily, C. M., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal, 42*(6), 674–687.

Dowell, G. W. S., Shackell, M. B., & Stuart, N. V. (2011). Boards, CEOs, and surviving a financial crisis: Evidence from the internet shakeout. *Strategic Management Journal, 32*(10), 1025–1045.

Durnev, A., & Kim, E. H. (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. *Journal of Finance, 60*(3), 1461–1493.

Engelen, P. J.,& Van Essen, M. (2010). Vulnerability to the financial crisis: The roles of firm- and country-level governance mechanisms in Europe. International corporate finance and governance conference, University of Twente, the Netherlands, 14–16 Oct 2010.

Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review, 11*(2), 102–111.

Faccio, M., & Lang, L. H. P. (2002). The ultimate ownership of western European corporations. *Journal of Financial Economics, 65*(3), 365–395.

Fahlenbrach, R., & Stulz, R. M. (2010). Bank CEO incentives and the credit crisis. *Journal of Financial Economics, 99*(1), 11–26.

Falaye, O., Mehrotra, V., & Morck, R. (2006). When labor has a voice in corporate governance. *Journal of Financial and Quantitative Analysis, 41*(3), 489–510.

Farrell, K. A., & Hersch, P. L. (2005). Additions to corporate boards: The effect of gender. *Journal of Corporate Finance, 11*, 85–106.

Fauver, L., & Fuerst, M. E. (2006). Does good corporate governance include employee representation? Evidence from German corporate boards. *Journal of Financial Economics, 82*(3), 673–710.

Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value? *Review of Financial Studies, 22*(6), 2331–2360.

Hambrick, D. C., Cho, T. S., & Chen, M. J. (1996). The influence of top management team heterogeneity on firms' competitive moves. *Administrative Science Quarterly, 41*(4), 659–684.

Hermalin, B. E., & Weisbach, M. S. (2003). Boards of directors as an endogenously determined institution: A survey of the economic literature. *Federal Reserve Bank of New York Economic Policy Review, 9*, 7–26.

Judge, W. Q., & Zeithaml, C. P. (1992). Institutional and strategic choice perspectives on board involvement in the strategic decision process. *Academy of Management Journal, 35*(4), 766–794.

Knight, D., Pearce, C. L., Smith, K. G., Olian, J. D., Sims, H. P., Smith, K. A., & Flood, P. (1999). Top management team diversity, group process, and strategic consensus. *Strategic Management Journal, 20*(5), 445–465.

Kroszner, R. S., & Strahan, P. E. (2001). Bankers on boards: Monitoring, conflicts of interest, and lender liability. *Journal of Financial Economics, 62*(3), 415–452.

Laux, V. (2008). Board independence and CEO turnover. *Journal of Accounting Research, 46*, 137–171.

Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review, 21*, 402–433.

Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. *Journal of Financial Economics, 64*(2), 215–241.

Oxelheim, L., & Randoy, T. (2003). The impact of foreign board membership on firm value. *Journal of Banking and Finance, 27*, 2369–2392.

Peng, M. W., & Jiang, Y. (2010). Institutions behind family ownership and control in large firms. *Journal of Management Studies, 47*(2), 253–273.

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: a resource dependence perspective*. New York: Harper & Row.

Robinson, G., & Deschant, K. (1997). Building a business case for diversity. *Academy of Management Executive, 11*, 21–31.

Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review, 15*(2), 404–413.

Rosenstein, S., & Wyatt, J. G. (1990). Outside directors, board independence, and shareholder wealth. *Journal of Financial Economics, 26*(2), 175–191.

Selby, C. C. (2000). From male locker room to coed board room: A twenty-five year perspective. In R. Burke & M. Mattis (Eds.), *Women on corporate boards of directors* (pp. 239–251). Dordrecht: Kluwer.

Shrader, C. B., Blackburn, V. B., & Iles, P. (1997). Women in management and firm financial performance: An exploratory study. *Journal of Managerial Issues, 9*(3), 355–372.

Siciliano, J. I. (1996). The relationship of board member diversity to organizational performance. *Journal of Business Ethics, 15*(12), 1313–1320.

Teachman, J. D. (1980). Analysis of population diversity. Measures of qualitative variation. *Sociological measures & research, 8*(3), 341–362.

Van der Laan, G., Engelen, P. J., Van den Berg, A., & Jorissen, A. (2012). Measuring heterogeneity change in boards of directors under conditions of institutional constraints. Working paper, Utrecht University School of Economics.

Van der Walt, N., & Ingley, C. (2003). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *Corporate Governance: An international review, 11*(3), 218–234.

Van Essen, M, Van Oosterhout, J. H., Carney, M. (2012). Corporate boards and the performance of Asian firms: A meta-analysis. *Asia Pacific Journal of Management* (forthcoming).

Williams, K. Y., & O'Reilly, C. A. (1998). Demography and diversity in organizations: A review of 40 years of research. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior 20* (pp. 77–140). Greenwich: JAI Press.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics, 40*(2), 185–211.

What Are Friends for? CEO Networks, Pay and Corporate Governance

Rayna Brown, Ning Gao, Edward Lee, and Konstantinos Stathopoulos

Abstract We investigate the impact of CEO networking on compensation arrangements. Unlike existing studies that are largely based on board interlocks, we use a unique measure that calculates the direct ties the CEO has created during her life. We show that a CEO's compensation is significantly affected by her power in the managerial labour market. We find that the size of the CEO network is positively related to the level of CEO compensation and inversely related to its pay-performance sensitivity. We interpret our results as direct evidence that managerial power influences compensation. However, in firms where shareholders rights are well protected, the impact of the CEO network over pay arrangements diminishes. This implies that outrage cost and governance reduces managerial power in pay negotiation. Overall, our results are consistent with the predictions of the managerial power approach.

1 Introduction

Few issues have attracted as much community and academic debate as the appropriate level and design of executive compensation packages. There are two main streams underlying academic research in this area which have their theoretical foundations in agency theory (see Berle and Means 1932; Mirrlees 1976; Jensen and Meckling 1976). The first is the "optimal contracting approach" which is based on the premise that the value of the firm is maximized if executive compensation is designed to minimize agency costs and the second is the "managerial power approach" (as proposed by Bebchuk et al. 2002) which is the focus of our study.

R. Brown
University of Melbourne, Melbourne, Australia

N. Gao • E. Lee • K. Stathopoulos (✉)
University of Manchester, Manchester, UK
e-mail: k.stathopoulos@mbs.ac.uk

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_12,

The managerial power approach argues that a firm's management team can influence decision making with regard to their compensation arrangements by exerting power towards the non-executive, outside directors. The claim is that sub-optimal, non-arm's length relationships between the managers and members of the compensation committee allow the former to expropriate wealth from shareholders in the form of "rent" (that is, excessive pay). In this study we focus on the compensation arrangements of the Chief Executive Officer (CEO). We expand the definition of "power" to include relationships that the CEO has developed through her current and past employment, education, and other types of social activities (e.g. golf clubs, charity organizations, etc.). We illustrate that a larger social network empowers the CEOs and enables them to influence the board and negotiate a more favourable compensation package. Our results also indicate that the existence of powerful shareholders mitigates the effects of CEO power on their pay arrangements.

What is managerial power? There are those who argue that huge executive compensation packages often amount to little more than corporate looting and that huge CEO pay reflects a board of directors that is shirking its responsibility by not exercising due care in overseeing and negotiating executive pay (Paredes 2005). Bebchuk et al. (2002) concentrate on the connections between the CEO and the firm's "nominally independent" directors that are created through "bonds of interest, collegiality or affinity". This restrictive definition of power only applies to connections *within* the firm.

However, CEOs will also derive power from connections *outside* the firm. Arguably the most powerful tool held by any worker is the threat to withdraw their services temporarily, or to resign. Given the CEO is typically the most powerful member of the corporate elite (Jensen and Zajac 2004) she holds a very valuable option in the threat to resign. The higher the value of this option the higher the CEO's reservation value; the company will try to match this value by offering more preferable to the CEO contracts, i.e. higher pay and lower sensitivity. We suggest the value of this option will be positively related to the ability of the CEO to find similar alternative employment. In sociology based social network theory it is argued that workers frequently locate jobs through friends and relatives rather than through the open job market (Granovetter 1973, 1974).[1] Early (Mortensen and Vishwanath 1994) and more recent (Calvo-Armengol and Jackson 2007; Fontaine 2008) theoretical advances in the economics literature also corroborate our conjectures regarding the role of social networks on the CEO pay arrangements. Drawing on this evidence we suggest a large social network empowers the CEO because it increases the probability of the CEO being able to exercise the option to resign.

[1] It is also acknowledged friends and social networks may influence decisions by many of the world's companies regarding with whom and how they conduct their business (Jackson 2005).

Although the managerial power hypothesis has considerable intuitive appeal it has only infrequently been subjected to *direct* empirical testing. Moreover, such studies as do exist mostly concentrate on interlocking boards and strong social ties.[2] The consensus is that interlocking boards have a positive effect on CEO remuneration levels (Core et al. 1999; Fich and White 2003; Larker et al. 2006).

However, it is weak social ties, rather than strong social ties, that enhance labour force mobility (Granovetter 1973, 2005). Moreover, this is particularly so for persons in high ranking positions (Wegener 1991). Therefore we do not focus on interlocking boards and strong ties but instead we test a unique measure that aggregates the direct ties the CEO has created during her life. CEOs with many weak ties are likely to receive new information about alternative positions as well as be able to use these ties to either obtain a new job or secure a more favourable contract with their current employer (through the threat of resignation). We test two hypotheses: (a) the larger the social network of the CEO the higher the level of compensation they are able to negotiate, and (b) the larger the social network of the CEO the lower the pay-performance sensitivity of their compensation. An empirical test of our measure is conducted using U.S. data for the 2005 fiscal year.

We contribute to the literature in the following ways. First, we use an alternative measure of CEO "power", which allows for the incorporation of weak, direct ties. This measure does not inflate the size of a CEO's network by including indirect ties, as may occur with an interlocking board measure. Similarly, it does not underestimate the size of the network by only including strong ties and/or ties developed solely within the current firm. Second, we provide empirical evidence on the relationship between CEO networks and managerial compensation. We find a positive relationship between the size of the social network and the level of total CEO pay. This is consistent with recent studies in the board interlocks literature, e.g. Barnea and Guedj (2006), Larcker et al. (2006) and Horton et al. (2009). In addition, we find a negative relationship between the size of the social network and the pay-performance sensitivity of the pay package. In both cases our results are consistent with the conclusions of the managerial power approach. Third, we show that the impact of CEO power on their pay arrangements is lessened in companies with strong shareholders' rights. This result has important theoretical and policy implications, which are discussed in detail.

The structure of the chapter is as follows. Section 2 provides a brief overview of the literature on executive compensation and social networks. In Sect. 3 the measurement of our proxy for CEO social networks is discussed together with the applied methodology. An overview of our data is also provided. Our results are presented in Sect. 4. Some concluding comments are presented in Sect. 5.

[2] Strong social ties link individuals who are similar and the more similar the individuals the stronger the social ties (Wegener 1991). Weak ties comprise acquaintances with whom we are less likely to be socially acquainted whereas a strong tie implies the individuals are close friends (Granovetter 1983). The issue of strong and weak ties is discussed in more detail in following sections.

2 Literature Review

2.1 Social Networks

Social network theory (SNT) is the study of how the social structure of relationships around a person, group, or organization affects beliefs or behaviours. Within the corporate setting an important social network is the board of directors and because relationships between directors may affect independence and behaviour, such relationships are an important corporate governance issue.[3] As stated by Granovetter (2005), social networks affect economic outcomes for three main reasons: They affect the flow and quality of information, act as an important source of reward and punishment and build trust that others in the social network will do the "right" thing despite a clear balance of incentives to the contrary.

The size of a social network is captured by the number of social ties. Social ties are often conceptualized as a dichotomy; they are classified as either *weak* or *strong* (Wegener 1991). Tie strength reflects the closeness of the relationship between individuals. Strong social ties are those we have with family and close friends. Strong ties are indicative of a network in which the members have very similar personalities and background and who are in frequent contact. Weak ties are characterized as 'distant' and by infrequent interaction. Granovetter (1973) argues that weak ties are more likely to be sources of new information than strong social ties. Individuals connected by strong social ties already have access to similar information so it is probable that each member can only make a marginal contribution to the group's information base. In contrast, people with whom only weak social links exist might be able to provide new information, which is of much higher value to the group (Strahilevitz 2005). Subsequent research on the importance of weak ties has demonstrated that they can be instrumental in the labour market (Ioannides and Loury 2004; Granovetter 1973, 1974) in the diffusion of ideas (Granovetter 1983; Rogers 1995) and technical advice (Constant et al. 1996). As new information, in particular employment information, is more likely to flow through weak ties than strong ties, acquaintances built over an entire career are likely to play a special role (Granovetter 2005).

Social ties can also be classified as either direct or indirect. The majority of the financial economics literature, which we detail in the following two paragraphs, focuses on board interlocks (direct ties), i.e. the practice of directors sitting on each other's corporate boards. We believe there are two drawbacks with the interlocking board measures that have been applied in the literature to date. The first, and most obvious, is that interlocks capture only current direct ties, thus excluding indirect ties as well as direct ties developed in the past (Gulati and Westphal 1999). As a result the size of the social network is underestimated. The second drawback is that even if one relaxes the reciprocity argument and allows for indirect ties to be

[3] See Wellman (1983) for a detailed explanation of the principles of network theory.

included, for example "friend of a friend" relationships (Larcker et al. 2006), the strength of a tie is very difficult to estimate. As a result one might inflate the size of the network by including ties that have no value to a director, i.e. neither party in this tie expects any information exchange to take place.[4]

Our measure of a CEO's social network captures the weak, direct ties developed by the CEO during her life. As we explain in Sect. 3 below, this measure is an appropriate proxy of the size of a CEO's social network. Whilst some ties may be omitted, we believe that we capture the ties that "count" in a business environment while avoiding the biases incurred in other studies.[5]

2.2 *Social Networks and Executive Pay Levels*

The academic literature on executive compensation suggests that firm size, industry and country effects are the main determinants of executive pay levels (Murphy 1999). Given the breadth and scope of the academic research in this area, it is surprising how little attention social networks have received as possible determinants of pay arrangements. Even the few papers that exist provide conflicting evidence. For example, Hallock (1997) finds that the pay of interlocked CEOs is on average higher than the pay of CEOs who do not sit in interlocked boards. However, this result weakens after controlling for other economic determinants and is confined only to cash, not total compensation. Core et al. (1999) fail to find any association between interlocks and executive pay for a small number of firms during the early 1980s.

More recently, Fich and White (2003) report that CEO compensation increases with interlocking boards and argue this is a consequence of entrenchment. Barnea and Guedj (2006) control for both firm and CEO characteristics and report a strong positive relationship between interlocking boards and CEO compensation. Larcker et al. (2006) find that for a large sample of directors a positive relationship exists between CEO total compensation and the proportion of "friendly" director links in the board. Hwang and Kim (2009) revisit the definition of board independence and expand it to also include social ties. They show that "socially dependent" boards, i.e. boards where the directors have social ties to the CEO, offer higher pay levels to their CEOs. In contrast to this study, they concentrate on within firm social ties, thus ignoring the weak, direct ties the CEO has developed over the years outside the firm. Furthermore, Horton et al. (2009) using large sample UK data calculate

[4] If Director "A" sits on a board with "B" and if director "B" sits on a board with "C" then "A" is assumed to know "C" and this link is included to the measure (Larcker et al. 2006). Whether A and C actually know each other, which will allow them to exchange information, know-how etc., is not examined. Larcker et al. (2006) fail to acknowledge this potential bias in their measure.

[5] Recent studies that have also examined the role of social networks in an economics/financial economics context include Fracassi (2009), Burns et al. (2010), Cohen et al. (2010), Nguyen (2012), Battu et al. (2011) and Fracassi and Tate (2012), among others.

qualitative features of board interlocks, such as the centrality of a director to the network and the strength of her ties. They find that executive (non-executive) directors with "better", i.e. larger with low constraints, networks receive higher (lower) compensation. Finally, a concurrent study to ours examines the effect of direct and indirect networks of UK directors to compensation practices (Zhao and Renneboog 2011). It finds that both networks increase pay levels. In addition, it provides evidence that the direct networks increase managerial entrenchment making it more likely for managers to expropriate wealth from the shareholders.

A premise of the managerial power approach is that CEO remuneration will be higher in firms in which managers have relatively more power. However, to date the proponents of this approach have mainly provided anecdotal evidence to support its main prediction (Bebchuk et al. 2002; Bebchuk and Fried 2003, 2004). With this study we provide empirical evidence regarding this prediction and also test a broader definition of managerial power.

2.3 Social Networks and Pay-Performance Sensitivity

According to agency theory minimization of agency costs is achieved by aligning the interests of the agents (managers) and the principals (shareholders); hence it is important to link managerial compensation to corporate performance by means of incentives. The majority of incentives provided to managers are through equity-based compensation schemes (Murphy 1999). It follows that the higher the sensitivity of these schemes to firm performance, the higher is the level of incentives provided to a manager.

In a review of this literature Core et al. (2003) argue that the level of incentives provided to managers is not randomly or arbitrarily determined (as claimed by the managerial power approach) but rather is based on standard economic factors. They identify 'firm size' and 'monitoring difficulty' as the two most influential factors. Several empirical papers find that the level of incentives for the CEO increases with firm size but at a diminishing rate (Demsetz and Lehn 1985; Himmelberg et al. 1999). Also, a number of studies identify a link between the level of incentives and different proxies of monitoring difficulty. For example, growth opportunities and firm risk (Smith and Watts 1992; Himmelberg et al. 1999; Aggarwal and Samwick 1999; Core and Guay 2002).

According to the managerial power approach, managers will use their power within the firm to negotiate pay contracts that will allow them to cash-out easily. Bebchuk et al. (2002) present a series of pay practices that they consider as evidence of managers forcing the implementation of sub-optimal pay schemes. For example, the rare use of reduced-windfall options and the near-uniform use of at-the-money options, reload options, etc. Still the evidence offered is anecdotal. As far as we are aware this is one of the first studies to explicitly test the relationship between managerial power and pay-performance sensitivity. Two related studies are by Hwang and Kim (2009) and Zhao and Renneboog (2011). The former finds,

for a small sample of Fortune 100 companies, that socially dependent boards offer their CEOs contracts with lower pay-performance sensitivity. However, our definition and measure of managerial power is broader, as it is not limited to within firm connections. Also, our analysis covers a much greater cross-section capturing the different practices of more than 1000 US firms. The latter study finds that the existence of direct networks leads to lower pay-performance sensitivity. In contrast, we relate the size of CEOs networks to their pay-performance sensitivity and find a strong negative relationship. In addition, we provide empirical evidence illustrating the importance of corporate governance in mitigating the effect of managerial power when determining the pay-performance sensitivity of the contract.

3 Research Issues and Methodology

3.1 Network Measure

As previously discussed, weak ties play an essential role in transmitting information. The more weak ties one builds through time, through such factors as labour force mobility (moving from job to job) or, in the case of directors, by accepting multiple positions (e.g. various outside, independent directorships) then the larger the size of the network and therefore the more improved the social network. The quality of the network improves with size since a big social network allows access to more sensitive information about employers, employees and jobs (Granovetter 2005).

Similarly, we argue that if CEOs have many contacts their position in the managerial labour market is strengthened and it is this strength which allows them to exert pressure on the board and to extract "rent". Our proxy to measure managerial power is broader than that typically provided as it is not restricted to within-the-firm ties. We argue that because our proxy includes all weak ties, past and present it is a better measure of the CEO's social network than a measure based on board interlocks. However, it excludes indirect ties where the strength and relevance are very difficult to access.

Although the measure applied in this study is simple – a single number – it is comprehensive. We measure the total number of contacts, that is, the total number of people with whom the CEO is acquainted, through her current and past employment, her education, and other types of social activities (golf clubs, charity organizations, etc.). There is no presumption as to relative status at the time the contact was made, i.e. the CEO may have been a simple board member when the contact was first made.[6] There is also no presumption as to the strength of the

[6] For all types of activities, apart from education, BoardEx collects data on the ties developed through board membership. Therefore even for social activities the links for the individual will be counted if she has an active role, e.g. board member of a golf club, trustee of a charitable organization.

relationship. Whether the contact was made 10 years ago or 1 year ago, the link will only increase the size of the network by one. Our measure does not control for the possibility that some of these past ties may no longer exist, either due to death or simply because of the strength of the link weakening over the years (people simply lose contact with some old acquaintances). We do not believe that the absence of these qualitative features of the network will bias our results, since we do not expect any of them to be systematically related to the relationship we investigate in this study.[7]

3.2 Hypotheses

The managerial power perspective predicts a positive relationship between managerial power and rent extraction, i.e. the ability of the manager to receive excessive pay through her contract. Managerial power leads to lower monitoring of the manager and hence more freedom for the manager, which in turn, will be used to the detriment of shareholders. Friendly relations reduce the independence of board members and will make them more sympathetic to higher levels of CEO compensation (e.g. Fich and White 2003).

However, the focus of our research is not whether the ability of the CEO to influence the board derives from strong ties with the current board but rather whether managerial power in part derives from the social network the CEO has built during their entire life. The social network empowers the CEO because of the advantage it gives in finding alternative employment. The most probable area for the CEO to exercise this power is with regard to their compensation. The higher the probability the CEO will be able to find an equally good job after resigning the more powerful the position of the CEO relative to the board.

We propose that a CEO with an extensive social network is more likely to be able to exercise the option to resign. If you have many professional contracts then you strengthen your position in the managerial labour market, since you have access to more details about employers, employees and jobs (Granovetter 2005). Recent theoretical advances in the economics literature support our conjecture that social networks strengthen the managers' position in the labour market. Fontaine (2008) shows that a strong network, characterised by low unemployment, leads to higher job arrival rates and higher wages, strengthening the bargaining power of the manager. Calvo-Armengol and Jackson (2007) also show a positive relationship between wages, employment and social networks. In order to prevent the CEO exercising the option to withdraw her services the board must make the cost of

[7] One expects older CEOs to be more affected by the strength-of-link issue, since some of their ties might date many years back. In our sample though the mean/median CEO age is only 55 years old, with only 1 % of the observations above 70. In any case, we control in our all analyses for CEO age.

resignation to the CEO higher. We argue that to do this the board will make the current compensation package for the CEO more attractive, thus increasing her reservation utility.[8] This will have the dual effect of increasing the cost of resignation for the CEO and also increasing the cost of recruitment for alternative employers.

Thus we have two main hypotheses. For any given CEO the larger their social network, then (1) the higher the level of compensation they are able to negotiate, and (2) the lower the pay-performance sensitivity of their compensation package.

3.3 Methodology

The methodology and variables used in this study are standard in the relevant literature (Larcker et al. 2006; Milbourn 2003; Aggarwal and Samwick 1999). The exception is our CEO networking measure which has not regularly been used in this research area.[9] To test hypothesis 1 we estimate the following equation on our cross-sectional data using median regression to reduce the influence of outliers (as in Hall and Liebman 1998; Aggarwal and Samwick 1999; Milbourn 2003).

$$\begin{aligned}\text{Total Compensation} = {} & \alpha_0 + \alpha_1 \text{CEO\_Network} + \alpha_i \text{CEO\_Characteristics} \\ & + \alpha_y \text{CG\_Characteristics} + \alpha_z \text{Firm\_Characteristics} + \varepsilon \end{aligned} \tag{1}$$

The dependent variable, *Total Compensation*, is the sum of a CEO's annual salary, bonus, other annual (short-term) compensation, value of restricted stock grants, payouts of long-term incentive plans, the Black and Scholes value of the options granted during the year and other annual (long-term) compensation. In order to isolate the effects of CEO networking on compensation we control for other CEO characteristics (age and tenure) that we expect to have a positive effect on pay. We choose these CEO characteristics since they proxy for CEO ability/reputation (Milbourn 2003). Milbourn (2003) also uses past firm performance as an alternative proxy of CEO reputation; we also control for past performance in our model by including the 3-year, prior to the examined year, industry adjusted return. We use this 3-year window since it matches the median CEO tenure in our sample. Because our measure of CEO social networks may be partially capturing CEO ability (i.e. more ability leads to greater employment opportunities therefore higher accumulation of ties) it is important to explicitly control for this. This allows us to

[8] Here we refer to *efficiency wages*. Firms are willing to offer to specific key employees compensation which is higher than the market rate in order to reduce employee turnover.

[9] Cohen et al. (2009) are the first to use BoardEx data to study the effect of networks in a financial economics context. They find that security analysts gather superior information about firms when they have educational links with the firms' senior managers.

claim that the managerial power effect on the pay arrangements is above and beyond any managerial ability effect. We also include a vector of control variables that capture corporate governance and other firm characteristics. Corporate governance factors that have been found to influence the level of CEO compensation are: the size of the board of directors (*Board size*), the proportion of independent directors on the board (*Board independence*) and whether the CEO is also the Chairman of the Board (*CEO/Chairman role*).

Board size is an important independent variable not only because of its effect on compensation levels but also because networking measures may partially be driven by the size of the board (Larcker et al. 2006). In this study, the CEO social networks measure is a cumulative one therefore we expect current board size to have only a marginal effect. Other firm characteristics include the market capitalization of the firm at the fiscal year end (*firm size*), the ratio of book value to market value of common equity (*BtM*), the dollar variance of the firm's stock returns calculated using 60 monthly observations preceding the sample year multiplied by the beginning of the year market capitalization *($ Variance*) and the industry classification (*Industry dummies*). All independent variables, apart from the dummy *CEO/Chairman role* and the ratio *Board Independence*, are transformed using the cumulative distribution function (CDF), as in Milbourn (2003) and Aggarwal and Samwick (1999).[10] In order to confirm our first hypothesis we expect coefficient α_1 to be positive and significant.

To determine whether there is a negative relationship between the size of the CEOs social network and the pay-performance sensitivity of the CEO's compensation package we estimate Eq. 2.

$$\begin{aligned}\text{Change in FS Wealth} = &\beta_0 + \beta_1 \$\text{Return} + \beta_2 \$\text{Return} \times \text{CEO\_Network} + \\ &\beta_3 \$\text{Return} \times \text{CEO\_age} + \beta_4 \$\text{Return} \times \text{CEO\_tenure} + \\ &\beta_5 \$\text{Return} \times \text{Past\_Firm\_Perf.} + \beta_6 \$\text{Return} \times \text{Firm\_size} + \\ &\beta_7 \$\text{Return} \times \$\text{variance} + \text{Uninteracted\_variables} + \varepsilon\end{aligned} \tag{2}$$

The dependent variable is the CEO's Change in Firm Specific Wealth, which is calculated as total compensation plus the change in the market value of the CEO's stock and stock option holdings in her company (as of the beginning of the year). The change in the market value of old stock option grants and other stock holdings allows us to better capture the heterogeneity in the empirically estimated pay-performance sensitivities (Murphy 1999). This measure is calculated as in Milbourn

[10] The transformation into CDFs allows us to control for extreme outliers and also facilitates the subsequent analysis on pay-performance sensitivity by helping us readily interpret the estimated coefficients in an economically meaningful way for the way in which CEO network affects the pay sensitivities at any size of the social network (Milbourn 2003, p. 253).

(2003). The independent variables include the firm's dollar return calculated as the percentage annual stock return multiplied by the beginning of the year market value of equity (*$ Return*) as well as the interaction of dollar return with the following variables: *CEO_Network*, *CEO_age*, *CEO_tenure*, *Past_Firm_Performance*, *Firm_size* and *$variance*. We also include all the variables un-interacted.

Equation 2 uses the methodology developed in Aggarwal and Samwick (1999). It gives us estimated coefficients (β_1 to β_7), which show in an economically meaningful way the direct effect of different factors on the pay-performance sensitivity. The pay-performance sensitivity for a CEO that is at the median of the distribution of all these parameters (network, age, tenure, prior firm performance, firm size and variance) is given by $\beta_1 + 0.5 \times \beta_2 + 0.5 \times \beta_3 + 0.5 \times \beta_4 + 0.5 \times \beta_5 + 0.5 \times \beta_6 + 0.5 \times \beta_7$. A CEO with the smallest (largest) values in all these parameters has a sensitivity of β_1 ($\beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + \beta_6 + \beta_7$). In order for our hypothesis (2) to be confirmed, we expect a negative and significant coefficient β_2. We use the other 5 factors, as in Milbourn (2003), since they have been shown in prior studies to have substantial effect on pay-performance sensitivity.

Bebchuk et al. (2002) argue that an important factor that restrains the CEO's ability to extract rents from the company is the "outrage" cost. If the compensation package is deemed by outsiders as deviating substantially from optimality it might cause an *en masse* reaction against the CEO of the firm. Obviously, for "outrage" to work efficiently and make CEOs refrain from exercising their power when setting their own pay arrangements (or at least reduce the amount of rents), CEOs must believe that outrage could have serious consequences for their position within the firm. Unless shareholders have the power to bring topics for discussion in the annual general meeting (AGM), vote against specific plans or even oust the CEO from the company, the CEO will only incur reputational costs from outrage, thereby limiting its effectiveness. In order to test this argument, we use the Gompers et al. (2003) shareholder rights index (*g-score*) and classify our companies into democracies and dictatorships. A company with below (above) median *g-score* is classified as a democracy (dictatorship); for this company, the threat of outrage is expected to carry more weight and we therefore predict that CEOs will use their power less, thus reducing the amount of rents they extract from the company. In order to test this we run Eq. 2 separately for the two sub-samples and compare the effect of CEO power on the pay-performance sensitivity.

3.4 Sample and Data

The final sample consists of 1,366 observations with data collected in the following manner: All CEO data is for the 2005 fiscal year and was drawn from two sources. From BoardEx database we collected the CEO networking, age, and tenure variables. This data resulted in 4,524 CEO observations. We then merged this data with the ExecuComp database. The compensation data available from

Table 1 Descriptive statistics

	Obs.	Mean	Median	Max	Min	St. Dev.
CEO Network	1,366	190	106	1,580	6	233.81
Total compensation (000's)	1,366	5,504	3,245	92,200	0	7,184.52
Change in firm specific wealth (000's)	1,366	8,179	3,724	342,772	−407,713	66,062.84
CEO age	1,366	55	55	89	36	7.08
CEO tenure	1,366	4.86	3.3	54.7	0	5.43
Board size	1,366	9.55	9	24	4	2.54
Board independence	1,366	0.83	0.86	1	0.4	0.09
CEO/chairman role	1,366	0.61	1	1	0	0.49
G-score	1,215	9.34	9	18	2	2.53
Market value of equity (mil)	1,366	8,220	2,035	367,474	3.80	24,045.76
Annual return (%)	1,366	14.03	8	470.86	−97.28	40.26
St. Dev. returns (%)	1,366	42.19	34.15	129.9	12.2	30.62
Ind-Adj 3 year return (%)	1,366	3.23	0	661.87	−89.50	35.01
$ return (mil)	1,366	565.43	129.54	59,274	−25,689	3,615.04
$ return variance	1,366	2,323	651.80	91,824	21.71	6,424.09

Notes: This table presents summary statistics of the main variables of interest. CEO Network counts the number of social ties (direct ties) the CEO has formed through her current and past employment, education, and other types of social activities (golf clubs, charity organizations, etc.). Total Compensation is the sum of a CEO's annual salary, bonus, other annual (short-term) compensation, value of restricted stock grants, payouts of long-term incentive plans, the Black and Scholes value of the options granted during the year and other annual (long-term) compensation. Change in Firm Specific Wealth is total compensation plus the change in the market value of the CEO's stock and stock option holdings in her company (as of the beginning of the year). CEO age is the age of the CEO, in years. CEO tenure is the number of years the CEO has been in this role. Board size is the total number of inside and outside directors sitting on a company's board. Board independence is the ratio of outside directors to board size. CEO/Chairman role is a dummy variable taking the value of one (zero) if the CEO is also (is not) the Chairman of the company. G-score refers to the Gompers et al. (2003) governance index. The market value of equity is the firm's market capitalization (in millions) measured at the fiscal year end. Annual return is the firm's stock return over its fiscal year. St. Dev. Returns is the standard deviation of the firm's stock returns calculated over 60 months. Ind-Adj 3 year Return is the firm's industry adjusted return over the previous 3 years. $ Return is calculated as the percentage annual stock return multiplied by the beginning of the year market value of equity, and is measured in millions of dollars. $ Return variance is the St. Dev. Returns multiplied by the beginning of the year market capitalization

ExecuComp restricted our sample to 1,696 CEOs. We deleted observations for ten companies that had co-CEOs and 78 observations where the name of the CEO in ExecuComp did not match the CEO name in BoardEx. A further 12 observations were deleted due to missing values in the compensation details. All other accounting and market data used was collected from CRSP-Compustat. Missing values in the variables collected from CRSP-Compustat further reduced our sample down to the 1,366 observations. The Gompers et al. (2003) shareholder rights index (*g-index*) was obtained from the IRRC database.[11]

[11] The *g-index* is that published for 2004. This variable is updated on a bi-annual basis and hence the 2004 *g-index* is the appropriate measure to use with 2005 data. A firm's corporate governance policy is not expected to change substantially on an annual basis.

Table 1 presents summary statistics for all variables used in our empirical analysis. The effect of outliers is evident in a number of variables. Our CEO network variable has an average (median) value of 190 (106). This means that on average the CEOs in our sample have 190 direct ties developed over their lives. Since the majority of social ties comes from current and past employment, this translates approximately to sitting on 20 average-sized boards, either as an executive or non-executive director, over the years (this figure is calculated by dividing the 190 ties by 9.5, which is the average board size in our sample; it equals 12 boards if median values are taken into account). The average (median) CEO flow compensation is $5.5mil ($3.2mil) and indicates a substantial increase in the level of CEO annual pay compared to the $3.3mil ($1.7mil) reported by Milbourn (2003) for the period 1993–1998. The changes in CEO firm specific wealth show even greater variation with an average (median) pay of $8.2mil ($3.7mil). The average CEO in our sample is 55 years old and has been in this role for less than 5 years. This indicates a substantial increase in CEO mobility since the mid-1990s when the average figure was 8.5 years (as reported by Milbourn 2003).

The average (median) firm in our sample had in 2005 a market capitalization of $8,220mil ($2,035mil) and an annual return of 14 % (8 %). There were on average 9.55 directors sitting on the board, 83 % of whom were classified as outside directors. In 61 % of the companies the CEO was also the Chairman.

The CEO social network measure we apply in this study is positively correlated with firm characteristics but no correlation coefficient is above 30 %. CEO characteristics show limited correlation (below 7 %) but the proxies for corporate governance (such as board size and board independence), are more highly correlated (21 % and 18 %, respectively).

4 Results

4.1 The Effect of CEO Networking on Pay Levels

Table 2 presents our results for the effect of CEO social networks on compensation levels. In model 1 we run a median regression between total compensation and CEO networks; we also control for industry effects. In model 2 we include CEO characteristics, i.e. CEO age and tenure, as well as past firm performance and in models 3 and 4 we include corporate governance and other firm characteristics. Under all specifications the estimated coefficient for CEO networking is positive and highly significant, thus confirming our hypothesis (1). It appears that the greater CEO power within the managerial labour market the higher the total pay she receives from the firm. This is above and beyond any CEO reputational effects and/or other firm specific or industry effects. This result confirms, albeit from a different standpoint given our very different social networking measure, the results of recent studies on board interlocks and pay levels.

Table 2 CEO pay and networking

	(1)	(2)	(3)	(4)
cdf_CEO network	4,655*	4,803*	3,629*	1,286*
	(0.000)	(0.000)	(0.000)	(0.000)
cdf_CEO age		427	−240	33
		(0.129)	(0.431)	(0.905)
cdf_CEO tenure		55	286	712*
		(0.845)	(0.333)	(0.009)
cdf_Ind-Adj 3 year return		956*	509	220
		(0.001)	(0.074)	(0.408)
CEO/chairman role			760*	230
			(0.000)	(0.161)
cdf_Board_Size			2,652*	284
			(0.000)	(0.392)
Board_Independence			−504	820
			(0.609)	(0.365)
cdf_Firm size				4,386*
				(0.000)
cdf_BtM				69
				(0.813)
cdf_$ variance				2,772*
				(0.000)
Sample size	1,366	1,366	1,366	1,366
Pseudo-R^2	0.071	0.073	0.097	0.218

Notes: We run median regressions with total compensation as the dependent variable. Total Compensation is the sum of a CEO's annual salary, bonus, other annual (short-term) compensation, value of restricted stock grants, payouts of long-term incentive plans, the Black and Scholes value of the options granted during the year and other annual (long-term) compensation. CEO Network counts the number of social ties (direct ties) the CEO has formed through her current and past employment, education, and other types of social activities (golf clubs, charity organizations, etc.). CEO age is the age of the CEO, in years. CEO tenure is the number of years the CEO has been in this role. Board size is the total number of inside and outside directors sitting on a company's board. Board independence is the ratio of outside directors to board size. CEO/Chairman role is a dummy variable taking the value of one (zero) if the CEO is also (is not) the Chairman of the company. Firm size is the firm's market value of equity measured as the market capitalization (in millions) at the fiscal year end. BtM is the ratio of book value of common equity divided by the market value of common equity. Ind-Adj 3 year Return is the firm's industry adjusted return over the previous 3 years. $ Variance is the variance of the firm's stock returns calculated using 60 monthly observations preceding the sample year multiplied by the beginning of the year market capitalization. All independent variables, apart from the binary CEO/Chairman role and Board Independence which lies between zero and one, are transformed using cumulative distribution function (CDF). Estimated coefficients for the intercept and industry dummies are suppressed. p-values are in *parentheses*. * denotes significance at the 1 % level

4.2 The Effect of CEO Networking on Pay-Performance Sensitivity

Table 3 presents our results on the effect of CEO networks on pay-performance sensitivity. In panel A we run 4 different model specifications on the full sample. In panel B (C) we run the same regressions but only for below (above) median

Table 3 CEO pay sensitivities and networking

	(1)	(2)	(3)	(4)
Panel A: full sample				
$ returns	4.18*	17.72*	10.17*	23.81*
	(0.000)	(0.000)	(0.000)	(0.000)
$ returns × cdf_CEO network		−16.76*	−13.25*	−6.33*
		(0.000)	(0.000)	(0.000)
$ returns × cdf_CEO age			−2.13*	−2.14*
			(0.000)	(0.000)
$ returns × cdf_CEO tenure			6.81*	6.72*
			(0.000)	(0.000)
$ returns × cdf_Ind-Adj 3 year return			5.07*	5.11*
			(0.000)	(0.000)
$ returns × cdf_Firm size				−3.84*
				(0.000)
$ returns × cdf_$ variance				−17.28*
				(0.000)
Sample size	1,366	1,366	1,366	1,366
Pseudo-R^2	0.066	0.093	0.113	0.126
Panel B: democracies				
$ returns	3.28*	14.23*	7.21*	25.13*
	(0.000)	(0.000)	(0.000)	(0.000)
$ returns × cdf_CEO network		−13.25*	−8.58*	−2.26*
		(0.000)	(0.000)	(0.000)
$ returns × cdf_CEO age			−3.42*	−4.34*
			(0.000)	(0.000)
$ returns × cdf_CEO tenure			5.18*	8.65*
			(0.000)	(0.000)
$ returns × cdf_Ind-Adj 3 year return			4.95*	5.68*
			(0.000)	(0.000)
$ returns × cdf_Firm size				−3.19*
				(0.004)
$ returns × cdf_$ variance				−20.46*
				(0.000)
Sample size	642	642	642	642
Pseudo-R^2	0.048	0.073	0.097	0.114
Panel C: dictatorships				
$ returns	4.57*	23.25*	16.90*	21.00*
	(0.000)	(0.000)	(0.000)	(0.000)
$ returns × cdf_CEO network		−22.85*	−23.09*	−14.78*
		(0.000)	(0.000)	(0.000)
$ returns × cdf_CEO age			−1.28**	−1.48*
			(0.016)	(0.000)
$ returns × cdf_CEO tenure			7.87*	8.27*
			(0.000)	(0.000)
$ returns × cdf_Ind-Adj 3 year return			7.02*	4.61*
			(0.000)	(0.000)
$ returns × cdf_Firm size				−7.10*
				(0.003)

(continued)

Table 3 (continued)

	(1)	(2)	(3)	(4)
$ returns × cdf_$ variance				−3.38
				(0.111)
Sample size	573	573	573	573
Pseudo-R^2	0.088	0.131	0.166	0.170
Panel D: estimated pay sensitivities				
Democracies				
For median CEO age, CEO tenure, Ind-Adj 3 year return, firm size and/or firm $ variance AND				
Minimum CEO networking				$18.30
Median CEO networking				$17.17
Maximum CEO networking				$16.04
Reduction in sensitivity				−12 %
Dictatorships				
For Median CEO age, CEO tenure, Ind-Adj 3 year return, firm size and/or firm $ variance AND				
Minimum CEO networking				$23.15
Median CEO networking				$15.76
Maximum CEO networking				$8.37
Reduction in sensitivity				−64 %

Notes: We run median regressions with Change in Firm Specific Wealth as the dependent variable. Change in Firm Specific Wealth is total compensation plus the change in the market value of the CEO's stock and stock option holdings in her company (as of the beginning of the year). CEO Network counts the number of social ties (direct ties) the CEO has formed through her current and past employment, education, and other types of social activities (golf clubs, charity organizations, etc.). CEO age is the age of the CEO, in years. CEO tenure is the number of years the CEO has been in this role. Firm size is the firm's market value of equity measured as the market capitalization (in millions) at the fiscal year end. $ Return is calculated as the percentage annual stock return multiplied by the beginning of the year market value of equity, and is measured in millions of dollars. Ind-Adj 3 year Return is the firm's industry adjusted return over the previous 3 years. $ Variance is the variance of the firm's stock returns calculated using 60 monthly observations preceding the sample year multiplied by the beginning of the year market capitalization. In panel A we run the analysis for the full sample. Panel B (C) runs the analysis for below (above) median G-Score companies. In panel D we illustrate the effect of CEO networks on the estimated pay-performance sensitivities. Estimated coefficients for the intercept, the cdf variables that are not interacted with $ returns and the industry dummies are suppressed. p-values are in *parentheses*. * denotes significance at the 1 % level and ** at the 5 % level

g-score firms. As expected the first model shows, in all panels, that the higher the return to shareholders the higher the change in CEO firm specific wealth. This is in line with the sharing (between the agents and the principals) of the "output" argument and shows that the pay of US CEOs depends on (is linked to) firm performance. In model 2, we isolate the impact of CEO networks to pay-performance sensitivity. As we predicted in hypothesis (2) the coefficient of the interacted term between dollar returns and our CEO social network measure is negative and highly statistically significant (in all panels). This result illustrates that

the higher the CEO power in the managerial labour market the lower the pay-performance sensitivity of the pay package she manages to negotiate. This result is robust to the addition of other factors that are known to affect the sensitivity of pay, i.e. proxies of CEO ability/reputation (model 3) as well as firm size and dollar return variance (model 4). As far as these additional factors are concerned we find a negative effect of CEO age, firm size and dollar return variance on pay-performance sensitivity and a positive effect of CEO tenure and past performance, thus confirming the results of Milbourn (2003).

Panel D of Table 3 compares the differences in the impact of CEO networks on the pay-performance sensitivity between companies that are classified as democracies or dictatorships. Using the estimated coefficients in model 4 (panels B and C), and median values in the other five factors affecting the sensitivity, we calculate the estimated pay sensitivities at different CEO networking levels.[12] We observe that as we move from the smallest to the biggest CEO social networks the pay-performance sensitivity reduces substantially; this reduction is more pronounced for companies that fall under the "dictatorships" classification. Indeed, the drop in companies with low shareholder rights is more than five times that observed in companies with high shareholder rights (64 % drop compared to a 12 % drop). The 64 % drop in dictatorships is economically significant since it translates to a sensitivity reduction of $14.78, which approximates the pay sensitivities estimated for democratic firms at any level of CEO networking. This confirms our expectation that CEOs are more prudent in exerting power over their pay packages in companies where the costs of creating outrage can have an immediate effect on the CEO's position within the firm (e.g. the CEO is fired at the Annual General Meeting).

4.3 Robustness Tests

The managerial power perspective claims that there is a correlation between CEO power and rent extraction: the greater the power of the CEO, the higher will be the rent she is able to extract. Bebchuk et al. (2002) argue that CEO power depends in large part on the ownership structure of the firm and in particular on the CEO shareholdings. The more shares owned by the CEO, the greater her power within the firm. In this chapter, we argue that this definition is restrictive. We claim that it is the CEO power in the managerial labour market (not only within the firm) that is more important in explaining pay arrangements and in particular rent-extraction.

[12] For example, the first figure in panel D ($18.30) is calculated using the panel B, model 4 coefficients in the following way: 25.13–0.5 × 4.34 + 0.5 × 8.65 + 0.5 × 5.68–0.5 × 3.19–0.5 × 20.46 (we don't take into account the coefficient for CEO networking since we calculate this figure for the lowest CEO network). The difference between the first and third figure (where we assume maximum CEO networking) stems from the size of coefficient β_2 (the coefficient of the interacted variable: dollar return × CEO Networking).

We test this argument and include both our CEO networking measure and CEO shareholdings in regression analyses using similar model specifications to the ones reported in Tables 2 and 3 (untabulated results). The CEO shareholdings variable is not significant in explaining total compensation, whereas our CEO networking measure remains positive and highly statistically significant. We also observe that CEO shareholdings are positively related to the change in CEO firm specific wealth (as one would expect) but CEO networking retains its negative and significant effect on pay-performance sensitivity.

As previously discussed, in the small number of studies that have examined the relationship between social networks and pay arrangements, various board interlocking measures have been used to proxy for the size of the network. In doing so, they implicitly assume that only current ties are important. We argue that all ties, whether developed recently or over many years, are equally important. Ignoring past ties substantially underestimates the size of the network. In additional (untabulated) analysis, we use the number of boards on which the CEO currently sits (either as an executive or non-executive director) as a proxy for current ties.[13] This measure becomes significant only in the regressions on CEO firm specific wealth, whereas the CEO Network coefficient remains highly significant and with the right sign throughout.

Finally, in order to further ensure the robustness of our results we test different model specifications (untabulated results). First, we add the governance controls used in the pay level specification to the pay-performance sensitivity analysis as well. Second, we use an alternative past performance indicator for the firm. The 3 years period used in our main specification matches the median CEO tenure in our sample. So, we now use the 5 year industry adjusted return, which matches the average CEO tenure. Despite these changes our results remain qualitatively the same.

5 Conclusion

This chapter examines the relationship between CEO networks and compensation arrangements. We use a broad measure of social network, which takes into account all direct ties developed over the CEO's life. This measure allows us to broaden the definition of CEO power and to avoid the biases inherent in previous studies which result from using board interlocking measures.

Our results support the predictions of the managerial power approach (Bebchuk et al. 2002). In particular, we find that the bigger the size of the CEO network, (and therefore her power in the managerial labour market), the higher the CEO total compensation and the lower the pay-performance sensitivity. We also show that the

[13] We do not use the actual number of current ties because they are bound to be correlated with the networking measure (i.e. they are part of our networking measure).

extraction of rent is more pronounced in firms with low shareholder rights, where the CEO feels protected against the consequences of "outrage". Our results are robust to different methodologies and model specifications. Even after controlling for CEO and firm characteristics that are known to affect pay arrangements, the size of the CEO network remains a highly significant determinant of the pay package.

This chapter also offers new evidence to the debate over the correct CEO power definition. We argue that if we want to better understand the compensation setting process, it is important to measure the CEO power in the managerial labour market and not only within the firm. We borrow arguments from the Social Network Theory and claim that direct ties developed in the past are equally important to current ties in empowering a CEO. We empirically demonstrate that this is the case when we test both our measure and other proxies of CEO power; in all specifications our CEO power measure is equally good or better in explaining pay arrangements.

There are two main limitations in our study, which are common within the corporate governance literature. First, we only study a cross-section of US firms, which makes it difficult to extract generalized conclusions. In our defence, our sample is contemporaneous and includes a substantial number of firms, which allows us to examine the majority of the recent corporate governance practices in this area. Also, our main variable of interest, the CEO's Social Network, is a cumulative one incorporating ties developed over a large number of years. Therefore any panel data analysis would only capture marginal effects for this variable. Second, there might be endogeneity issues between the networking variable and other independent variables, such as board size. Still, the correlation between the CEO networking variable and any of the corporate governance variables applied in this study is not above 21 %, which essentially shows that the variables are orthogonal (e.g. board size does not explain more than 4.4 % of CEO social networks).[14]

Finally, a specific limitation to this study is that our measure does not capture all social ties developed by the CEOs. However, as previously discussed, this is not feasible since humans create hundreds of weak, *indirect* links which are difficult to trace. In addition, drawing on social network theory, we illustrate that the ties we do capture (weak, direct ties) are the most important ties in the managerial labour market. In any case, the use of our measure helps avoid the biases of the various board interlocking measures applied in the relevant literature, thus advances this research area.

Overall, we believe that more attention should be paid to the effect of social networks in corporate governance. The managerial power approach has recently provided a new platform to test power relationships.

[14] The correlation coefficient between board size and CEO networks is 21 %. Therefore board size explains 4.4 % ($R^2 = \rho^2 = 0.21^2$) of the CEO networking variation.

References

Aggarwal, R., & Samwick, A. (1999). The other side of the trade-off: The impact of risk on executive compensation. *Journal of Political Economy, 107*, 65–105.

Barnea, A., & Guedj, I. (2006). But, mom, all the other kids have one! CEO compensation and director networks. *McCombs School of Business Working Paper*, University of Texas at Austin.

Battu, H., Seaman, P., & Zenou, Y. (2011). Job contact networks and the ethnic minorities. *Labour Economics, 18*, 48–56.

Bebchuk, L. A., & Fried, J. M. (2003). Executive compensation as an agency problem. *Journal of Economic Perspectives, 17*, 71–92.

Bebchuk, L. A., & Fried, J. M. (2004). *Pay without performance: The unfulfilled promise of executive compensation*. Cambridge: Harvard University Press.

Bebchuk, L. A., Fried, J. M., & Walker, D. I. (2002). Managerial power and rent extraction in the design of executive compensation. *The University of Chicago Law Review, 69*, 751–846.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. New York: Commerce Clearing House.

Burns, J., Godlonton, S., & Keswell, M. (2010). Social networks, employment and worker discouragement: Evidence from South Africa. *Labour Economics, 17*, 336–344.

Calvo-Armengol, A., & Jackson, M. O. (2007). Networks in labor markets: Wage and employment dynamics and inequality. *Journal of Economic Theory, 132*, 27–46.

Cohen, L., Frazzini, A., & Malloy, C. (2010). Sell-side school ties. *Journal of Finance, 65*, 1409–1437.

Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: On the usefulness of weak ties for technical advice. *Organization Science, 7*, 119–135.

Core, J., & Guay, W. R. (2002). The other side of the trade-off: The impact of risk on executive compensation: A revised comment. *Working paper*. Available at SSRN: http://ssrn.com/abstract=292955.

Core, J., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, CEO compensation and firm performance. *Journal of Financial Economics, 51*, 317–406.

Core, J., Guay, W., & Larcker, D. F. (2003). Executive equity compensation and incentives: A survey. *Economic Policy Review*, 27–50 Apr 2003.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy, 93*, 1155–1177.

Fich, E., & White, L. (2003). CEO compensation and turnover: The effects of mutually interlocked boards. *Wake Forest Law Review, 38*, 935–959.

Fontaine, F. (2008). Why are similar workers paid differently? The role of social networks. *Journal of Economic Dynamics & Control, 32*, 3960–3977.

Fracassi, C. (2009). Corporate finance policies and social networks. *Working Paper,* University of Texas at Austin.

Fracassi, C., & Tate, G. A. (2012). External networking and internal firm governance. *Journal of Finance, 67*, 153–194.

Gompers, P. A., Ishii, J. L., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics, 118*, 107–155.

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology, 78*, 1360–1380.

Granovetter, M. (1974). *Getting a job: A study of contacts and careers*. Cambridge: Harvard University Press.

Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory, 1*, 201–233.

Granovetter, M. (2005). The impact of social structure on economic outcomes. *Journal of Economic Perspectives, 19*, 33–50.

Gulati, R., & Westphal, J. D. (1999). Cooperative or controlling? The effects of CEO-board relations and the content of interlocks on the formation of joint ventures. *Administrative Science Quarterly, 44*, 473–506.

Hall, B. J., & Liebman, J. B. (1998). Are CEOs really paid like bureaucrats? *Quarterly Journal of Economics, 113*, 653–691.

Hallock, K. (1997). Reciprocally interlocking boards of directors and executive compensation. *Journal of Financial and Quantitative Analysis, 32*, 331–344.

Himmelberg, C., Hubbard, G., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics, 53*, 353–384.

Horton, J., Millo, Y., & Serafeim, G. (2009). Paid for connections or too connected to be good? Social networks and executive and non-executive directors compensation. *Working Paper*, London School of Economics.

Hwang, B. H., & Kim, S. (2009). It pays to have friends. *Journal of Financial Economics, 93*, 138–158.

Ioannides, Y. M., & Loury, L. D. (2004). Job information networks, neighborhood effects, and inequality. *Journal of Economic Literature, 42*, 1056–1093.

Jackson, M. O. (2005). The economics of social networks. In R. Blundell, W. K. Newey, T. Persson (Eds), *Advances in economics and econometrics: Theory and applications,* vol. 1, Ch. 1, Ninth World Congress.

Jensen, M., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 4*, 305–360.

Jensen, M., & Zajac, A. J. (2004). Corporate elites and corporate strategy: How demographic preferences and structural position shape the scope of the firm. *Strategic Management Journal, 25*, 507–524.

Larcker, D., Richardson, S., Seary, A., Tuna, I. (2006). Director networks, executive compensation, and firm performance. *Working Paper*, Stanford University.

Milbourn, T. (2003). CEO reputation and stock-based compensation. *Journal of Financial Economics, 68*, 233–262.

Mirrlees, J. (1976). The optimal structure of incentives and authority within an organization. *Bell Journal of Economics, 7*, 105–131.

Mortensen, D. T., & Vishwanath, T. (1994). Personal contacts and earnings: It is who you know! *Labour Economics, 1*, 187–201.

Murphy, K. J. (1999). Executive compensation. In O. Ashenfelter & D. Card (Eds.), *Handbook of labor economics* (pp. 2485–2563). North-Holland: Elsevier Science. 3b, Ch. 38.

Nguyen, B. D. (2012). Does the Rolodex matter? Corporate Elite's small world and the effectiveness of boards of directors. *Management Science*, *58*, 236–252.

Paredes, T. (2005). Too much pay, too much deference: Behavioral corporate finance, CEOs, and corporate governance. *Florida State University Law Review, 32*, 673–762.

Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.

Smith, C., & Watts, R. (1992). The investment opportunity set and corporate financing, dividends, and compensation policies. *Journal of Financial Economics, 32*, 263–292.

Strahilevitz, L. J. (2005). A social networks theory of privacy. *The University of Chicago Law Review, 72*, 919–988.

Wegener, B. (1991). Job mobility and social ties: Social resources, prior job, and status attainment. *American Sociological Review, 56*, 60–71.

Wellman, B. (1983). Network analysis: Some basic principles. *Sociological Theory, 1*, 155–200.

Zhao, Y., & Renneboog, L. (2011). Us knows us in the UK: On director networks and CEO compensation. *Journal of Corporate Finance, 17*, 1132–1157.

Board Independence, Corporate Governance and Earnings Management in France

Ramzi Benkraiem

Abstract The financial markets increasingly look to corporate governance mechanisms to help guarantee reliable and accurate financial information. The evaluation of the effectiveness of this role is therefore an interesting empirical question. This question has been brought to the fore by recent financial scandals and made crucial by the recent changes in the French institutional context. It is from this standpoint that this chapter aims to examine the influence of the board independence and two other corporate governance mechanisms, namely the audit quality and the ownership structure, on earnings management as measured by discretionary accruals. The empirical findings show that the presence of independent directors can moderate the management of discretionary accruals. The Big 4 auditors can also limit this discretionary adjustment. However, no statistically significant relationship was observed between dispersion vs. concentration of ownership structure and these accruals. This study makes an interesting contribution by making it possible to evaluate empirically the effectiveness of the role of three important corporate governance mechanisms. It adds to the limited research into the relationship between corporate governance and earnings management in France. Thus, it should be of interest to academics as well as regulators in preparing and amending corporate governance laws.

1 Introduction

Corporate managers can use the managerial latitude to maximize their own interests, sometimes at the expense of shareholders, creditors and other stakeholders' wealth. From an accounting standpoint, they can thus take advantage of the flexibility offered by the standards and engage in activities known as

R. Benkraiem (✉)
IESEG School of Management, Lille, France
e-mail: r.benkraiem@ieseg.fr

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_13,

"earnings management" so as to modulate the financial information to be disclosed. This modulation consists concretely in opting for accounting decisions that individually comply with the legal framework but are globally oriented towards the fulfillment of specific self-serving objectives. A monitoring of corporate managers may then be necessary in order to limit the scope of these practices. In this framework, independent directors (subsequently referred to as ID), key actors of corporate governance, have a decisive role to play. The markets increasingly look to them to help guarantee reliable and accurate financial information (Stolowy and Jeanjean 2006; Petra 2007). From a disciplinary standpoint, these ID are regarded as an important source of the board independence (Fama 1981; Fama and Jensen 1983; Beasley 1996).

The main objective of this chapter is to study the relationship between the board independence, assessed by the presence of ID, and the managerial discretion exercised specifically at the accounting level. More specifically, it seeks to answer the question: can board independence, appreciated by the presence of ID, influence and limit earnings management practices in France?

This question has been brought to the fore by recent financial scandals and made crucial by the changes in the French institutional context. The need to guarantee quality accounting information is now an increasingly important issue for the firm's various partners. Accordingly, it seems important to know whether board independence plays an effective role at this level.

This paper makes an interesting contribution by making it possible to evaluate empirically the effectiveness of this role. It adds to the limited research into the relationship between corporate governance and earnings management in France. It also gives empirical evidence on the effectiveness of the Viénot 1999 report's recommendations [Viénot report promotes non-binding corporate governance principles dealing with director compensation and independence. While this report is non-binding, French listed companies are strongly invited to comply with it]. Thus, it should be of interest to academics as well as regulators in preparing and amending corporate governance laws.

The remainder of this paper is organized as follows: Sect. 2 presents the theoretical framework and formulates the hypotheses. Section 3 describes the methodology. Section 4 presents and discusses the results. Section 5 serves as the conclusion.

2 Theoretical Framework and Hypotheses Development

2.1 Earnings Management

According to Dechow and Skinner (2000), earnings management practices are directly linked to the accrual based accounting. In fact, the choice of the moment when revenues and charges are recorded creates a variation that constitutes the difference between cash vs. accrual based accounting. In the long run, this variation will tend to disappear, since earnings must normally tend towards the cash flows. In

the short term, however, it is potentially adjustable (Dechow and Dichev 2002). Earnings management represents a way of manipulating this variation. This manipulation comprises a set of accounting choices whose objective is to modify firms' reported earnings. It is carried out in compliance with prevailing accounting standards. Researchers in accounting and finance have devoted considerable energy to studying this phenomenon (for a review of this literature, see Stolowy and Breton 2004). From an academic point of view, several methods have been developed for the purposes of analysis and have become increasingly refined over time. In this domain and since the study of Healy (1985), most research has sought to study earnings management on the basis of "accruals". This measure includes all the adjustments that make it possible to move from cash to accrual based accounting. As Cormier et al. (1998, p. 27) emphasize, "such an approach seems logical since accruals represent a global measure of the company's accounting disclosure strategy and are therefore more likely to reflect a strategic decision of corporate managers than simply studying a particular accounting method".

2.2 Independent Directors and Earnings Management

The roles assigned in a general way to boards of directors and specifically to ID can vary according to the theories of corporate governance. Thus, Charreaux (2004) distinguishes two main categories of theories in this area: contractual and strategic theories. Contractual theories are aimed at disciplining corporate managers and protecting shareholders' interests, whereas strategic theories aim essentially at wealth creation, particularly through the creation of knowledge, skills, etc. It should be noted that this paper subscribes to the former category of theories. One of the most important functions assigned to the board of directors in France is that of overseeing corporate managers. Indeed, Article L. 225–35 of the French Commercial Code stipulates that "the board of directors determines the orientations of the company's business activity and oversees their implementation. It addresses any question relating to the smooth operation of the company and decides through its deliberations on the matters that concern it [. . .]. The board of directors carries out the appropriate checks and verifications. The Chief Executive of the company is required to supply each director with all documents and information necessary for the fulfillment of his duties". As outlined above, one of the decisive sources of effectiveness of these boards is the presence of ID (Fama 1981; Fama and Jensen 1983; Beasley 1996). According to the Bouton 2002 report (p. 9) [Bouton is a report published in France in reaction to the Enron and Vivendi Universal scandals. It extends the Viénot report and promotes stricter non-binding principles regarding board independence, financial information, etc.], a director is defined as independent "when he has no relationship of any kind whatsoever with the company, its group or its management that could compromise the exercise of his freedom of judgment". At least two reasons can motivate ID to fulfill their role efficiently. First, ID are often recruited on the basis of their reputation on the director market. Their career development seems to be directly associated with their reputation. Secondly,

the absence of subordination to corporate managers makes it easier for them to openly oppose these managers' decisions. The presence of ID (i.e. directors without any subordinate relationship with the company) can limit earnings management. Several previous papers, mainly Anglo-Saxons, have tended to show that discretionary accruals are negatively associated with ID (Peasnell et al. 2000; Klein 2002; Xie et al. 2003; Benkel et al. 2006). This leads to the first hypothesis:

H1 – Independent directors will be negatively associated with earnings management.

2.3 Other Corporate Governance Mechanisms and Earnings Management

As well as the presence of ID, other corporate governance mechanisms can limit earnings management behavior. Two additional important mechanisms are often highlighted by numerous previous research studies (see references below): the audit quality and the ownership structure.

The audit quality can influence the opportunistic accounting choices of corporate managers. DeAngelo (1981) shows analytically that "big" auditing firms are more motivated than "small" ones to provide high-quality controls on accounts.

Two arguments can support this thesis:

1. The loss of reputation is more important for big auditors in the event of a problem arising from certification.
2. Big auditors are usually wealthier and thus more liable to be sued for damages in the event of malpractice.

From an empirical standpoint, Francis and Krishnan (1999) find that companies audited by the Big 6 auditors use less discretionary accruals than others to adjust reported earnings. Kim et al. (2003) confirm this negative relationship. Furthermore, they add that the Big auditors exercise more effective control when corporate managers are motivated to manipulate earnings upwards. In the Swiss context, Cormier et al. (1998) also show that the Big 6 reduce recourse to total and discretionary accruals. In France, Jeanjean (2001) confirms this association. Nevertheless, he highlights a smaller moderating effect (in terms of extent and statistical significance) than that found by the other Anglo-Saxon cited research. Overall, the quality of external audit seems to play an effective role in limiting the extent of discretionary accruals. This leads to the second hypothesis:

H2 – Big 4 auditors will be negatively associated with earnings management.

The ownership structure can also influence earnings management practices. Several researchers suggest that the accounting behavior of controlled companies is less active than that of managerial firms. According to Jeanjean (2001), it is possible to identify two dividing lines with regard to ownership structure:

1. A first distinction between firms owned by their corporate managers, vs. other companies
2. A second distinction between companies with concentrated vs. diffused ownership structure

Some empirical studies tend to confirm the influence of a large stockholder on firms' accounting policy. Thus, based on a sample of firms that made an initial public offering in Quebec, Cormier and Magnan (1995) find that forecast-issuing companies whose corporate managers maintain a high degree of ownership manipulate their earnings less than firms where corporate managers retain only a low level of ownership. Coherently, in the French context, Cormier and Martinez (2006) show that the opportunistic accounting behaviour of managerial firms (dispersed ownership structure, i.e. absence of a large blockholder) is more active than that in controlled companies. This leads to the third hypothesis:

H3 – Dispersed ownership structure will be positively associated with earnings management.

3 Methodology

To study the influence of Board independence and other corporate governance mechanisms on the managerial discretion carried out to adjust reported earnings, we use discretionary accruals as a proxy for earnings management. Several estimation models are put forward by the literature. We focus in this study on working-capital (i.e. short-term) discretionary accruals. The contribution of this approach in detecting earnings management has been highlighted by several papers. In this regard, authors such as Young (1999), Peasnell et al. (2000) and Xie et al. (2003) emphasize that the discretionary adjustment of short-term items is easier for corporate managers than long-term items. In their view, managing long-term items generally requires modifying the depreciation policy, which is more visible for external users of the financial information.

In what follows, the estimation of these accruals, the specifications of the empirical model and the sample are presented, respectively.

3.1 Estimation of Working Capital Discretionary Accruals

For the purposes of estimating working capital discretionary accruals, the first task is to calculate the total working capital accruals as follows (Peasnell et al. 2000; Xie et al. 2003):

$$\mathrm{TWCAC_{it}} = (\ \Delta \mathrm{CA_{it}} - \ \Delta \mathrm{Cash_{it}}) - (\ \Delta \mathrm{CL_{it}} - \ \Delta \mathrm{STD_{it}}) \qquad (1)$$

Where for firm *i* in year *t*: ΔCA_{it} is the change in current assets; $\Delta Cash_{it}$ is the change in cash and cash equivalents; ΔCL_{it} is the change in current liabilities and ΔSTD_{it} is the change in long-term debt included in current liabilities.

The total working capital accruals (TWCAC) calculated includes normal and abnormal parts. Only the abnormal part is assumed to reflect subjective accounting choices made by corporate managers. Using industry and fiscal year combination, working capital discretionary accruals (WCDAC) are obtained by calculating the difference between total and non-discretionary working capital accruals:

$$WCDAC_{it}/A_{it-1} = (TWCAC_{it}/A_{it-1}) - [\beta_0(1/A_{it-1}) + \beta_1((\Delta REV_{it} - \Delta AR_{it})/A_{it-1})] \quad (2)$$

Where for firm *i* in year *t*: A_{it-1} is the lagged total assets; ΔREV_{it} is the change in sales revenues and ΔAR_{it} is the change in account receivables.

3.2 *Specifications of the Empirical Model*

To test the hypotheses already formulated, the empirical model set out below is posited. As regards ID variable, it seems useful to turn first of all to an important source of "good practices" of corporate governance in France. The unique text called "collective 2003", combining the Viénot and Bouton reports can serve as a particularly judicious source. The deployed conception of independence tends increasingly to be based upon the main criterion of the absence of any link of direct or indirect interest between the director and the company. This criterion seems to be aimed at enabling the director to exercise his duties objectively, without any dependence upon corporate managers. In the strict sense, it does not consider all external directors as automatically independent. In other words, a director who is defined as external because he does not have any operating responsibilities may have a connecting interest with the firm and as a result not be considered independent. French companies often invoke the conditions set out by these reports in declaring the independence of their directors. This research is therefore based upon the information given in the companies' annual reports. Only the directors described as such in these reports are here considered independent. This choice may lead to an underestimation of the presence of ID (i.e. ID not mentioned in the annual reports). Nevertheless, it has the advantage of taking into account the contextual specificities and thus bringing methodological rigor into the analysis. Two dichotomous variables are then used to assess the influence of ID. These variables respectively take the value 1 in the case of the presence of ID and in the case of boards comprising at least one third of ID, as recommended by the Viénot 1999 report.

To assess the audit quality, in accordance with the existing literature (DeAngelo 1981; Francis and Krishnan 1999, Chung et al. 2005), we distinguish between

certifiers belonging to the four Big auditors and the others. We thus establish a dichotomous variable which takes the value 1 when the company's accounting records are certified by a Big 4.

The ownership structure variable is introduced because previous studies suggest that the opportunistic accounting behavior of managerial firms (i.e. with diffused ownership structure) is more active than that of controlled firms (Cormier and Magnan 1995; Cormier and Martinez 2006). A dichotomous variable, representing a diffused ownership structure, is then used. Based on the IAS no. 28, the 20 % threshold, corresponding to the concept of significant influence, is adopted to signal that the capital is dispersed. The designated variable takes the value 1 when no blockholder holds more than 20 % of the total ordinary shares outstanding.

The empirical model presented below takes into consideration different control variables because the corporate governance variables are not the only ones that could potentially influence the opportunistic adjustment of WCDAC. These variables, used in numerous past research studies, refer to the company size, its debt (Watts and Zimmerman 1986), its relative earnings performance (Kim et al. 2003; Chung et al. 2005) and its lagged WCDAC (Sloan 1996; Koh 2003; Grace and Koh 2005).

$$\begin{aligned} \mathrm{WCDAC_{it}} = {} & \delta_0 + \delta_1\,\mathrm{PID_{it}}[\mathrm{or\,IDT_{it}}] + \delta_2\,\mathrm{BA_{it}} + \delta_3\,\mathrm{DOS_{it}} + \delta_4\,\mathrm{SIZE_{it}} \\ & + \delta_5\,\mathrm{DEBT_{it}} + \delta_6\,\mathrm{REP_{it}} + \delta_7\,\mathrm{LWCDAC_{it}} \\ & + \sum_{\mathrm{k}=2001}^{2003} \beta_{\mathrm{K}}\,\mathrm{Year\,k} + \varepsilon_{\mathrm{it}} \end{aligned} \tag{3}$$

Where for firm i in year t: PID is a dummy variable, 1 if board of directors comprises ID and 0 otherwise; IDT is a dummy variable, 1 if board of directors comprises at least one third of ID and 0 otherwise; BA is a dummy variable, 1 if the auditor is a Big 4 and 0 otherwise; DOS is a dummy variable, 1 if no stockholder holds more than 20 % of the total ordinary shares outstanding; SIZE is the logarithm of market capitalization; DEBT is total debts divided by total assets; REP is a dummy variable, 1 if the operating cash flow for a firm is below the industry annual median of operating cash flows [poor performance] and 0 otherwise; LWCDAC are the lagged WCDAC and Year K is a cluster dummy variable, 1 if the year is K and 0 otherwise.

3.3 Sample

The accounting and financial data are from AMADEUS. This database comprises the consolidated financial statements of 629 French companies listed on the Paris stock exchange. The initial sample is composed of all the French companies available over the period 2001–2004. Financial and assimilated companies are excluded because of their specific accounting rules. Real estate and holding companies are also excluded. This because the cross-sectional intra-industry

estimation model of WCDAC is based on the assumption of firms' homogeneity in the same industry (Koh 2003). These companies operate in various industries and exploit diversified resources. They therefore clearly violate this assumption. The other independent variables are collected from the annual reports. Taking into account the analyses to be conducted, the information required for calculation of the WCDAC had to be available for at least 2 consecutive years. Companies for which information was missing are therefore excluded. To ensure the estimation efficiency of discretionary accruals, industries for which observations were less than 10 per year are therefore excluded. The final sample is made up of 239 different French companies listed on the Paris stock exchange.

4 Results

At this stage, the descriptive statistics of our different variables, the Pearson correlation matrix and the OLS fixed effect regression results of Eq. 3 will be presented, respectively.

4.1 Descriptive Statistics

Table 1 presents the descriptive statistics of the variables used. The WCDAC are negative and amount on average to −0.6 %. These WCDAC amount to −5.75 % for the first quartile and 5.5 % for the third quartile of firms. This shows that some corporate managers adjust their earnings downwards while others manage them upwards. The PID is on average 61.3 %. Since we are dealing with a dichotomous variable, this mean indicates a frequency. More than 61 % of the companies in our sample mention in their annual reports the presence of ID in their boards of directors. The IDT amounts on average to 40.5 %. More than 40 % of the companies expressly state in their annual reports that the boards of directors include at least one third of ID. For the other governance variables, this same table shows that almost half of the companies have financial statements certified by the Big 4. It also indicates that more than 16 % of these companies have a diffused ownership structure.

In addition, the variable SIZE calculated from the market capitalization amounts to 3.8 on average and its standard deviation is 1.796. It shows the highest "variability". DEBT is equal to 0.056, which means that the companies in our sample have debt amounting on average to 5.56 % of their total assets. Half of the companies have the operating cash flow lower than the industry annual median of operating cash flows. Finally, the LWCDAC are on average equal to 0.1 %. Their values observed for each quartile of firms are almost the same as those of WCDAC for the current year.

Table 1 Descriptive statistics for dependent and independent variables

			Quartiles		
	Mean	St. dev	25	50	75
WCDAC	−0.006	0.121	−0.058	0	0.055
PID	0.613	0.464	0	1	1
IDT	0.405	0.404	0	0	1
BA	0.480	0.500	0	0	1
DOS	0.164	0.370	0	0	1
SIZE	3.813	1.796	2.526	3.501	4.966
DEBT	0.056	0.078	0.012	0.026	0.062
REP	0.502	0.500	0	1	1
LWCDAC	0.001	0.175	−0.060	−0.004	0.055

Where for firm *i* in year *t*: WCDAC are the working capital discretionary accruals computed using Eq. 2; PID is a dummy variable, 1 if board of directors comprises ID and 0 otherwise; IDT is a dummy variable, 1 if board of directors comprises at least one third of ID and 0 otherwise; BA is a dummy variable, 1 if the auditor is a Big 4 and 0 otherwise; DOS is a dummy variable, 1 if no stockholder holds more than 20 % of the total ordinary shares outstanding; SIZE is the logarithm of market capitalization; DEBT is total debts divided by total assets; REP is a dummy variable, 1 if the operating cash flow for a firm is below the industry annual median of operating cash flows [poor performance] and 0 otherwise and LWCDAC are the lagged WCDAC.

Table 2 Pearson correlation matrix

	PID	IDT	BA	DOS	SIZE	DEBT	REP	LWCDAC
PID	1	0.751	0.280	0.035	0.305	0.133	0.003	0.033
		(0.000)	(0.000)	(0.308)	(0.000)	(0.000)	(0.937)	(0.376)
IDT		1	0.220	0.064	0.215	0.070	0.001	0.045
			(0.000)	(0.065)	(0.000)	(0.044)	(0.974)	(0.230)
BA			1	0.034	0.270	0.076	0.009	0.041
				(0.324)	(0.000)	(0.029)	(0.805)	(0.275)
DOS				1	0.021	0.073	0.090	0.015
					(0.543)	(0.037)	(0.010)	(0.685)
SIZE					1	0.170	−0.183	0.132
						(0.000)	(0.000)	(0.000)
DEBT						1	0.072	−0.011
							(0.037)	(0.766)
REP							1	−0.170
								(0.000)
LWCDAC								1

Where for firm *i* in year *t*: PID is a dummy variable, 1 if board of directors comprises ID and 0 otherwise; IDT is a dummy variable, 1 if board of directors comprises at least one third of ID and 0 otherwise; BA is a dummy variable, 1 if the auditor is a Big 4 and 0 otherwise; DOS is a dummy variable, 1 if no stockholder holds more than 20 % of the total ordinary shares outstanding; SIZE is the logarithm of market capitalization; DEBT is total debts divided by total assets; REP is a dummy variable, 1 if the operating cash flow for a firm is below the industry annual median of operating cash flows and 0 otherwise; LWCDAC are the lagged WCDAC.

4.2 Pearson Correlation Matrix

Table 2 sets out the Pearson correlations between the different independent variables as well as their statistical significance (P values shown in parentheses). IDP is positively and significantly associated with the BA, SIZE and DEBT (the other correlations are not significant at the 10 % level). In a fairly consistent way, IDT is positively and significantly correlated with BA, DOS, SIZE and DEBT. This shows that ID are positively associated with the Big 4. However, they are positively associated with diffused ownership structure only when they make up at least one third of the boards of directors. As regards the control variables, the results seem to indicate that ID are positively associated with the size of the firm and also its level of debt. Note that despite some statistically significant correlations, the coefficients do not seem high enough to cause problems of multicolinearity.

4.3 The Regression Results

Table 3 presents the OLS fixed effect regression results of the two different specifications of our empirical model. The first specification uses the IDP variable, the corporate governance variables and the control variables. The second specification replaces the PID variable by IDT and retains all the other variables used.

Our variables of interest are first examined. The first specification shows an adjusted R2 of 12.8 % and a Fisher statistic significant at the 1 % level. PID shows a negative correlation coefficient of −0.017. This coefficient is significant at the 10 % level. This indicates that the presence of ID is negatively associated with the management of WCDAC. In other words, the presence of these ID tends to attenuate such adjustment, which confirms our first hypothesis. In other words, the presence of ID, i.e. directors without any subordinate relationship with the company, can limit earnings management. This confirms the findings of several previous studies, mainly Anglo-Saxons, showing that discretionary accruals are negatively associated with ID (Peasnell et al. 2000; Klein 2002; Xie et al. 2003; Benkel et al. 2006). BA also shows a negative coefficient of −0.021. This coefficient is significant at the 5 % level. This shows that the Big 4 can also play a moderating role as regards the discretionary adjustment of short-term accruals, which is also consistent with our second hypothesis. However, DOS has a negative coefficient, not significant at the 10 % level. So, it seems that diffused ownership structure has no influence on the management of these accruals. This result tends to disconfirm our third hypothesis. The second specification shows an adjusted R2 of 13 % (i.e. slightly greater than that of the first). This slight increase is induced by the replacement of the PID variable by IDT since all the other variables remain unchanged. The latter variable shows a more substantial and more significant correlation coefficient than that of PID. This result seems entirely logical. ID are

Table 3 The OLS fixed effect regression results of WCDAC on various variables

1st specification:

$$WCDAC_{it} = \delta_0 + \delta_1 PID_{it} + \delta_2 BA_{it} + \delta_3 DOS_{it} + \delta_4 SIZE_{it} + \delta_5 DEBT_{it} + \delta_6 REP_{it} + \delta_7 LWCDAC_{it} + \sum_{k=2001}^{2003} \beta_K Year\,k + \varepsilon_{it}$$

	δ_0	δ_1	δ_2	δ_3	δ_4	δ_5	δ_6	δ_7	δ_8	δ_9	δ_{10}
Coef	−0.080	−0.017	−0.021	−0.012	0.018	−0.105	0.074	−0.067	−0.020	−0.008	−0.007
t stat	−5.926	−1.894	−2.486	−1.173	7.371	−2.025	9.082	−2.730	−1.771	−0.721	−0.583
P value	0.000	0.059	0.013	0.241	0.000	0.043	0.000	0.007	0.077	0.471	0.560
Adj. R2	12.8 % (P value of F stat < 1 %)										

2nd specification:

$$WCDAC_{it} = \delta_0 + \delta_1 PID_{it} + \delta_2 BA_{it} + \delta_3 DOS_{it} + \delta_4 SIZE_{it} + \delta_5 DEBT_{it} + \delta_6 REP_{it} + \delta_7 LWCDAC_{it} + \sum_{k=2001}^{2003} \beta_K Year\,k + \varepsilon_{it}$$

	δ_0	δ_1	δ_2	δ_3	δ_4	δ_5	δ_6	δ_7	δ_8	δ_9	δ_{10}
Coef	−0.079	−0.023	−0.021	−0.012	0.018	−0.109	0.074	−0.066	−0.020	−0.008	−0.007
t stat	−5.891	−2.278	−2.533	−1.084	7.399	−2.123	9.080	−2.689	−1.794	−0.724	−0.603
P value	0.000	0.023	0.012	0.279	0.000	0.034	0.000	0.007	0.073	0.469	0.547
Adj. R2	13 % (P value of F stat < 1 %)										

Where for firm *i* in year *t*: WCDAC are the working capital discretionary accruals computed using Eq. 2; PID is a dummy variable, 1 if board of directors comprises ID and 0 otherwise; IDT is a dummy variable, 1 if board of directors comprises at least one third of ID and 0 otherwise; BA is a dummy variable, 1 if the auditor is a Big 4 and 0 otherwise; DOS is a dummy variable, 1 if no stockholder holds more than 20 % of the total ordinary shares outstanding; SIZE is the logarithm of market capitalization; DEBT is total debts divided by total assets; REP is a dummy variable, 1 if the operating cash flow for a firm is below the industry annual median of operating cash flows [poor performance] and 0 otherwise; LWCDAC are the lagged WCDAC and Year K is a dummy variable, 1 if the year is K and 0 otherwise.

more effective in moderating the discretionary adjustment of accruals when they represent at least a third of the members of the boards of directors. This supports the recommendation of the Viénot 1999 report. Moreover, it further confirms the first hypothesis of this research. The coefficients of the BA and DOS variables are, in terms of extent and statistical significance, consistent with those of the first specification. They thus lead to the same conclusions.

As regards the control variables for our two specifications, SIZE has, contrary to our expectations, a positive coefficient, significant at the 5 % level. The larger the company, the more the corporate managers tend to adjust earnings upwards. DEBT has a negative coefficient, significant at the 5 % level. Leverage can, on the basis of this finding, represent a deterrent to the opportunistic management of accounting numbers. These two last results, although not in line with the expectations of the positive accounting theory (Watts and Zimmerman 1986), are consistent with those found by some previous studies (Chung et al. 2002; Piot and Janin 2007).

On the other hand, in accordance with our predictions, REP has a positive coefficient, significant at the 1 % level. The poorer the company's relative earnings performance, the more corporate managers manipulate their earnings upwards. Finally, the LWCDAC are negative and significant, which is consistent with the phenomenon of reversibility of discretionary accruals from one period to another (Koh 2003; Grace and Koh 2005).

5 Conclusion

The main reports on corporate governance in France (collective 2003) emphasize the functioning of boards of directors. Independent directors (ID) constitute one of the decisive sources of the effectiveness of these boards (Beasley 1996; Fama and Jensen 1983). As Stolowy and Jeanjean (2006) point out, the financial markets increasingly look to these ID to help guarantee reliable and accurate financial information. The evaluation of the effectiveness of this role is therefore an interesting empirical question. It is from this standpoint that this study has aimed to examine the influence of ID and two other corporate governance mechanisms, namely the audit quality and the ownership structure, on earnings management.

Our analysis, conducted over a period of 4 years from 2001 to 2004, was applied to a sample of 239 different non-financial French companies listed on the Paris stock exchange.

The dependent variable of the empirical model is working capital discretionary accruals computed using a cross-sectional intra-industry estimation model. The contribution of this approach in terms of detecting earnings management has been highlighted by several previous papers (Young 1999; Peasnell et al. 2000; Xie et al. 2003). The ID variable was declined by two measures that are based on information from the annual reports published by the companies in our sample. In France, the retained conception of independence seems largely based on the combined Viénot and Bouton Reports (collective 2003). This conception tends

increasingly to be based upon the main criterion of the absence of any link of direct or indirect interest between the director and the firm. French companies often refer to these reports in mentioning the independence of their directors. Therefore, only the directors described as such in these reports are considered independent. The other independent variables of corporate governance (i.e. the audit quality and the ownership structure) were computed, as in some previous studies, by the presence of a Big 4 and the dispersion of the company's capital.

The findings show that the presence of the board independence can moderate the management of WCDAC. This role appears to be more effective when ID make up at least one third of the members of boards of directors, as recommended by the Viénot 1999 report. The Big 4 auditors can also limit this discretionary adjustment. However, no statistically significant relationship was observed between dispersion vs. concentration of ownership structure and WCDAC. This chapter adds to the limited research into the relationship between corporate governance and earnings management in France. It also gives empirical evidence on the effectiveness of the Viénot 1999 report's recommendations. Thus, it should be of interest to academics as well as regulators in preparing and amending corporate governance laws.

References

Beasley, M. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review, 71*, 443–65.

Benkel, M., Mather, P., & Ramsay, A. (2006). The association between corporate governance and earnings management: the role of independent directors. *Corporate Ownership and Control, 3*, 65–75.

Charreaux, G. (2004). Corporate governance theories: From micro theories to national systems theories. *Working Paper*, University of Bourgogne, from: http://ideas.repec.org/p/dij/wpfarg/1041202.html.

Chung, R., Firth, M., & Kim, J. B. (2002). Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance, 8*, 29–48.

Chung, R., Firth, M., & Kim, J. B. (2005). Earnings management, surplus free cash flow and external monitoring. *Journal of Business Research, 58*, 766–76.

Collective. (2003). Corporate governance in listed companies: Consolidation of Viénot and Bouton reports, *AFEP – MEDEF Business Associations* [in French].

Cormier, D., & Magnan, M. (1995). Strategic earnings management: The case of forecast-issuing companies during an IPO. *Comptabilité Contrôle Audit, 1*, 45–61 [in French].

Cormier, D., & Martinez, I. (2006). The association between management earnings forecasts, earnings management and stock market valuation: evidence from French IPO's. *The International Journal of Accounting, 4*, 209–36.

Cormier, D., Magnan, M., & Morard, B. (1998). Strategic earnings management: Is the Anglo-Saxon model appropriate to the Swiss context? *Comptabilité Contrôle Audit, 1*, 25–48 [in French].

DeAngelo, L. (1981). Auditor size and audit quality. *Journal of Accounting and Economics, 3*, 183–99.

Dechow, P. M., & Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation error. *The Accounting Review, 77*, 35–59.

Dechow, P. M., & Skinner, D. J. (2000). Earnings management reconciling the views of accounting academics, practitioners and regulators. *Accounting Horizons, 14*, 235–50.
Fama, E. (1981). Agency problems and the theory of the firm. *Journal of Political Economy, 88*, 288–297.
Fama, E., & Jensen, M. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*, 301–26.
Francis, J. R., & Krishnan, J. (1999). Accounting accruals and auditor conservatism. *Contemporary Accounting Research, 16*, 135–65.
Grace, C. H., & Koh, P. S. (2005). Does the presence of institutional investors influence accruals management? Evidence from Australia. *Corporate Governance, 13*, 809–23.
Healy, P. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics, 7*, 85–107.
Jeanjean, T. (2001). *Contribution to the analysis of earnings management in French listed companies*. Paper presented at the congress of the francophone accounting association [in French].
Kim, J. B., Chung, R., & Firth, M. (2003). Auditor conservatism, asymmetric monitoring and earnings management. *Contemporary Accounting Research, 20*, 323–59.
Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics, 33*, 375–400.
Koh, P. S. (2003). On the association between institutional ownership and aggressive corporate earnings management. *The British Accounting Review, 35*, 105–28.
Peasnell, K. V., Pope, P. F., & Young, S. (2000). Accrual management to meet earnings targets: UK evidence pre- and post-Cadbury. *The British Accounting Review, 32*, 415–45.
Petra, S. T. (2007). The effect of corporate governance on the informativeness of earnings. *Business and Economics, 8*, 129–152.
Piot, C., & Janin, R. (2007). Audit quality, corporate governance and earnings management in France. *European Accounting Review, 16*, 429–54.
Sloan, R. G. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings? *The Accounting Review, 71*, 289–315.
Stolowy, H., & Breton, G. (2004). Accounts manipulation: A literature review. *The Review of Accounting and Finance, 3*, 5–66.
Stolowy, H., & Jeanjean, T. (2006). *The financial competence of boards of directors*. Paper presented at the congress of the francophone accounting association [in French].
Watts, R., & Zimmerman, J. (1986). *Positive accounting theory*. New Jersey: Prentice-Hall.
Xie, B., Davidson, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance, 9*, 295–316.
Young, S. (1999). Systematic measurement error in the estimation of discretionary accruals: An evaluation of alternative modeling procedures. *Journal of Business Finance and Accounting, 26*, 833–62.

Part IV
New Trends in Corporate Governance: Towards A More Effective and Sustainable Governance

The State of Corporate Governance Research

Lucian A. Bebchuk and Michael S. Weisbach

Abstract This paper, which serves as an introduction to the special issue on corporate governance of the *Review of Financial Studies*, reviews and comments on the state of corporate governance research. The special issue features seven papers on corporate governance that were presented in a meeting of the National Bureau of Economic Research's (NBER's) corporate governance project. Each of the papers represents state-of-the-art research in an important area of corporate governance research. For each of these areas, we discuss the importance of the area and the questions it focuses on, how the paper in the special issue makes a significant contribution to this area, and what we do and do not know about the area. We discuss in turn work on shareholders and shareholder activism, directors, executives and their compensation, controlling shareholders, comparative corporate governance, cross-border investments in global capital markets, and the political economy of corporate governance.

This special issue of *The Review of Financial Studies* presents seven papers that were presented at a meeting of the corporate governance project of the National Bureau of Economic Research (NBER). The papers, which subsequent to the conference went through the usual Review of Financial Studies review process,

Full Bibliographic Citation Bebchuk, L. A., & Weisback, M. S. (2010). The state of corporate governance research. *Review of Financial Studies 23*, 939–961. *Reprinted with permission from Oxford University Press.*

L.A. Bebchuk (✉)
Harvard Law School and NBER, 02138 Cambridge, MA, USA
e-mail: bebchuk@law.harvard.edu

M.S. Weisbach
Department of Finance, Fisher College of Business, Ohio State University and NBER, 43210 Columbus, OH, USA
e-mail: weisbach.2@osu.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_14,

represent cutting-edge research in important areas of corporate governance research. This special issue thus provides a good opportunity for taking stock of the state of corporate governance research in these areas.

Interest in corporate governance has been rapidly growing, both inside and outside academia, together with recognition of its importance. In the academic world, the interest in corporate governance has been truly interdisciplinary, with much work being undertaken by researchers not only from economics and finance but also from law, management, and accounting. The term "corporate governance" appears as a key word in the abstract of 987 papers over the past year on SSRN, and, given the huge amount of research being done in the area, SSRN in 2009 started the Corporate Governance Network (CGN) with 21 different subject-matter electronic journals.

Shleifer and Vishny (1997) define corporate governance as referring to the way in which suppliers of finance assure themselves a return on their investment. Because returns to suppliers of finance depend on myriad legal and contractual arrangements, the operation of various markets, and the behavior of different types of players, corporate governance has evolved into various sub-literatures (e.g., Zingales 1998; Becht et al. 2003; Hermalin 2005).

Below we discuss in turn seven important areas of corporate governance research, each of which is represented by a paper in this special issue. For each of these areas, we discuss the importance of the area and the questions that it poses for researchers, how the paper in the special issue and other recent research advance our understanding of the area, and the questions that future research may do well to examine. Throughout, we stress questions concerning corporate governance that public and private decision-makers face; research that can shed light on these questions will have substantial implications and payoffs.

Section 1 focuses on shareholders and shareholder activism – the actions that shareholders may take to protect their interests. Section 2 focuses on corporate directors, while Section 3 turns to executives and their compensation. Whereas Sections 1, 2, and 3 focus on companies without a controlling shareholders, Section 4 considers companies with such shareholders. Sections 5 and 6 focus on international corporate governance, with Section 5 considering cross-country comparisons and Section 6 discussing cross-border investments by foreign investors. Finally, Section 7 focuses on the political economy of corporate governance.

1 Shareholders

Berle and Means (1932) identified what appeared to be a fundamental contradiction in the corporate form of organization: While dispersed shareholders collectively have incentives to monitor the management of the firms for which they own stock, individually, the free-rider problem can ruin such incentives, leading to a lack of shareholder involvement in firms. Given that the distribution of stock ownership is important because of these free-riding considerations, Shleifer and Vishny (1986) pointed out that large percentage block shareholdings are more prevalent in the United States than previously thought (no one doubted their existence outside the U.S.).

Morck et al. (1988) and many follow-up studies have documented a robust empirical relation between these large shareholdings and corporate performance, holding in a wide variety of samples spanning a number of countries and time periods.

The underlying reasons, however, for this relation between ownership structure and firm performance are not clear. The main explanation discussed in the Shleifer and Vishny (1986) article is through the possibility of hostile takeover, because such takeovers can be more profitable for a shareholder who already owns a large block of shares than for one who does not (see also Grossman and Hart 1980). Yet, the empirical relation between ownership and performance appears to be too robust to be explained by hostile takeovers alone, since the same relation exists in countries and time periods in which there is no possibility of a hostile takeover.

Another possibility is that the relation could occur because of other actions taken by blockholders. Most shares of U.S. firms are held by informed, sophisticated institutional investors, many of whom have non-negligible stakes. And some outside shareholders pursue active and sometimes aggressive strategies – proxy fights and takeover bids in the past, and hedge fund activism in the past decade.

Financial economists have accordingly been increasingly looking at the effects of shareholder actions. There have been a number of studies that have examined the effect of public pension funds and other institutional investors on the firms in which they invest [see Del Guercio and Hawkins (1999), Gillan and Starks (2000), Hartzell and Starks (2003), as well as Karpoff (2001) and Gillan and Starks (2007) for surveys]. In recent years, the most important players in the activism landscape have been activist hedge funds. The activities and payoffs of such hedge funds, which are willing to make substantial investments in engagement with companies, are the subject of recent studies by Brav et al. (2008), Greenwood and Schor (2009), and Klein and Zur (2009).

One key question on which research has focused is the effect of activism on profitability Are activists producing value for firms and their fellow shareholders? Or are they hurting their fellow shareholders? Such questions have been asked in the past about shareholders mounting proxy fights and takeover bids and have been more recently asked about hedge fund activists. The resolution of these questions has important policy implications for debates on the optimal scope of shareholder rights in public companies (e.g., Bebchuk 2005, 2007; Bainbridge 2006; Strine 2006; Lipton and Savitt 2007). Whereas a conclusion that activism is beneficial provides support for strengthening shareholder rights, the opposite conclusion provides support for constraining them.

Unlike activist shareholders who mounted proxy fights and takeover bids in the past, the activist hedge funds that attracted the limelight in the past decade do not commonly seek to acquire the company themselves. Instead they try to affect the way in which the company is run or to get the company to be acquired by someone else. Importantly, they most commonly contact companies privately, so it is difficult to gauge the magnitude of their intervention using publicly-available data. It also is not clear what the net effect of institutional activism is. Are activists producing a collective good, which is still under-provided and whose actions should be encouraged? Or are they destroying value at the expense of other investors? [see Kahan and Rock (2007) for a survey and discussion of this issue].

Unfortunately, informal contact between institutional investors and firms is by its nature private and difficult to quantify. Consequently, there has historically been only one study of such activism: Carleton et al. (1998) gather a sample of letters between TIAA-CREF (a large U.S. pension fund) and companies. They find that TIAA-CREF typically does not ask firms to make large operational changes but are usually successful at inducing firms to make the relatively small changes they ask for (such as having a shareholder vote before adopting 'Blank-Check Preferred Stock,' or having women or minority representatives on their board of directors). Yet, it is impossible to know exactly how representative TIAA-CREF is of other U.S. (or international) institutions in terms of its activism.

Becht et al. (2009), a study included in this special issue, utilizes privately obtained data from Hermes, the fund manager owned by the British Telecom Pension Scheme, on engagements with management in companies targeted by its U.K. Focus Fund (HUKFF) between 1998 and 2004. This fund has been highly involved with activism and also has been unusually successful, earning abnormal annual returns net of fees of 4.9 %. Becht, Franks, Mayer, and Rossi have complete access to the records of all activism by Hermes, including private interventions that would be unobservable in studies purely relying on public information. Becht, Franks, Mayer, and Rossi document the way in which Hermes frequently seeks and achieves significant changes in the company's strategy, including refocusing on the core business and returning cash to shareholders, as well as changes in the executive management such as the replacement of the CEO or chairman. These authors estimate that around 90 % of the abnormal fund returns is due to the activism program.

Becht et al. (2009) is a significant study because it provides a window into the nature of 'behind the scenes' activism and shows that such activism can be important. The study suggests that financial institutions can increase in value not just by buying and selling securities strategically, but also by creating value inside of firms by providing monitoring services. It provides an example of the way in which it is possible to learn a great deal from the details of the actions of a single (particularly interesting) financial institution.

There are some questions that future research should try to address. If activism produces such large returns, why has Hermes not done it on a larger scale? Is the ability to produce such results unique to Hermes or a few such players or is it something that has been done, or can be done, by other U.K. players with similar success? Note also that the large returns that the study shows raise the question of why more capital does not flow into this work, reducing returns, and in the process also possibly reducing slack in the economy. We need to understand better what the barriers are to entry if any into activism. Interestingly, large returns from activism do not indicate that a system is working well. The fact that activism can generate such large returns might indicate that a high level of slack exists prior to activist intervention.

It will also be important to understand the extent to which the findings are due to the particular legal and institutional features of the U.K. system. As Becht et al. (2009) note, legal rules in the U.K. give shareholders much more power than U.S.

shareholders have. Understanding the ways in which the payoffs and effects of activism depend on legal rules is an important question for financial economists to investigate.

The financial crisis has intensified the ongoing debate about the role that shareholders should play in corporate governance. To some, increasing shareholder power and facilitating shareholder intervention when necessary is part of the necessary reforms. To others, activism by shareholders who potentially have short-term interests is part of the problem, not a solution. To what extent (and when) can shareholder activism improve firm value and performance? To what extent (and when) can shareholder activism produce distortions that make matters worse? Research by financial economists that seeks further light on these questions will provide valuable input to the questions with which decision-makers are wrestling.

2 Boards of Directors

An alternative to direct monitoring by shareholders is governance through the board of directors, who are elected by shareholders. Yet, as has been recognized at least since Smith (1776) and Berle and Means (1932), directors' interests may not fully overlap with those of shareholders. The complex three-way relationship among shareholders, boards, and top management has been the subject of a large literature [see Hermalin and Weisbach (2003) and Adams et al. (2010) for surveys].

How do we make boards work better? One recipe that has been increasingly suggested by public and private decision-makers is to have independent boards [see Gordon (2007) on the rise of independent directors]. Indeed, a common policy response to observed 'governance crises' has been to adopt reforms designed to strengthen the independence of boards. For example, following the Enron and WorldCom scandals in 2002, the exchanges increased independence requirements, and the Sarbanes–Oxley Act of 2002 required the independence of audit committees. The financial crisis has similarly led to the consideration of legislation aimed at bolstering the independence of compensation committees.

Why impose regulatory limits on the composition of the board? Hermalin and Weisbach (1998) present a model in which directors imposed on the firm by regulations are likely to be less effective than those picked through the endogenous selection process that would occur in the absence of regulation. At the same time, regulators are typically concerned that, without regulation, opportunism by insiders might lead to insufficient independence of directors.

Nonetheless, given the growing importance of independent directors, whether due to regulation or to choices made by firms, it is important to study empirically the effects of director independence. Initial work on the subject failed to find a link between board independence and higher firm value (Hermalin and Weisbach 1991; Bhagat and Black 1999, 2002). However, there is a growing body of empirical research indicating that director independence is associated with improved

decisions with respect to some specific types of decisions (e.g., Byrd and Hickman 1992; Shivdasani 1993; Brickley et al. 1994; Cotter et al. 1997; Dann et al. 2003; Gillette et al. 2003). In particular, it has been shown that director independence has an impact on CEO turnover (e.g., Weisbach 1988), executive compensation decisions (e.g., Core et al. 1999; Chhaochharia and Grinstein 2009), the incidence of fraud (e.g., Beasley 1996; Dechow et al. 1996; Beasley et al. 2000), and on the incidence of opportunistic timing of stock option grants (e.g., Bebchuk et al. 2010).[1]

An important, and necessary, condition for directors to be able to be effective is the amount and nature of information that they have. If directors only have access to publicly-available information, it is hard to imagine that they will be able to evaluate management better than an outside shareholder. In addition, the mere fact that directors do *not* have superior information would in itself likely be the consequence of a strained relationship with management, since presumably no information of value would have been transmitted during board meetings. The informational advantage of directors over outsiders thus presumably provides a measure of the potential for these directors to add value.

Ravina and Sapienza (2009), in this special issue, adopt a novel strategy to estimate the magnitude of this informational advantage. These authors compare the trading performance of independent directors and other officers of the firm. Their interesting finding is that independent directors earn positive and substantial abnormal returns when they purchase their company stock and that the difference with the same firm's officers' personal trading returns is relatively small at most horizons. Executive officers and independent directors both earn higher returns in firms with the weakest governance. In addition, independent directors who sit on the audit committee earn higher returns than other independent directors at the same firm. Finally, independent directors earn significantly higher returns than the market when they sell the company stock in a window before bad news and around earnings restatements. The authors view their results as consistent with the view that independent directors have an informational advantage over outsiders and thus can perform their job well.

While Ravina and Sapienza (2009) stress the implications of their findings for the ability of independent directors to perform their role well, one could also draw inferences from it concerning their incentives to do so. In particular, to the extent that independent directors rely on management for the receipt of information, independent directors who made larger trading profits might have been individuals that were close to management or whose performance of the oversight function might have been more favorable to management. Bebchuk et al. (2010) find that independent directors have been recipients of opportunistically timed stock option grants, and they show that the directors' benefits from such lucky timing were associated with substantial benefits to the CEO. In particular, they find that, for any

[1] Recent work (Chhaochharia and Grinstein 2006) also documents that reforms requiring some firms to increase their use of independent directors were associated with increases in the firm value of such firms.

given firm and CEO, the odds of a CEO grant being lucky were significantly higher when the independent directors of the firm received grants on the same date; and that director grant events not coinciding with awards to executives were more likely to be lucky when the CEO received a lucky grant in the same or prior year.

The Ravina and Sapienza (2009) study, and the other recent works discussed in this section, highlight the value of the work by financial economists on independent directors, who play a major role in corporate decision-making. Financial economists should not generally assume that independent directors seek to maximize shareholder value; rather, the decisions of independent directors, like those of other economic agents, might well be influenced by their incentives, which in turn are a product of various features of the environment in which they operate. The information that independent directors have should be similarly recognized to be endogenously determined by corporate structures and processes, rather than to be exogenously given. Additional work on the incentives and information of independent directors would be worthwhile.

3 Executive Compensation

In the ordinary course of events, public firms are managed by executives, not directors or shareholders. Executives' decisions are influenced by the directors' oversight, as well as by shareholders' monitoring. Executives' decisions are also affected, however, by the incentives provided to them by their executive compensation arrangements. These compensation arrangements have become the subject of a large literature [see Murphy (1999) and Core et al. (2003) for surveys].

There are at least two views of executive compensation in the literature. One view ("the optimal contracting view") sees executive pay arrangements as the product of arm's length contracting between boards and executives, which leads to contracts that provide efficient incentives for reducing agency problems as much as possible (e.g., Holmstrom 1979). An alternative view ("the managerial power view") questions whether pay arrangements are the product of arm's length contracting and sees such pay arrangements as part of the agency problem itself rather than as a solution to it (Bebchuk and Fried 2003, 2004).

One part of the debate on executive compensation concerns compensation levels (Kaplan 2008). Are the levels of executive compensation, which have grown considerably relative to rank-and-file compensation in recent years (Jensen et al. 2004; Bebchuk and Grinstein 2005), a reflection of supply and demand in the labor market for executives? Or do they reflect rent-seeking by powerful managers? Given the attention that pay levels receive from the media, the public, and policymakers, a better understanding of the factors affecting them is clearly an important research topic.

The second dimension to the debate concerns the structure of pay arrangements. Under the optimal contracting view, the design of pay arrangements is presumed to be (second-best) efficient. In contrast, the managerial power view allows for the

possibility that pay arrangements will be structured sub-optimally in ways that lead to diluted or even perverse incentives. While Jensen and Murphy (1990) argued that pay is insufficiently tied to performance due to outside social pressures, the managerial power view suggests that sub-optimal pay-performance sensitivity could itself be a product of executive influence. To financial economists, the question of incentives, and in particular the extent to which incentives provided by pay arrangements should be presumed to be optimal, is of significant importance.

Some recent work by financial economists, including the work by Kaplan and Rauh (2009) in this special issue, seeks to explain the growth of executive pay within the arm's length contracting paradigm by suggesting that it reflects an increase in the value of executives' marginal contributions and improvements in their outside options. Murphy and Zabojnik (2007) suggest that the growth in pay reflects a shift in the importance of "managerial ability" (skills transferable across companies) relative to "firm-specific human capital" (valuable only within the organization), which operated to strengthen executives' bargaining position by improving their outside options. Gabaix and Landier (2008) develop a model in which the marginal product of an executive of a given quality is proportional to the market capitalization of the firm, and argue that the growth of pay has been due to the increase in the market capitalization of firms. The extent to which these theories can explain the time-series variation in executive compensation is questioned on empirical grounds by Dew–Becker and Gordon (2007), Cremers and Grinstein (2009), and Frydman and Saks (2010).

Kaplan and Rauh (2009) examine the question of whether the growth of pay can reflect market forces in a creative way. The idea is that if executive pay reflects market forces, then its growth should parallel that of other high paid professions. Kaplan and Rauh gather data on compensation from high paying fields such as financial service sector employees from investment banks, hedge funds, private equity funds, and mutual funds (Wall Street), as well as corporate lawyers, professional athletes, and celebrities.

The estimates of Kaplan and Rauh (2009) lead them to conclude that non-financial public company CEOs and top executives do not represent more than 6.5 % of any of the top AGI brackets (the top 0.1 %, 0.01 %, 0.001 %, and 0.0001 %). Individuals in the Wall Street category comprise at least as high a percentage of the top AGI brackets as non-financial executives of public companies. Kaplan and Rauh argue that this evidence suggests that the growth of executive pay is not reflective of suboptimal contracting, but rather is most consistent with theories of superstars, skill biased technological change, greater scale, and the interaction of these effects.

Although Kaplan and Rauh (2009) suggest that the growth of pay levels could be consistent with the optimal contracting view, they do not attempt to test directly whether compensation is indeed the product of arm's length contracting. A full defense of this view would have to address the empirical evidence that compensation levels are higher (as well as less sensitive to performance) when governance is weaker [see Bebchuk and Fried (2004, Chap. 6) for a survey]. Among other things, there is evidence that CEO pay is higher when outside directors serve on multiple

boards, when the board has interlocking directors, when more of the outside directors have been appointed under this CEO, when there are no large outside blockholders, when a smaller percentage of shares is held by institutional investors, and when antitakeover protections are more significant (e.g., Borokhovich et al. 1997; Hallock 1997; Core et al. 1999; Cyert et al. 2002; Hartzell and Starks 2003).[2]

Whereas Kaplan and Rauh (2009) defends the optimal contracting view against claims that pay levels have been excessive, some other recent work seeks to defend this view against claims that compensation structures have been inefficiently designed.. In particular, Edmans et al. (2009) present a model in which optimal pay lines up closely with empirical observations on actual executive compensation. And while many public officials expressed concerns that standard pay arrangements provide excessive incentives to focus on the short-term [an argument stressed in Bebchuk and Fried (2004, Chap. 14)], Fahlenbrach and Stulz (2011) argue that there is no empirical evidence that such incentives have played a role in the run-up to the financial crisis.

Although interest in executive pay has been high for quite some time, the Financial Crisis of 2008–2009 has further intensified this interest. Public attention to the compensation levels of top officials appears to be at an all-time high. Regulators around the world are examining measures to improve the structure of compensation, and not to make things worse through ill thought out provisions. And authorities in the U.S. and elsewhere are considering measures to improve the corporate governance processes that produce pay arrangements. The examination of pay arrangements and the pay-setting processes by public and private decision-makers, we hope, will be informed from the ongoing and future research of financial economists.

4 Controlling Shareholders

The nature of governance problems differs greatly between public companies with and without a controlling shareholder (La Porta et al. 1999; Bebchuk and Hamdani 2009). With controlling shareholders, the market for corporate control that plays such an important role in the analysis of companies without a controller, cannot provide a source of discipline. With a controlling shareholder, the fundamental governance problem is not opportunism by executives and directors at the expense of public shareholders at large but rather opportunism by the controlling shareholder at the expense of the minority shareholders.

The Becht, Franks, Mayer, and Rossi, Ravina and Sapienza, and Kaplan and Rauh papers in this issue all focus on companies without a controlling shareholder – the

[2] There is also evidence that weaker corporate governance is associated with lower sensitivity of pay to performance (Bertrand and Mullainathan 2001) and opportunistic compensation practices such as those manifested by option backdating (Bebchuk et al. 2010; Bizjak et al. 2009).

common structure among publicly traded firms in the U.S. and the U.K. and the one on which most research has focused. But as the work on comparative corporate governance has shown (Becht and Röell 1999; La Porta et al. 1999; Franks and Mayer 2001), companies with a controlling shareholder are the dominant form among publicly traded firms in most countries. Holderness (2009) shows that controlling shareholders are more common even in the U.S. than is usually assumed.

One important type of controlling shareholders are those labeled "controlling minority shareholders" by Bebchuk et al. (2000). These are shareholders who own only a minority (and sometimes a small minority) of the company's cash flow rights but control a majority of the votes and thus have a lock on control. An owner of minority of the cash flow rights can control a majority of the votes when cash flow rights and votes are separated due to the use of dual-class stock, corporate pyramids, or cross-holdings. Such structures are quite common in many countries (Claessens et al. 2000; Faccio and Lang 2002). Bebchuk et al. (2000) show that such structures have the potential to create very large agency costs that are an order of magnitude larger than those associated with controlling shareholders who hold a majority of the cash flow rights in their companies. Bertrand et al. (2002) present evidence about the significant amount of tunneling that takes place in such firms.

In the U.S., controlling minority shareholder structures commonly occur through the use of dual-class shares. In such firms, multiple classes of stocks will trade, typically with the same dividend rights but different voting rights. This arrangement ensures that control is kept in the hands of a small group of individuals, usually the founder and/or his family, even though the company can be traded publicly with many shareholders. The wedge between the prices of the different classes of stock reflects the private benefits of control enjoyed by the high-vote shareholders. There have been a number of papers documenting the patterns of ownership, the prices of dual class stocks, and the value of voting rights in such firms both in the U.S. and internationally (e.g., Zingales 1994, 1995; Nenova 2003). Yet, these studies have typically had relatively small samples that limit their ability to answer important questions about dual class firms, such as the incremental effect of dual class ownership on valuation.

Gompers et al. (2009), in this issue, consider the issue of governance when cash flow rights and voting rights are separated. They assemble a comprehensive list of dual-class firms in the U.S. and use this list to investigate the relationship between insider ownership and firm value. Their data (which is available at the *Review of Financial Studies* website) has two useful features for this valuation analysis. First, since dual-class stock separates cash-flow rights from voting rights, they can separately identify the impact of each. Second, they address endogeneity concerns by using exogenous predictors of dual-class status as instruments.

In single-stage regressions, Gompers et al. (2009) find strong evidence that firm value is increasing in insiders' cash-flow rights and decreasing in insider voting rights. In instrumental-variable regressions, the point estimates remain the same sign and magnitude, but the significance levels are lower. This work illustrates the importance of ownership structure for valuation. Because of its instrumental

variable approach, it has a relatively clean way of measuring the impact of controlling shareholders that can appropriate private benefits from minority ones.

The Gompers et al. (2009) paper thus makes a contribution to the accumulating empirical evidence that controlling minority shareholder structures are associated with increased agency costs and reduced firm value. The question then arises why such structures develop and are maintained, and what should be the public policy toward them. Given the importance of companies with controlling minority shareholders in many countries around the world, these questions should be part of the research agenda of financial economists.

5 International Comparisons

Until the mid-1990s, most of the work on corporate governance has been in the context of U.S. firms. But the influential work of La Porta et al. (1999) and La Porta et al. (1997, 1998, 2000a, b, 2002)) has stimulated a large body of work on international comparisons [see Levine (2005) and La Porta et al. (2008) for surveys].

Much of this work has focused on differences between countries' legal systems (including their systems of enforcement), and has studied how such differences relate to differences in how economies and capital markets perform. La Porta et al. (1997, 1998) put forward an anti-director index for measuring the legal protection accorded to investors, and this index has been subsequently used by more than 100 studies (Spamann 2010). How best to measure the extent to which a particular country's legal system protects the rights of public investors is an active area of research in which recent work seeks to provide improved indices for this purpose (Hail and Leuz 2006; Djankov et al. 2008; Jackson and Roe 2008).

While research on comparative corporate governance has in the past mainly focused on cross-country differences in governance, a substantial body of research about U.S. firms has been showing that cross-firm differences in governance have substantial effect on firm value and performance. Gompers et al. (2003) have shown that a governance index (the G-index) based on 24 provisions is negatively correlated with firm value. Bebchuk et al. (2009) point out that six of these provisions fully drive the Gompers-Ishii-Metrick results and propose an alternative entrenchment index based on them (the E-index). A particularly important component of the G-index and the E-index is whether boards are staggered (Bebchuk et al. 2002; Bebchuk and Cohen 2005). A significant number of subsequent studies have identified many ways in which the G-index, the E-index, and the existence of staggered boards are associated with firm performance and behavior (e.g., Masulis et al. 2007; Kedia and Philippon 2009).

Given the magnitude of firm-level differences in governance, it is a natural next step for the literature on international comparisons to try to look beyond cross-country and incorporate into the investigation firm-level differences. Aggarwal et al. (2009), in this issue, take this step using a new database of firm-level governance provisions put together by RiskMetrics, a global shareholder advisory

firm.[3] Bruno and Claessens (2010) and Chhaochharia and Laeven (2007) also use this dataset to investigate the subject.

With data on both country-level and firm-level governance, an important question investigated by Aggarwal et al. (2009) is how these two types of governance choices interact. Does having a good legal system act as a substitute for firm-level choices? Or does it facilitate firm-level governance, making the two types of governance complements? Theoretically, either is possible, so the question can only be answered by examining data on firm and country level governance.

Given that the U.S. has very high country-level governance, the authors examine whether comparable non-U.S. firms choose higher or lower levels of protection than similar U.S. firms. They construct a firm-level governance index that increases with minority shareholder protection. Compared to U.S. matching firms, only 12.68 % of foreign firms have a higher index. The value of foreign firms falls as their index decreases relative to the index of matching U.S. firms. The authors view these findings as consistent with the "complements" view under which lower country-level investor protection make it suboptimal for foreign firms to invest as much in governance as U.S. firms do.

As done by Aggarwal et al. (2009), future research on comparative corporate governance should strive to take firm-level governance into account. The use of the RiskMetrics dataset for this purpose, however, has some limitations. Bebchuk and Hamdani (2009) point out that the RiskMetrics dataset is U.S.-centric in that it focuses on features that are important for the companies without controlling shareholder that are dominant in the U.S. capital market but not in most other capital markets around the world. Indeed, the finding of Aggarwal et al. (2009) that firm-level governance is better in U.S. firms than in firms from other countries is likely to be at least partially due to the U.S.-centric nature of the dataset used by this study.

The Bebchuk and Hamdani (2009) analysis suggests a direction that would be worth pursuing by work on international comparisons. Much of the work thus far has sought to develop and employ a single global governance standard for making either country-level or firm-level comparisons around the world. However, governance arrangements that are optimal for investor protection in companies without a controlling shareholder could be suboptimal for companies with such a controller, and vice versa. Consequently, the quest for a single global governance standard should be replaced with separate standards for evaluating governance in firms with and without a controlling shareholder. The development and application of such standards is potentially an important task for future research.

[3] At the time of the study, the database was owned by I.S.S. and is consequently referred to as the I.S.S. database by Aggarwal, Erel, Stulz, and Williamson (and other authors).

6 Cross-Border Investing

A substantial part of the work on international comparisons abstracts from the movement of firms and capital across borders. It takes as given that each country has a given set of firms and a given amount of capital invested in these firms, and it focuses on how firms in different countries vary in how they are governed. In our increasingly globalized world, however, there is in fact much movement across borders, and there is some research that seeks to understand the causes and consequences of such movement.

One important element of cross-border movements concerns decisions by firms headquartered and operating in a given country to subject themselves to the governance rules of other countries. Coffee (1999) and Stulz (1999) have suggested that firms can therefore "bond" themselves to good governance by incorporating in another country or by listing on a foreign exchange. There is a significant line of work examining why firms "migrate" to foreign governance systems and the extent to which such migration is due to a desire by firms to "bond" themselves to governance arrangements that provide tighter protection to public investors (Reese and Weisbach 2002; Pagano et al. 2002; Doidge et al. 2004; Siegel 2005; Doidge et al. 2009).[4]

Another important element of global capital markets is cross-border movement of capital. In contrast to classical portfolio theory, investors tend to have a "home bias" in favor of investing in firms of the investor's country of residence. Recently, however, investors have been increasingly allocating part of their equity investments to foreign companies. As it is natural to ask how the migration of firms across borders is influenced by governance considerations, it is also natural to ask how cross-border investing flows are influenced by such considerations.

The level of investor protection is likely to be particularly important for investors considering purchasing securities issued by a company from another country. Foreign investors tend to have less information about companies they invest in than domestic investors and also tend to have fewer political connections, or long-term relationships with the firm that can potentially substitute for governance. Under this hypothesis, the quality of governance in a firm should be correlated with the foreign stockholders in a company. In particular, since strong governance makes a firm relatively more attractive to foreigners than to domestic investors, foreigners should have a higher percentage ownership in firms where investors are better protected.

The study by Leuz et al. (2009), in this issue, tests this hypothesis. There has been much work documenting that increased disclosure makes a firm more attractive to all investors [see Hermalin and Weisbach (2012) and the references therein], and Leuz, Lins, and Warnock show that such openness is particularly important in attracting foreign investors. The authors study 4,409 firms from 29 countries to assess whether

[4] This work is naturally related to the substantial literature on regulatory competition among states seeking to attract incorporations (Romano 1985, 1997; Bebchuk 1992; Daines 2001; Bebchuk and Hamdani 2002; Bebchuk and Cohen 2003; Kahan 2006; Bar-Gill et al. 2006).

and why concerns about corporate governance result in fewer foreign holdings. Their results suggest that foreigners invest less in firms that reside in countries with poor outsider protection and disclosure and have ownership structures that are conducive to governance problems. This effect is particularly pronounced when earnings are opaque, indicating that the information asymmetry and monitoring costs faced by foreign investors likely drive the results.

The findings of Leuz et al. (2009) confirm that governance problems impede firms' ability to attract capital from foreign investors even more than it impedes their ability to raise capital domestically. Poor governance can thus limit capital flows and the integration of capital markets in the global economy. These findings are especially important given that some of the countries whose investor protection is especially weak are also those countries for whom capital investment from abroad is especially significant. Thus, governance reforms in such countries might produce considerable benefits for their economies. Whether such reforms will in fact occur depends in part on the political economy of governance reforms, which is the subject of the next section.

7 Politics

Corporate governance is in part a product of legal systems put in place and the legal infrastructure accompanying them. And throughout the earlier discussion we have talked about the potential significance of differences among systems of corporate governance in different countries. Such systems differ considerably around the world and, for any given country, over time.

There is a lot of research that either takes the legal rules as given and examines how agents make choices given them, or asks what legal arrangements are desirable assuming that public officials generally seek to adopt whatever rules are optimal. But why then would countries that are in a similar stage of their economic development have legal rules that are so different and why do so many countries persist in having systems that seem to provide patently insufficient legal protection to public investors?

One important strand seeks to relate cross-country differences to some innate, long-standing differences among countries. This line of work suggests that a country's level of investor protection may be influenced by long-standing factors such as the country's legal origin (La Porta et al. 1998; Glaeser and Shleifer 2002; La Porta et al. 2008), its culture and ideology (Bebchuk and Roe 1999; Roe 2003; Allen 2005), or the religion of its population (Stulz and Williamson 2003), all of which lie outside the realm of current political choices.

But given that countries do change their investor protection arrangements considerably over time, the level of such protection at any given point in time may also result at least partly from recent decisions by public officials. And the question is how these decisions are determined. The theory of regulatory capture (Stigler 1971) suggests that the decisions by public officials might be influenced

and sometimes distorted by the influence activities of rent-seeking interest groups. What can be said about the way in which interest group politics is played out in the area of corporate governance politics? In a recent *Journal of Economic Literature* survey, Morck et al. (2005) stress the importance of developing formal political economy models of corporate governance arrangements and view this task as "a fascinating uncharted territory for creative theorists."

Bebchuk and Neeman (2009), in this issue, try to help fill this void and develop a formal political economy model of how lobbying by interest groups affects the level of investor protection. In their model, three groups – insiders in existing public companies, institutional investors (financial intermediaries), and entrepreneurs who plan to take companies public in the future – compete for influence over the politicians setting the level of investor protection. The authors identify conditions under which this lobbying game has an inefficiently low equilibrium level of investor protection.

Factors pushing investor protection below its efficient level include the ability of corporate insiders to use the corporate assets they control to influence politicians, and the inability of institutional investors to capture the full value that efficient investor protection would produce for outside investors. The interest that entrepreneurs (and existing public firms) have in raising equity capital in the future reduces but does not eliminate the distortions arising from insiders' interest in extracting rents from the capital that public firms already possess. The entrepreneurs prefer an efficient level of investor protection, and their introduction into the Bebchuk and Neeman (2009) model therefore moderates, but is shown not to eliminate, the bias in favor of excessive private benefits of control. While entrepreneurs do internalize the interests of those public investors who buy IPO shares when they take their firms public, they do not internalize, and neither does anyone else at the lobbying table, the interests of individuals who directly or indirectly hold shares in existing public firms and who are not at the table.

The essential point is that, in an economy with existing public firms, choices of investor protection levels affect not only the allocation of cash flows from the capital to be raised from public investors in the future but also the allocation of rents from the capital that public firms already have (Bebchuk and Roe 1999). When those lobbying on behalf of insiders and outside shareholders do not fully internalize the costs and benefits of their choices on outside investors, the fight over these rents produces suboptimal investor protection levels even in the presence of entrepreneurs lobbying for efficient rules.

The insights generated by the Bebchuk and Neeman (2009) model complements those developed by Rajan and Zingales (2003, 2004) and Perotti and Volpin (2008), who argue that incumbent firms seeking to retain market power lobby for weak investor protection that would make it difficult for other firms to raise capital to enter. Bebchuk and Neeman focus on another conflict among interest groups – the struggle between public firms' corporate insiders, who seek to extract rent from

the capital under their control, and the outside investors who provided them with capital.[5]

One important pattern established by the evidence is the positive correlation between high levels of investor protection and good economic outcomes such as well-developed stock markets and higher levels of economic growth (e.g., La Porta et al. 1998, 2000b; La Porta et al. 1999). One possible interpretation of this correlation is that higher levels of investor protection bring about such good economic outcomes. The results generated by the Bebchuk and Neeman (2009) model indicate, however, that some of the causality may go in the opposite direction: a high level of investor protection may be, at least partly, the product – rather than the cause – of high economic growth, a developed stock market, or an advanced-stage economy.

The model provides predictions relating differences in investor protection (both over time and around the world) to the structure of political and legal decision-making, the developmental stage of the economy, the corporate structures dominant in the economy, as well as to scandal waves and stock market crashes. While some of these results can help explain patterns identified by a number of existing empirical studies, it also provides new predictions that future empirical work may seek to test.

More generally, to improve the understanding of existing governance arrangements and how they could be improved, it is important for future work to take into account and study how such arrangements are influenced by interest group politics and how it can impede governance reforms. The framework offered by the Bebchuk and Neeman (2009) model might be helpful for such work.

8 Conclusion

This issue of *The Review of Financial Studies* contains seven papers that were presented in a meeting of the NBER's corporate governance project. Each of the papers makes a significant contribution to an important area of corporate governance. For each of these areas, we discuss its importance and current state of research, how the paper in this special issue makes a contribution, and some of the work that remains to be done. We hope that the papers in the special issue, and the additional work that will follow, will advance our understanding about these important areas.

[5] Note that both the Bebchuk and Neeman (2009) line of work focus on lobbying by interest groups, in contrast to earlier work that has focused on how investor protection is shaped by the citizens' voting decisions and the preferences of the median voter (e.g., Pagano and Volpin 2005a, 2005b; Perotti and von Thadden 2006). Bebchuk and Neeman argue that, in the ordinary course of events, most corporate issues are intensely followed by the interest groups with sufficient stake and expertise but are not sufficiently understood and salient to most citizens. But they recognize that the ordinary pro-insider operation of interest group politics can sometimes be interrupted by pro-investor reforms resulting from corporate scandals or a stock market crash that makes voters more attentive to corporate governance problems, and they allow for this possibility in their model.

References

Adams, R., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework & survey. *Journal of Economic Literature, 48*, 58–107.

Aggarwal, R., Erel, I., Stulz, R M., & Williamson, R. (2009). Differences in governance practices between U.S. and foreign firms: Measurement, causes, and consequences. *Review of Financial Studies*, this issue.

Allen, F. (2005). Corporate governance in emerging economies. *Oxford Review of Economic Policy, 21*, 164–177.

Bainbridge, S. (2006). Directory primacy and shareholder disempowerment. *Harvard Law Review, 119*, 1735–1749.

Bar-Gill, O., Barzuza, M., & Bebchuk, L. A. (2006). The market for corporate law. *Journal of Institutional and Theoretical Economics, 162*, 134–171.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review, 71*, 443–455.

Beasley, M., Carcello, J. V., Hermanson, D. R., & Lapides, P. D. (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons, 14*, 441–452.

Bebchuk, L. A. (1992). Federalism and the corporation: The desirable limits on state competition in corporate law. *Harvard Law Review, 105*, 1435–1510.

Bebchuk, L. A. (2005). The case for increasing shareholder power. *Harvard Law Review, 118*, 833–917.

Bebchuk, L. A. (2007). The myth of the shareholder franchise. *Virginia Law Review, 93*, 675–732.

Bebchuk, L. A., Coates, J., & Subramanian, G. (2002). The powerful antitakeover force of staggered boards: Theory, evidence & policy. *Stanford Law Review, 54*, 887–951.

Bebchuk, L. A., & Cohen, A. (2003). Firms' decisions where to incorporate. *Journal of Law and Economics, 46*, 383–425.

Bebchuk, L. A., & Cohen, A. (2005). The costs of entrenched boards. *Journal of Financial Economics, 78*, 409–433.

Bebchuk, L. A., Cohen, A., & Ferrell, A. (2009). What matters in corporate governance. *Review of Financial Studies, 22*, 783–827.

Bebchuk, L. A., & Fried, J. (2003). Executive compensation as an agency problem. *Journal of Economic Perspectives, 17*, 71–92.

Bebchuk, L. A., & Fried, J. (2004). *Pay without performance*. Cambridge: Harvard University Press.

Bebchuk, L. A., & Grinstein, Y. (2005). The growth of executive pay. *Oxford Review of Economic Policy, 21*, 283–303.

Bebchuk, L. A., Grinstein, Y., & Peyer, U. (2010). Lucky CEOs and lucky directors. *Journal of Finance, 65*, 2363–2401.

Bebchuk, L. A., & Hamdani, A. (2002). Vigorous race or leisurely walk? *Yale Law Journal, 112*, 553–615.

Bebchuk, L. A., & Hamdani, A. (2009). The elusive quest for global governance standards. *University of Pennsylvania Law Review, 157*, 1263–1317.

Bebchuk, L. A., Kraakman, R., & Triantis, G. (2000). Stock pyramids, Cross-ownership, and dual class equity. In R. Morck (Ed.), *Concentrated corporate ownership*. Chicago: University of Chicago Press.

Bebchuk, L. A., & Neeman, Z. (2009). Investor protection and interest group politics. *Review of Financial Studies*, this issue.

Bebchuk, L. A., & Roe, M. (1999). A theory of path dependence in corporate ownership and governance. *Stanford Law Review, 52*, 127–170.

Becht, M., & Röell, A. (1999). Blockholding in Europe: An international comparison. *European Economic Review, 43*, 1049–1056.

Becht, M., Bolton, P., & Röell, A. (2003). Corporate governance and control. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the economics of finance*. Amsterdam: North Holland.

Becht, M., Franks, J., Mayer, C., & Rossi, S. (2009). Returns to shareholder activism: Evidence from a clinical study of the Hermes U.K. focus fund. *Review of Financial Studies*, this issue.

Berle, A. A., & Means, G. C. (1932). *The modern corporation and private property*. New York: Macmillan.

Bertrand, M., Mehta, P., & Mullainathan, S. (2002). Ferreting out tunneling: An application to Indian business groups. *The Quarterly Journal of Economics, 117*, 121–148.

Bertrand, M., & Mullainathan, S. (2001). Are CEOs rewarded for luck? The ones without principals are. *The Quarterly Journal of Economics, 116*, 901–932.

Bhagat, S., & Black, B. S. (1999). The uncertain relationship between board composition and firm performance. *The Business Lawyer, 54*, 921–963.

Bhagat, S., & Black, B. S. (2002). The Non-correlation between board independence and long-term firm performance. *Journal of Corporation Law, 27*, 231–273.

Bizjak, J. M., Whitby, R., & Lemmon, M. (2009). Option backdating and board interlocks. *Review of Financial Studies, 22*, 4821–4847.

Borokhovich, K. A., Brunarski, K. R., & Parrino, R. (1997). CEO contracting and anti-takeover amendments. *Journal of Finance, 52*, 1495–1517.

Brav, A., Jiang, W., Thomas, R. S., & Partnoy, F. (2008). Hedge fund activism, corporate governance, and firm performance. *Journal of Finance, 63*, 1729–1775.

Brickley, J. A., Coles, J. L., & Terry, R. L. (1994). Outside directors and the adoption of poison pills. *Journal of Financial Economics, 35*, 371–390.

Bruno, V., & Claessens, S. (2010). Corporate governance and regulation: Can there be too much of a good thing? *Journal of Financial Intermediation, 19*, 461–482.

Byrd, J. W., & Hickman, K. A. (1992). Do outside directors monitor managers? Evidence from tender offer bids. *Journal of Financial Economics, 32*, 195–221.

Carleton, W. T., Nelson, J. M., & Weisbach, M. S. (1998). The influence of institutions on corporate governance through private negotiations: Evidence from TIAA–CREF. *Journal of Finance, 53*, 1335–1362.

Chhaochharia, V., & Grinstein, Y. (2006). Corporate governance and firm value: The impact of the 2002 governance rules. *Journal of Finance, 62*, 1789–1825.

Chhaochharia, V., & Grinstein, Y. (2009). CEO compensation and board structure. *Journal of Finance, 64*, 231–261.

Chhaochharia, V., & Laeven, L. (2007). The invisible hand in corporate governance. CEPR Discussion Paper 6256.

Claessens, S., Djankov, S., & Lang, L. H. P. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics, 58*, 81–112.

Coffee, J. (1999). The future as history: The prospects for global convergence in corporate governance and its implications. *Northwestern Law Review, 93*, 641–708.

Core, J., Guay, W. R., & Larcker, D. F. (2003). Executive equity compensation and incentives: A survey. *Economic Policy Review, 9*, 27–50.

Core, J., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, CEO compensation, and firm performance. *Journal of Financial Economics, 51*, 371–406.

Cotter, J. F., Shivdasani, A., & Zenner, M. (1997). Do independent directors enhance target shareholder wealth during tender offers? *Journal of Financial Economics, 43*, 195–218.

Cremers, M., & Grinstein, Y. (2009). The market for CEO talent: Implications for CEO compensation. Yale ICF Working Paper 09–11.

Cyert, R. M., Kang, S.-H., & Kumar, P. (2002). Corporate governance, takeovers, and Top–Management compensation: Theory and evidence. *Management Science, 48*, 435–469.

Daines, R. M. (2001). Does delaware law improve firm value? *Journal of Financial Economics, 62*, 525–558.

Dann, L., Del Guercio, D., & Partch, M. (2003). Governance and boards of directors in Closed–end investment companies. *Journal of Financial Economics, 69*, 111–148.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research, 13*, 1–21.

Del Guercio, D., & Hawkins, J. (1999). The motivation and impact of pension fund activism. *Journal of Financial Economics, 52*, 293–340.

Dew-Becker, I., & Gordon, R. J. (2007). Selected issues in the rise of income inequality. *Brookings Papers on Economic Activity, 2*, 169–190.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The law and economics of self-dealing. *Journal of Financial Economics, 88*, 430–465.

Doidge, C., Karolyi, G. A., Lins, K. V., Stulz, R. M., & Miller, D. P. (2009). Private benefits of control, ownership, and the cross-listing decision. *Journal of Finance, 64*, 425–466.

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2004). Why are foreign firms listed in the U.S. worth more? *Journal of Financial Economics, 71*, 205–238.

Edmans, A., Gabaix, X., & Landier, A. (2009). A multiplicative model of optimal CEO incentives in market equilibrium. *Review of Financial Studies, 22*, 4881–4917.

Faccio, M., & Lang, L. H. P. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics, 65*, 365–395.

Fahlenbrach, R., & Stulz, R. M. (2011). Bank CEO incentives and the credit crisis. *Journal of Financial Economics, 99*, 11–26.

Franks, J. R., & Mayer, C. (2001). Ownership and control of German corporations. *Review of Financial Studies, 14*, 943–977.

Frydman, C., & Saks, R. (2010). Executive Compensation: A new view from a long–term perspective, 1936–2005. *Review of Financial Studies, 23*, 2099–2138.

Gabaix, X., & Landier, A. (2008). Why has CEO pay increased so much? *Quarterly Journal of Economics, 123*, 49–100.

Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: The role of institutional investors. *Journal of Financial Economics, 57*, 275–305.

Gillan, S. L., & Starks, L. T. (2007). The evolution of shareholder activism in the United States. *Journal of Applied Corporate Finance, 19*, 55–73.

Gillette, A. B., Noe, T. H., & Rebello, M. J. (2003). Corporate board composition, protocols, and voting behavior: Experimental evidence. *Journal of Finance, 58*, 1997–2032.

Glaeser, E., & Shleifer, A. (2002). Legal origins. *Quarterly Journal of Economics, 117*, 1193–1229.

Gompers, P. A., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics, 118*, 107–155.

Gompers, P. A., Ishii, J., & Metrick, A. (2009). Extreme governance: An analysis of dual-class firms in the United States. *Review of Financial Studies*, this issue.

Gordon, J. N. (2007). The rise of independent directors in the United States, 1950–2005: Of shareholder value and stock market prices. *Stanford Law Review, 59*, 1465–1568.

Greenwood, R., & Schor, M. (2009). Investor activism and takeovers. *Journal of Financial Economics, 92*, 362–375.

Grossman, S., & Hart, O. (1980). Takeover bids, the free-rider problem, and the theory of the corporation. *The Bell Journal of Economics, 11*, 42–64.

Hail, L., & Leuz, C. (2006). International differences in the cost of equity capital: Do legal institutions and securities regulation matter? *Journal of Accounting Research, 44*, 485–531.

Hallock, K. F. (1997). Reciprocally interlocking boards of directors and executive compensation. *Journal of Financial and Quantitative Analysis, 32*, 331–344.

Hartzell, J. C., & Starks, L. T. (2003). Institutional investors and executive compensation. *Journal of Finance, 58*, 2351–2374.

Hermalin, B. E. Corporate governance: A critical assessment. In R Gibbons & J Roberts (eds.), *Handbook of organizational economic*. Princeton: Princeton University Press, forthcoming.

Hermalin, B. E., & Weisbach, M. S. (1991). The effects of board composition and direct incentives on firm performance. *Financial Management, 20*, 101–112.
Hermalin, B. E., & Weisbach, M. S. (1998). Endogenously chosen boards of directors and their monitoring of management. *American Economic Review, 88*, 96–118.
Hermalin, B. E., & Weisbach, M. S. (2003). Boards of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review, 9*, 7–26.
Hermalin, B. E. (2005). Trends in corporate governance. *Journal of Finance, 60*, 2351–2384.
Hermalin, B. E., & Weisbach, M. S. (2012). Information disclosure and corporate governance. *Journal of Finance, 67*, 195–234.
Holderness, C. G. (2009). The myth of diffuse ownership in the United States. *Review of Financial Studies, 22*, 1377–1408.
Holmstrom, B. (1979). Moral hazard and observability. *The Bell Journal of Economics, 10*, 74–91.
Jackson, H. E., & Roe, M. J. (2008). Public enforcement of securities laws: Resource-Based evidence. *Journal of Financial Economics, 93*, 207–238.
Jensen, M., & Murphy, K. (1990). Performance pay and top-management incentives. *Journal of Political Economy, 98*, 225–264.
Jensen, M. C., Murphy, K. J., & Wruck, E. (2004). Remuneration: Where we've been, how we got to here, what are the problems, and how to fix them. ECGI Working Paper Series in Finance 44.
Kahan, M. (2006). The demand for corporate law: Statutory flexibility, judicial quality, or takeover protection? *The Journal of Law, Economics, and Organization, 22*, 340–365.
Kahan, M., & Rock, E. (2007). Hedge funds in corporate governance and corporate control. *University of Pennsylvania Law Review, 155*, 1021–1093.
Kaplan, S. (2008). Are U.S. CEOs overpaid? *Academy of Management Perspectives, 22*, 5–20.
Kaplan, S. N., & Rauh, J. (2009). Wall street and main street: What contributes to the rise in the highest incomes? *Review of Financial Studies*, this issue.
Karpoff, J. M. (2001). The impact of shareholder activism on target companies: A survey of empirical findings. Working Paper, University of Washington.
Kedia, S., & Philippon, T. (2009). The economics of fraudulent accounting. *Review of Financial Studies, 22*, 2169–2199.
Klein, A., & Zur, E. (2009). Entrepreneurial shareholder activism: Hedge funds and other private investors. *Journal of Finance, 64*, 187–229.
La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance, 54*, 471–517.
La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The economic consequences of legal origin. *Journal of Economic Literature, 46*, 285–332.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *Journal of Finance, 52*, 1131–1150.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy, 107*, 1113–1155.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000a). Agency problems and dividend policies around the world. *Journal of Finance, 55*, 1–33.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000b). Investor protection and corporate governance. *Journal of Financial Economics, 58*, 3–27.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2002). Investor protection and corporate valuation. *Journal of Finance, 57*, 1147–1170.
Leuz, C., Lins, K. V., & Warnock, F. E. (2009). Do foreigners invest less in poorly governed firms? *Review of Financial Studies*, this issue.
Levine, R. (2005). Law, endowments, and property rights. *Journal of Economic Perspectives, 19*, 61–88.
Lipton, M., & Savitt, W. (2007). The many myths of Lucian Bebchuk. *Virginia Law Review, 93*, 733–758.
Masulis, R. W., Wang, C., & Xie, F. (2007). Corporate governance and acquirer returns. *Journal of Finance, 62*, 1851–1889.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics, 20*, 293–315.
Morck, R., Wolfenzon, D., & Yeung, B. (2005). Corporate governance, economic entrenchment and growth. *Journal of Economic Literature, 43*, 657–722.
Murphy, K. J. (1999). Executive compensation. In O. Ashenfelter & D. Card (Eds.), *Handbook of labor economics* (Vol. 3). Amsterdam: North-Holland.
Murphy, K. J., & Zabojnik, J. (2007). Managerial capital and the market for CEOs. Working Paper, Queen's University.
Nenova, T. (2003). The value of corporate votes and control benefits: A cross-country analysis. *Journal of Financial Economics, 68*, 325–351.
Pagano, M., Röell, A., & Zechner, J. (2002). The geography of equity listing: Why do companies list abroad? *Journal of Finance, 57*, 2651–2694.
Pagano, M., & Volpin, P. (2005a). The political economy of corporate governance. *American Economic Review, 95*, 1005–1030.
Pagano, M., & Volpin, P. (2005b). Workers, managers, and corporate control. *Journal of Finance, 60*, 841–868.
Perotti, E., & von Thadden, E.-L. (2006). The political economy of corporate control and labor rents. *Journal of Political Economy, 114*, 145–174.
Perotti, E., & Volpin, P. (2008). Politics, investor protection and competition. ECGI Working Paper Series in Finance 162.
Rajan, R., & Zingales, L. (2003). The great reversals: The politics of financial development in the 20th century. *Journal of Financial Economics, 69*, 5–50.
Rajan, R., & Zingales, L. (2004). *Saving capitalism from the capitalists: Unleashing the power of financial markets to create wealth and spread opportunity*. Princeton: Princeton University Press.
Ravina, E., & Sapienza, P. (2009). What do independent directors know? Evidence from their trading. *Review of Financial Studies*, this issue.
Reese, W., & Weisbach, M. S. (2002). Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings. *Journal of Financial Economics, 66*, 65–104.
Roe, M. (2003). *Political determinants of corporate governance*. Oxford: Oxford University Press.
Romano, R. (1985). Law as a product: Some pieces of the incorporation puzzle. *Journal of Law, Economics and Organization, 1*, 225–267.
Romano, R. (1997). State competition for corporate charters. In J. Ferejohn & B. Weingast (Eds.), *The new federalism: Can the states be trusted?* Stanford: Hoover Institution Press.
Shivdasani, A. (1993). Board composition, ownership structure and hostile takeovers. *Journal of Accounting and Economics, 16*, 167–198.
Shleifer, A., & Vishny, R. (1986). Large shareholders and corporate control. *Journal of Political Economy, 94*, 461–488.
Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance, 52*, 737–783.
Siegel, J. (2005). Can foreign firms bond themselves effectively by renting U.S. securities laws? *Journal of Financial Economics, 75*, 319–359.
Smith, A. (1776). *An inquiry into the nature and causes of the wealth of nations*. Indianapolis: Liberty Press.
Spamann, H. (2010). The 'Antidirector Rights Index' revisited. *Review of Financial Studies, 23*, 467–486.
Stigler, G. (1971). The theory of economic regulation. *Bell Journal of Economic and Management Science, 2*, 3–21.
Strine, L. E., Jr. (2006). Toward a true corporate republic: A traditionalist response to Bebchuk's solution for improving corporate America. *Harvard Law Review, 119*, 1759–1783.
Stulz, R. M. (1999). Globalization of equity markets and the cost of capital. *Journal of Applied Corporate Finance, 12*, 8–25.

Stulz, R. M., & Williamson, R. (2003). Culture, openness, and finance. *Journal of Financial Economics, 70*, 313–349.

Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics, 20*, 431–460.

Zingales, L. (1994). The value of the voting right: A study of the Milan stock exchange experience. *Review of Financial Studies, 7*, 125–148.

Zingales, L. (1995). What determines the value of corporate votes? *Quarterly Journal of Economics, 110*, 1047–1073.

Zingales, L. (1998). Corporate governance. In P. Newman (Ed.), *The new Palgrave dictionary of economics and the law*. New York: Macmillan.

A Sustainable Future for Corporate Governance Theory and Practice

Shann Turnbull

Abstract This chapter shows how the natural "science of control and communications in the animal and the machine" identified by Wiener in 1948 can be applied to social organizations to establish a science of governance. The science of governance provides a sustainable future for corporate governance theory and practice. Good governance is defined as the ability of organizations in the private, public and non-profit sectors to achieve their purpose in the most efficacious manner while minimizing the need for laws, regulations, regulators, courts or codes of so called "best practices" to protect and further the interests of their stakeholders and society. Evidence is provided that current best practices: (a) did not prevent firms failing to create the 2008 financial crisis; (b) are not based on theory or conclusive empirical evidence; and (c) are inconsistent with common sense. Systemic problems arising from organizations governed by a single board are identified. These include the absolute power of directors to manage their own conflicts of interest to allow the corruption of themselves and the organization. Examples of organizations with over a hundred boards show how network governance provides: (a) division of powers; (b) checks and balances; (c) distributed intelligence; (d) decomposition in decision making labor; (e) cross checking communication and control channels from stakeholder engagement; (f) integration of management and governance to further self-regulation and self-governance with: (g) operating advantage and sustainability. The examples illustrate how an ecological form of network governance could reduce the size, scope, cost and intrusiveness of government and their regulators while improving economic efficiency, resiliency and enriching democracy with widespread citizen stakeholder engagement.

S. Turnbull (✉)
International Institute for Self-governance, Sydney, Australia
e-mail: sturnbull@mba1963.hbs.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_15,

1 Introduction

This chapter shows how the natural "science of control and communications in the animal and the machine" identified and described by Weiner (1948) as "cybernetics" can be applied to social organizations to establish a science of governance. The science of governance explains how small-brained creatures with little intelligence can sustain their existence in complex, unknowable dynamic environments while corporations governed by large brained highly intelligent humans cannot.

Adoption of the science of governance provides a basis for achieving a sustainable future for corporate governance theory and practice. However, it means discarding some so called "best governance" practices and turning others upside down. This is because all creatures including humans sustain their existence from augmenting internal top down control and communication channels with bottom up and other channels to create an "ecological" form of "network governance" (Turnbull 2002a).

Network governance arises when a network of boards, and/or control centers internal and/or external to an organization governs its operations. This definition extends the one proposed by Jones et al. (1997) who did not consider the possibility of a division of power occurring *within* an organisation to create an internal network of control centers to introduce distributed intelligence. Their definition was limited to networks of firms. This created the problem of identifying the boundaries of firms as raised by Zingales (2000).

Highly successful examples of network governed organisations with over a hundred boards are provided by the John Lewis Partnership in the United Kingdom, VISA International located in the US and the nested networks of networked stakeholder cooperatives located around the town of Mondragon in Spain. Their existence indicates that the introduction of network governance need not necessarily require any change in the law.

Without the introduction of a division of power within an organisation it is not possible to introduce a special type of "ecological" or "holonic" network governance found universally in social animals (Dunbar 1993). Ecological governance is based on decentralisation as found in the human brain to allow redundancy and so resiliency. As noted by Kurzweil (1999, p. 84) "None of our individual brain cells is all that important – there is no Chief Executive Officer neuron".

A fundamental requirement of creatures to exist over generations is the ability to sustain their existence for sufficient time to reproduce themselves in complex, unknowable dynamic environments. To achieve this objective creatures need to be self-regulating and for their social groups to be self-governing.

The ability of firms to become self-regulating would reduce the cost, size and intrusiveness of government and their regulators. For this reason and to follow the imperatives and precedents in the evolution of living things, good governance will be defined as the ability of organisations to further their self-governance. To become self-governing, firms need to become self-regulating to high degree. In this way the regulation of firms becomes largely privatised. Ecological governance becomes a part of "networked regulation" (Tomasic and Akinbami 2011, p. 242).

Offsetting the additional costs of introducing self-regulation and self-governance there are operating and competitive advantages as identified in Sect. 4. Operational efficiency is of little importance for a creature or firm that cannot survive.

A practical compelling reason for large complex organisations to adopt ecological governance is provided by the experience of Japanese robot manufacturers. "The reduction in data transmission, and in data complexity, achieved by holonic architecture is prodigious. Moreover the advantages accumulate as the robotic device gets more complicated." (Mathews 1996, p. 30). In other words ecological governance allows the data processing by executives and/or board members to be prodigiously reduced to reduce the risk of physiological and/or neurological overloading. There are many additional advantages of ecological governance described in the following sections.

To fully appreciate the advantages of ecological governance an introduction to the science of governance is required. This is undertaken in the following section (Sect. 2). The third section considers how and why so called "best" or "good" governance practices have failed. Section 4 illustrates network governance with its benefits for various stakeholders outlined in Sect. 5. The concluding section (Sect. 6) outlines the irrelevancy of dominant corporate governance theories and practices.

2 The Science of Governance

Stafford Beer pioneered the application of cybernetics principles to management that became described variously as "operations research", "management cybernetics", "management science" or "system science". As the President of the World Organization of System Science and Cybernetics, Beer informed me in 1996 that neither he nor his colleagues had applied the science of control and communications to the governance of organizations.

From 1970 to 1973 Beer had worked for President Allende in Chile to establish a system of control and communications to operate a socialist economy using Teletype printers. So while Beer had applied the principals of cybernetics to coordinating firms this had been achieved in top down control and communication system as commonly found in hierarchical firms. One widely known contribution of Beer (1985) was his concept of organizing units of a firm into a "viable system" to efficaciously manage complex tasks. This contribution was based on conceptual rather than quantitative cybernetic analysis.

Quantitative analysis of organizations only became possible when technology progressed to allow natural scientists to identify the physiological and neurological limits of individuals to receive, store, process and transmit data. Organizational theorists have long recognized data processing as a fundamental problem. Williamson (1979, note 4) stated: "But for the limited ability of human agents to receive, store, retrieve, and process data, interesting economic problems vanish". "The problem of organization is precisely one of decomposing the enterprise in efficient informational processing" (Williamson 1985, p. 283).

Capacity in bytes/sec[a]	Human input data channels[a]					Constraints in humans to transact bytes created by:
	Smell	Taste	Touch	Sound	Sight	
	<10K	<15K	<15K	100K	1,000M	
Nature of transacting bytes in humans	1	Reception through organs				Physiology
	2	Storage through nervous system				Physiology
	3	Perception/understanding through the activation and strengthening of neural networks which correlate current patterns with previous ones				Physiology plus experience, training and motivation
	4	Insight/knowledge through sequential processing in neo-cortex limited to around 200 calculations per/sec (Kurzweil 1999: 103)				As above plus size and architecture of neo-cortex and psychological status
	5	External responses transmitted by movement and vocal chords				Proximity/distance, environmental conditions, culture, literacy & numeracy
Capacity in bytes/sec[a]	Human output data channels[a]					Data received 10,000 faster than the rate at which it can be transmitted
	Touch	Signs	Writing	Sound	Speech	
	<15K	<15K	<15K	<100K	<100K	

Fig. 1 Human constraints in transacting bytes (K = Kilobytes, M = Megabytes) ([a]Sources of channel capacity; Cochrane (1997, 2000))

Quantifying the ability of humans to receive, store, process and transmit data was only achieved at the turn of the last century. The then head of the British Telecom Research Laboratories Peter Cochrane (2000) quantified the physiological limits of individuals to receive and transmit data in terms of bytes as is set in Fig. 1. MIT based voice recognition scientist Ray Kurzweil (1999, p. 103) reported the limitations of the human brain to sequentially process data in terms of bytes as noted in the centre of Fig. 1. He explains how humans overwhelmingly solve problems by pattern recognition. Kurzweil (1999, p. 79) points out that when 10-year old girl goes to catch a ball "it follows a path that can be predicted from the ball's initial trajectory, spin, and speed, as well as wind conditions." Calculation of where to go to catch the ball "would appear to require the solution of an overwhelming set of complex simultaneous equations. These equations need to be constantly recomputed as a new visual data streams in". The point is that humans achieve complex tasks through pattern recognition developed through trial and error until the skill becomes innate not requiring conscious data processing. Driving a car is an example. Pattern recognition skills provide a rationale for business schools to educate through the case method so as to provide synthetic experiences.

The human brain is a massively parallel computer processing many bits of data at once rather than one bit at time as undertaken by personal computers at the time Kurzweil was writing in 1999. As a result, the personal computer at that time could only "emulate about a million neuron connection calculations per second, which is more than a billion times slower than the human brain" (Kurzweil 1999, p. 79). Like catching a ball, humans recognized faces and voices by data pattern recognition. This is why voice recognition has taken time for computers to catch up to the capabilities of the human brain.

It has now become common for all the data provided to board members to be in digital form. This allows the quantity of data received by each board member to be quantified. The time involved for its input can also be measured to identify data overload. With the use of content analysis estimates of information over load can also be obtained. Technology now makes it possible to use data measured in bits and bytes to become a unit of organizational analysis. Both Williamson (1990, p. xi) and Simon (1984, p. 40) saw the need "for observing the phenomena at a higher

level of resolution". Bytes provide an answer in this regard and also answer the question raised by Williamson (1990, p. xi) "how micro is micro?".

A methodology developed by Turnbull (2001b) described as "Transaction Byte Analysis" (TBA) provides a way to investigate, design, and compare organizations with either hierarchical or network architecture on a quantitative basis. TBA overcomes the problems identified Radner (1992, p. 1384) who stated: "I know no theoretical research to date that compares the relative efficiency of hierarchical and non-hierarchical organizations within a common model" and of Demb and Neubauer (1992) who wanted a way to "compare systems of corporate governance within and between cultures". More generally, Demsetz (1991, p. 159) states: "a more complete theory of the firm must give greater weight to information cost than is given either in Coase's theory or in theories based on shirking and opportunism which have not gone far enough". Jensen (1993, p. 873), an author of agency theory widely used in corporate governance analysis observed: "we're facing the problem of developing a viable theory of organizations". While the emergence of network firms led Zingales (2000) to state in regards to existing theories of the firm that: "they seem to be quite ineffective in helping us cope with the new type of firms that are emerging".

TBA subsumes Transaction Cost Economics (TCE) developed by Williamson (1975, 1985) when costs become a proxy for data and its higher order social constructs of information, knowledge, and wisdom. Information represents data that provide meaning to an observer. Meaning from non-mathematical languages cannot be quantified. Nor can knowledge that represents information that can be useful for analysis or action. Likewise wisdom cannot be quantified as it represents the knowledge of when to use knowledge. However, no change in the state of information, knowledge or wisdom can occur without the transaction of bytes.

The sharing of information is dependent on patterns of data being interpreted in a similar manner by senders and receivers. To interpret data in an identical way, the neurological circuits of individuals (or creatures) sending data needs to be closely aligned with neurological circuits of the individual receiving the data. However, the neurological architecture of even identical twins can vary according to how different external stimuli affect their brain development. "The number of neurons in the human brain is estimated at approximately 100 billion, with an average of 1,000 connections per neuron, for a total of 100 trillion connections" (Kurzweil 1999, p. 119). Such large numbers means that no two or more individuals can be expected to have identical neurological architecture for interpreting an identical meaning from a given pattern of data. However, cultural homogeneity with training and conditioning can commonly achieve useful approximations of shared meaning.

Notwithstanding these observations, the word "information" is commonly used ambiguously to mean either meaningful data or just data. This ambiguity will be accepted as it is in everyday usage to allow quotations that use the word "information" to be accepted without qualification. Examples are Williamson (1985, p. 283) cited above and for Kurzweil (1999, p. 120) where he states: "The brain relies on a large degree of redundancy and a relative low density of information storage to gain reliability and to continue functioning effectively despite a high rate of neuron loss as we age".

2.1 Architecture of Nature

The transaction of bytes involves perturbations in matter and/or energy. Minimizing the transaction of bytes is required to minimize the energy and/or matter creatures require to receive, store and process data required to sustain their existence as well as to avoid exceeding their physiological and neurological limits in transacting bytes. Minimizing the transaction of bytes in firms would minimize costs to allow TBA to subsume TCE.

Over billions of years creatures have evolved sustainable systems of self-regulation and governance based on survival of the fittest. Survival provides a basic criterion for achieving self-regulation and self-governance. However, competition for survival means that this needs to be achieved in the most economic, efficient and resilient manner. This in turn requires the most efficient and reliable system for obtaining signals from the environment, comparing them with past signals, processing the data and activating responses to allow creatures to sustain their existence from unknowable complex threats and opportunities.

Nature creates complexity and controls complexity by decomposing it into what Simon (1962) described as "sub-assemblies" (1962, p. 472) or "stable intermediate forms" (1962, p. 473) to create "*nearly decomposable* systems, in which the interactions among the sub-systems are weak, but not negligible" (1962, p. 474). These "sub-assembles", "forms" and "sub-systems" were described by (Koestler 1967) as "holons". Koestler describes a hierarchy of holons as a "holarchy" to distinguish it from a hierarchy where there is a direct "boss" (Simon 1962, p. 468) in a command and control system. Other terms are used to describe holons like "modules" or "capsules" (Baldwin and Clark 2006), "viable systems" (Beer 1985), "chaords" (Hock 1999), "wholes", "systems", "org", "entities" or "cooperative heterarchy" noted by Mathews (1996).

An inherent characteristic of holons is that they contain contrary characteristics such as centralization/decentralization of control, bottom-up/top-down processes, autonomous/integrated behavior and order/ambiguity (Mathews 1996, pp. 52–53). The ability of organizations to possess contrary characteristics was noted by Dee Hock the founding CEO of the credit card company VISA international. To describe the organization he designed with these characteristics he coined the word "chaord" by combining the contrary words "chaos" and "order" (Hock 1999). The combination of contrary characteristics in physical structures allows new properties to emerge with tensional integrity or what Buckminster Fuller (1961) described as "tensegrity".

Fuller created geodesic domes by combing contrary materials like wire that has strength in tension and struts that have strength in compression. The combination of these contrary materials allows the greatest area to be covered by a structure with the least weight. The rich variety of stable or dynamic configurations that a human body can obtain arise from combining bones that work best in compression with muscles that work best in tension. Tensegrity is a fundamental feature of the "architecture of life" as described by Ingber (1998) who reports that human cells

are constructed from material with contrary properties. The reason is because like geodesic domes it provides "a maximum amount strength for a given amount of building material" (Ingber 1998, p. 32). Tensegrity has been adopted by evolution as the most efficient and resilient way to create and sustain living things.

DNA programs social creatures, including humans, to possess contrary characteristics like being competitive/cooperative, suspicious/trusting, selfish/altruistic and so on. I described this behavior as "Social Tensegrity" (Turnbull 2001b, p. 84). Social tensegrity introduces organizational integrity without the need for individual integrity advocated by Jensen (2009). TBA reveals the competitive advantages of social tensegrity. It provides creatures with a requisite variety of responses to discover those responses that will sustain their life in complex unknowable dynamic environments. Social tensegrity provides "a requisite number of responses to manage uncertainty while using minimum energy and/or materials to transact bytes" (Turnbull 2001b, p. 134).

To paraphrase Ingber (1998, p. 32), it appears that organizations with holonic architecture are able to provide "a maximum amount of control (strength) for a given amount of bytes (building material)". In other words social tensegrity in organizations maximizes their ability to self-control/self-regulate/self-govern with the minimum transaction of bytes. This in turns explains how network governance can provide competitive advantages and resiliency compared with hierarchies that create information overload, and lack a requisite variety of communication and control channels to control/regulate complexity. The operating and/or competitive advantage of network organizations increases as activities increase in complexity (Craven et al. 1996; Jones et al. 1997).

Hierarchies depend upon obedience and conformity. In this way hierarchies inhibit the ability of individuals to act in a contrary manner as encouraged by their DNA. This problem was identified by Hock (1995, p. 4) in the last century who stated that:

> Industrial Age, hierarchical command and control pyramids of power, whether political, social, educational or commercial, were aberrations of the Industrial Age, antithetical to the human spirit, destructive of the biosphere and structurally contrary to the whole history and methods of biological evolution. They were not only archaic and increasingly irrelevant; there were a public menace.

Hock (1999, p. 6) observed before the financial crises over the last decade that:

> We are experiencing a global epidemic of institutional failure that knows no bounds. We must seriously question the concepts underlying the current structures of organization and whether they are suitable to the management of accelerating societal and environmental problems – and, even beyond that, we must seriously consider whether they are the primary source of those problems.

The institutional problem of individuals being inhibited to be contrary is that there is little inbuilt ability for hierarchical organizations to generate sufficient variety of responses to manage complexity. This problem is overcome with holonic organizations that possess contrary behavior. The importance of being able to generate a rich variety of responses to manage complexity arises from the cybernetic law of requisite variety that states: "only variety can destroy variety"

(Ashby 1956, p. 207). In regards to the law of requisite variety Ashby (1956, p. 245) explained that: "Its importance is that if R[egulator] is fixed in its channel capacity, the law places an absolute limit to the amount of regulation (or control) that can be achieved by R[egulator], no matter how R[egulator] is re-arrange internally, or how great the opportunity in T [system]."

The variety of responses from any regulator/controller must be sufficient to handle the complexity of the variables involved. This is why complex firms cannot be reliably centrally controlled because they lack a requisite variety of independently acting controllers. Likewise, it becomes impossible for government regulators to reliably control complex firms on a centralized top-down basis.

The purpose of government regulators is to protect and further the interests of stakeholders and society who can be harmed by a firm or put at risk by a firm. To achieve their objective regulators require a requisite variety of controllers. It is the stakeholders who regulators have been created to protect that can provide the requisite variety of control. This is why stakeholder engagement becomes an essential requirement for either firms or their regulators to reliably control complex activities as illustrated in Sect. 4. It is stakeholders who can expeditiously and sensitively provide the bottom-up feedback correction to protect and further their interests and that of society.

These insights explain why so called governance best practices and government regulators cannot reliably protect stakeholders. Efficient, economic and effective control and regulation of complex firms requires stakeholders to be constructively engaged in the governance architecture. This explains the necessity for introducing network governance and network regulation when complex firms are involved. The engagement of stakeholders into the governance and regulatory architecture provide a basis to further the self-regulation and self-governance of firms. The conditions for achieving self-control/regulation/governance are set out in Turnbull (2001b, p. 118).

Adoption of network governance would change the role of government. It would reduce: (a) the need for regulators; (b) the size and costs of government while (c) enriching democracy at the grass roots level to sustain society and the environment. The role of government would become indirect, a condition required by the law of requisite variety to amplify regulation by supplementation (Ashby 1956, p. 270). In the words of US Vice President Al Gore the role of government would be "to imprint the DNA" (Gore 1996) of institutions so they could become self-governing.

DNA in social creatures only survives if it programs its host to possess contrary behavior with manifold ying/yang characteristics such as approach/avoidance, etc. Contrary behavior introduces a "requisite variety" (Ashby 1956, p. 206) of responses that introduces checks and balances to permit the selection of the most appropriate reactions in uncertain, dynamic complex life threatening environments. While small-brained insects can survive in such environments, the 2008 financial crisis revealed that large brained highly intelligent so-called "masters of the universe" could not. The problem is that most large corporations are governed through top down command and control hierarchies that resists contrary views, bottom up initiatives or checks and balances. The inherent problems of centralized top-down governance are next considered.

3 Failure of Top-Down Only Governance

The failure of current laws, regulations and regulators to protect stakeholders arises because each relies on a top down approach. The evidence of nature and so the science of governance reveals that a bottom up approach is also essential to reliably regulate complex organizations operating in unknowable, dynamic environments. Lawmakers and their regulators cannot control firms if firm directors and/or executives in turn rely only on a top down control system without independent feedback signals from everywhere else.

Network governance introduces bottom up control and communications from the very people governments and regulators are trying to protect. As illustrated by the John Lewis Partnership, the Mondragón Corporacion Cooperativa (MCC) and by Fig. 4, it is plain common sense for stakeholders to be included in the governance architecture of firms. Michael Porter (1992) recommended this approach in his report to the US government on competiveness. But his ideas were not adopted because stakeholders on a US unitary board would introduce conflicts of interest.

What Porter did not take into account is that bottom up feedback communication in Japanese and German firms are channeled through a different board. Such boards not only obtain, (1) the information to act but also; (2) the incentive; (3) power and (4), capability to act. These four conditions are not typically present in US/UK type of disconnected capitalism as shown by Turnbull and Pirson (2012). It is by making such connections that network governance can reduce risks and provide competitive advantages.

Network governance also separates conflicts of interest and introduces different viewpoints to create checks and balances to establish more mutually effective and resilient operations. In addition, by separating the governance and management powers of directors, governance and management functions can then paradoxically be integrated throughout the firm. How this is achieved in practice by the Mondragón stakeholder controlled cooperatives is illustrated in Fig. 7.3 in Turnbull (2001b, p. 245). Kay (1996) and Givens (1991) describe how stakeholder engagements can be added to traditional hierarchical firms.

The integration of management and governance in turn introduces self-regulation and self-governance as found in nature. Network governance provides a way to overcome the built in problems with current ideas of "best" practices for a unitary board to provide systemic solutions as indicated in Table 1. Details of "The corrupting powers of a unitary board" are presented in Turnbull (2001b, p. 115).

Network governance empowers Governors who take of the roles of NEDs, with information independently of management to monitor management. Without network governance, common sense suggests that the more a director is considered to be independent then the more the director lacks authority and knowledge to monitor and evaluate management and the business operations. This explains why there is no compelling empirical evidence that NEDs can improve performance or prevent disasters. On the contrary, Bhagat and Black (2002) found evidence that increasing the number of NEDs on a board reduces performance.

Table 1 How ecological governance overcomes problems of a unitary board

	Systemic problems for non-executive directors (NEDs) on a unitary board	Systemic solutions from introducing network governance used by nature described as "ecological governance"
1	Suspicion by outsiders that the absolute power of directors to identify and manage their own conflicts of interest might corrupt the directors and/or the business	Corporate charter establishes a governance board and a management board of directors elected by cumulative voting with one vote per share and Governors with one vote per shareholder. Governors control internal and external auditors, director nomination and pay with veto powers when conflicts exist for directors (Dallas 1997, Turnbull 2000a)
2	No creditable systematic process for NEDs to determine when their trust in management might be misplaced	Corporate charters makes provision for any class of stakeholders to elect a representative board to meet with governors independently of management or directors to provide feedback and/or feed forward competitive intelligence to them and/or managers
3	Exposure of NEDs to personal liabilities and loss of reputation from management misdeeds	Misdeeds of executives are the responsibility of the directors' as Governors do not have power to manage business operations. As indicated in Figs. 3 & 4 board could include non-executives
4	No systemic access for NEDs to information opposing management views and so for evaluating management independently of managers	Feedback from establishment of one or more "Employee Assemblies", "Supplier Forums", Customer Councils and Community Committees" who appoint a "Stakeholder Congress" to advise on KPIs used to determine executive appointments and their remuneration
5	No diversity of information sources to cross check integrity of management information or obtain second or more opinions	Diversified feedback provided from specialized stakeholders groups and their Boards with informal access to Government regulator who chairs their Stakeholder Congress. Congress manages AGM that determines the pay and election of Directors and Governors
6	Coping with data and information overload	Compliance information and liabilities transferred to directors with option of strategic analysis transferred to a supervisory board as found in Europe
7	Difficulties in detecting biases, errors and omissions in reports from managers	Access to a requisite variety of independent crosschecking sources of stakeholder feedback to obtain accuracy as much as desired as demonstrated by Shannon (1948)
8	Inadequate knowledge for complex decision-making	Simplification of decision making by decentralization into to a requisite variety of centers as described by von Neuman (1947)

(continued)

Table 1 (continued)

Systemic problems for non-executive directors (NEDs) on a unitary board	Systemic solutions from introducing network governance used by nature described as "ecological governance"
9 Board decision-making subject biases in its membership – Gender biases, etc.	Exposed to multiple diverse and contrary viewpoints raised by stakeholders to force consideration of taboo topics and avoid culture of don't ask don't tell
10 Lack of will to act against management	Governors not captive to management information and/or executive powers and influence with independent power and/or influence on director nomination, pay and tenure
11 Lack of a systemic way to safely blow the whistle on errors, misdeeds, etc.	Provided privately by network of boards connected to the government regulator and/or firm specific employee ombudsperson
12 Impossibility of *directly* controlling/ countering complex variables/risks	Control amplified *indirectly* through requisite variety of stakeholders acting as co-regulators (Ashby 1956, p. 265)

The proliferation of governance codes arise because corporate lobbyists argue that to remain competitive firms need governments to adopt a "light touch" to allow self-regulation. But belief in self-regulation is irresponsible and dangerous with firms governed by a unitary board that allows directors absolute power to identify and manage their conflicts of interest (Jackson 2007). Self-regulation only becomes possible firstly if a division of powers is created and secondly if stakeholders become empowered to assists in protecting themselves. As noted above stakeholder engagement also provides a way to increase competitiveness. So self-regulation and competitiveness can be achieved together. In addition network governance provides a way to make firms directly accountable to stakeholders for their social and environmental concerns.

The law of requisite variety for regulating complexity requires the existence of a requisite variety of controllers. Reliability in regulating complexity cannot be improved by making controllers stronger. What is required is a greater variety of controllers through introducing supplementary co-regulators (Ashby 1956, p. 265). It is by introducing supplementary sources of energy from the household power supply that it becomes possible to amplify the weak signal received by a radio or TV to be heard and/or seen.

The fact that direct amplification of reliable control or regulation is impossible has profound and widespread implications for the structure of complex organizations in the public, private and/or non-profit sectors. It means that all complex organizations need to include stakeholders as co-regulators to supplement the variety of control to improve their regulation. It also reveals the futility of top down proposals to improve corporate governance and business regulation. Some legal scholars have recognized the need for a division of board powers (Braithwaite 1997; Dallas 1997) and the need for "networked regulation" (Tomasic and Akinbami 2011) as is next considered.

4 Network Governance

Network governance can be introduced by changing corporate constitutions (Turnbull 2000a). A basic requirement is the introduction of a division of powers. This allows checks and balances to exist as found in nature, our bodies and in our brains. My PhD research revealed how the architecture of the MCC and the constitutions of its member firms exemplify "the architecture of life" (Ingber 1998). An architecture that is ubiquitous throughout the universe (Turnbull 2001b, p. 130, 221).

However, before reaching my PhD research epiphany, it seemed like just plain common sense to introduce elements of network governance into the constitutions of start-up-firms that I founded. I had two motives: (1) to raise millions of dollars at the lowest cost, and (2) protect my reputation as a serial entrepreneur in the event the business did not exceed. Both objectives were achieved (Turnbull 2000a, 2002c).

I introduced three basic changes. First, removing the absolute power of directors to identify and manage their own conflicts of interests to avoid the possibility of corrupting themselves and/or the business. Second, removing unethical conflicts of interest that arise for: (a) directors when they appoint and pay the auditor who judges them, and (b) auditors when they are selected and paid by the directors whose accounts they judge as shown in Fig. 2. Judges in a law court cannot claim to be independent when they are selected and paid by the people they are judging. If the judge then attested that he/she was "independent", as auditors do, then it would be the judge that would be sent to jail. The third change was to remove the power of any director to chair a meeting of shareholders where shareholders were holding directors to account, determining their pay and/or their appointment. Instead, the chairman of a *shareholders'* audit committee described as a "Governance Board" chaired the AGM. Refer to Fig. 3.

The separation of powers that I introduced were similar to those typically introduced by venture capitalists and bankers for providing finance. These first steps in introducing network governance do not represent a radical precedent nor would they inhibit the ability of businesses to add value and grow. Network governance protects the reputations of directors by removing suspicion and questions from stakeholders and the media that directors could be feathering their own nests rather than creating nest eggs for others. Refer to row 1, Table 1.

5 Understanding the Advantages of Network Governance

Company directors, scholars and governance experts typically reject the idea of network governance when they note the complexity of networked governed firms such as presented in Turnbull (2001b, p. 207). While it may be counter intuitive, the tasks of individuals can be simplified by greater organization complexity as

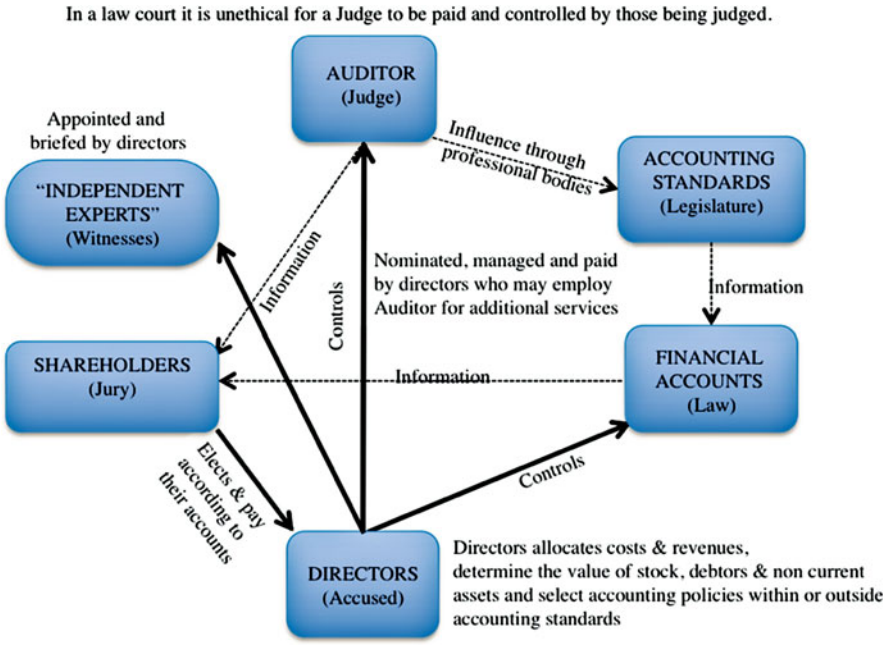

Fig. 2 Unethical conflicts of unitary board

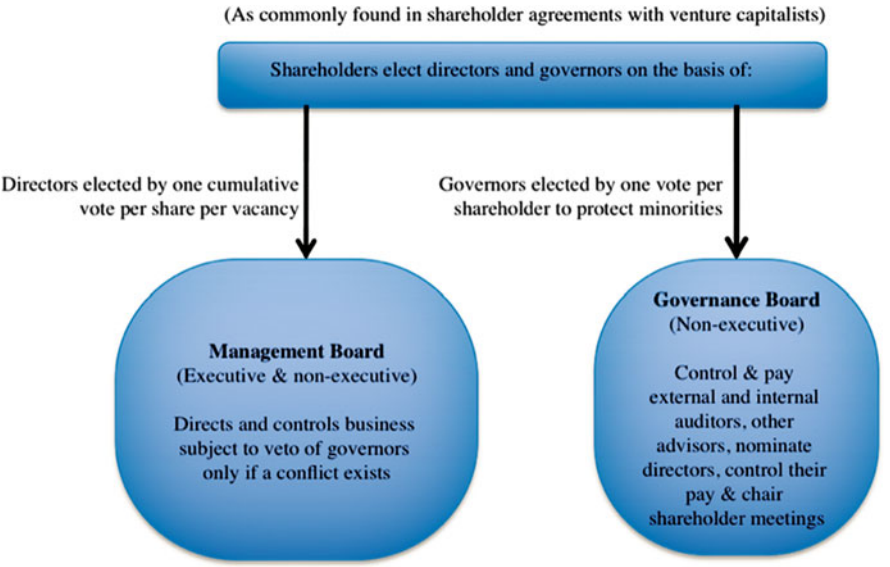

Fig. 3 Network governance-separation of powers is the first step to be ethical and competitive

illustrated by the MCC (Turnbull 2001b, p. 245). Simplification in hierarchies is achieved through limiting the span of control and by introducing multidivisional forms of organizations (Williamson 1975, p. 32).

The eye glazing, mind-numbing complexity of the MCC control and communication architecture presented in Turnbull (2001b, p. 207) represents what is described as "state description" (Simon 1962, p. 479; De Vany 1998). Like the complexity of nature it can be explicated simply from a "process description" that describes how complexity is constructed from simpler components as presented in Turnbull (2001b, p. 221).[1] As noted by Simon (1962, p. 479) "The problem of finding relatively simple descriptions for complex systems is of interest not only for an understanding of human knowledge of the world but also for an explanation of how a complex system can reproduce itself."

Centralized governance through hierarchies are now well past their "use by date" for large complex financial institutions. Pirson and Turnbull (2011) explain how firms judged too big to fail are likely also to be too big to be reliably managed, governed or regulated without network governance. In our follow up article we raise the question "Could the 2008 US financial crisis have been avoided with network governance?" (Turnbull and Pirson 2012).

Some of the benefits of network governance for NEDs who become "Governors" are next considered. The advantages for auditors, managers, investors, stakeholder and regulators are also outlined in the following subsections.

5.1 Governors

Nine of the benefits for NEDs being elected separately by shareholders to become Governors are outlined below:

1. Role simplified and information overload reduced by the decomposition of decision-making labor that also minimizes compliance responsibilities and so personal liabilities (Clarke 2006; Page 2009; Rodrigues 2007; Turnbull 2001b, p. 245).
2. Monitoring and supervisory roles legitimatized by obtaining access to a rich variety information to evaluate management and the business independently of management (Shannon 1948).

[1] The complexity of the MCC is parsimoniously summed up in the four columns and five rows of "Table 6.1, Holon typology of Mondragón" on page 221 of Turnbull (2001b). Table 6.1 allows the complexity of the MCC to be revealed as a consistent continuum of how the complexity of life is created and the universe emerges as shown in "Table 3.8, Holarchy: Hierarchy of Holons" on page 130. Table 6.1 also illustrates the point made by Simon (1962, p. 479): "the task of science is to make use of the world's redundancy to describe that world simply."

3. Ability to cross check management reports for errors, biases, distortions, omissions and "spin" from additional independent communication channels from a diversity of stakeholders (Shannon 1948; Turnbull 2001b, p. 99).
4. Formal and informal access to industry, product and competitive intelligence and/or whistle blowers from systematized stakeholder engagement (Porter 1992; Turnbull 1997; 2000b, 2001a).
5. Creditable processes established on an independent systemic basis for learning when trust in management might be misplaced (Page 2009).
6. Exposure to most financial liabilities transferred to full time executives as governors not responsible for management decisions.
7. Unethical conflicts with financial auditor eliminated with exclusive control of internal auditor (Turnbull 2002c, 2008a, 2009).
8. Residual personal conflicts on governors own pay and tenure taken over or mediated by stakeholder congress.
9. Intelligence on Key Performance Indicators (KPIs) for executives provided by stakeholders exposed to services, costs and/or risks from management (Turnbull 2002b, 2009).

5.2 Auditors

External auditors obtain substantial benefits from enhancing their integrity, professionalism and role in four ways.

1. Unethical conflicts removed by Auditor no longer selected, appointed and remunerated directors whose accounts they are judging (Gitins 2002; Hatherly 1995; Hayward 2003; O'Connor 2004; Shapiro 2005; Turnbull 2008a).
2. Unconscious bias in judging accounts, as identified by Bazerman et al. (2002), is removed.
3. The possibility of the auditor not being seen as being independent of the officers whose accounts they are judging is removed to remove the need for audit partner or audit firm rotation (Bazerman et al. 1997; Shapiro 2004, and Hayward 2003).
4. Access is obtained to a rich variety of alternative communication channels to cross check the integrity of corporate data independently of management (Shannon 1948).

5.3 Management

Management obtains formal systemic processes for accessing stakeholder resources for enhancing operations.

1. Formal relationships established to facilitate and/or arbitrate Total Quality Management (TQM) and Just In Time (JIT) processes with relevant stakeholders (Turnbull 1997, 2000a, b, 2001a).

2. Process for accessing innovational, operational and competitive intelligence from stakeholders that might not otherwise be provided on a systematic basis (Hippel 1986).
3. Facilitate stakeholder loyalty and engagement to constructively support the firm (Givens 1991).
4. Systematic process to quickly learn about problems and take corrective actions before governors/regulators.
5. Harness pro-bono stakeholder resources for continuous improvements (Givens 1991; Turnbull 1997; 2000a,b; 2001a).
6. Compliance processes integrated into management.

5.4 Stakeholders

Those parties who are affected by the firm and described as stakeholders obtain formal direct and contingently influential relationships to protect and further their interests as outlined below and discussed in greater details by Givens (1991), Kay (1996), and Turnbull (1997, 2000a, b, 2001a).

1. Formal access to contribute continuous improvement programs for mutual benefits.
2. Direct access to correct poor quality goods/services and relationships.
3. Direct, quicker and more responsive access to protect and further their own interest than regulators, courts and/or public protests.
4. Strengthen constructive working relationships and mediate others.

5.5 Regulators

The role of regulators is enhanced while their size and cost can be reduced in four ways as outlined below:

1. Amplification of regulation through stakeholder supplementation as co-regulators (Ashby 1956, p. 265).
2. Higher integrity of monitoring communications through multiple stakeholder feedback (Shannon 1948).
3. Improved formal and informal access to monitor firms and the integrity of the self-regulating processes of firms (Turnbull 2001b, p. 118).
4. Role changes to promoting and supervising the integrity of firm self-governance (Gore 1996).

6 Closing Remarks

Even without applying the insights of cybernetics this paper reveals that the current dominant form of US/UK governance architecture and practices are not supported by common sense, ethics, theory or compelling empirical evidence. The new types of nonhierarchical firms that concerned Zingales (2000) include those with network governance. These diminish the relevancy of agency theory (Jensen and Meckling 1976) and stewardship theory (Davis et al. 1997) commonly used by governance scholars. The diminishing arises because the role of agents and stewards can become irrelevant and/or interchanged in a network at different times.

The impotency and/or irrelevancy of governance laws, regulations, regulators and codes is demonstrated by the many recent high profile and unexpected failures. For example there are manifold and continually changing definitions of director "independence" and confusion over the purpose of seeking independence (Clarke 2006; Page 2009). Rodrigues (2007) has noted the "fetishization of Independence" notwithstanding that extensive empirical survey by Bhagat and Black (2002) that found no correlation of director independence and performance with US boards. The evidence suggested that firm performance decreases as the independent directors on a board are increased. This supports the common sense observation considered earlier.

Likewise there has been a long historical confusion over the different legal purposes of external auditing in the UK and the US that has led to confusion about the role and structure of audit of committees (Turnbull 2008a). There is denial by practitioners in recognizing the unethical relationship between auditors and directors as raised by a number of scholars such as: Bazerman et al. (1997); Bazerman et al. (2002); Hayward (2003); O'Connor (2004); Shapiro (2004); Romano (2004). Hatherly (1995) proposed that a shareholder committee should control the auditor as indicated in Figs. 3 and 4 as is the practice in some European countries like France (Analytica 1992, p. 107), Hungary (Lempert 2003), Italy (Melis 2004) and Russia (Gitins 2002).

Regulators seem to be captive to practitioners and so limit their consideration of changes to mainly those that are only cosmetic in nature. They then falsely claim that such changes increase audit independence when the inherent unethical conflicts of interest still remain. Changes like limiting non-audit services, rotating partners and/or rotating auditors do not remove the unethical relationships. The ability of auditors to legally attest that they are "independent" illustrates how this word has become perverted from its widely accepted meaning. It is not a good look for directors and auditors to be seen by the public as not being able to recognize unethical and/or untrue relationship by stating that in some obscure technical and largely irrelevant basis they can classify themselves as being "independent".

Likewise, fundamental changes in the concentration of corporate power and influence are little considered in new reforms (Sharpe 2010). It is time to fundamentally rethink the roles of directors, governance and regulators. The very fact that codes of behavior are required proves the inadequacy and/or irrelevancy of

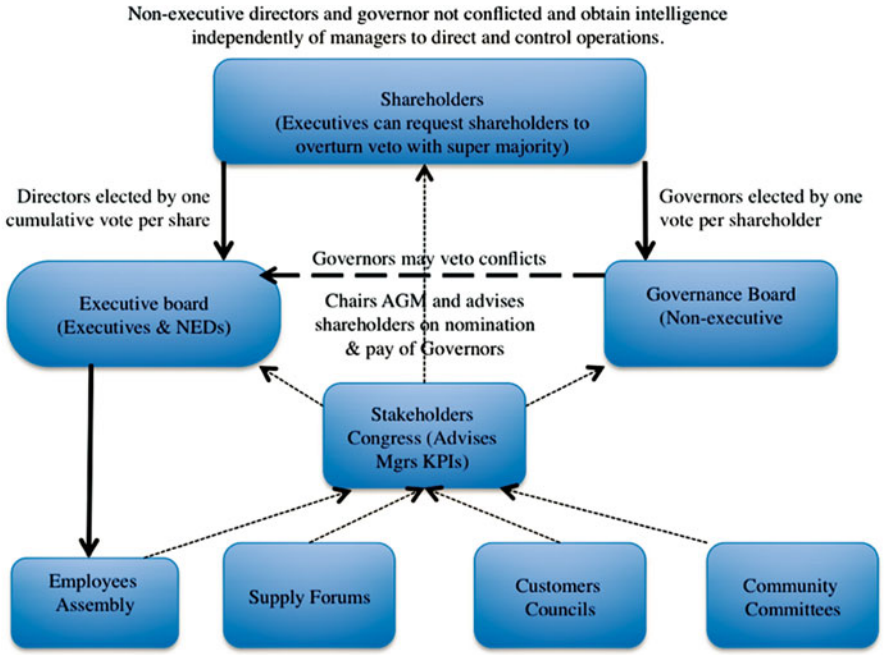

Fig. 4 Network governance-bottom up added to top down

corporate laws, regulations and regulators. In the natural world, the control and communication system in creatures is programmed to sustain their existence on a resilient self-regulating basis without codes. Unless there is fundamental rethinking the endless revisions of laws, regulations and codes will continue to meet the political and social imperatives of being seen to being doing something to reduce unexpected failures. Governance science reveals that fundamental change is required to adopt the control and communication architecture found in nature.

Re-designing the architecture of corporate governance could be introduced on an incremental basis. In Australia I negotiated with the regulator to avoid the cost of calling an AGM to change the auditor. The exemption was granted because the regulator accepted that the democratically elected shareholder audit committee protected minority shareholders better than shareholders voting on the usual plutocratic basis of one vote per shareholder. By such processes corporations could negotiate incremental de-regulation. The UK Financial Reporting Council supported this approach by sponsoring the presentation of my paper on the 'The Theory and Practice of Government De-regulation' to a conference[2] for regulators (Turnbull 2008c).

[2] 2nd Cambridge University Conference on 'Regulation, Inspection & Improvement, Judge Business School Centre for Business Research, 12 September 2007.

As documented in this paper there is growing concern by legal and other scholars over the role of directors, governance and regulation in English speaking countries (Howson 2009; Sharpe 2010; Sun et al. 2011; Vasudev and Watson 2012). These and other scholars provide evidence of various so-called "best practices" being unethical, conflicted, counterproductive, naïve and dangerous for directors, shareholders and regulators.

There is also growing acceptance by other leading scholars of the contrary views outlined in this paper. These include my PhD examiners, editors who have solicited my contrary views in their reference books and textbooks and the many referees involved in publishing Turnbull (1995, 2000a, b, 2002a, b, 2008a, b, c, 2009, 2010, 2011, 2012). These writings provide additional details of the science and practices self-regulation and self-governance.

The contribution of this paper is to present both a practical and a theoretical overview for rethinking director's roles, governance and regulation. The theoretical framework provided by governance science identifies the impossibility of direct reliable control, regulation and/or governance of large complex firms with a unitary control structure by the firm or its regulator. This means that regulators are being irresponsible to allow large complex firms to exist without network governance (Jackson 2007; Pirson and Turnbull 2011; Turnbull and Pirson 2012).

As shown in Sect. 5, network governance provides numerous practical advantages for directors, auditors, management, stakeholders and regulators. The conclusion that network governance should be required for large complex firms is supported by both practical and theoretical considerations. The constructive engagement of stakeholders through network governance introduces direct democratic process for improving the social and environmental behavior of firms in way to reduce the size, intrusiveness and cost of government. It is in these ways and for these reasons that a sustainable future can be established for corporate governance practices grounded in the science of governance.

References

Analytica. (1992). *Board directors and corporate Governance: Trends in the G7 countries over the next 10 years*. Oxford: Oxford Analytica Ltd.

Ashby, W. R. (1956). *An introduction to cybernetics*. London: Chapman & Hall.

Baldwin, C.Y., & Clark, K.B. (2006). Where do transactions come from? A network design perspective on the theory of the firm. Harvard NOM Working Paper No. 06–12.

Bazerman, M. H., Morgan, K. P., & Loewenstein, G. F. (1997). The impossibility of auditor independence. *Sloan Management Review, 38*(4), 89–94.

Bazerman, M. H., Loewenstein, G., & Moore, D. A. (2002). Why good accountants do bad audits? *Harvard Business Review, 80*(11), 95–98.

Beer, S. (1985). *Diagnosing the system for organization*. New York: Wiley.

Bhagat, S., & Black, B. S. (2002). The non-correlation between board independence and long-term firm performance. *Journal of Corporation Law, 27*(2), 231–273.

Braithwaite, J. (1997). On speaking softly and carrying big sticks: Neglected dimensions of a republication separation of powers. *University of Toronto Law Journal, 47*, 305–361.

Clarke, D. C. (2006). Setting the record straight: Three concepts of the independent director. GWU Legal Studies Research Paper No. 199, George Washington University Law School.
Cochrane, P. (1997). Private e-mail communication to the author dated December 21 when head of British telecom research laboratories, UK.
Cochrane, P. (2000). Hard drive: Bandwidth and brandwidth. 6 April, London: *Telegraph.*
Craven, D. W., Piercy, N. F., & Shipp, S. H. (1996). New organizational forms for competing in highly dynamic environments: The network paradigm. *British Journal of Management, 7*(3), 203–218.
Dallas, L. L. (1997). Proposals for reform of corporate boards of directors: The dual board and ombudsperson. *Washington and Lee Law Review, 54*(3), 92–146.
Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Towards a stewardship theory of management. *Academy of Management Review, 22*(1), 20–47.
De Vany, A. (1998). How much information is there in an economic organization and why can't large ones be optimal? *Brazilian Electronic Journal of Economics*, 1(1).
Demb, A., & Neubauer, F. F. (1992). *The corporate board: Confronting the paradoxes*. Oxford: Oxford University Press.
Demsetz, H. (1991). The theory of the firm revisited. In O. E. Williamson & S. G. Winter (Eds.), *The nature of the firm: Origins, evolution and development* (pp. 159–178). New York: Oxford University Press.
Dunbar, R. I. M. (1993). Co-evolution of neocortical size, group size and language in humans. *Behavioral and Brain Science, 16*, 681–735.
Fuller, B. R. (1961). Tensegrity. Portfolio and Art News Annual, No. 4.
Gitins, M. M. (2002). Letter of 10 December to securities and exchange commission, Washington D.C. Re: Conflict with Russian Law under Section 301 of the Sarbanes-Oxley Act of 2002.
Givens, B. (1991). *Citizens' utility boards: Because utilities bear watching*. San Diego: Centre for Public Interest Law, University of San Diego School of Law.
Gore, A. (1996). The technology challenge: What is the role of science in American society? *Prepared remarks delivered to American association for the advancement of science.* 12 February. Baltimore, Washington, DC: Office of the Vice President.
Hatherly, D. J. (1995). The case for the shareholder panel. *European Accounting Review, 4*(3), 535–553.
Hippel, E. V. (1994). Sources of Innovation. New York: Oxford University Press.
Hayward, J. (2003). *Thinking not ticking: Bringing competition to the public interest audit*. London: Centre for the Study of Financial Innovation (CSFI).
Hock, D. W. (1995). The chaordic organization: Out of control and into order. *World Business Academy Perspective, 9*(1), 4.
Hock, D. W. (1999). *Birth of the chaordic age*. San Francisco: Berrett-Koehler Publishers.
Howson, N. C. (2009). When "Good" corporate governance makes "Bad" (Financial) firms: The global crisis and the limits of private law. *Michigan Law Review, 108*, 44. First Impressions.
Ingber, D. E. (1998). The architecture of life. *Scientific American, 278*, 30–39. January.
Jackson, R. (2007). Are regulators and stock exchanges irresponsible?' Posted by Robert Jackson managing editor (Ed), *Harvard law school forum on corporate governance and financial regulation*. Thursday 8 November 12:45 pm. Available at: http://blogs.law.harvard.edu/corpgov/2007/11/08/are-regulators-and-stock-exchanges-irresponsible/. Accessed 8 Nov.
Jensen, M. C. (1993). The modern industrial revolution: Exit and the failure of control systems. *Journal of Finance, 48*(3), 831–880.
Jensen, M. C. (2009). Integrity: Without it nothing works. *Rotman Magazine: The Magazine of the Rotman School of Management*, 16–32.
Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior: Agency costs and ownership structure. *Journal of Financial Economics, 3*, 305–360.
Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A general theory of network governance: Exchange conditions and social mechanisms. *Academy of Management Review, 22*, 911–945.

Kay, J. (1996). Regulating private utilities: The customer corporation. *Journal of Co-operative Studies, 29*(2), 28–46.
Koestler, A. (1967). *The ghost in the machine*. London: Hutchinson.
Kurzweil, R. (1999). *The age of spiritual machines: When computers exceed human intelligence*. New York: Viking.
Lempert, M. (2003). *Corporate governance at Matav*. Paper presented to 6th international conference on corporate governance and board leadership, Henley, 7 Oct.
Mathews, J. (1996). Holonic organizational architectures. *Human Systems Management, 15*, 27–54.
Neumann, John von, (1947). *Theory of Games and Economic Behaviour*, New Haven, CT: Yale University Press.
Melis, A. (2004). On the role of the board of statutory auditors in Italian listed companies. *Corporate Governance: An International Review, 12*(1), 74–384.
O'Connor, S. M. (2004). Be careful what you wish for: How accountants and Congress created the problem of auditor independence. *Boston College Law Review, 45*(5), 741–828.
Page, A. (2009). Unconscious bias and the limits of director independence. *University of Illinois Law Review, 2009*(1), 237–294.
Pirson, M., & Turnbull, S. (2011). Corporate governance, risk management, and the financial crisis – an information processing view. *Corporate Governance: An International Review, 19*(5), 459–470. September.
Porter, M. E. (1992). *Capital choices: Changing the way America invests in business*. Boston: Harvard Business School.
Radner, R. (1992). Hierarchy: The economics of managing. *Journal of Economic Literature, 30*(3), 1382–1415.
Rodrigues, U. (2007). *The fetishization of independence*. The UGA legal studies research paper No. 07–007, University of Georgia Law School, March.
Romano, R. (2004). The Sarbanes-Oxley act and the making of quack corporate governance. Yale ICF Working paper 04–37, ECGI, Finance. Available at: http://ssrn.com/abstract=596101.
Shannon, C. E. (1948). The mathematical theory of communications. *The Bell System Technical Journal, 27*, 379/623–423/656.
Shapiro, A. (2005). Who pays the auditor calls the tune? Auditing regulation and client's incentives. *Seton Hall Law Review, 35*(3):1029–1095.
Sharpe, N. F. (2010). Rethinking board function in the wake of the 2008 financial crisis. *Journal of Technology and Business Law, 5*(1)99–111.
Simon, H. (1962). The architecture of complexity. *Proceedings of the American Philosophical Society, 106*, 467–482.
Simon, H. (1984). On the behavioral and rational foundations of economic dynamics. *Journal of Economic behavior and Organization, 5*, 35–56. March.
Sun, W., Stewart, J., & Pollard, D. (Eds.). (2011). *Corporate governance and the global financial crisis-international perspectives* (pp. 50–74). Cambridge: Cambridge University Press.
Tomasic, R., & Akinbami, F. (2011). Towards a new corporate governance after the global financial crisis. *International Company and Commercial Law Review, 8*, 237–249.
Turnbull, S. (1995). Best practice in the governance of GBEs. In J. Guthrie (Ed.), *The Australian public sector: Pathways to change in the 1990s'* (pp. 99–109). Sydney: IIR Pty. Limited.
Turnbull, S. (1997). Stakeholder Co-operation. *Journal of Co-operative Studies, 29*(3), 18–52. no.88.
Turnbull, S. (2000a). Corporate charters with competitive advantages. *St. Johns Law Review, 74*(44), 101–159.
Turnbull, S. (2000b). Stakeholder governance: A cybernetic and property rights analysis. In R. I. Tricker (Ed.), *Corporate governance: The history of management thought* (pp. 401–413). London: Ashgate Publishing.
Turnbull, S. (2001a). The competitive advantage of stakeholder mutuals. In J. Birchall (Ed.), *The new mutualism in public policy, chapter 9* (pp. 171–201). London: Routledge.

Turnbull, S. (2001b). *The governance of firms controlled by more than one board: Theory development and examples*. Sydney, Australia: Macquarie University PhD dissertation. Available at: http://ssrn.com/abstract=858244.
Turnbull, S. (2002a). *A new way to govern: Organisations and society after Enron*. London: The New Economics Foundation.
Turnbull, S. (2002b). The science of corporate governance. *Corporate Governance: An International Review, 10*, 256–272.
Turnbull, S. (2002c). Watchdog Boards: Past, present and future? Working Paper, February. Available at: http://papers.ssrn.com/abstract_id=608244.
Turnbull, S. (2008a). Muddled auditing practices. In C. Padmavathi & A. Bellur (Eds.), *Audit committees: An insight* (pp. 36–46). Hyderabad: The ICFAI University Press.
Turnbull, S. (2008b). The science of governance: A blind spot of risk managers and corporate governance reform. *Journal of Risk Management in Financial Institutions, 1*(4), 360–368. July-September.
Turnbull, S. (2008c). The theory and practice of government De-regulation. In J. Choi & S. Dow-Anvari (Eds.), *International finance review: Institutional approach to global corporate governance* (Vol. 9, pp. 117–139). Bingley: Emerald Publishing.
Turnbull, S. (2009). Mitigating the exposure of corporate boards to risk and unethical conflicts. In R. W. Kolbe & D. Schwartz (Eds.), *Corporate boards: Managers of risk, sources of risk, chapter 7* (pp. 143–74). Oxford: Blackwell.
Turnbull, S. (2010). What's wrong with corporate governance "Best" practices? In H. K. Baker & R. Anderson (Eds.), *Corporate governance: A synthesis of theory research and practice* (pp. 79–96). Hoboken: Wiley.
Turnbull, S. (2011). Why "Best" corporate governance practices are unethical and less competitive? In L. Hartman & J. DesJardins (Eds.), *Business ethics for personal integrity and social responsibility* (2nd ed., pp. 576–583). Burr Ridge: McGraw-Hill.
Turnbull, S. (2012). The limitations in corporate governance best practices. In T. Clarke & D. Branson (Eds.), *Handbook of corporate governance, chapter 25*. London/Thousand Oaks: Sage.
Turnbull, S., & Pirson, M. (2012). Could the 2008 US financial crisis been avoided with network governance? *International Journal of Disclosure and Governance, Special Issue on Financial Crises and Regulatory Responses, 9*(1), 1–27.
Vasudev, P. M., & Watson, S. M. (2012). Corporate governance after the financial crisis. In P. M. Vasudev & W. Susan Mary (Eds.), *Corporate governance after the financial crisis*. Cheltenham: Edward Elgar.
von Hippel, E. (1986). Lead users: A source of novel product concepts. *Management Science, 32*(7), 791–805.
von Neuman, J. (1947). *Theory of games and economic behavior*. New Haven: Yale University Press.
Weiner, N. (1948). *Cybernetics: Control and communication in the animal and the machine*. New York: Wiley.
Williamson, O. E. (1975). *Markets and hierarchies: Analysis and anti–trust implications*. New York: Free Press.
Williamson, O. E. (1979). Transaction cost economics: The governance of transactional relations. *Journal of Law and Economics, 22*, 233–261.
Williamson, O. E. (1985). *The economic institutions of capitalism*. New York: Free Press.
Williamson, O. E. (1990). *Industrial organization*. London: Gower House.
Zingales L. (2000). *In search of new foundations*. CRSP Working paper, 515.

National Culture and Corporate Governance

Wolfgang Breuer and Astrid Juliane Salzmann

Abstract In a series of cross-country comparisons, we show that national culture is statistically significant in differentiating countries with different corporate governance systems. Using the Schwartz cultural value model and data on corporate governance systems, we analyze the impact of national culture on six dimensions of corporate governance. Countries that have stronger emphasis on the dimensions of Embeddedness, Egalitarianism, and Harmony are more likely to have bank-based systems, while countries with a stronger emphasis on Autonomy, Hierarchy, and Mastery tend to have market-based systems. The findings suggest several implications for the ongoing debate on convergence and divergence of corporate governance systems and policy reforms regarding financial crises.

1 Introduction

Corporate governance deals with the means in which suppliers of finance to corporations ensure adequate returns on their investment and that their funds are not expropriated. Corporate governance is traditionally studied within the framework of agency theory developed by Jensen and Meckling (1976), viewing the corporation as a nexus of contracts between principals and agents. The foundation of the agency problem lies in the separation of ownership and control (or the separation of finance and management), originally motivated by the seminal study of Berle and Means (1932). As interests of principals and agents usually do not coincide, various mechanisms have been developed to align them. Conventionally, the financiers and the manager sign a contract that determines the managerial functions and duties and the division of returns. Ideally, they would sign a complete contract, but practically,

W. Breuer (✉) • A.J. Salzmann
RWTH Aachen University, Aachen, Germany
e-mail: wolfgang.breuer@bfw.rwth-aachen.de

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_16,

complete contracts are hardly feasible. The solution in order to align interests of principals and agents lies in incentive contracts (Shleifer and Vishney 1997).

There exists a wide range of specific contractual mechanisms to address the agency problem and recent surveys of corporate governance have clearly demonstrated that corporate governance mechanisms vary significantly among nations (Shleifer and Vishney 1997). Doidge et al. (2007) show that country characteristics have a significant impact on country-level measures of governance, explaining much more of the variance in corporate governance (ranging from 39 % to 73 %) than observable firm characteristics (ranging from 4 % to 22 %). Even though many other studies investigating cross-country differences of financial issues found country to be significant, it is still difficult to explain the reasons behind the country effects (Sekely and Collins 1988). Economies have converged in a number of fields during the past, but corporate governance structures have remained different. What explains these differences? And should they be expected to persist or disappear? This study proposes culture as a key driver for the particular design of corporate governance systems and determines sources of national culture that can help to answer these questions.

Research papers on different areas of business studies (for example in accounting and organizational studies) have already documented the remarkable impact of culture and have shown that culture can account for country-specific differences. Due to its nature of common knowledge of a society, culture acts as a constraint which guides people's sentiments and behavior. This lowers the costs to establish and preserve institutions that are compatible with prevailing cultural values (Licht et al. 2005). As corporate governance is basically the outcome of interactions among stakeholders, it needs to be conceptualized in terms of its embeddedness in different social contexts (Granovetter 1985). In order to function properly, the general and the more specific institutions in a society need to be conceptually consistent (Roland 2004). Therefore, we must restrain from the undersocialized view of the corporation and take a contextual approach. Our approach enables us to recognize the important role national contexts have for corporate governance through differences in cultural characteristics. Differences in culture might all have impeded, and might continue to impede, convergence or divergence of corporate governance structures. American culture, for example, opposes hierarchy and centralized authority more than Japanese culture, German people are proud of their national codetermination, Italian family firm owners may get special value from a longstanding family-owned business, while an American family might prefer to cash the company earlier and engage into politics (Bebschuk and Roe 1999). The sources of national culture that we identify can explain why economies still differ in important patterns of corporate governance – despite the powerful forces in an increasingly global marketplace pressing towards convergence – and also indicate that some important differences might even persist (Licht 2001).

The argument that culture influences the corporate governance system of a country is based on Williamson's (2000) institutional model. Williamson (2000) distinguishes four levels of social institutions: informal institutions such as norms, customs, and cultural values (Level I), the formal institutional environment such as law and property rights (Level II), corporate governance structures (Level III), and

actual firm practices (Level IV). In this framework, culture at the top level affects institutions which again affect corporate governance.

A recent stream of research takes on this argument and addresses the relationships between dimensions of national culture and characteristics of corporate governance systems. Licht et al. (2005) find empirical support for the impact of culture on the protection of minority shareholders. De Jong and Semenov (2006) identify several significant relationships between corporate control, the ownership structure, and the protection of minority shareholders, and the cultural dimensions of Hofstede. Li and Harrison (2008) document a significant impact of national culture using the Hofstede model on the structure of corporate boards. Haxhi and van Ees (2010) argue that culture is crucial in explaining the worldwide diffusion of corporate governance practices.

Awareness among policy-makers, theorists, and practitioners of the relevance of national culture to corporate governance is obviously growing (Guiso et al. 2006). Our study complements previous work by offering a more comprehensive approach with six distinct corporate governance indicators and using a larger dataset across a wide range of countries. Our research focuses on corporate control, investors' objectives, ownership structure, protection of minority shareholders, corporate boards, and takeover activity as main attributes of corporate governance systems and their developments in relation to the Schwartz cultural dimensions of Embeddedness, Autonomy, Hierarchy, Egalitarianism, Mastery, and Harmony. We outline a general theory on the links between value types postulated by the concept of national culture and central issues dealt with by every corporate governance system. As the main contribution of this chapter, we show that countries with a strong emphasis on the cultural dimensions of Embeddedness, Egalitarianism, and Harmony tend to have a bank-based corporate governance system, whereas countries with a strong emphasis on the cultural dimensions of Autonomy, Hierarchy, and Mastery tend towards a market-based system.

The remainder of the chapter is structured as follows. Section 2 introduces the theoretical background. Section 3 develops the research hypotheses. Section 4 presents the dataset, and Sect. 5 constitutes the empirical analysis. Section 6 discusses the results. Section 7 refers to some implications. Section 8 concludes.

2 Theoretical Background

Culture is a very vague concept with manifold definitions (Kroeber and Kluckhohn 1952). A common definition was given by the Dutch researcher Geert Hofstede (1984, p. 82):

> Culture is the collective programming of the mind which distinguishes the members of one group or society from those of another. Culture consists of the patterns of thinking that parents transfer to their children, teachers to their students, friends to their friends, leaders to their followers, and followers to their leaders. Culture is reflected in the meanings people attach to various aspects of life; their way of looking at the world and their role in it; in their values, that is, in what they consider as 'good' and 'evil'; in their collective beliefs, what

> they consider as 'true' and as 'false'; in their artistic expressions, what they consider as 'beautiful' and as 'ugly'.

As it is illustrated in this definition, values must be established as the most fundamental element of culture. Values are to be understood as the central characteristics of a culture and can be employed to compare different cultures. This basic status of values is reflected in the functional chain of culture, from values across attitudes towards behavior. Values shape attitudes which again form the behavior of people. Accordingly, as cultural values take roots among individual members of a society, they shape social institutions and the general social environment.

Many scientists developed different frameworks to describe cultural paradigms, and to date there exist several alternative cultural models: the Hofstede (2001) cultural dimensions, the Schwartz (1994) culture-level analysis, the GLOBE study (House et al. 2004), the survey of cultural values (Smith et al. 2002), and the World Values Survey (Inglehart et al. 1998). Normally, such a framework consists of several cultural dimensions which can be used to characterize and categorize countries and cultures, respectively. For each dimension, the two extreme values are specified and the particular countries/cultures are arranged in between. As value types can take numerical values, they may be used to derive statistically testable hypotheses about corporate governance systems.

Over the last decades, there has been considerable debate over which model to use. Following recent literature in international business (see, for example Shao et al. 2010; Chui et al. 2002), we capture national culture using the Schwartz (1994) cultural theory. Although Hofstede's framework is still most widely used for the description of cultural differences in international business, Schwartz's model overcomes some difficulties of Hofstede's approach: It is based on a careful theoretical elaboration and then empirically validated, it offers a more comprehensive set of value dimensions, it uses more recent data, it was obtained from more diverse regions including socialist countries, and it has been tested with two matched samples (Ng et al. 2007). After having studied the underlying cultural value concept comprehensively, Schwartz (1994, 1999) conducted his studies in the years from 1988 to 1992 and took samples from 38 countries in 30 different languages. Since then the surveys have been continued and, currently, data on cultural dimensions are available for 73 countries. Schwartz (2004) specifies three bipolar dimensions: Embeddedness versus Autonomy, Hierarchy versus Egalitarianism, and Mastery versus Harmony.

Embeddedness emphasizes the maintenance of the status quo and relies on values like SOCIAL ORDER, RESPECT FOR TRADITION, RECIPROCATION OF FAVORS, and WISDOM.

Autonomy relates to the desirability of individuals independently pursuing their own ideas and draws on values like CREATIVITY, SELF-INDULGENCE, FREEDOM, and VARIED LIFE.

Hierarchy corresponds to the legitimacy of an unequal distribution of power and applies to the values SOCIAL POWER, AUTHORITY, WEALTH, and HUMBLENESS.

Table 1 The Schwartz cultural value dimensions

Cultural dimension	Emphasis on	Value types
Embeddedness	Maintenance of the status quo	Social order, politeness, national security, reciprocation of favors, respect for tradition, self-discipline, wisdom, moderation, honoring of parents and elders, preserving public image, obedience, devotion, forgiveness, cleanliness
Intellectual and affective autonomy	Desirability of individuals independently pursuing their own ideas	Curiosity, broadmindedness, creativity, pleasure, exciting life, varied life, enjoying life, self-indulgence, freedom, broadmindedness
Hierarchy	Legitimacy of an unequal distribution of power	Social power, authority, humbleness, wealth
Egalitarianism	Sharing basic interests and showing concern for everyone's welfare	Equality, social justice, responsibility, honesty, loyalty, helpfulness
Mastery	Getting ahead through active self-assertion	Ambition, success, daring, competence, social recognition, independence, influence, choosing own goals, capable, success
Harmony	Accepting the world as it is	Unity with nature, protecting the environment, world of beauty, a world in peace

Summary of the Schwartz cultural value model. For each cultural dimension, the basic concept and the underlying value types are given

Egalitarianism relates to sharing basic interests and showing concern for everyone's welfare and bears on values like EQUALITY, SOCIAL JUSTICE, RESPONSIBILITY, and HELPFULNESS.

Mastery supports the idea of getting ahead through active self-assertion and refers to values like AMBITION, SUCCESS, and INFLUENCE.

Harmony points to accepting the world as it is and rests on values like UNITY WITH NATURE, PROTECTING THE ENVIRONMENT, and A WORLD IN PEACE.

An emphasis on the cultural type at one pole of a dimension typically accompanies a de-emphasis on the polar type. These dimensions were constructed out of 45 basic value types, as indicated in Table 1. The cultural dimension of Autonomy subdivides into Affective and Intellectual Autonomy, but we will use their mean value for the following analysis.

Table 2 Dimensions of corporate governance

	Bank-based system	Market-based system
Corporate control	Insider	Outsider
Investors' objectives	Strategic	Financial
Ownership structure	Complex	Transparent
Protection of minority shareholders	Weak	Strong
Corporate boards	Important	Negligible
Takeover activity	Low	High

Overview of the main characteristics of corporate governance systems in the bank-based and the market-based system

3 National Culture and Corporate Governance

Culture induces actions compatible with its values through its impact on organizational policies and on the values of individual decision-makers. Cultural values constitute a convention of common tastes for certain interpersonal relations and institutions, and, as a result, may influence the choice of particular corporate governance structures. In the long-run, the content of corporate governance structures should be compatible with and partly reflect the prevailing cultural orientations in a society (Roland 2004).

Most comparisons identify and contrast two general systems of corporate governance: one, associated with the United States and the United Kingdom, which is characterized as a market-based corporate governance system, and the other, associated with Germany and Japan, which is characterized as a bank-based corporate governance system (Aguilera and Jackson 2003). In order to offer a comprehensive approach to corporate governance systems, it is important to study national differences in corporate governance mechanisms along salient dimensions. We first identify key dimensions that describe the variations in corporate governance systems, namely corporate control, investors' objectives, ownership structure, protection of minority shareholders, corporate boards, and takeover activity (Guillén 2000). The bank-based corporate governance system can be stylized in terms of an insider system, strategic investors' objectives, complex ownership structures, a weak protection of minority shareholders, a crucial role of corporate boards, and low takeover activity, and the market-based corporate governance system in terms of an outsider system, financial investors' objectives, transparent ownership structures, a strong protection of minority shareholders, a limited role of corporate boards, and high takeover activity. As our approach is broadly based and the six dimensions constitute essential features of a corporate governance system, they might not be entirely mutually exclusive. However, in order to offer a really comprehensive approach, overlap might be accepted, though we try to construct the dimensions as disjunctive as possible. Table 2 summarizes the main features of each corporate governance configuration.

In the following, we demonstrate how a particular set of cultural values may affect the choice of specific approaches to corporate governance in a society. We

only focus on those cultural dimensions that seem most influential on a certain dimension of corporate governance. We examine the relationship between culture and corporate governance verbally and summarize them in hypotheses.

3.1 Corporate Control

The agency problem deals with the difficulties of financiers in ensuring that their funds are not expropriated or wasted on unattractive projects. The problem is tackled by incentive contracts which vary in their specific contractual mechanisms (Shleifer and Vishney 1997).

In the *bank-based* corporate governance system, control is predominantly exercised by bank relationships and miscellaneous stakeholders, and thus the system is referred to as an insider system. According to Schmidt and Spindler (2002), there exist numerous insiders with special information and influential capabilities. Tyrell and Schmidt (2001) note that a bank-based system relies on stability, as it is grounded on implicit contracts with a long-term orientation. Pursuant Franks and Mayer (2001), the existence of private information involves the risk of exploiting information for private benefits. Furthermore, Franks and Mayer (1995) observe that ownership patterns reflect a tradeoff of risk and control, whereas the bank-based system relies on high control and low risk. In the market-based corporate governance system, control is exercised via market mechanisms, and thus the system is called an outsider system. For Schmidt and Spindler (2002), these mechanisms consist mainly of proxy votes, mergers, and acquisitions. In compliance with Tyrell and Schmidt (2001), the market-based system is based on flexibility; relationships are governed by explicit contracts and are generally short-term. However, the availability of public information leads to free-rider problems. This is again demonstrated in the analysis of ownership patterns by Franks and Mayer (1995), who detect high risk and low control in the market-based system.

Countries with a strong emphasis on the cultural dimension of Embeddedness should tend to have a bank-based corporate governance system. Embeddedness coincides with values like SOCIAL ORDER, RESPECT FOR TRADITION, RECIPROCATION OF FAVORS, and HONORING OF PARENTS/ELDERS, which relates to the existence of privileged insiders. There exist numerous stakeholders in an insider system that have a very strong position when it comes to managerial decisions. A strong emphasis on the cultural dimension of Autonomy militates in favor of the market-based corporate governance system. Autonomy draws on values like FREEDOM, VARIED LIFE, and CREATIVITY, which is reflected in the flexibility of the market based system. Shareholders do not want to commit themselves to certain responsibilities and preserve their freedom regarding the lockup of capital. Countries with a low emphasis on the mentioned cultural dimensions should demonstrate reverse characteristics. Thus, the hypothesis to be tested is:

H1: In countries with
(a) High (low) emphasis on the cultural dimension of Embeddedness,
(b) Low (high) emphasis on the cultural dimension of Autonomy,
Corporate control is exercised by bank relationships and various stakeholders (externally via market mechanisms) and the system is referred to as insider system (outsider system).

3.2 Investors' Objectives

There may exist different kinds of investors (for example banks, pension funds, individuals, industrial companies, families) which might possess not only different identities, but also different interests, time horizons, and strategies (Aguilera and Jackson 2003).

In the *bank-based* corporate governance system, investors do not pursue immediate financial objectives, and the system is ascribed as control-based. Hackethal and Schmidt (2000) point out that priority is given to strategic interests, which is the case for the owner family or long-term business partners. According to Aguilera and Jackson (2003), commitment is very high and control is exercised directly through voice. In the *market-based* corporate governance system, investors' objectives are solely financial, and the system is referred to as liquidity-based. Investments are motivated by the prospect of a positive return, and thus Hackethal and Schmidt (2000) remark that the maximization of the market value of a share and its dividend are of main interest. Following Aguilera and Jackson (2003), liquid shareholders prefer the ability to exit to the control through voice.

Countries with a strong emphasis on the cultural dimension of Harmony should tend towards a bank-based corporate governance system. Harmony is produced by the value A WORLD IN PEACE, which supports the idea of direct influence to secure strategic objectives. Investors have close relationships to corporations and engage heavily in them. A strong emphasis on the cultural dimension of Autonomy suits a market-based corporate governance system. Autonomy rests on FREEDOM and SELF-INDULGENCE, which correlates with liquidity-orientation and the ability to exit. Investors pursue their own goals which might vary at times, so that they refrain from entering commitments by pursuing financial objectives. Again, countries with a low emphasis on the addressed cultural dimensions should exhibit characteristics of the opposite system. The hypothesis to be verified is:

H2: In countries with
(a) High (low) emphasis on the cultural dimension of Harmony,
(b) Low (high) emphasis on the cultural dimension of Autonomy,
Investors pursue strategic objectives (financial objectives) and the system is referred to as control-based (liquidity-based).

3.3 Ownership Structure

The structure of corporate ownership is essentially determined by the degree of ownership concentration. Large investors represent their own interests which need not coincide with the interests of other investors or stakeholders (Prowse 1995).

In the *bank-based* corporate governance system, ownership structures are rather complex and characterized by cross-shareholdings. The exertion of control through voice results in increasing ownership concentration (Aguilera and Jackson 2003). Franks and Mayer (1995) remark that bank-based systems have small quoted sectors, and companies typically have at least one major "strategic" shareholder owning more than 25 % of the equity. On the other hand, ownership structures of the *market-based* corporate governance system are transparent and not very complex. Aguilera and Jackson (2003) argue that high liquidity and the ability to exit favor fragmented ownership. Franks and Mayer (1995) also confirm the existence of large quoted sectors in the market-based system with stocks being widely held by institutional/individual shareholders without strategic interests.

A strong emphasis on the cultural dimensions of Egalitarianism matches a bank-based corporate governance system, as RESPONSIBILITY and HELPFULNESS are in line with complex ownership structures, where many interests are reconciled. Investors carry clear responsibilities so that several interests need to be settled. Countries with a strong emphasis on the cultural dimension of Hierarchy should tend towards a market-based corporate governance system. WEALTH and AUTHORITY, which correspond to the dimension of Hierarchy, are in accordance with liquidity orientation. This is the case for institutional/individual shareholders, which pursue financial objectives in an exceptionally self-determined manner. This yields the following hypothesis:

H3: In countries with
(a) High (low) emphasis on the cultural dimension of Egalitarianism,
(b) Low (high) emphasis on the cultural dimension of Hierarchy,
Ownership structures are rather complex (transparent) and there is a strong incidence of cross-shareholdings (and not very complex).

3.4 Protection of Minority Shareholders

The protection of minority shareholders deals with the representation of minority shareholders' rights in a corporation. Countries with pronounced investor protection typically exhibit more fragmented control of firms than do countries with poor investor protection (La Porta et al. 2000).

Corresponding to the ownership structure, the protection of minority shareholders is very weak in the *bank-based* corporate governance system. Due to the superiority of shareholders with large stakes, interests of minority shareholders are hardly considered (Berkovitch and Israel 1999). However, the protection of minority shareholders is very strong in the *market-based* corporate governance

system. Despite moderate influence capabilities, property rights predominantly protect institutional/individual shareholders (Aguilera and Jackson 2003).

The values of the cultural dimensions should behave similarly to the ones above. A strong emphasis on the cultural dimension of Harmony is, with reference to the values A WORLD IN PEACE and UNITY WITH NATURE, again in line with the bank-based corporate governance system, where the situation is accepted as it is. Because of the complex ownership structures, control is exercised internally and incremental by powerful insiders. Referring to its generating value EQUALITY, a strong emphasis on the cultural dimensions of Egalitarianism corresponds to the market-based system, where all shareholders have equal rights. The power structure is well balanced and evenly distributed throughout all shareholders. These considerations make for the following hypothesis:

H4: In countries with
(a) High (low) emphasis on the cultural dimension of Harmony,
(b) Low (high) emphasis on the cultural dimension of Egalitarianism,
Protection of minority shareholders is very weak (strong).

3.5 Corporate Boards

The board of directors is responsible to carry out the monitoring function on behalf of the shareholders. It has, at least theoretically, the power to hire and fire the management, set their compensation, and impede any major investments (Prowse 1995).

Corporate boards play a very crucial role in the *bank-based* corporate governance system, which is reflected in their dual structure as a two-tier system. Bühner et al. (1998) point out that high management control can be obtained by the strong representation of outsiders, namely non-management employees and banks, in the supervisory board. In the *market-based* corporate governance system, the role of corporate boards is rather limited, as it is virtually a substructure of the management. Fischer and Rudolph (2000) remark that incentives aligning management's and shareholders' interests can be established via stock options or the market for corporate control.

A strong emphasis on the cultural dimensions of Harmony and Embeddedness militates in favor of a bank-based corporate governance system. Harmony rests on UNITY WITH NATURE and Embeddedness on SOCIAL ORDER, which is in line with a strong corporate board that acts in the interest of outsiders. Outsiders are strongly represented in the corporate board so that many interests need to be united. This adds up in the hypothesis:

H5: In countries with
(a) High (low) emphasis on the cultural dimension of Harmony,
(b) High (low) emphasis on the cultural dimension of Embeddedness,
Corporate boards play a crucial (rather limited) role.

3.6 Takeover Activity

Takeover activity is widely recognized as a potentially important mechanism by which market forces prohibit management misbehavior. If firms do not maximize profits, investors can gain by purchasing the firm and changing the policy to a value-maximizing one (Prowse 1995). However, takeovers are an extremely vulnerable mechanism, since they are opposed by managerial lobbies and cross-ownership which has developed as an anti-takeover device (La Porta et al. 1999). Moreover, the existence of a market for corporate control not only induces beneficial effects. It might also aggravate agency problems and trigger inefficient actions.

In the *bank-based* corporate governance system, takeover activity is very low. Bühner et al. (1998) ascribe this to the impediment of the market for corporate control by strong regulation, proxy votes, and voting right restrictions. This confers more power to banks, family owners, and states, which will be able to inhibit undesirable takeovers. The level of takeover activity is comparably high in the *market-based* corporate governance system. According to Franks and Mayer (1998), takeovers are regarded as a central function of the stock market, because they secure effective management and induce a convergence of the interests of management and shareholders.

A strong emphasis on the cultural dimension of Harmony corresponds to a bank-based system. Harmony rests on A WORLD IN PEACE, which is in line with low takeover activity. Confrontations are avoided and takeovers thus prevented. A strong emphasis on the cultural dimension of Mastery coincides with a market-based corporate governance system. Mastery is based on values like AMBITION and INFLUENCE, which match the idea of influence emanating from takeovers. If management mistakes occur, responsibility is assumed by the market for corporate control so that takeover processes might be initiated. This produces the following hypothesis:

H6: In countries with
(a) High (low) emphasis on the cultural dimension of Harmony,
(b) Low (high) emphasis on the cultural dimension of Mastery,
Takeover activity is very low (high).

4 Data

Data describing culture using the Schwartz framework have been collected continuously and are currently available for 73 countries from the Israel Social Science Data Center at the Hebrew University of Jerusalem. Using the Schwartz Value Survey, people in each country are asked to judge the 45 basic values according to their importance as "Guiding Principles in Her/His Life". The response options range from 7 (of supreme importance) to −1 (opposed to my values). For each

Table 3 Variables and sources

Criterion	Description	Source
Variables for corporate governance		
Corporate control	*Widely held* fraction of firms with no controlling shareholder who holds more than 10 % of the voting rights. Lower values indicate a more insider-oriented system, higher values a more outsider-oriented system. Data for 2002	Stulz (2005)
Investors' objectives	*Close_vw* value-weighted average fraction of firm stock market capitalization held by insiders. Higher values indicate more strategic objectives, lower values more financial objectives. Data for 2002	Stulz (2005)
Ownership structure	*OwnerConc* average percentage of common shares owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country. Higher values indicate more complex ownership structures, lower values more transparent ownership structures. Data for 1994	La Porta et al. (2006)
Protection of minority shareholders	*ProtMin* ranking of the answers to: Interests of minority shareholders in your country are... (1 = not protected by law and seldom recognized by majority shareholders, 7 = protected by law and actively enforced). Data for 2006	Lopez-Claros et al. (2006)
Corporate boards	*EffBoards* ranking of the answers to: corporate governance by investors and boards of directors in your country is characterized by... (1 = management has little accountability, 7 = investors and boards exert strong supervision of management decisions). Data for 2006	Lopez-Claros et al. (2006)
Takeover activity	*M&AValue* M&A transaction value to GDP. This variable is the rank value of the transaction in US dollars (as a percentage of GDP). Data for 2006	World Economic Forum (2008)
Control variables		
Economic development	Logarithm of real per capita GDP	CIA World factbook (2008)
Legal environment	Indicator variable that takes the value 1 for common law countries and 0 otherwise	La Porta et al. (1997)
Macroeconomic conditions	Principal component of inflation and trade openness. Inflation is the log difference of consumer price index. Trade openness is the sum of real exports and imports as share of real GDP	Demirgüç-Kunt and Levine (2001)
Political conditions	Principal component of revolution, assassination and corruption. A revolution is defined as any illegal or forced change in the top of governmental elite, any attempt at such a change, or any successful or unsuccessful armed rebellion whose aim is independence from central government. Assassination is the number of assassinations per thousand inhabitants. Corruption is a measure of	Demirgüç-Kunt and Levine (2001)

(continued)

Table 3 (continued)

Criterion	Description	Source
	corruption, with a scale from 0 (high level) to 10 (low level)	
Institutional development	Principal component of six institutional measures: voice and accountability, political stability and absence of violence, government effectiveness, light regulatory burden, rule of law, freedom from graft	Kaufmann et al. (2006)

This table describes the variables for corporate governance and the control variables utilized in the empirical section of this chapter and their sources

Table 4 Summary statistics

Variable	Mean	Median	S.D.	Min	Max	N
Data on national culture						
Embeddedness	3.61	3.61	0.30	2.94	4.50	73
Affective autonomy	3.34	3.34	0.72	1.66	4.76	73
Intellectual autonomy	4.12	4.08	0.57	2.73	5.56	73
Hierarchy	2.19	2.15	0.45	1.15	3.74	73
Egalitarianism	4.48	4.44	0.46	3.61	5.42	73
Mastery	3.79	3.81	0.33	3.08	3.81	73
Harmony	3.83	3.82	0.51	2.61	4.92	73
Data on corporate governance						
Corporate control	0.22	0.10	0.25	0.00	0.90	29
Investors' objectives	0.46	0.50	0.19	0.10	0.87	35
Ownership structure	0.46	0.49	0.13	0.18	0.67	43
Protection of minority shareholders	4.89	4.85	0.91	3.30	6.50	68
Corporate boards	4.85	4.85	0.64	3.60	6.00	68
Takeover activity	0.05	0.04	0.04	0.00	0.15	43

This table presents descriptive statistics for the variables. S.D. indicates the standard deviation, N the number of countries with available data

country, the values of the different cultural dimensions are then calculated out of these results.

We collect data for measuring the dimensions of corporate governance from various sources. While we focus on cultural determinants, we also account for other reasons, not directly rooted in national culture, why corporate governance structures might vary among countries and continue to do so over time. We control for the economic, legal, macroeconomic, political, and institutional development, as suggested by Aguilera and Jackson (2003). Our corporate governance data and control variables are specified in Table 3.

Table 4 shows some descriptive statistics of data on national culture and corporate governance. For the following empirical analysis, we therefore multiply the variables *OwnerConc*, *Close_vw* and *EffBoards* with −1, so that lower values of the variables always stand for the bank-based system, whereas higher values of the variables indicate the market-based system.

5 Regression Results

We estimate multivariate regression models of each dimension of corporate governance on the dimensions of national culture. In consideration of the bipolarity of the cultural dimensions, we never include two bipolar dimensions at the same time. Due to the high correlations between the cultural variables, this would cause severe problems of multicollinearity. We obtain two models of the form

$$CorpGov_i = \alpha + \beta_1 Aut + \beta_2 Egal + \beta_3 Harm + \Sigma_j \gamma_j C_j \quad (1)$$

$$CorpGov_i = \alpha + \beta_1 Emb + \beta_2 Hier + \beta_3 Mast + \Sigma_j \gamma_j C_j \quad (2)$$

where $CorpGov_i$ is the variable representing the corporate governance dimension studied ($i = 1, \ldots, 6$), C_j is a set of country-specific control variables representing the economic, legal, macroeconomic, political and institutional development. We standardize both the dependent and independent variables (the mean is set to zero and the standard deviation to one) so that the coefficient estimates can be directly compared within and across regressions. Table 5 presents the regression results.

We find entire support for H1. The cultural dimension of Embeddedness has a negative impact on corporate control: Countries with a high emphasis on Embeddedness tend to have an insider system, and countries with a low emphasis on Embeddedness tend to have an outsider system. The cultural dimension of Autonomy has a positive impact on corporate control, which means that countries with a low emphasis on Autonomy tend to have an insider system, and countries with a high emphasis on Autonomy tend to have an outsider system. The relationships are all highly significant.

Since both dependent and independent variables have been standardized for our regressions, the corporate governance estimates are easy to interpret in economic terms. The original variable *Widely held* (i.e. before standardization) has a mean of 0.22 and a standard deviation of 0.25, and in the last column Embeddedness has a coefficient estimate of −0.41. This estimate implies that, all else equal, a one-standard-deviation increase in Embeddedness would induce a $0.41 \times 0.25 = 0.1025$ decrease in the *Widely held* measure. In percentage terms, relative to the mean of *Widely held*, this corresponds to about a 47 % decrease in *Widely held*, which is economically significant. Autonomy has a coefficient estimate of 1.15, which implies that a one-standard-deviation increase in Autonomy would induce a $1.15 \times 0.25 = 0.2875$ increase in the *Widely held* measure. In percentage terms, relative to the mean of *Widely held*, this corresponds to about a 131 % increase in *Widely held*, which is economically significant as well.

H2 is also widely supported. The cultural dimension of Harmony has a negative impact on investors' objectives, which implies that countries with a high emphasis on Harmony can be characterized as control-oriented, and countries with a low emphasis on Harmony as liquidity-oriented. The cultural dimension of Autonomy has a positive impact on investors' objectives, that is to say countries with a low emphasis on Autonomy can be characterized as control-oriented, whereas countries

Table 5 Empirical results

Independent variables	Dependent variable: corporate control (H1)							Independent variables	Dependent variable: corporate control (H1)						
Embeddedness	−0.55*	−0.70**	−0.72*	−0.78***	−0.65**	−0.70**	−0.41*	Autonomy	1.3***	1.25**	1.18**	1.18**	1.36***	1.36**	1.15**
	0.07	*0.02*	*0.07*	*0.00*	*0.03*	*0.02*	*0.10*		*0.00*	*0.02*	*0.03*	*0.02*	*0.01*	*0.02*	*0.02*
Hierarchy	0.59**	0.74***	0.75**	1.17***	0.72***	0.74***	0.89***	Egalitarianism	−0.28	−0.30	−0.26	−0.28	−0.54	−0.26	−0.53
	0.04	*0.01*	*0.05*	*0.00*	*0.01*	*0.01*	*0.01*		*0.54*	*0.54*	*0.6*	*0.52*	*0.25*	*0.60*	*0.23*
Mastery	0.22	−0.22	−0.23	−0.53*	−0.20	−0.22	−0.26	Harmony	−0.71**	−0.68*	−0.48	−0.82**	−0.59*	−0.74*	−0.42
	0.25	*0.43*	*0.52*	*0.06*	*0.46*	*0.44*	*0.36*		*0.03*	*0.07*	*0.31*	*0.03*	*0.10*	*0.07*	*0.3*
Economic development		1.06**	1.08*	1.81***	1.51**	1.08	1.66**	Economic development		0.09	−0.08	0.55	0.97	0.31	1.32**
		0.04	*0.09*	*0.00*	*0.02*	*0.17*	*0.02*			*0.87*	*0.89*	*0.31*	*0.15*	*0.64*	*0.06*
Legal environment			−0.01				0.27	Legal environment			0.21				0.29
			0.96				*0.18*				*0.48*				*0.29*
Macroeconomic conditions				0.62**			0.71***	Macroeconomic conditions				0.41**			0.46**
				0.00			*0.00*					*0.03*			*0.02*
Political conditions					−0.27		−0.41**	Political conditions					−0.44**		−0.52*
					0.24		*0.05*						*0.05*		*0.02*
Institutional development						0.02	−0.45	Institutional development						0.32	−0.14
						0.98	*0.27*							*0.56*	*0.80*
Constant	−0.30	−0.96***	−0.97**	−1.23***	−1.2***	−0.96**	−1.33***	Constant	−0.33	−0.37	−0.34	−0.49*	−0.83**	−0.34	−1.02***
	0.18	*0.01*	*0.04*	*0.00*	*0.01*	*0.02*	*0.00*		*0.12*	*0.22*	*0.27*	*0.09*	*0.03*	*0.26*	*0.01*
F	2.84*	3.65**	2.8**	6.9***	3.27*	2.8*	5.47***	F	5.17***	3.74**	3.03**	4.51***	4.21***	2.98**	4.38***
Observations	29	29	29	29	29	29	29	Observations	29	29	29	29	29	29	29
Adjusted R^2	0.16	0.27	0.24	0.51	0.29	0.24	0.56	Adjusted R^2	0.31	0.28	0.27	0.39	0.36	0.26	0.49

(continued)

Table 5 (continued)

Independent variables	Dependent variable: investors' objectives (H2)							Independent variables	Dependent variable: investors' objectives (H2)						
Embeddedness	−0.02	−0.17	0.05	−0.19	−0.18	−0.15	0.18	Autonomy	1.03***	0.92**	0.74*	0.94***	0.91**	0.81**	0.70*
	0.94	*0.53*	*0.87*	*0.49*	*0.52*	*0.56*	*0.53*		*0.00*	*0.01*	*0.07*	*0.01*	*0.02*	*0.03*	*0.08*
Hierarchy	−0.12	0.14	−0.10	0.23	0.15	0.14	0.01	Egalitarianism	0.22	0.16	0.26	0.10	0.16	0.14	−0.03
	0.63	*0.58*	*0.73*	*0.42*	*0.57*	*0.58*	*0.98*		*0.51*	*0.66*	*0.49*	*0.79*	*0.67*	*0.70*	*0.94*
Mastery	0.43**	0.05	0.15	−0.01	0.03	0.06	0.09	Harmony	−0.78***	−0.71**	−0.55*	−0.73**	−0.71**	−0.68**	−0.52*
	0.03	*0.84*	*0.53*	*0.97*	*0.88*	*0.77*	*0.67*		*0.01*	*0.03*	*0.10*	*0.02*	*0.03*	*0.03*	*0.10*
Economic development		0.83***	0.70**	1.00**	0.77*	0.14	0.46	Economic development		0.21	0.16	0.38	0.21	−0.18	0.15
		0.01	*0.04*	*0.02*	*0.06*	*0.78*	*0.36*			*0.54*	*0.66*	*0.34*	*0.63*	*0.69*	*0.77*
Legal environment			0.27				0.42	Legal environment			0.21				0.18
			0.12				*0.02*				*0.31*				*0.45*
Macroeconomic conditions				0.13			0.44	Macroeconomic conditions				0.13			0.35**
				0.45			*0.02*					*0.36*			*0.04*
Political conditions					0.05		−0.25	Political conditions					0.00		−0.16
					0.81		*0.23*						*0.99*		*0.39*
Institutional development						−0.67*	−1.00*	Institutional development						−0.51	−0.88*
						0.10	*0.02*							*0.19*	*0.07*
Constant	−0.12	−0.55**	−0.44*	−0.63**	−0.53*	−0.58**	−0.82***	Constant	−0.35**	−0.40**	−0.44**	−0.46**	−0.40*	−0.44**	−0.75***
	0.57	*0.04*	*0.10*	*0.03*	*0.07*	*0.03*	*0.01*		*0.03*	*0.03*	*0.02*	*0.02*	*0.07*	*0.02*	*0.00*
F	1.74	3.21**	3.22**	2.65**	2.50*	3.29**	3.57**	F	8.37***	6.25***	5.22***	5.14***	4.83***	5.50***	4.27***
Observations	35	35	35	35	35	35	35	Observations	35	35	35	35	35	35	35
Adjusted R^2	0.06	0.21	0.25	0.20	0.18	0.25	0.38	Adjusted R^2	0.39	0.38	0.38	0.38	0.36	0.40	0.43

(continued)

Table 5 (continued)

Independent variables	Dependent variable: ownership structures (H3)							Independent variables	Dependent variable: ownership structures (H3)						
Embeddedness	0.06	0.13	0.20	0.14	0.09	0.17	0.30	Autonomy	0.73**	0.58*	0.40	0.58*	0.56	0.42	0.34
	0.79	*0.52*	*0.33*	*0.49*	*0.67*	*0.37*	*0.19*		*0.03*	*0.09*	*0.30*	*0.10*	*0.13*	*0.24*	*0.40*
Hierarchy	0.38*	0.47**	0.38*	0.49**	0.51**	0.45**	0.42*	Egalitarianism	−0.23	−0.33	−0.31	−0.34	−0.32	−0.33	−0.35
	0.08	*0.02*	*0.09*	*0.02*	*0.02*	*0.03*	*0.08*		*0.50*	*0.35*	*0.39*	*0.36*	*0.37*	*0.35*	*0.34*
Mastery	0.19	−0.04	−0.02	−0.05	−0.10	−0.10	−0.14	Harmony	−0.21	−0.14	0.08	−0.14	−0.14	−0.12	0.00
	0.24	*0.81*	*0.89*	*0.77*	*0.62*	*0.56*	*0.47*		*0.44*	*0.62*	*0.81*	*0.62*	*0.63*	*0.67*	*0.99*
Economic development		0.44**	0.46***	0.46**	0.38*	0.05	0.06	Economic development		0.29	0.30	0.30	0.28	−0.01	0.02
		0.02	*0.01*	*0.02*	*0.06*	*0.86*	*0.84*			*0.19*	*0.18*	*0.21*	*0.24*	*0.96*	*0.96*
Legal environment			0.16				0.19	Legal environment			0.21				0.15
			0.27				*0.21*				*0.28*				*0.49*
Macroeconomic conditions				0.07			0.25	Macroeconomic conditions				0.01			0.13
				0.64			*0.12*					*0.93*			*0.46*
Political conditions					0.13		0.04	Political conditions					0.03		0.01
					0.48		*0.82*						*0.87*		*0.96*
Institutional development						−0.46	−0.59**	Institutional development						−0.44	−0.47
						0.11	*0.06*							*0.19*	*0.24*
Constant	0.00	−0.10	−0.11	−0.10	−0.09	−0.11	−0.13	Constant	−0.07	−0.11	−0.13	−0.11	−0.10	−0.13	−0.15
	0.99	*0.51*	*0.46*	*0.51*	*0.54*	*0.47*	*0.38*		*0.65*	*0.50*	*0.43*	*0.50*	*0.52*	*0.43*	*0.38*
F	3.07**	4.2***	3.63***	3.33***	3.42***	4.04***	2.99***	F	2.45*	2.31*	2.10*	1.80	1.81	2.25*	1.45
Observations	43	43	43	43	43	43	43	Observations	43	43	43	43	43	43	43
Adjusted R^2	0.13	0.23	0.24	0.22	0.22	0.27	0.27	Adjusted R^2	0.09	0.11	0.12	0.09	0.09	0.13	0.08

(continued)

Table 5 (continued)

Independent variables	Dependent variable: protection of minority shareholders (H4)							Independent variables	Dependent variable: protection of minority shareholders (H4)						
Embeddedness	−0.28*	−0.16	0.09	−0.21	−0.26	−0.09	0.13	Autonomy	0.50**	0.44*	0.16	0.92***	0.93***	0.28	0.37
	0.06	*0.23*	*0.46*	*0.19*	*0.12*	*0.43*	*0.35*		*0.01*	*0.03*	*0.35*	*0.00*	*0.00*	*0.12*	*0.11*
Hierarchy	0.05	0.11	−0.20	0.14	0.24	0.15	−0.1	Egalitarianism	0.45***	0.34	0.21	−0.24	−0.26	0.26*	−0.23
	0.74	*0.47*	*0.19*	*0.45*	*0.21*	*0.23*	*0.54*		*0.01*	*0.06*	*0.15*	*0.36*	*0.32*	*0.10*	*0.27*
Mastery	0.26*	0.07	0.18	0.14	0.04	−0.04	0.03	Harmony	−0.42**	−0.39**	0.19	−0.26	−0.27	−0.36**	0.18
	0.06	*0.64*	*0.17*	*0.37*	*0.81*	*0.73*	*0.85*		*0.02*	*0.02*	*0.28*	*0.21*	*0.18*	*0.02*	*0.38*
Economic development		0.48***	0.44***	0.33*	0.29*	−0.29	−0.38*	Economic development		0.21	0.15	0.08	0.09	−0.38*	−0.31
		0.00	*0.00*	*0.04*	*0.07*	*0.14*	*0.07*			*0.13*	*0.25*	*0.63*	*0.58*	*0.05*	*0.12*
Legal environment			0.46***				0.31***	Legal environment			0.58***				0.35***
			0.00				*0.00*				*0.00*				*0.00*
Macroeconomic conditions				−0.13			0.11	Macroeconomic conditions				−0.08			0.06
				0.32			*0.30*					*0.49*			*0.57*
Political conditions					0.22		0.06	Political conditions					0.04		0.02
					0.17		*0.63*						*0.74*		*0.82*
Institutional development						−0.94***	−0.93***	Institutional development						−0.82***	−0.63***
						0.00	*0.00*							*0.00*	*0.01*
Constant	−0.03	−0.03	0.12	0.19	0.18	−0.02	0.25*	Constant	−0.01	0.00	0.12	0.27*	0.27*	0.00	0.27**
	0.77	*0.75*	*0.22*	*0.15*	*0.16*	*0.80*	*0.02*		*0.91*	*1.00*	*0.15*	*0.02*	*0.02*	*0.96*	*0.01*
F	3.40**	7.12***	8.23***	4.16***	4.43***	9.48***	7.28***	F	9.05***	9.99***	9.85***	8.45***	8.31***	9.85***	8.99***
Observations	67	67	59	53	53	66	53	Observations	67	67	59	53	53	66	53
Adjusted R^2	0.10	0.27	0.38	0.25	0.27	0.47	0.53	Adjusted R^2	0.34	0.38	0.55	0.46	0.45	0.52	0.56

(continued)

Table 5 (continued)

Independent variables	Dependent variable: corporate boards (H5)							Independent variables	Dependent variable: corporate boards (H5)						
Embeddedness	0.28*	0.17	−0.11	0.21	0.26	0.11	−0.09	Autonomy	−0.48***	−0.39*	−0.06	−0.88***	−0.89***	−0.27	−0.28
	0.06	*0.22*	*0.37*	*0.19*	*0.12*	*0.37*	*0.56*		*0.01*	*0.06*	*0.74*	*0.00*	*0.00*	*0.19*	*0.28*
Hierarchy	0.08	0.03	0.33**	−0.03	−0.15	−0.01	0.21	Egalitarianism	−0.40*	−0.28	−0.18	0.20	0.23	−0.22	0.11
	0.63	*0.86*	*0.03*	*0.89*	*0.42*	*0.95*	*0.23*		*0.04*	*0.13*	*0.28*	*0.44*	*0.39*	*0.22*	*0.63*
Mastery	−0.23	−0.04	−0.11	−0.01	0.02	0.04	0.04	Harmony	0.43**	0.38**	−0.15	0.32	0.34*	0.36**	−0.14
	0.11	*0.78*	*0.38*	*0.53*	*0.90*	*0.75*	*0.81*		*0.02*	*0.03*	*0.44*	*0.12*	*0.10*	*0.03*	*0.54*
Economic development		−0.46***	−0.47***	−0.35**	−0.32**	0.13	0.11	Economic development		−0.26*	−0.28*	−0.13	−0.14	0.20	0.06
		0.00	*0.00*	*0.04*	*0.05*	*0.55*	*0.64*			*0.08*	*0.06*	*0.42*	*0.38*	*0.33*	*0.80*
Legal environment			−0.48***				−0.29***	Legal environment			−0.53***				−0.33**
			0.00				*0.01*				*0.00*				*0.02*
Macroeconomic conditions				0.19			0.04	Macroeconomic conditions				0.12			0.09
				0.13			*0.73*					*0.31*			*0.46*
Political conditions					−0.25		−0.15	Political conditions					−0.08		−0.11
					0.11		*0.27*						*0.56*		*0.37*
Institutional development						0.72***	0.51*	Institutional development						0.64***	0.21
						0.00	*0.03*							*0.00*	*0.40*
Constant	0.04	0.04	−0.12	−0.16	−0.14	0.03	−0.28***	Constant	0.01	−0.00	−0.11	−0.23**	−0.24**	−0.00	−0.29**
	0.74	*0.74*	*0.23*	*0.23*	*0.26*	*0.78*	*0.01*		*0.94*	*1.00*	*0.26*	*0.04*	*0.04*	*0.98*	*0.01*
F	2.91**	6.32***	9.29***	4.41***	4.48***	8.16***	5.01***	F	9.00***	8.64***	9.45***	8.52***	8.24***	9.56***	5.31***
Observations	68	67	64	53	53	67	53	Observations	68	67	64	53	53	67	53
Adjusted R^2	0.08	0.24	0.42	0.27	0.27	0.35	0.42	Adjusted R^2	0.26	0.32	0.45	0.44	0.44	0.39	0.44

(continued)

Table 5 (continued)

Independent variables	Dependent variable: takeover activity (H6)							Independent variables	Dependent variable: takeover activity (H6)						
Embeddedness	−0.36*	−0.29*	−0.03	−0.22	−0.22	−0.25	0.18	Autonomy	0.37	−0.06	−0.25	0.05	0.08	−0.11	−0.32
	0.10	*0.10*	*0.85*	*0.28*	*0.31*	*0.16*	*0.40*		*0.16*	*0.83*	*0.31*	*0.88*	*0.83*	*0.68*	*0.36*
Hierarchy	0.15	0.52**	0.21	0.47	0.55	0.50	0.10	Egalitarianism	0.64	0.31	0.38	0.26	0.16	0.27	0.36
	0.50	*0.01*	*0.26*	*0.05*	*0.02*	*0.02*	*0.65*		*0.02*	*0.26*	*0.12*	*0.48*	*0.66*	*0.30*	*0.29*
Mastery	0.04	−0.53***	−0.29	−0.43*	−0.51**	−0.51***	−0.25	Harmony	−0.89***	−0.62***	−0.48*	−0.59**	−0.50*	−0.62***	−0.44*
	0.83	*0.01*	*0.11*	*0.08*	*0.04*	*0.01*	*0.27*		*0.00*	*0.01*	*0.08*	*0.05*	*0.06*	*0.00*	*0.10*
Economic development		1.03***	0.86***	0.86***	0.95***	0.69*	0.67	Economic development		0.87***	0.57**	0.67*	0.89**	0.29	0.37
		0.00	*0.00*	*0.01*	*0.01*	*0.09*	*0.12*			*0.00*	*0.04*	*0.08*	*0.03*	*0.42*	*0.42*
Legal environment			0.48***				0.54***	Legal environment			0.57***				0.49**
			0.00				*0.00*				*0.00*				*0.04*
Macroeconomic Conditions				−0.15			0.08	Macroeconomic Conditions				−0.15			0.00
				0.34			*0.58*					*0.32*			*1.00*
Political conditions					0.07		−0.17	Political conditions					−0.06		−0.11
					0.73		*0.33*						*0.75*		*0.51*
Institutional development						−0.29	−0.38	Institutional development						−0.60**	−0.42
						0.30	*0.21*							*0.02*	*0.24*
Constant	−0.07	−0.40**	−0.32**	−0.25	−0.28	−0.35**	−0.29*	Constant	−0.12	−0.28*	−0.24*	−0.18	−0.24	−0.20	−0.27
	0.66	*0.01*	*0.02*	*0.20*	*0.15*	*0.03*	*0.10*		*0.39*	*0.05*	*0.05*	*0.30*	*0.20*	*0.13*	*0.12*
F	1.05	6.33***	9.18***	3.80***	3.54***	5.30***	4.86***	F	5.73***	7.70***	9.28***	4.38***	4.06***	8.15***	4.68***
Observations	49	43	43	36	36	43	36	Observations	49	43	43	36	36	43	36
Adjusted R^2	0	0.34	0.52	0.29	0.27	0.34	0.47	Adjusted R^2	0.25	0.39	0.52	0.33	0.30	0.46	0.46

Least squares regressions of the dimensions of corporate governance on the Schwartz dimensions of national culture for the cross-section of countries
*** $p \leq 1$ %, ** $p \leq 5$ %, * $p \leq 10$ %. *p*-values in *italics*

with a high emphasis on the cultural dimension of Autonomy can be characterized as liquidity-oriented. All of the regression coefficients of the focal cultural variables are highly significant.

The coefficient estimates are again significant in economic terms. Compared to the mean of *Close_vw*, a one-standard-deviation increase in Harmony would induce a $0.52 \times 0.19 = 0.0988$ decrease in the *Close_vw* measure, which corresponds to about a 21 % decrease in *Close_vw*. A one-standard-deviation increase in Autonomy would induce a $0.70 \times 0.19 = 0.1330$ increase in the *Close_vw* measure, which corresponds to about a 29 % increase in *Close_vw*.

H3 is supported in parts. The cultural dimension of Egalitarianism shows no significant impact. Nonetheless, the cultural dimension of Hierarchy has a significantly positive impact, so that countries with a low emphasis on Hierarchy display complex ownership structures, and countries with a high emphasis on Hierarchy display transparent ownership structures.

All else equal, a one-standard-deviation increase in Hierarchy would induce a $0.42 \times 0.13 = 0.0546$ increase in the *OwnerConc* measure. In percentage terms, relative to the mean of *OwnerConc*, this corresponds to about a 12 % increase in *OwnerConc*, which is still economically significant.

At first sight, the impact of Harmony on the protection of minority shareholders in H4 seems to be supported, yet it must be traced back to the impact of the legal environment and the institutional development, as the latter two variables are highly significant even in the regression with all control variables simultaneously employed, while the coefficient of Harmony becomes insignificant. Also, the impact of the cultural dimension of Egalitarianism cannot be recognized as significant.

A similar result can be observed for the impact of national culture on the role of corporate boards in H5. The cultural dimension of Embeddedness has no significant impact, and the impact of the cultural dimension of Harmony is again overlapped by the highly significant impact of the legal environment.

H6 can again be supported in parts. The cultural dimension of Harmony has a negative impact on takeover activity, which means that in countries with a high emphasis on Harmony, takeovers tend to be rare, and in countries with a low emphasis on Harmony, takeovers tend to be frequent. The relationships are highly significant. The cultural dimension of Mastery has no significant impact on the level of takeover activity.

Compared to the mean, a one-standard-deviation increase in Harmony would induce a $0.44 \times 0.04 = 0.0176$ decrease in the *M&AValue* measure. In percentage terms, this corresponds to about a 12 % decrease in *M&AValue*, which again is still economically significant.

These calculations indicate that the statistically significant coefficient estimates for the corporate governance characteristics are also economically significant. The regression estimates show that certain dimensions of national culture exert a strong influence on corporate governance, even after we account for other determinants.

6 Discussion

6.1 Robustness

There exist many different value approaches to characterize cultures. We have used the model provided by Schwartz, which seems to be superior to other models for several reasons. Another well accepted and widely used framework is that of Hofstede. The original Hofstede (1984) cultural model introduces four cultural dimensions. We repeat our above analysis using the Hofstede dimensions for robustness checks. The additional regressions point to similar results as our original approach based on the Schwartz cultural model. The detailed results can be obtained from the authors upon request.

6.2 Causality

The impact of culture on corporate governance can be twofold: first, cultural values may motivate policy makers and interest groups to prefer certain corporate governance arrangements to others; second, culture may interfere with corporate governance reforms that are not compatible with prevailing value preferences. Beyond doubt, relationships between national culture and corporate governance are very dense. But, as corporate governance systems and national culture both evolve over time, one needs to address the issue of causality: Does culture really precede the structure of corporate governance systems or vice versa?

Corporate governance systems are clearly more recent phenomena than the basic elements of national culture. When companies and financial markets emerged, they developed differently in countries and faced manifold conditions, where the resulting corporate governance systems had to be compatible with. In other words, national cultures had set the starting conditions when corporate governance systems were first established. This argument has been labeled "path dependency" (Bebchuk and Roe 1999). According to this framework, national culture can be perceived as the "mother" in the evolution of corporate governance systems in a causal sense.

Reverse causality would imply that culture would adapt rapidly to changes in the corporate governance system, and thus would be of no original relevance. In order to affect cultural values, the corporate governance system must either be obtrusive or influence people's daily life considerably. Given the way the Schwartz cultural value model operationalizes culture, only a negligible impact from corporate governance to national culture seems possible. The data on national culture come from respondents either unfamiliar with corporate governance systems or whose daily lives are unlikely to be affected by them. Hence, there is little reason to expect reverse causality from the corporate governance system to cultural values in our study.

We formally address the issue of causality using instrumental variables in two-stages linear least squares regressions. Our results suggest that a corporate governance system in a country is causally linked to cultural values and thus

maintains itself over decades. The detailed causality analysis can be obtained from the authors upon request.

7 Implications

Because previous studies that link culture to corporate governance systems are rather limited, this study presents a major extension of existing research on this field and makes two main contributions. First, using detailed cross-country data, we document that national culture *in general* has a significant influence on the configuration of corporate governance systems. Culture can be seen as a main determinant for the prevalent features of corporate governance systems. Second, our study offers *in detail* a comprehensive understanding of the impact of national culture on corporate governance, as all cultural dimensions are included in the analysis and main characteristics of corporate governance are examined separately. Table 6 summarizes the results.

This overview suggests an interesting systematization of countries with regard to their corporate governance systems, in particular when we account for the bipolar structure of the cultural dimensions Embeddedness versus Autonomy, Hierarchy versus Egalitarianism, and Mastery versus Harmony. According to the Schwartz model, the opposed values are regarded as conflicting, and hence should lead to two fundamentally different systems. This is indeed the case. Countries with a strong emphasis on the cultural dimensions of Embeddedness, Egalitarianism, and Harmony tend to have a bank-based corporate governance system. Countries with a strong emphasis on the cultural dimensions of Autonomy, Hierarchy, and Mastery possess the characteristics of a market-based system. The bank-based insider system relies on values like SOCIAL ORDER and EQUALITY, whereas the market-based outsider system leans on values like INDEPENDENCE and AUTHORITY. The differences would become even clearer if we had data with larger sample sizes, which is indicated by the directions of the non-significant results in Table 5.

Regarding the corporate governance systems of Japan and the UK as typical examples of the two polar corporate governance systems, our theory is extensively supported. Japan is a country with a strong emphasis on the cultural dimensions of Embeddedness, Egalitarianism, and Harmony, and has an established bank-based corporate governance system. The UK is a country with a strong emphasis on the cultural dimensions of Autonomy, Hierarchy, and Mastery, and is famous for its well-known market-based system.

Figure 1 offers an additional verification of this systematization. We aggregate the cultural dimensions and the dimensions of corporate governance to a single parameter each, and plot the parameter representing the corporate governance system *CorpGov* on the parameter representing national culture *NatCult*. In order to compute *CorpGov*, all six corporate governance dimensions have been normalized and summed up. For the parameter *NatCult* the sum of the values of the dimensions Embeddedness, Egalitarianism, and Harmony is computed and

Table 6 Culture's consequences on corporate governance

	Corporate control		Investors' objectives		Ownership structure		Protection of minority shareholders		Corporate boards		Takeover activity	
	Insider	Outsider	Strategic	Financial	Complex	Clear	Weak	Strong	Important	Negligible	Rare	Common
Embeddedness	+	−										
Autonomy	−	+	−	+								
Hierarchy					−	+						
Egalitarianism												
Mastery												
Harmony			+	−							+	−

Summary of the empirical results. + indicates a positive impact, − indicates a negative impact of a cultural dimension on a corporate governance feature

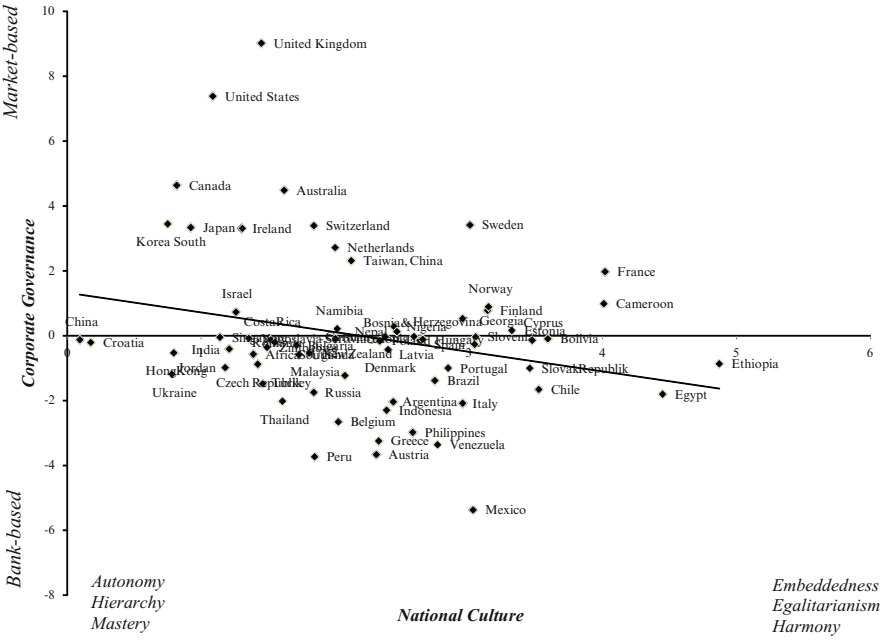

Fig. 1 Plot of corporate governance and national culture. The cultural dimensions and the dimensions of corporate governance are aggregated to a single parameter each

subtracted by the sum of the values of the dimensions Autonomy, Hierarchy, and Mastery. Higher values of *NatCult* indicate an emphasis on the cultural dimensions of Embeddedness, Egalitarianism, and Harmony, whereas lower values of *NatCult* indicate an emphasis on the cultural dimensions of Autonomy, Hierarchy, and Mastery. Higher values of the parameter *CorpGov* point to a market-based system and lower values point to a bank-based system. The linear trend line confirms our observed relationship, that countries with an emphasis on the cultural dimensions of Embeddedness, Egalitarianism, and Harmony tend to have a bank-based corporate governance system, and countries with an emphasis on the cultural dimensions of Autonomy, Hierarchy, and Mastery tend to have a market-based system. Certainly, the influence of *NatCult* interferes with the control variables discussed above, in particular Legal Environment and Institutional Development, so that these relationships are indeed worth to be examined in more depth by future research. Nevertheless, the variables *NatCult* and *CorpGov* offer a simple tool to highlight the general connection between cultural dimensions and corporate governance systems. This assessment is underpinned by further analyses where we dwell on culturally induced differences among countries regarding the parameter *CorpGov* somewhat more. The elaborations can be obtained from the authors upon request.

8 Conclusion

This study shows that national culture is an essential determinant for the design of corporate governance systems. After the derivation of six hypotheses which summarize the proposed relationships between culture and corporate governance, we estimate multivariate regression models to examine the hypotheses empirically. We find significant support for most parts of our hypotheses.

Our model accurately maps national diversity because it disaggregates various dimensions of corporate governance. The value dimension approach provides a suitable means for rigorously addressing informal social institutions like national culture. It provides a theory-driven, universally validated operationalization of fundamental societal orientations and enables us to derive and empirically test hypotheses about relations between national culture and corporate governance.

Our analysis features considerable advantages over previous studies on national culture and corporate governance. First and foremost, our study offers a more extensive approach than comparable studies, as we include all cultural dimensions of the Schwartz model in our examination and consider six dimensions of corporate governance systems. Furthermore, our study is based on the Schwartz cultural value model, which offers not only a more recent dataset, but is also presumed to be superior to the Hofstede model. In addition, our study features a larger sample size than comparable studies.

Like other studies, this study has its limitations. Firstly, as we use socio-economic variables to map the main characteristics of corporate governance systems, the measurement is not precise. To alleviate this problem, the study should be repeated using alternative measures for the variables. Secondly, for some variables the sample size is only moderate. Increasing the sample size would lead to more reliable results and should be the objective of further studies. Thirdly, our data are from different points of time. However, this should not be a major problem, since culturalist scholars argue that cultural values are relatively robust and practically unchanging over time. Nevertheless, it would be preferable to have data from the same range of years.

Last, but not least, many variables used in cross-country research as proxies for broad concepts (e.g., orientation of the economy: bank- versus market-oriented economy) are likely to catch other country specificities, such as the nature of law (civil versus common law), accounting and auditing standards differences, etc. As a consequence, regression analyses may be plagued by omitted correlated factors or endogeneity problems, calling into question the results and conclusions. Bushman and Smith (2001) point out that the results of cross-country studies should be regarded as suggestive of the underlying relations and interpreted with “eyes wide open”.

Countries differ profoundly in their contexts in which corporate governance relationships are embedded. An understanding of differences and similarities in

national contexts provides insights about the evolution of differences in corporate governance mechanisms over the last decades and about their future development. For our purposes, it does not matter whether differences in corporate governance structures have recently been narrowing, remaining the same, or increasing somewhat – a question that the data are insufficient to resolve. What is clear is that, notwithstanding the forces of globalization, some key differences in corporate governance structures among countries have persisted. Our cultural analysis sheds light on why economies, despite pressures to converge, vary in their corporate governance structure. It also provides a basis for why some important differences might persist.

In the wake of the recent financial and economic crisis, countries have launched wide-ranging regulatory measures to prevent future crises from turning up again. These attempts have involved corporate governance reforms which in particular address corporate risk-taking. However, reform proposals put forward by policymakers around the world vary on their enforcement strategies, whether they are invoked by empowering either shareholders or stakeholders (Bruner 2011).

The current chapter underlines that alternative implementation strategies are indeed crucial, and should be thoroughly elaborated by policymakers. The foregoing analysis highlights the differences of the bank-based and market-based corporate governance systems, and reveals the potential competitive strengths of each corporate governance system. Though each system involves certain trade-offs, both systems are able to function properly, especially in terms of crisis prevention. Policymakers need to be aware of the present variation in cultural understandings and resulting differences in the balance of power between management, stakeholders, investors and government. As an example in this vein, one might cite the Asian Shadow Financial Regulatory Committee, which suggests in its recent statement on "Governance of Financial Institutions in Asia: Lessons from the Financial Crisis" that cultural differences imply less emphasis on formal contracts and more obedience to authority in Asia in contrast to the US.

Therefore, effective regulatory response implies very different challenges in each country. As corporate governance systems differ considerably in fundamental matters, political dynamics stimulating reforms must differ in fundamental aspects in each country as well. If the cultural context out of which reform efforts arise are not evaluated properly, corporate governance reforms pursued in a country will fail to remedy the problem (Bruner 2011).

Acknowledgement We would like to thank Bob Chirinko, Julian Holler, Dusan Isakov, Jens Iversen, Barbara Petracci, Robert Durand, and several anonymous conference referees for helpful comments. We are also grateful for suggestions from participants at the Annual Meeting of the Midwest Finance Association in Chicago, March 2009, the Conference of the Swiss Society for Financial Market Research in Geneva, April 2009, the FMA European Conference in Turin, June 2009, the INFINITI Conference on International Finance in Dublin, June 2009, the FMA Asian Conference in Singapore, July 2010, and the Australasian Finance and Banking Conference in Sydney, December 2010. Financial support by the Deutsche Forschungsgemeinschaft (DFG) is gratefully acknowledged.

References

Aguilera, R., & Jackson, G. (2003). The cross-national diversity of corporate governance: Dimensions and determinants. *Academy of Management Review, 28*(3), 447–465.

Bebschuk, L., & Roe, M. (1999). A theory of path dependence in corporate ownership and corporate governance. *Stanford Law Review, 52*(1), 127–170.

Berkovitch, E., & Israel, R. (1999). Optimal bankruptcy laws across different economic systems. *The Review of Financial Studies, 12*(2), 347–377.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. New York: Macmillan.

Bruner, C. (2011). Corporate governance reform in a time of crisis. *The Journal of Corporation Law, 36*(2), 309–341.

Bühner, R., Rasheed, A., Rosenstein, J., & Yoshikawa, T. (1998). Research on corporate governance: A comparison of Germany, Japan, and the United States. *Advances in International Comparative Management, 12*, 121–155.

Bushman, R., & Smith, A. (2001). Financial accounting information and corporate governance. *Journal of Accounting Economics, 32*(1–3), 237–333.

Chui, A., Lloyd, A., & Kwok, C. (2002). The determination of capital structure: Is national culture a missing piece to the puzzle? *Journal of International Business Studies, 33*(1), 99–127.

De Jong, E., & Semenov, R. (2006). Cultural determinants of ownership concentration across countries. *International Journal of Business Governance and Ethics, 2*(1–2), 145–165.

Demirgüç-Kunt, A., & Levine, R. (2001). *Financial structure and economic growth: A cross-country comparison of banks, markets, and development*. Cambridge, MA: MIT Press.

Doidge, C., Karolyi, G. A., & Stulz, R. (2007). Why do countries matter so much for corporate governance? *Journal of Financial Economics, 86*(1), 1–39.

Fischer, C., & Rudolph, B. (2000). Grundformen von Finanzsystemen. In G. Obst, O. Hintner, J. v. Hagen, J. v. Stein (Eds.), *Geld-, Bank- und Börsenwesen: Handbuch des Finanzsystems* (40th ed., pp. 371–446). Stuttgart: Schäffer-Poeschel.

Franks, J., & Mayer, C. (1995). Ownership and control. In H. Siebert (Ed.), *Trends in business organization: Do participation and cooperation increase competitiveness?* (pp. 171–195). Tübingen: Mohr Siebeck.

Franks, J., & Mayer, C. (1998). Bank control, takeovers and corporate governance in Germany. *Journal of Banking and Finance, 22*(10), 1385–1403.

Franks, J., & Mayer, C. (2001). Ownership and control of German corporations. *The Review of Financial Studies, 14*(4), 943–977.

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *The American Journal of Sociology, 91*(3), 481–510.

Guillén, M. F. (2000). Corporate governance and globalization: Is there convergence across countries? *Advances in International Comparative Management, 13*, 175–204.

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes? *Journal of Economic Perspectives, 20*(2), 23–48.

Hackethal, A., & Schmidt, R. (2000). Finanzsystem und Komplementarität. *Kredit und Kapital, 15*, 53–102.

Haxhi, I., & van Ees, H. (2010). Explaining diversity in the worldwide diffusion of codes of good governance. *Journal of International Business Studies, 41*(4), 710–726.

Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of Management, 1*(2), 81–99.

Hofstede, G. (2001). *Culture's consequences – comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks: Sage.

House, R., Hanges, P., Javidan, M., Dorfman, P., & Gupta, V. (2004). *Culture, leadership, and organizations: The globe study of 62 societies*. Thousand Oaks: Sage.

Inglehart, R., Basanez, M., & Moreno, A. (1998). *Human beliefs and values: A cross-cultural sourcebook*. Ann Arbour: University of Michigan Press.

Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Kaufmann, D., Kraay, A., Mastruzzi, M. (2006). Governance matters V: Governance indicators for 1996–2005. *Policy research working paper series*, No. 4012. Washington: The World Bank.

Kroeber, A., & Kluckhohn, C. (1952). *Culture − A critical review of concepts and definitions*. Cambridge, MA: Peabody Museum.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The quality of government. *Journal of Law, Economics, and Organization, 15*(1), 222–279.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics, 58*(1–2), 3–27.

La Porta, R., López-de-Silanes, F., Shleifer, A., & Vishny, R. (1997). Legal determinants of external finance. *The Journal of Finance, 52*(3), 1131–1150.

La Porta, R., Djankov, S., López-de-Silanes, F., & Shleifer, A. (2006). The law and economics of self-dealing. *Journal of Financial Economics, 88*(3), 430–465.

Li, J., & Harrison, J. R. (2008). National culture and the composition and leadership structure of boards and directors. *Corporate Governance: An International Review, 16*(5), 375–385.

Licht, A. (2001). The mother of all path dependencies: Toward a cross-cultural theory of corporate governance systems. *Delaware Journal of Corporate Law, 26*(1), 147–205.

Licht, A., Goldschmidt, C., & Schwartz, S. (2005). Culture, law, and corporate governance. *International Review of Law and Economics, 25*(2), 229–255.

Lopez-Claros, A., Porter, M., Sala-i-Martin, X., & Schwab, K. (2006). *The global competitiveness report 2006–2007*. Hampshire: World Economic Forum.

Ng, S., Lee, J., & Soutar, G. (2007). Are Hofstede's and Schwartz's value frameworks congruent? *International Marketing Review, 24*(2), 164–180.

Prowse, S. (1995). Corporate governance in an international perspective: A survey of corporate control mechanisms among large firms in the United States, the United Kingdom, Japan and Germany. *Financial Markets, Institutions and Instruments, 4*(1), 1–63.

Roland, G. (2004). Understanding institutional change: Fast-moving and slow-moving institutions. *Studies in Comparative International Development, 38*(4), 109–131.

Schmidt, R. J., & Spindler, G. (2002). Path dependence, corporate governance and complementarity. *International Finance, 5*(3), 311–333.

Schwartz, S. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications* (Vol. 18, pp. 85–99). Thousand Oaks: Sage.

Schwartz, S. (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review, 48*(1), 23–47.

Schwartz, S. (2004). Mapping and interpreting cultural differences around the world. In H. Vinken, J. Soeters, & P. Ester (Eds.), *Comparing cultures – dimensions of culture in a comparative perspective* (pp. 43–73). Leiden: Brill.

Sekely, W., & Collins, J. M. (1988). Cultural influences on international capital structure. *Journal of International Business Studies, 19*(1), 87–100.

Shao, L., Kwok, C., & Guedhami, O. (2010). National culture and dividend policy. *Journal of International Business Studies, 41*(8), 1391–1414.

Shleifer, A., & Vishney, R. (1997). A survey of corporate governance. *The Journal of Finance, 52*(2), 737–783.

Smith, P., Peterson, M., & Schwartz, S. (2002). Cultural values, sources of guidance, and their relevance to managerial behavior: A 47-nation study. *Journal of Cross-Cultural Psychology, 33*(2), 188–202.

Stulz, R. (2005). The limits of financial globalization. *The Journal of Finance, 60*(4), 1595–1638.

Tyrell, M., & Schmidt, R. (2001). Pensions- und Finanzsysteme in Europa: Ein Vergleich unter dem Gesichtspunkt der Komplementarität. In H.-C. Mager, H. Schäfer, K. Schrüfer (Eds.), *Private Versicherung und Soziale Sicherung* (pp. 103–121.). Marburg: Metropolis-Verlag.

Williamson, O. (2000). The new institutional economics: Taking stock, looking ahead. *Journal of Economic Literature, 38*(3), 595–613.

Effective Governance in the Family Owned Business

Keanon J. Alderson

Abstract Family business is the most prevalent form of organization in the world. It has been estimated that as many as 90 % of businesses are either family owned or family controlled. A third of the firms listed on the S&P 500 and those of the Fortune 500 are family owned or controlled by families. Much of the governance literature focuses on the larger publicly owned non-family corporations rather than on the unique issues of the more prevalent family businesses. This chapter presents information to give the reader an understanding of the unique and complex nature of family owned businesses, their problems and challenges, and the unique governance structures and practices used to effectively manage a family business to greater performance. Due to the predominance of family members in upper management roles, which leads to a reduction of agency costs, family firms have less bureaucracy, allowing for fast decision-making and the creation of competitive advantages. Depending on the organizational structure, family firms have shown superior financial performance compared to their non-family counterparts. Goal congruency among the top management team and a long-term outlook are differentiating factors that lead to improved performance. Family firms, however, can also benefit from an increase in more formal governance mechanisms.

1 Introduction

Family business is the most prevalent form of organization in the world. Experts have estimated that in the United States, as many as 90 % of businesses are either family owned or family controlled (Astrachan and Shanker 2003; Ward 1987). In Europe, the prevalence of family business is approximately 70–80 %, with approximately 75–90 % in the Middle East and 70 % in Latin America (Family Firm

K.J. Alderson (✉)
California Baptist University, Riverside, CA, USA
e-mail: kalderson@calbaptist.edu

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_17,

Institute [FFI] n.d.). Family businesses are responsible for the majority of jobs in the United States, including 85 % of private sector jobs and 86 % of all jobs created in the last 10 years (Poza 2009). Approximately 40–50 % of employment in Europe is from family-owned or family-controlled firms (FFI n.d.) and over one third of the companies on the benchmark Standard and Poor's 500 index are family owned or controlled, as are one third of the firms on the Fortune 500 (Miller and Le Breton-Miller 2005). Many large corporations such as Wal-Mart, Ford, Michelin, AstraZeneca, News Corp, Toyota, and Cargill can be considered family businesses by their family ownership or control. Some have public ownership and are listed on stock exchanges.

Family firms are vital to the global economy; yet, they have unique and complex issues that non-family firms do not have. Their continued health and effective functioning should be of paramount importance to local governments and policymakers. Providing effective corporate governance of family firms takes on more importance in the contexts of their global ubiquity and their extensive differences from non-family firms.

The early sections of this chapter allow the reader to understand the many unique differences between a family business and a non-family business. The theoretical foundations of family business and the challenges of corporate governance highlight the diverse and distinct nature of family businesses. The remaining sections of the chapter focus on the governance structures and mechanisms, both formal and informal, which aid in increasing the effectiveness and performance (financial and otherwise) of family owned firms.

2 How Family Firms Differ from Non-family Firms

Several significant differences are apparent between family and non-family firms. Family businesses often have a long-term view; a lasting mission, vision, and purpose; a desire to create a nurturing, caring community and to act as stewards; and an ability to build relationships, bonds, and connections with customers, suppliers, and other outsiders (Poza 2009).

By far, the greatest difference between a family firm and a non-family firm is the addition of the family unit. The involvement of family can be both an advantage and a disadvantage. Family ties can lead to tremendous competitive advantages, but can also be the cause of serious dysfunction and complications. The non-family firm does not face many of the complex issues faced by family firms, such as the upheavals of divorce, interpersonal conflict, inheritance and tax issues, and non-employed family members with decision authority.

Due to significantly longer family CEO average tenure of 24 years, compared to 3–4 years for non-family firms, family firms have no need to maximize short-term gains at the risk of long-term gains (Dyer 1986; Ibrahim et al. 2008), which allows families to make decisions that benefit the next generation of family members. The longer tenure is associated with both beneficial and detrimental issues that help to

make a family owned business significantly more complex and different from a non-family firm. The beneficial issues include unsurpassed knowledge of the organization, a tremendous amount of explicit and tacit knowledge, and deep understanding of the market, its customers, and its suppliers. The detrimental issues include entrenched leadership, a lack of new ideas and concepts, possible nepotism, and heavy dependence upon the way things have always been done.

2.1 Definition of a Family Business

A family business has the following characteristics:

- Ownership control (15 % or higher) by two or more members of a family or a partnership of families.
- Strategic influence by family members on the management of the firm, whether by being active in management, by continuing to shape culture, by serving as advisors or board members, or by being active shareholders.
- Concern for family relationships.
- The dream (or possibility) of continuity across generations (Poza 2009).

2.2 Mission and Values

In family businesses, the mission and values of the firm are a major differentiating factor from non-family businesses. Family firms commonly act altruistically with customers, employees, and the local community and make decisions that do not maximize profitability in the short run. This is often in direct conflict with minority shareholders.

Family business members care about their family's legacy. Successive generations are concerned with the reputation of the family within the community and they strive to honor the original mission and values created by the founders. Family firms often have different priorities from those of non-family firms. Family businesses are associated with several non-financial objectives.

Family companies are more likely to be concerned with the stability and continued family ownership of the business. Families often see employment of family members as a priority. Families are less likely to seek rapid growth by selling equity, either privately or on the stock exchange. Families are not quick to lay off either family or non-family members. For a family business, the mission statement and corporate values are highly significant and very powerful.

2.3 Theoretical Approaches

Agency theory (Jensen and Meckling 1976) has become the predominant paradigm for studying family businesses. Agency theory suggests that due to the unification of

the roles of ownership and management by family members, the formal supervision of management is less, resulting in reduced agency costs. This would help explain the competitive advantage enjoyed by many family firms. Agency theory may also explain several negative issues associated with family ownership, such as managerial entrenchment, nepotism, self-dealing, and discrimination of minority shareholders. Agency theory posits the board of directors is an important mechanism for limiting any potential conflict between owners and managers when they disagree.

The stewardship approach suggests that family members see the firm as an extension of themselves and they act as stewards to protect the firm and the family legacy. This approach is associated with hiring professional outside management and instituting effective and formal governance structures (Mustakallio et al. 2002; Ward 1988). Examples of this perspective are the larger S&P 500 family firms with a strong board of directors who the family entrusts to give objective counsel.

The resource-based view can also help to explain the competitive advantages often seen in family firms. Families in business together have longer time horizons, quick and efficient decision-making, goal congruence, and patient family capital, as well as excellent relations with customers and suppliers passed down through the generations and significant human and social capital (Chrisman et al. 2003; Sirmon and Hitt 2003).

Family firms commonly have three basic forms of family business ownership: the controlling owner (usually the entrepreneurial founder), the sibling partnership (direct offspring of the controlling owner), and the cousin consortium, the latter usually characterized by members of at least three generations (Gersick et al. 1997). As the business matures and progresses through each stage of the business life cycle, more family stakeholders become involved. With increasing numbers of members, the complexity of the family firm increases.

Tagiuri and Davis (1996) created the systems (or three circle) model of the family business, which has become the primary conceptual model for family business studies. The model presents family business as consisting of three complex and overlapping subsystems of ownership, family, and business. The model has been instrumental in understanding many of the complexities and dynamics within the family business domain. Where the family and business systems overlap, situations can become ripe for disagreement. For example, a family member who is an owner, but not an employee, may be more inclined to consider a buyout offer than a family member who is both an owner and an employed member of management. The controlling owner, who is in all three subsystems, may have different viewpoints, concerns, and goals from those of newly entering family members.

3 Governance Challenges in the Family Business

The numerous challenges and complexities faced by family owned firms underscore the importance and need for effective structures and mechanisms of family business governance.

3.1 Family Dysfunction and Conflict

Dating back to Biblical times and starting with the first reported sibling rivalry between Cain and Abel, families have endured dysfunction and conflict. Family conflict is commonplace. When the family system, with its petty but often deep-seated resentments, emotions, interpersonal conflicts, rivalries, mistrust, favoritism, and one-sided altruism is combined with a business system in which family members' employment, identity, and wealth are intertwined, the problems are magnified (Hilburt-Davis and Dyer 2003). Conflict is usually expressed in communication and behavioral problems and grows exponentially with the age and growth of the business.

A study of 1,454 top managers in small and midsize family businesses found that 34 % had argued about the future direction of the company and 27 % had argued about the contribution of other employed family members. Twenty percent experienced tension over roles of in-laws, who was and was not allowed to work in the business, and lack of consultation on key decisions with other family members (PriceWaterhouseCoopers 2007/8). Lack of communication is a root cause for much of the interpersonal conflict associated with family businesses.

The remedy for complex conflict is to enlist outside resources (Hilburt-Davis and Dyer 2003). Non-family advisors and the establishment of governance structures can help the family by providing wise counsel, oversight, and stability during a time of family conflict.

3.2 Planning

An old adage says, "Failure to plan is planning to fail." The vast majority of family businesses fail to plan effectively; only 37 % of 1,143 surveyed firms had a strategic plan (American Family Business Survey 2003). This presents a tremendous opportunity for family businesses to improve their performance and focuses on the need for more effective decision-making and improved corporate governance. Characteristics of family businesses with a strategic plan include conducting board meetings, having written hiring policies, creating buy-sell agreements, possessing a formal valuation of company worth, having more employees, and showing greater likelihood to have selected the successor. They also have higher international sales and higher sales overall. These positive outcomes point to the importance of the strategic plan in helping the company manage the business in a more rational and professional manner. It also points to the need for more effective corporate governance tools to enable better planning.

3.3 Decision-Making

Decision-making among family members may take place emotionally rather than rationally, resulting in a lack of productivity and slowed or delayed decisions. Dissenting family members often may not show acceptance or buy-in of business decisions (Kellermanns and Eddleston 2004).

Many entrepreneurs are controlling, with a dominant personality, and they make the majority of decisions. This leaves succeeding generations unprepared for decision making in the absence of the founder (Dyer 1986). Feltham, Feltham, and Barnett (2005) found in 75 % of the firms surveyed ($N = 765$), the organization was either dependent or very dependent upon a single decision maker. The decision maker made all the decisions in 51 % of the cases in the area of production and delivery, 87 % of the decisions in finance and accounting, 65 % in sales and promotion, 62 % in purchasing, and 57 % of all human resource decisions. Sixty-five percent of the respondents made all the decisions in three of the five areas, and a staggering 31 % made all decisions in all five areas. Aronoff and Astrachan (1996) found that 34 % of surveyed founders made the decisions themselves, 48 % of family businesses searched for a consensus, and 6 % discussed the issue and took a vote. Fifty-three percent of the voting group was made up of the third generation of family leadership. Aronoff and Astrachan suggested this entailed a higher level of professionalism and governance.

3.4 Succession

Most family businesses do not have a successful succession of ownership from the founding generation to the second generation. Studies have generally agreed that approximately 30 % transfer to the second generation, while only 10–15 % pass from the second generation to the third generation (Ward 1987), and only 4 % managed to stay in the same family in the fourth generation (Poza 2009). Most family business researchers agree that the main reasons for failed successions are a lack of effective decision-making and proper planning (Poza 2009; Shepherd and Zacharakis 2000; Ward 1987). More effective governance can help family owned firms in both of these areas.

In a 2009 survey of family business owners by the accounting firm, KPMG, the following issues were rated as most troublesome or important:

1. Growing profitably
2. Balancing different interests
3. Dealing with regulatory challenges
4. Planning succession
5. Determining future directions
6. Exiting by retirement
7. Establishing professional business management

8. Selling the business
9. Managing family relationships
10. Addressing international growth (KPMG 2009)

These issues are evidence of the need for effective family business governance. Each issue or challenge is of paramount importance to the members of the various governance structures of the family firm. Having skilled and experienced members will provide the firm with knowledgeable recommendations and oversight.

3.5 Challenges in Privately Held Firms

Privately held family firms have not been well studied (Mustakallio et al. 2002; Pieper et al. 2008). These firms do not have public shareholders and thus lack the extensive government regulations, legal needs, and capital market demands that would require adoption of more formalized corporate governance structures. Privately held family firms value privacy and are notoriously secretive, and they tend to underutilize common governance structures, such as a board of directors or advisors.

Pieper et al. (2008) validated both agency and stewardship theories in family firms; however, the prevalence of one over the other was context specific. Privately held family firms with shared values and stated goals were more likely to use informal and relational social control mechanisms such as communication, inclusion or exclusion at family events, and family norms, rather than the more formal monitoring structures of corporate governance. Pieper et al. asserted such behaviors might allow a competitive advantage for family firms, as less formal structure could be more cost effective and allow for faster decisions. When the family did not have a high level of goal congruency and lacked a shared vision, the more formal structures of family corporate governance were more prevalent, perhaps as a way to monitor performance.

Aronoff and Astrachan (1996) noted a higher level of formal governance mechanisms among the third and later generations. As the number of family members increases, goal congruency becomes more difficult to maintain, thus requiring formalized governance structures. Privately held family firms could benefit from the utilization of more formal governance structures to increase communication and improve decision-making (Jaffe 2005).

3.6 Challenges in Public Family Firms

Governance in family firms that have sold shares to the public is more complex than in privately held family firms. Often the family exerts considerable influence upon the organization beyond their ownership stake, making effective corporate

governance difficult. Families can exert considerable control and influence on directors, thus placing their objectivity, analysis, and recommendations in question. Families often choose who serves on the board, effectively stacking the deck in their favor. By using dual classes of voting and non-voting stock and weighted or *supershares* (Brenes et al. 2011), a family can exert more control than their ownership stake would suggest. As an example, the Ford family controls 40 % of the voting shares of Ford Motor Company. Latin American *groupos* and hierarchical business groups often found in Asia often have a pyramidal structure in which the family controls a majority of shares in the core firm and effectively controls numerous firms – often suppliers – downstream, with minimal actual ownership (Le Breton-Miller and Miller 2006).

Examples abound where the founder or the controlling family runs a public company as if it were still privately held. The account of the Rigas family of Adelphia Communications is a dramatic example of the need for effective corporate governance to protect minority shareholders. The family held a minority stake, yet controlled the majority of the board seats, effectively diluting the power of the board of directors. Off-the-books accounting and favorable loans to family members hastened the bankruptcy and demise of the firm (Lewis 2002). Two family members were sentenced to prison for fraud. Adelphia accounting scandals, along with the Enron, Tyco, and Global Crossings, were in large part responsible for the increase in financial regulations and mandates enacted in the United States, such as the 2002 Sarbanes-Oxley Financial Accountability legislation, Securities and Exchange Commission rules, and increased stock exchange requirements. As a result, publicly held family firms have been forced to increase the number of outside directors and improve corporate governance structures to be compliant with regulations.

An example of the new reality among publicly held family firms was the Robert Mondavi Corporation. Minority shareholders balked when the family turned down an extremely generous buyout offer submitted by Constellation Brands. The founding patriarch and controlling majority owner was forced to sell the company against his wishes in order to comply with regulations requiring fairness to all stockholders (Siler 2007).

4 Family Business Governance Mechanisms and Structures

Due to the major differences between family firms and non-family firms and the unique issues associated with family ownership, family firms have developed several specific governance structures and practices to mitigate the challenges of the family system that is so closely intertwined with the business. Privately held and younger firms utilize the relational mechanisms of governance such as meetings and retreats. As the firm matures, it adopts the more formal structures of governance.

4.1 Family Meetings

Of all the management tools and techniques a family business has at its disposal, instituting family meetings may be the easiest to accomplish, and the process can have the greatest positive impact on the future of the firm and the family. Many family businesses do not have good communication among the family members. Poor communication can be both a symptom and a cause of unhealthy conflict (Kellermanns and Eddleston 2004). The first generation often tends to make the decisions individually and they often do not discuss how they arrived at their decisions. This may irritate other family members, some of whom may have differing viewpoints on the issue. Families can discuss issues, problems, and opportunities by holding family meetings and can use the time to create bonds with members who may now be adults and have families of their own. The family meeting is a way to foster family togetherness, increase communication among members of the family, and prevent conflict and miscommunication (International Finance Corporation 2011).

4.2 Family Retreats

Family retreats are commonly held on an annual basis and the entire family goes away for a long weekend. The retreat consists of a mix of business and pleasure activities, and usually, the children of the family members are present. The retreat serves as a time to reconnect and increase communication with all family members, including those not seen often (IFC 2011). Some families have activities for members to participate in, such as team building events and outdoor recreation activities. Recently, families have started inviting professional services firms to make presentations. These professionals often sponsor a lunch or dinner for the family.

4.3 The Family Constitution

Also referred to as a protocol or family charter, the family constitution is a document that lists the mission and vision of the firm and spells out the family commitment to continuity, responsibilities of ownership, and conflict resolution procedures. It also details company policies and procedures on such important issues as family employment, including hiring, retirement, and terminations (IFC 2011). The constitution includes buy-sell agreements, shareholder policies, role of spouses and non-family members in the firm, and handling of unemployed family business members. Rules of ownership such as procedures for selling shares, non-compete agreements, job descriptions for top management positions, and rules of governance are among the many other issues addressed.

The critical functions of the family constitution are to document family discussion and input and to have agreed-upon family policies and procedures in advance, before being forced to make decisions when the family is in crisis or faces emotionally charged issues involving family members. Interestingly, the vast majority of family businesses do not have this all-important document. Families often begin to create this document at annual retreats. It is a living document the family can change and update as they see fit.

4.4 The Family Council

In the majority of family firms, the family council is the main vehicle of family business governance, as the council is beneficial in both private and publicly held family firms. Instituting a family council is a notably positive step toward managing the business in a more rational and professional manner. The family council is more formal than the family meeting. The purpose of the council is to present the family-related issues of running the business and the family council is where problems, concerns, issues, and opportunities are presented and discussed, alternatives are weighed, and decisions are made.

The family council is composed of inside- and outside-the-business family members. Council members may be both owners and non-owning family members. Family council meetings take place more often than family retreats, usually several times per year, and decision-making is a key focus. When the family moves to the family council as a tool of governance, the family members often agree to make their decisions by voting, with decisions made either by a simple majority or by consensus. Some families strive for unanimity, which can delay decisions, but increases family unity.

Aronoff and Ward (2002) and Leon-Guerrero, McCann, and Haley (1998) discussed family councils as usually found in the more mature stages of the family business lifecycle, such as the cousin consortium. This stage follows the sibling partnership and the controlling owner stages. Aronoff and Ward gave several examples of families utilizing councils: to open a family office, to establish a family venture capital fund to invest in the younger members' entrepreneurial activities, or to purchase investment or recreational real estate.

For council effectiveness, family members should understand the family council meeting is the appropriate time and place to present their points of view and discuss issues. The alternatives should be discussed in a process that encourages family members' viewpoints and concerns. The diversity of opinions, alternatives, challenges, and concerns creates an improved and more logical decision-making process. One of the key strengths of the family council is that family members agree to abide by the collective decision, even if they disagree or are a member of the minority, and agree to a showing of unified support for the decision (Bianchi and Alderson 2011).

The family council is a tool the family uses to discuss issues of importance to both the family and the business (Jaffe 2005). The board of directors is utilized to

carry out the will of the family with regard to business issues. The family council can discuss issues of importance to the family, such as family employment policies and family termination policies and procedures. The family's decision is then communicated to the board of directors for implementation in the business. Having such important family issues discussed in advance and having a set policy already in place can improve the efficiency of the firm and reduce the need to discuss personal issues when emotions are high.

Mustakallio et al. (2002) concluded a shared family vision was positively related to increased social interaction and to improved decision quality and commitment. Handler (1994), in a review of the succession research, proposed the creation of family councils as a way to increase communication and discussion regarding succession. Leach (2007) discussed councils as vital for communication improvement and healthy family functioning, relating how the family council saved the UK-based Clarke Shoe Co. from family crises and possible breakup. Landsberg and Perrow (1991) called family councils a "virtual requirement".

Research shows family councils are an underutilized tool of family corporate governance. In a study of boards of directors in 73 Italian firms, Corbetta and Tomaselli (1996) reported only 10 % had a functioning family council. In a study of 192 first-, second-, and third-generation Finish family firms, 75.4 % had informal family meetings, 26.7 % had had formal family meetings, 17.3 % had family plans, and only 7.3 % had family councils (Mustakallio et al. 2002).

4.5 The Board of Advisors

Used mostly in privately held family firms, these voluntary and informal boards are made up of respected business owners and outside business professionals, such as bankers, accountants, and attorneys. The board of advisors should ideally be composed of professionals not presently associated with the family firm to ensure the emergence of unbiased advice. The board acts as a sounding board and gives recommendations and advice to the business. The business is under no obligation to accept the recommendations; the board has no formal authority, and as such, members may have less liability associated with sitting on the board of directors. Many family firms do not utilize this helpful tool; however, some family firms, especially earlier in the second generation, use a defacto board of advisors when they consult with other respected professionals in the community and in their social networks.

4.6 The Board of Directors in a Family Firm

In a non-family firm, the board of directors has significant responsibility and formal authority to make recommendations and decisions. The board has hiring and termination authority over the CEO and top management team. The board seats

are compensated positions, and the majority of board members are from outside the company. The purpose of the board is to provide a system of checks and balances, to supply monitoring oversight, to help ensure accountability, and to make recommendations to the top management team.

In a family firm, most of the board comprises members of the family and the ratio of insiders to independent outsiders is often out of balance. Most family firms do not properly use a board of directors (American Family Business Survey 2003). However, family businesses with strong boards of directors show improved decision-making ability, partially due to the beneficial aspects of conflict (Eisenhardt et al. 1997; Kellermanns and Eddleston 2004). Diversity of opinion and good debate lead to members having their say and arguing a valid point. Points of view are put forth that entrenched family leadership could otherwise stifle. By hearing a variety of ideas and solutions to problems, family businesses can make better decisions (Eddleston et al. 2008).

The vast majority of family firms who utilize a board of directors rate its contribution as good to excellent. The key is to be active and to meet often. Research shows boards that meet 12 times a year have improved performance (Brenes et al. 2011). In a U.S. survey, the majority of boards met only once or twice a year; only 29 % of boards of directors met three or more times a year (American Family Business Survey 2003). In a follow-up study of 650 first- and second-generation family firms, one third reported having an active board of directors and over half rated their directors' contribution as outstanding, a considerable increase from the previous 2003 survey (American Family Business Survey 2007). This may be due to the increased importance and requirements placed on corporate governance by outsiders such as banks and other external stakeholders.

Instituting a board of directors is a significant area of opportunity for many family firms to improve their management and company performance. A major responsibility of the board is to look at the business separately from the needs of the family. The needs of the family are to be discussed in the family council, where the family council makes recommendations to the board of directors on behalf of the family.

4.7 The Board of Directors in a Publicly Held Family Firm

Directors who serve on a public, yet family controlled board and are independent of both management and the family play a vital role (IFC 2011). These directors are the "sole actors at the highest level of firm governance who have the capacity to bring appropriate detachment to bear in resolving difficult questions that implicate family ties as well as business necessity" (DeMott 2008, p. 824). Outside directors must distance themselves from powerful family members in order to consider all the shareholders' needs effectively. Maximizing shareholder value is difficult in the family controlled firm, as family shareholders and non-family public shareholders may define shareholder value differently (DeMott 2008).

In a study of the 500 largest Canadian firms, Morck (2000) reported that of 246 public firms, 44 % had a controlling owner who was an heir of the founder. Anderson and Reeb (2003) reported that in the 35 % of firms controlled by families, the family held 18 % of the stock. In non-family firms, independent directors held 61.2 % of the board seats, compared with 43.9 % in family controlled firms. A higher percentage of family members on the nominating committee were associated with fewer independent directors on the board. Families can maintain or create control of public family firms by having disproportional representation on the board and by creating different classes of shares.

The monitoring effect of the board is stronger when no members of the family serve on the board (Bikki and Tsui 2007). Conversely, a balance of the board of directors between outsiders and family members is often ideal (Brenes et al. 2011), as they can complement each other's contributions. Family members provide experience and knowledge of their business and outsiders bring professionalism and objectivity.

The presence of outside directors who take an active role has a positive relationship with increased objectiveness, increased company performance, increased transparency, and increased confidence by family members who are not actively involved in the management of the firm (Brenes et al. 2011). The difference in results has to do with the differing regulatory and capital markets requirements in various countries as well as their associated cultures and norms. For instance, Latin American family firms often place non-family directors on their boards based on family friendship or political reasons such as respect and power (Brenes et al. 2011).

5 Corporate Governance That Drives Performance

Recent research shows family businesses have a higher return on investment, operate more efficiently, and carry less debt, compared with non-family businesses. Family firms in the S&P 500 over the period 1992–2002 had higher profit margins and a higher reinvestment of revenues when compared with non-family firms (Lee 2006). Anderson and Reeb (2003) presented evidence showing that large family businesses in the S&P 500 performed better than non-family firms did. A Business Week survey identified the family controlled firms in the S&P 500 and found they had superior performance when compared with listed non-family firms over a 10-year period. Annual shareholder returns averaged 15.6 % for the family controlled firms vs. 11.2 % for non-family firms. Annual revenue growth averaged 23.4 % vs. 10.8 %, and income growth averaged 21.1 % compared with 12.6 % (Weber et al. 2003). A study of 46 successful large family controlled companies, including Hallmark, L. L. Bean, IKEA, *The New York Times*, SC Johnson, W. L. Gore, and Cargill showed that family firms outperformed their non-family counterparts (Miller and Le Breton-Miller 2005).

A Credit Suisse study reported family firms outperformed their non-family competitors over a 10-year period. The study highlighted the importance and need for effective family governance by focusing on three characteristics:

- *A long-term management focus.* Most families want to pass the firm on to following generations and want to honor and preserve the family legacy. Families make long-term decisions that benefit future generations and avoid short-term, quarter-by-quarter decisions to seize short-term growth.
- *Improved alignment of management and shareholder interests.* The family wealth is usually heavily invested in the business, and as a result, the family is keenly interested in management and the strategic process. Formal corporate governance structures such as the family council have been initiated to allow the family to maintain its influence the board of directors, and usually a member of the council also sits on the board.
- *A better focus on core business activities than non-family firms.* Families usually focus intently on their particular niche and limit their activities to their core business strengths. Families also limit diversification and expansion efforts outside of the core business in order to maintain their control of the firm (Credit-Suisse 2007).

6 Conclusion

Effective governance is vital to the effective management, oversight, and longevity of a family firm. Firms with effective governance mechanisms and structures, both formal and informal, exhibit increased communication and improved decision-making, which lead to improved performance. The type of governance and the structures utilized are dependent upon the stage of the business in the generational lifecycle and upon whether the company is entirely private or includes public shareholders. At the founder/controlling owner stage, corporate governance is minimal and the owner makes the vast majority of decisions. As the company matures and the second generation appears, communication and decision-making suffer, and necessary informal and relational governance mechanisms emerge, such as family meetings, retreats, and the formation of a family constitution. Later, when the third generation of cousins becomes involved, more formal governance structures such as a family council and boards of advisors or directors become vital.

The need for a clear and unified family business mission and vision is essential for goal congruency among members of the top management team and other family members, and they should be detailed in the family constitution. Family meetings and family councils are unique and differentiating factors of family corporate governance that aid in increased communication, prevention or resolution of conflict, and faster and more effective decision-making. Family firms have been shown to have competitive advantages and unique capabilities, compared with non-family firms, leading to superior financial and operational performance. Family

firms could benefit from increased focus on the more formal mechanisms of corporate governance. For publicly held family firms, independent members on the board of directors are vital and are often a regulatory requirement.

References

American family business survey. (2003). MassMutual Financial Group/Raymond Institute. http://www.kennesaw.edu/fec/DMD9500R.pdf

American family business survey. (2007). MassMutual Financial Group/Raymond Institute. http://www.kennesaw.edu/fec/DMD9500R.pdf

Anderson, R. C., & Reeb, D. M. (2003). Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance, 58*, 1301–1328.

Aronoff, C. E., & Astrachan, J. H. (1996). How to make better decisions. *Nations Business, 84*(1), 39–41.

Aronoff, C. E., & Ward, J. L. (2002). *Family meetings: How to build a stronger family and a stronger business*. Marietta: Family Enterprise.

Astrachan, J. H., & Shanker, M. C. (2003). Family businesses' contribution to the U.S. economy: A closer look. *Family Business Review, 16*, 211–219.

Bianchi, C., & Alderson, K. (2011). Family councils: What do we really know about them and ought to know? In A. Carsrud & M. Brännback (Eds.), *International perspectives on future research in family business: Neglected topics and under-utilized theories* (Springer international entrepreneurship series). New York: Springer.

Bikki, J., & Tsui, J. (2007). Insider trading, earnings management, and corporate governance: Empirical evidence based on Hong Kong firms. *Journal of International Financial Management and Accounting, 18*, 192–222.

Brenes, E. R., Madrigal, K., & Requena, B. (2011). Corporate governance and family business performance. *Journal of Business Research, 64*, 280–285.

Chrisman, J., Chua, J., Sharma, P. (2003). *Current trends and future directions in family business management studies: Toward a theory of the family firm*. [Coleman White Paper]. Retrieved from http://usasbe.org/knowledge/whitepapers/chrisman2003.pdf.

Corbetta, G., & Tomaselli, S. (1996). Boards of directors in Italian family businesses. *Family Business Review, 9*, 403–421.

Credit-Suisse. (2007). *Family holdings outperform competitors*. Retrieved from http://www.Credit-Suisse.com.

DeMott, D. A. (2008). Guests at the table: Independent directors in family-influenced public companies. *The Journal of Corporate Law, 33*, 819–863.

Dyer, W. G., Jr. (1986). *Cultural change in family firms: Anticipating and managing business and family transitions*. San Francisco: Jossey-Bass.

Eddleston, K. A., Otondo, R. F., & Kellermanns, F. W. (2008). Conflict, participative decision-making, and generational ownership dispersion: A multilevel analysis. *Journal of Small Business Management, 46*, 456–484.

Eisenhardt, K., Kahwajy, J., & Bourgeois, L. (1997). How management teams can have a good fight. *Harvard Business Review, 75*(4), 77–85.

Family Firm Institute. (n.d.). Retrieved from http://www.ffi.org.

Feltham, T. S., Feltham, G., & Barnett, J. J. (2005). The dependence of family businesses on a single decision maker. *Journal of Small Business Management, 43*, 1–15.

Gersick, K. E., Davis, J. A., Hampton, M. M., & Lansberg, I. (1997). *Generation to generation: Life cycles of the family business*. Boston: Harvard Business School Press.

Handler, W. C. (1994). Succession in family business: A review of the research. *Family Business Review, 7*, 133–157.

Hilburt-Davis, J., & Dyer, W. G. (2003). *Consulting to family business*. San Francisco: Jossey-Bass.
Ibrahim, N. A., Angelides, J. P., & Parsa, F. (2008). Strategic management of family businesses: Current findings and directions for future research. *International Journal of Management, 25*, 95–110.
International Finance Corporation. (2011). *IFC family business governance handbook* (3rd ed.). Washington, DC: Author.
Jaffe, D. T. (2005). Strategic planning for the family in business. *Journal of Financial Planning, 18*(3), 50–56.
Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*, 305–360.
Kellermanns, F. W., & Eddleston, K. A. (2004). Feuding families: When conflict does a family firm good. *Entrepreneurship Theory and Practice, 3*, 209–228.
KPMG. (2009). *Family business survey 2009*. Retrieved from http://www.kpmg.com.
Landsberg, I., & Perrow, E. (1991). Understanding and working with leading family businesses in Latin America. *Family Business Review, 4*, 127–147.
Le Breton-Miller, I., & Miller, D. (2006). Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability. *Entrepreneurship Theory & Practice, 30*, 731–746.
Leach, P. (2007). *Family business: The essentials*. London: Profile Books.
Lee, J. (2006). Family firm performance: Further evidence. *Family Business Review, 19*(2), 103–114.
Leon-Guerrero, A. Y., McCann, J. E., & Haley, J. D. (1998). A study of practice utilization in family businesses. *Family Business Review, 11*, 102–120.
Lewis, M. (2002). Death may be Adelphia's third act. Forbes.com.
Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. Boston: Harvard Business School Press.
Morck, R. (2000). Inherited wealth, corporate control, and economic growth: The Canadian disease? In R. Morck (Ed.), *Concentrated corporate ownership* (pp. 319–327). Chicago: University of Chicago Press.
Mustakallio, M., Autio, E., & Zahra, S. (2002). Relational and contractual governance in family firms: Effects on strategic decision-making. *Family Business Review, 15*, 205–223.
Pieper, T. M., Klein, S. B., & Jaskiewicz, P. (2008). The impact of goal alignment on board existence and top management team composition: Evidence from family-influenced businesses. *Journal of Small Business Management, 46*, 372–394.
Poza, E. J. (2009). *Family business* (3rd ed.). Mason: Thomson South-Western.
PriceWaterhouseCoopers. (2007/8). *Making a difference: The PriceWaterhouseCoopers family business survey*.
Shepherd, D. A., & Zacharakis, A. (2000). Structuring family business succession: An analysis of the future leaders' decision-making. *Entrepreneurship Theory and Practice, 24*(4), 25–41.
Siler, J. F. (2007). *The house of Mondavi: Rise and fall of an American wine dynasty*. New York: Gotham.
Sirmon, D., & Hitt, M. (2003). Managing resources: Linking unique resource management and wealth creation in family firms. *Entrepreneurship Theory and Practice, 27*, 339–358.
Tagiuri, R., & Davis, J. A. (1996). Bivalent attributes of the family firm. *Family Business Review, 9*, 199–208.
Ward, J. L. (1987). *Keeping the family business healthy*. San Francisco: Jossey-Bass.
Ward, J. L. (1988). The active board with outside directors and the family firm. *Family Business Review, 1*, 223–229.
Weber, J., Lavelle, L., Lowry, T., Zellner, W. (2003). *Family Inc*. Special report, Bloomberg Businessweek.

Enlightened Shareholder Value: Is It the New Modus Operandi for Modern Companies?

Stelios Andreadakis

Abstract The present financial crisis has led to more and more calls for changes in the way modern companies operate. The need for increased scrutiny of corporate governance, greater corporate accountability and monitoring has been repeatedly highlighted. As a result, a new trend has been developed the last few years, according to which business success and shareholder value cannot be achieved solely through maximizing short-term profits, but instead through market-oriented yet responsible behavior. Failure to effectively manage both the financial and non-financial aspects of corporate responsibility places shareholder value at risk. However, it is extremely difficult to achieve total transformation of the objectives of the company or the market system, thus the right approach is not to shift the focus away from shareholder value, but to reaffirm shareholder value as the central focus of corporate responsibility. The rules of the corporate game have changed and corporate boards are required to change the existing corporate mentality, in order to create companies, which are sustainable and economically, ethically and socially responsible. The enlightened shareholder value theory represents an attempt to strike a balance between shareholders' primacy and corporate stakeholders' interests. Effective corporate social responsibility management is not incompatible with shareholder value and having wider interests can be the key to long-term financial performance. Companies should not be seen only as vehicles for profit maximization, but as having a wider social role. The companies, which are willing to change their mentality and adopt a long-term perspective, will be rewarded with sustainability and efficiency.

S. Andreadakis (✉)
Oxford Brookes University, Oxford, UK
e-mail: sandreadakis@brookes.ac.uk

S. Boubaker et al. (eds.), *Corporate Governance*,
DOI 10.1007/978-3-642-31579-4_18,

1 Introduction

In 1776 Adam Smith wrote that 'an invisible hand of self-interest' moved to create a total environment in the best interests of 'the many', when each of us acts to maximize our own individual interests (Smith 1974). Economic development was a challenge, based on striking the right balance between the common good and each one's own interests. In other words, it was necessary for all actors in the world economic scene to realize that the greater good was to be served by individuals actively seeking to optimize their own best interests. Despite the simplicity of this idea, our society has been unable to strike the right balance up to this day 235 years later.

The corporate objective of modern companies is an 'extremely varied, inclusive and open-ended' notion and it has been for many years an abstract concept in the corporate vocabulary (Clark 1986, p. 473). The debate has triggered the emergence of two competing schools of thought, known as the shareholder value theory and the stakeholder theory. These two theoretical approaches consist of distinct philosophies and are based on various arguments, in an attempt to establish the ideal theoretical framework underpinning the corporate objective and, in essence, defining the scope of company law (Letza et al. 2004; Blair and Stout 2006, p. 473).

While there is still no consensus among academics regarding which of the two models – the shareholder-value or stakeholder-value model – is more efficient, the present chapter considers an alternative model of corporate governance that transcends the classic shareholder-stakeholder polarization. The 'enlightened shareholder value' approach represents an attempt to strike a balance between shareholders' primacy and corporate stakeholders' interests. Effective corporate social responsibility management is not incompatible with shareholder value and having wider interests can be the key to long-term financial performance.

The chapter will commence by examining the background of the new approach, its roots and objectives, while responding to the criticism and concerns that have been raised by the proponents of the other two models. Then, it will examine how enlightened shareholder value links up with the existing polarization of theories and whether it can inspire modern companies in their quest for optimal performance and responsible management. The focus is on whether enlightened shareholder value can fulfil its promises and, if not, whether it can be useful as a driving force for both the ongoing and future corporate governance reform initiatives.

The challenge for future corporate governance reform worldwide is how best to balance the often conflicting interests of a company's shareholders and stakeholders in order to keep the company in the pathway of success and sustainability. The rules of the corporate game need to be changed and it remains to be seen whether corporate boards and management team are willing to become a bit more ethical and 'enlightened' or whether the roots of shareholders primacy are so strong that only strict state legislation can change the existing corporate mentality.

2 Shareholders' Primacy and Wealth Maximization

Shareholder value theory has long been the dominant theory in the Anglo-Saxon jurisdictions (Macey 1991; Black and Kraakman 1996). It represents the strict, but traditional approach to corporate objective. The spotlight of shareholder theory is placed on the interests of shareholders and the sole purpose of companies is limited to the maximisation of shareholder wealth. The keystone of this proposition lies on the view that shareholders are the owners of the company, as the contributors of capital, and thus they are the residual claimants. The residual claimants have the primary stake in how the company operates, benefiting if the company's fortunes increase, but they will suffer loss in case the company fails to be profitable and becomes insolvent (Gamble and Kelly 2001; Easterbrook and Fischel 1989, p.1426).

The period after the crash of 1929 in the United States was decisive for the dominance of the shareholder value theory and has marked the start of endless debates regarding the regulation of companies (Deakin 2005, p. 13). In 1930, Adolf Berle and Merrick Dodd had a fierce exchange of views on the issue of the corporate objective. Berle (1931, p.1049; 1932, p. 1370) supported that the powers given to the managers were to be exercised for the benefits of the shareholders,[1] an assertion that became really popular following the introduction of the notion of the separation of ownership and control (Berle and Means 1932). Under the agency relationship the shareholders (principals) delegate some decision-making authority of the company's business to the directors (agents), in order to run the business on their (the shareholders') behalf. The owners of the company effectively hand over the control of the company to the directors, who are more skilled, experienced, efficient and thus more suitable to implement the corporate strategy and achieve the company's goals. Extending the theory of separation of ownership and control, the shareholder value principle placed the interests of the shareholders ahead of any other party, who might affect or be affected by the conduct of the company. Companies were required to be run in such a way as to maximize market value of the company 'through allocative, productive and dynamic efficiency' (Mayer 1997, p.155).

The same 'objective' has also been supported a few decades later by the Nobel Prize winner, Milton Friedman (1970), who highlighted that the only social responsibility of business is to increase its profits. Although Friedman was not referring to profits in the sense of immediate profits, he has been very frequently cited as a supporter of profit maximization as the main objective of companies. He was actually supporting a more sophisticated form of profit maximization, backing up Berle's agency theory: 'corporate executives, provided they stay within the law, have responsibilities in their business activities other than to make as much money for their stockholders as possible' (Friedman 1970; Bevan 2008).

[1] For Berle, shareholders are the legitimate and only claimants to corporate profits, not necessarily because they are the owners in the traditional property sense, but because they represented to some extent the welfare of the general public.

Since then, the theory has attracted many supporters and its popularity reached remarkably high levels: In 2000 it was proclaimed that the Anglo-American corporate governance system based on shareholder primacy had succeeded and European stakeholder systems were converging to the Anglo-American approach (Hansmann and Kraakman 2001). The irony is that not long after these statements a domino of corporate collapses and scandals in both sides of the Atlantic made it clear that the system was not flawless. The scandals at the outset of the new millennium were followed by the demise of major banks, such as Northern Rock in the UK and Lehmann Bros in the US (Keay 2011, p. 49). The alarm had gone off, as the virus that had initially infected companies was now expanding to banks and financial institutions. A change of direction was necessary, as corporate governance structures and financial regulation were under scrutiny for all these failures. The deficiencies of the much-advertised Anglo-American system were becoming obvious, investors and stakeholders has lost their trust to the system and voices asking for reforms were becoming louder and louder.

3 The Rise of Stakeholders and the Development of the Stakeholder Concept

The 1970s signalled the gradual development of stakeholder theory addressing the issues of the purpose and governance of companies. At the time, there was a considerable shift in theory and a debate regarding the desirability of reform of companies' organisation. A crucial issue was whether the shareholder value concept ignored the representation of stakeholder claims in the company, whether directors' duties should be broadened to include stakeholders' interests as well as whether there could be an alternative theory to the traditional shareholder value paradigm (Gamble and Kelly 2001, pp. 112–113).

Therefore, stakeholder theory represented an attempt to provide an account of the corporate purpose and an alternative to the traditional shareholder value doctrine (Langtry 1994, p. 431). It was presented as a more refined answer to the question of the corporate objective, not as limited as the shareholder theory and definitely not so myopic. There was a widespread perception that the British and American economies were losing ground, and that in particular British and American companies in some sectors were being outcompeted by German and Japanese companies (Gamble and Kelly 2001, p. 113). Companies were seen as vehicles whose sole function is to promote the economic interests of their shareholders and stakeholders were not so keen in making investments to such companies. Shareholder value theory was becoming an obstacle to the development of relationship of trust with the company's stakeholders and consequently to long-term profits (Kiarie 2006, p. 332).

Stakeholder value theory was built on the realization that the shareholder paradigm had one major flaw identified by Dodd back in the 1930s. Since there is

no law or legal principle that could make directors and managers so loyal to shareholders that they would serve their interests unquestionably, the management team should be free from any shareholder constraints and be encouraged to become servants of the community instead (Dodd 1935, pp. 203, 205). It was a rather ground-breaking idea to treat corporate managers as 'guardians of all the interests, which the corporation affects and not merely servants of its absentee owners', the shareholders (Dodd 1932, p. 1157). Stakeholders were all seen as residual risk-holders and the wealth-creating function of a company could not afford to disregard all stakeholders' interests. Corporate success and effective management entails the adequate creation of benefits and minimum adverse effects for all groups of stakeholders. Levitt in 1958 made a valuable contribution for the crystallization of the notion of stakeholderism. He argued that companies should continue to be concerned with improving production and increasing profits, while at the same time abiding by the rules of the game, which include acting honestly and in good faith, and that social problems should be left for the state to address (Levitt 1958).

During 1960s and 1970s more pieces were added to the jigsaw called stakeholder value theory. Stakeholders were not seen as externalities to strategic planning and management process anymore. They were offered a more active role in the decision-making process. The new theory was intended to ensure stability and certainty, as opposed to the prevailing shareholder value theory (Dill 1975, p. 58). The business environment was relatively static at that time and definitely much more stable comparing to the last few years. Therefore, the proponents of the stakeholder theory did not want to influence specific stakeholder behaviour; they only wanted to be able to predict the future developments in the business environment, in order to adapt it with the capabilities of the company. Changing the role of stakeholders from influencers to active participants, their relationship with the company became bidirectional and one of interdependency (Freeman et al. 2010, p. 34). Even Carr (1968), in spite of defending the pure profit-making view, recognized that if a company wishes to take a long-term view of its profits, 'it will need to preserve amicable relations with whom it deals'.

In the 1980s the theory became really popular and credit must be given to the work of Richard Edward Freeman, which gave a massive boost to this theoretical approach. The theory did not manage to replace the shareholder value theory, mostly because it was not easy to define 'stakeholders' and create a clear picture of how the theory works in practice. Friedman and Miles (2006, p. 46) confirmed the problem with the identification of stakeholders and the allocation of resources between them, as, after reviewing the relevant literature, they found 55 different definitions of what constitutes a stakeholder group. Inevitably, the theory faded in the vagueness of 'growth and greed' attitudes of the 1980s. The development of its content would continue, as the ideas of Freeman and stakeholderism in general gave rise to a huge amount of literature (Laplume et al. 2008) both supporting and criticizing the contender of the long-established shareholder-orientated theory.

Stakeholder value theory came back in the surface again in the late 1990s and the early twenty-first century, embodying social and environmental concerns on the operation of modern companies, particularly multinationals, worldwide (Tricker 2008,

p. 230). The time was right for a new approach, following the failure of the shareholder theory to live up the expectations of the investing body and be a driving force to corporate success. Instead of this, the business community was hit by a series of corporate scandals, which have indelibly marked corporate history, such as Enron, WorldCom, Parmalat, Adelphia and numerous more. Some leading writers, such as Freeman (1994), were so optimistic for the new era that even proclaimed boldly that stakeholder theory was generally so pre-eminent that shareholder value is dead.

Having gone through years and years of evolution, stakeholder theory was an extremely attractive choice among companies, which were worried by the culture of fraud and opportunism, as a result of the pressure for immediate profits. It was offering a promising new start built on a more ethical and stable basis. The notions of public environmental awareness, social consciousness, and sustainability were gradually integrating in people's mentality and life, and companies were expected to demonstrate the inclusion of social and environmental concerns in business operations and in their interactions with stakeholders (Van Marrewijk and Verre 2003, p. 107). Companies were starting to realize that they had to adapt to the new mentality, as they could not afford to ignore any stakeholder concern that might affect its ability to generate long-term owner value (Sternberg 1997, p. 9). The stakeholder theory was promoting the idea that 'the goal of any company is or should be the flourishing of the company and all its principal stakeholders' (Werhane and Freeman 1999, p. 8). Shareholders were not excluded from the companies' strategic planning, as they were considered part of the stakeholders group, but they enjoyed no primacy over the other stakeholders. Dividing the world into the concerns of the two is "the logical equivalent of contrasting 'apples' with 'fruit'" (Freeman et al. 2004, p. 365).

It was positive that shareholders were considered as part of the stakeholders team and the managers were still expected to promote the shareholders' interests, though not exclusively any more. For some jurisdiction, such as the UK, directors of many listed companies and large private companies that were subject to public scrutiny were almost certainly considering a wider range of factors even before this turn towards stakeholderism (Alcock et al. 2007). Another positive element was flexibility, as there are no general responsibilities that apply to every company in exactly the same manner. In other words, it has the advantage of not enforcing a standard answer for all businesses and of being dynamic rather than static (Sachs and Maurer 2009, p. 542). Responsibilities toward stakeholders depend on the characteristics of the company's value creation process and on the ways each stakeholder contributes to it. In this way, stakeholders feel that they are an integral part of the company's structure and operation and they are motivated to stay closely connected to the company, cooperate and contribute to its long-term success in the marketplace. Overall, the theoretical basis of stakeholderism is strong and this is why the theory has become so popular on certain periods of the business history. Despite the diversity in the expressed views and suggested approaches among the advocates of stakeholder value theory (Donaldson and Dunfee 1994; Attas 2004; Jones and Wicks 1999; Orts and Strudler 2002), overall, the theoretical basis of

stakeholderism was strong enough to attract supporters and this is why the theory has become so popular on certain periods during the past few decades. It is also interesting to note that, although a number of scholars (Key 1999; Waxenberger and Spence 2003; Lepineux 2005; Weaver and Trevino 1994) have openly rejected this idea and questioned the theory's foundations, the stakeholder concept was promoted as having the potential to deliver a theory with practical usefulness for management. Its importance and its prevalence, though, are undermined by its problematic implementation.

One of the main deficiencies of the stakeholder value theory is that it takes for granted that decision-making process can easily shift towards a more stakeholder-orientated direction. However, this view seems to overlook the practical difficulties, such as the problem of hierarchy among the groups of stakeholders and their often conflicting interests. Directors and managers are not always capable of striking the right balance and keeping all stakeholders relatively satisfied. Sometimes this is simply impossible, given the peculiarities of each stakeholder group, and their expectations from the company's management, which often can be by definition incompatible with each other. Motivation is another issue that has also been problematic. Managers are not rewarded or compensated for considering stakeholders' interests. Stakeholder management does not provide bonuses for stakeholder-orientated managers and directors, as it was the case for managers succeeding in value maximization (Benson and Davidson 2009, p. 930).

Theorists and supporters of the stakeholder value theory have failed to provide directors with guidance on how to put the stakeholder model into practice. Without such guidance, the outcome will never be the expected one and stakeholder value theory will not succeed in offering modern companies what the shareholder value theory failed to offer: long-term value maximization, stability and prosperity. For example, there will be times when certain groups of stakeholders will benefit at the expense of others and there will still be debates about primacy of one stakeholder over the other. The work of Freeman is remarkable, as he has been trying for years to develop the most appropriate illustration of the stakeholder model: from the original framework, where the company is the hub of a wheel and stakeholders are at the ends of spokes around the rim (Freeman 1984, p. 25; Frooman 1999), till the adapted version, where there are five internal and six external stakeholders, all of them placed around the company (Freeman 2003). He has been aiming to refine and improve the theory, recognising the problems created by its inherent ambiguity and breadth, in an attempt to facilitate the correct interpretation of the framework. However, what he has not managed to do is to show corporate managers how to bring stakeholderism in the boardroom.

Over the years, the uncontrolled broadening of the theory's scope and application, coupled with the parallel multiplication of stakeholder definitions, has created confusion (Fassin 2009). Criticism was focusing, as expected, on the theory's vagueness and ambiguity, while it became clear that the theory would not stand the test of time, unless clarification and guidance was provided for all the misconceptions and misinterpretations that were threatening to undermine the whole concept of stakeholder-orientated management. It has been argued that

the shareholder value theory proposes a single-objective view, which is 'a narrow view that cannot possibly do justice to the panoply of human activity that is value creation and trade, i.e., business' (Freeman et al. 2004, p. 364). A unique, but unsatisfactory, answer is as bad as a wide range of answers without any assistance regarding the performance of a balancing act among these answers.

Finally, notwithstanding the consistent attempts of researchers to justify that the stakeholder approach is indeed better than the shareholder value one, this did not happen. Numerous studies (Sundaram and Inkpen 2004; Griffin and Mahon 1997) were conducted during the last 25 years, but it was not possible to empirically prove the existence of a clear link between stakeholder management and corporate performance. There is also no clear yardstick by which to judge the managers performance. Companies have been unable to figure out whether they were in the right path or not and, there is no 'principled way within the stakeholder construct that anyone could say that a manager has done a good or bad job' (Jensen 2001b).

As a result, the stakeholder model was heavily criticized for lack of clarity in its mission. As Jensen (2001b) has argued, 'when there are many masters, all end up being short-changed'. Directors could easily engage in opportunistic behavior, taking advantage of any arising opportunity to benefit themselves at the expense of others, because they essentially end up accountable to no one (Keay 2008; Easterbrook and Fischel 1991, p. 38), but an 'amorphous group' (Keay 2010, p. 79). Companies and the business world in general were ultimately puzzled, as the traditional shareholder value theory was collapsing in practice and the promising stakeholder approach was not convincing enough that it holds the solution to the problems of greed, short-termism and mismanagement.

4 Enlightened Shareholder Value: Corporate Objective Revisited

Jensen was one of the first, who identified the problem and decided to go beyond the polarization of the two existing theories. He came up with enlightened value maximization (Jensen 2001a). At first glance, it looks as if he tried to combine the positives of the two approaches, in an attempt to eliminate their disadvantages. More concretely, he did not reject value maximization as the primary aim of modern companies, but he recognised that companies cannot maximize their value without taking good care of their stakeholders. To quote Jensen's (2001a) words, '200 years' worth of work in economics and finance indicate that social welfare is maximized when all companies in an economy maximize total company value'. Stakeholders cannot be ignored by corporate managers any more. The time has long passed, when strict compliance to the myopic principle of unquestionably promoting shareholders' interests was the rule. The interdependencies that exist among the company and its stakeholders go beyond simple contractual or commercial exchanges and the ability to establish and maintain such relationships within its

entire network of stakeholders has been recognized as one of the determining factors for the long-term survival and success of every company (Post et al. 2002).

Jensen's theory clearly aims at striking the right balance between shareholder primacy and stakeholder management. His perception of corporate objective uses Friedman's thoughts as a starting point, but blends them with Freeman's views about ethics and economics. To be more specific, for Friedman the purpose of a business is to use its resources, engage in activities designed to increase its profits so long as it stays within the rules of the game. By rules of the game Friedman (1970) implies companies operating in an environment of open and free competition without deception or fraud. Enlightened theory adds one more dimension in business activity, the moral one. Stakeholder theory proponents see a moral dimension to business activity, because economics 'is clearly infused or embedded with ethical assumptions, implications, and overtones' (Carroll 2000). According to Freeman et al. (2004), 'values are necessarily and explicitly a part of doing business, and rejects the idea that ethics and economics can be clearly separated. In this way, the enlightened theory aims at repelling the argument brought forward by the shareholder value theory that corporate managers should not be allowed to pursue moral goals at the expense of profitability, since this is the only objective function of the company (Branco and Rodrigues 2007). It is true that companies are not expected to replace the governments or NGOs undertaking the role of promoters of social responsibility. However, being socially responsible and ethical does not contradict with the obligation to maximize shareholder value.

During the same period John Kay also highlighted the need for a radical change not only in corporate objective, but also in market operation and business regulation. More specifically, Kay (2002) talked about developing a genuinely inclusive capitalism 'in which securities markets are mechanisms for financing and refinancing companies rather than hyperactive casinos; in which employees and investors have the common objectives of satisfying customers and outperforming competitive products; in which the regulation of business, like law generally, is designed to enforce on a minority the behaviour which most people adopt naturally'. The question was whether this new and ambitious idea could be transform into a practical approach, suitable to guide modern companies outside the labyrinth of scandals and short-termism.

Enlightened value maximization attracted considerable attention in both the academic and the business community. Brickley, Smith, and Zimmerman (2002) supported the new approach indicating that 'creating shareholder wealth involves allocating resources to all constituencies that affect the process of shareholder value creation, but only to the point at which the benefits from such expenditures do not exceed their additional costs'. Being in the centre of attention allowed Jensen's theory to evolve and grow quickly. The outcome was what we call today enlightened shareholder value theory (ESV). The time was right for a new theory, which could claim supremacy over the two other theories.

ESV is a hybrid approach which, while retaining the shareholder primacy paradigm, requires long-termism and promotes welfare for all the stakeholders (Fisher 2009). Initially, it was seen as being nothing more than 'shareholder

primacy with an ESG cherry on top' (Branson 2001). Or even though it creates stakeholder' dreams, it only serves shareholder realities (Likierman 2006). Subsequently, it was presented as the middle ground between the two poles (Lian Yap 2010), the emerging third way to the corporate objective and the representation of the balanced compromise between the two extremes. Finally, it was recognised that the ESV 'kills two bird with one stone, since stakeholders get more consideration and shareholders maintain the profit maximisation goal and remain to hold the directors accountable' (Kiarie 2006).

The ESV concept was carefully developed as a hybrid, but autonomous approach. It attempted not to fill-in the gaps of the previous theories, but to offer a different option to corporate managers. ESV was aiming at bringing the corporate objective debate in the twenty-first century, using an innovative methodology. It preserved the basis of the shareholder value theory, maintaining the old traditional way of doing business, and added a new dimension: the consideration of stakeholder interests. ESV encourages long-termism in the company's affairs. There is no other way to balance the conflicting interests of all stakeholders but through inclusive consideration of all the factors that affect the company's long term performance and prosperity, highlighting the importance of trust and sustainability. To put it simply, ESV is seen as providing a radical reform (Roach 2005).

The focus on shareholders' interests and value maximization was extremely difficult to shift instantly, thus the new approach is still grounded squarely within a shareholder value paradigm, which insists on economic efficiency and shareholder wealth maximization (Harper Ho 2010). However, it is much more enlightened than its predecessor, as profit maximization is the confirmation that a company is managed properly, not its main goal. Profits are the outcome of the correct implementation of the enlightened shareholder value theory, not the overriding purpose. Companies should function so as to create value, not only for the shareholders, but for all their stakeholders, as shareholders represent simply one of the many stakeholder groups (Keay 2010, p. 256).[2] Pluralism asserts that no stakeholder group has priority over the other and requires directors to engage into a balancing exercise to benefit all the different constituencies and not just the shareholders (Kiarie 2006, p. 340). At this point, it slightly deviates from the stakeholder value as well, in the sense that managers are not expected to engage in managing the interests, needs, and viewpoints of the company's stakeholders (Friedman and Miles 2006).

Modern companies, especially multinational ones, are considered as highly influential social actors whose operations significantly affect society. Therefore, the most suitable theory for dealing with the question of corporate objective should be a theory that reflects the current socio-economic reality of the business world and not a purely theoretical one, which is difficult to be implemented in practice. The ESV seems to be the missing link between corporate management and financial

[2] On contrary, Freeman views profit maximization as the end result of effective stakeholder management, which he considers the fundamental purpose of the firm, rather than a means to an end. On this issue, see Agle et al. (2008).

performance, the balancing point between the private nature of modern companies against the impact of their operations to the public by recognizing their primary economic function, but at the same time requiring directors and managers to consider the direct external impact of profit maximization. This was also supported by empirical evidence (Copeland et al. 1995) indicating that 'increasing shareholder value does not conflict with the long-run interests of other stakeholders. Winning corporations seem to create relatively greater values for all stakeholders. . .Shareholders are the only stakeholders of a corporation who simultaneously maximize everyone's claim in maximizing their own'.

Soon after, when the enthusiasm went down, the other side of the coin was revealed: ESV had several flaws, which could not be simply ignored. In fact, the ESV has not only espoused the advantages of each theory but also some of their drawbacks. It was not really clear how does ESV represent an improved approach, compared to shareholder and stakeholder approaches.

First of all, the new theory was criticized for continuing to be shareholder-orientated. The interests of the shareholders of the company are still of central importance, insofar as the directors are to act in a way that would promote the success of the company for the benefit of its members as a whole. Directors are required to consider a number of factors in determining the best way to perform this duty, but the end result seemed to once more shareholder-centric. Inevitably, concerns have been expressed regarding the efficiency of the new theory and the extent to which it really goes far enough to protect the other groups of stakeholders. Secondly, as it was the case with the stakeholder value approach, ESV lacks precision as it fails to provide guidance to directors for balancing the interests of all the company's stakeholders. Adding to that, the issue of enforcement is another considerable weakness of the approach. Namely, the ESV fails to hold the directors accountable to stakeholders, and thus, stakeholders have little or no means of bringing an action when their interests are ignored.

These 'defects' of the approach are quite serious and it is not surprising that they have been interpreted as the signals of its failure to be seen as a way of moving towards regarding the corporate purpose (Keay 2007). Such criticism is valid and justified, but instead of rejecting all new proposals, perhaps it is advisable to be constructive and focus on contributing towards the improvement of this new approach. Corporate managers and directors were not principally against the ESV theory and they had no objections to the change of direction towards long-termism and enlightenment. A study by the *Financial Times* (cited in Scholes and Clutterbuck 1998, p. 230.) of Europe's most respected companies found that chief executive officers were of the view that one of the features of a good company was the ability to ensure that there was a balancing of the interests of stakeholder groups. The question is how this balancing will take place in practice, avoiding conflicts of interest and disappointment of certain stakeholder groups and at the same time keeping shareholders confident that the success of the company is properly promoted?

According to Lorsch and MacIver's study (1989) on director behaviour, the majority of directors regard themselves as accountable to more than one

constituency and this leads to a complicated decision-making process. An unfettered discretion has been vested in directors as to what interests and to what extent they take into account in their decision-making process. Nevertheless, it is not always easy to perceive what is in the best interests of all stakeholders, and directors have to consider, evaluate and balance a variety of factors before deciding what bests promotes the success of the company. Furthermore, the answer supported by the stakeholder theory that the advantages gained by some parties are matched by the disadvantages besetting others is not at all satisfactory. Guidance is essential and it is rather disappointing that the creators of the ESV did not learn from the mistakes of the past and failed to rectify a defect that was also identified in the stakeholder value approach. Balancing involves an 'inherently subjective process' (Parkinson 2003, p. 498) and has been the subject of significant criticism over the years (Hurst and McGuiness 1991; Siems 2002), particularly in relation to the need to balance the interests of constituencies. However, we should not overlook the fact that this balancing exercise is clearly included in the job description of directors, if not one of the primary functions of management, as it has been suggested by the relevant literature (Keay 2005; Ansoff 1984; Harrison and Freeman 1999; Aoki 1984; Donaldson and Preston 1995) and confirmed by the courts' jurisprudence, in cases like *Unocal Corporation* v *Mesa Petroleum Corporation* (1985) *493 A 2d 946*. Directors, who do not possess the appropriate skills and ability for this, should not be considered competent enough. Of course this does not mean that directors should be left unguided and unattended when performing such a significant task. This is not a proper implementation of pluralism and in any case one of the intentions of the creators of the ESV was to make directors' duties clearer and more accessible. Without introducing a sort of practical guidance or a 'determinate metric for assessing options', ESV would end up being a theory that seeks to embrace the new, without being able to support it in practice. (Lian Yap 2010)

The jury is still out there on the suitability of ESV to take over from the shareholder and stakeholder value theories. More time is required for consensus to be reached. Modern companies and their management teams are under the spotlight to see whether they can erase the mistakes of the past and change their 'DNA' through enlightenment. Until then, there a few lessons that the business world needs to learn, as they are crucial for the future of international corporate governance.

4.1 Lessons to Be Learnt

As indicated by Freeman et al. (2004), the shareholder and stakeholder theories should not be considered as opposed, in the sense that even shareholder theory can be regarded as a version of stakeholder theory, because stakeholder theory admits many possible normative cores. As a particular version of stakeholder theory, the moral presuppositions of the shareholder value approach can be seen as encapsulating useful elements, such as voluntary cooperation and individual

initiative to improve everyone's circumstances. This may sound controversial given the antagonism between the two theories during the last decades, but it is not and ESV is perhaps the best illustration of this point. Although the ESV has been promoted as a new modern approach, it is in effect an improved version of both pre-existing theories. If the supporters of each theory, instead of looking for arguments to undermine each other's views, were working to find a solution to the practical problems of the implementation of these theories, they would have probably found the right formula to promote the success of the companies for the welfare of all parties involved.

The shortcomings of shareholder value approach signalled the review of the system and the rethinking of the whole corporate objective debate. As Deakin and Konzelmann (2003, p. 584; 2004, p. 141) noted, Enron's business model exemplified the 'pathology of the shareholder value system' and it was argued that 'until the power of shareholder value norm is broken, effective reform of corporate governance will be on hold'. No surprise that several academics, shaken by the complete failure of shareholder value theory to foresee, prevent and minimise the effect of corporate failures, shared the view that the value maximisation as the overarching corporate objective is too simplistic and superficial (Miller 1988). However, as it was stated earlier value maximization cannot be completely ruled out from a company's strategy and management. Profit maximization is one of the main reasons why people choose the corporate form and corporate managers will always continue pursuing profits, high share prices and gainful deals. At that time, instead of moving to the other extreme, theorists should have thought of fighting excessively short-termism by adding stakeholderism in the equation without eliminating shareholder value. This would have been a great addition, as stakeholder theory focuses us on the multiplicity of ways that companies and entrepreneurs can create value, make our lives better, and effectively change the world (Agle et al. 2008). 'Stakeholder theory can be viewed as a conceptual cocktail concocted from a variety of disciplines and producing a blend of appealing sociological and organizational flavours', combining elements of ethics, philosophy, economics, law, political theory as well as organizational social science (Solomon 2010, p. 15).

The second lesson is that even if we accept that the stakeholder value model is not the answer to the corporate objective dilemma, we cannot disregard the value of stakeholders for all modern companies. As argued earlier, the relationship of the company with its multiple constituencies are perhaps the principal means of sustaining and enhancing its company's wealth-creating capacity. The stakeholders, who engage in voluntary relationships with a company and contribute directly to its operations, such as investors, employees, customers, market partners, obtain a stake in its operations. They thus expect to be better off as a result of the relationship either by gaining greater or lesser benefits or experiencing greater or lesser harm (Branco and Rodrigues 2007). By requiring directors to focus on long-term value, however, the result of ESV may in fact be the reduction of conflicts between shareholder value and stakeholders' interests where ongoing commitment and support from stakeholders is required for ongoing profitability (Beauchamp and Bowie 2004).

Even assuming that ESV will not always improve profitability, however, it is possible that re-focusing directors back to the generation of long-term wealth rather than short-term stock market gains will result in less market volatility (Richardson 2007).

5 Conclusion

This chapter has explored the development of the three main theories on corporate objective, in an attempt to determine how corporate directors make – or should make – decisions and whose interests the company should serve: shareholders or other stakeholders? The discussion commenced with the traditionally dominant theory of shareholder value theory. It then examined the emergence of stakeholder value, its benefits and the factors responsible for its eminence, before moving to the most recent approach, the promising enlightened shareholder value theory. In the last section, the chapter considers the reasons why ESV has not yet established as the dominant paradigm as well as the lessons we can learn from the development and the rivalry of the three theories.

Theories evolve over time and each new step builds upon its predecessors. Enlightened shareholder value theory can be the final word in the long-lasting corporate objective debate, provided that directors and managers are properly equipped to apply it in the boardrooms. Shareholder value maximization remains the goal of the company, but it should be pursued in a way that a long-term view of the company is encouraged. Stakeholder value theory can inspire directors in creating the right methods and finding the right tools to satisfy customers, increase employee responsibility and empowerment and create stable, trust-based supplier relations, all with a view to generating value for the firm in the long run' (Pichet 2011; Agle et al. 1999).

The real objective behind this development of theories is to create companies, which are sustainable and economically, ethically and socially responsible. Therefore, it is mistaken to confine ourselves in conflict between the shareholder and the stakeholder model. John Kay (1996) was pointing to the right direction by saying that it is sensible to consider adapting the corporate model to reality 'rather than reality to the model' (Kay and Silberston, 1996). This is what ESV is trying to achieve. It is erroneous to criticize ESV as a mere re-branding of a shareholder value adapted to placate the increasingly concerned stakeholder community. It is definitely more than that. It puts emphasis on the long-term sustainability of the firm and the need for relationships of trust, while maintaining efficiency and accountability accruing from the profit maximization goal. In this way, it provides a superior and more adaptable theory; a model which is flexible, adjustable to the needs of the market, and makes the company attractive to investors. It is essential for modern companies to embrace a stronger stakeholder perspective given the changing nature of modern companies.

'Maybe this time CEOs will get it. If they don't, we'll be traveling back to the future once more, with yet more rounds of scandal and recession' (Pfeffer 2009).

Companies that are willing to make the necessary changes and adapt to the constantly changing socio-economic environment will have a competitive edge. 'Those that don't make that effort won't be a problem, simply because ultimately they won't be around' (Lovins et al. 1999, p. 158).

References

Agle, B. R., Mitchell, R. K., & Sonnenfeld, J. A. (1999). Who matters to CEOs? An investigation of stakeholder attributes and salience, corporate performance, and CEO values. *Academy of Management Journal, 42*(5), 507–525.

Agle, B. R., et al. (2008). Dialogue: Toward superior stakeholder theory. *Business Ethics Quarterly, 18*(2), 153–190.

Alcock, A., Birds, J., & Gale, S. (2007). *Companies Act 2006: The new law*. Bristol: Jordans.

Ansoff, H. (1984). *Strategic management*. Englewood Cliffs: Prentice-Hall.

Aoki, M. (1984). *The co-operative game theory of the firm*. Oxford: Clarendon.

Attas, D. (2004). A moral stakeholder theory of the firm. *Zeitschrift fur Wirtschafts- und Unternehmensethik, 5*(3), 312–318.

Beauchamp, T., & Bowie, N. (Eds.). (2004). *Ethical theory and business*. New York: Pearson Education.

Benson, B. W., & Davidson, W. N., III. (2009). The relation between stakeholder management, firm value, and CEO compensation: A test of enlightened value maximization. *Financial Management, 39*(3), 929–963.

Berle, A. (1931). Corporate powers as powers in trust. *Harvard Law Review, 44*(7), 1049–1074.

Berle, A. (1932). For whom corporate managers are trustees: A note. *Harvard Law Review, 45*(8), 1365–1372.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. New York: Macmillan.

Bevan, D. (2008). Philosophy: A grounded theory approach and the emergence of convenient and inconvenient ethics. In M. Painter-Morland & P. Werhane (Eds.), *Cutting edge issues in business ethics* (pp. 131–152). Boston: Springer.

Black, B., & Kraakman, R. (1996). A self-enforcing model of corporate law. *Harvard Law Review, 109*(8), 1911–1982.

Blair, M., & Stout, L. (2006). Specific investments and corporate law. *European Business Organisation Law Review, 7*(2), 473–500.

Branco, M. C., & Rodrigues, L. L. (2007). Positioning stakeholder theory within the debate on corporate social responsibility. *Electronic Journal of Business Ethics and Organization Studies, 12*(1), 5–15.

Branson, D. M. (2001). Corporate governance 'reform' and the new corporate social responsibility. *University of Pittsburg Law Review, 62*, 605–647.

Brickley, J. A., Smith, C. W., Jr., & Zimmerman, J. L. (2002). *Designing organizations to create value: From strategy to structure*. New York: McGraw Hill Book Professional.

Carr, A. Z. (1968). Is business bluffing ethical. *Harvard Business Review, 46*(1), 143–153.

Carroll, A. B. (2000). Ethical challenges for business in the new millennium: Corporate social responsibility and models of management morality. *Business Ethics Quarterly, 10*(1), 33–42.

Clark, R. C. (1986). *Corporate law*. Boston: Little, Brown and Company.

Copeland, T., Koller, T., & Murrin, J. (1995). *Valuation, measuring and managing*. New York: Wiley.

Deakin, S. (2005). The coming transformation of shareholder value. *Corporate Governance: An International Review, 13*(1), 11–18.

Deakin, S., & Konzelmann, S. (2003). After Enron: An age of enlightenment? *Organisation, 10*(3), 583–587.
Deakin, S., & Konzelmann, S. (2004). Learning from Enron. *Corporate Governance, 12*(2), 134–142.
Dill, W. R. (1975). Public participation in corporate planning: Strategic management in a Kibitzer's world. *Long Range Planning, 8*(1), 57–63.
Dodd, E. M., Jr. (1932). For whom are corporate managers trustees? *Harvard Law Review, 45*(7), 1145–1163.
Dodd, E. M., Jr. (1935). Is effective enforcement of the fiduciary duties of corporate managers practicable? *University Chicago Law Review, 2*, 194–207.
Donaldson, T., & Dunfee, T. (1994). Toward a unified conception of business ethics: Integrative social contract theory. *Academy of Management Review, 19*(2), 252–284.
Donaldson, T., & Preston, L. (1995). The stakeholder theory of the corporation concepts, evidence, and implications. *The Academy of Management Review, 20*(1), 65–91.
Easterbrook, F., & Fischel, D. (1989). The corporate contract. *Columbia Law Review, 89*(7), 1416–1448.
Easterbrook, F., & Fischel, D. (1991). *The economic structure of company law*. Cambridge, MA: Harvard University Press.
Fassin, Y. (2009). The stakeholder model refined. *Journal of Business Ethics, 84*(1), 113–135.
Fisher, D. (2009). The enlightened shareholder-leaving stakeholders in the dark: Will Section 172 (1) of the Companies Act 2006 make directors consider the impact of their decisions on third parties? *International Company and Commercial Law Review, 20*(1), 10–16.
Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman.
Freeman, R. E. (1994). The politics of stakeholder theory: Some future directions. *Business Ethics Quarterly, 4*(4), 409–421.
Freeman, R. E. (2003). Lecture – Stakeholder management revisited: What's the state of the art? Leuven, 20 Nov 2003.
Freeman, R. E., Wicks, A. C., & Parmar, B. (2004). Stakeholder theory and the corporate objective revisited. *Organization Science, 15*(3), 364–369.
Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & de Colle, S. (2010). *Stakeholder theory: The state of the art*. Cambridge: Cambridge University Press.
Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times Magazine*, 13 Sept 1970.
Friedman, A. L., & Miles, S. (2006). *Stakeholders: Theory and practice*. Oxford: Oxford University Press.
Frooman, J. (1999). Stakeholder influence strategies. *Academy of Management Review, 24*(102), 191–205.
Gamble, A., & Kelly, G. (2001). Shareholder value and the stakeholder debate in the UK. *Corporate Governance, Corporate Governance, 9*(2), 110–117.
Griffin, J. J., & Mahon, J. F. (1997). The corporate social performance and corporate financial performance debate. *Business and Society, 36*(1), 5–31.
Hansmann, H., & Kraakman, R. (2001). The end of history for corporate law. *Georgetown Law Journal, 89*(2), 439–468.
Harper Ho, V. (2010). Enlightened shareholder value: Corporate governance beyond the shareholder-stakeholder divide. *Journal of Corporation Law, 36*(1), 59–112.
Harrison, J., & Freeman, R. E. (1999). Stakeholders, social responsibility and performance: Empirical evidence and theoretical perspectives. *Academy of Management Journal, 42*(5), 479–485.
Hurst, T. & McGuiness, L. (1991). The corporation, the bondholder and fiduciary duties. 10 *Journal of Law and Commerce 187*, 197–218.
Jensen, M. C. (2001a). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance, 14*(3), 8–21.

Jensen, M. C. (2001b). Value maximization, stakeholder theory, and the corporate objective function. In J. Andriof et al. (Eds.), *Unfolding stakeholder thinking* (pp. 65–84). Sheffield: Greenleaf Publishing.

Jones, T., & Wicks, A. (1999). Convergent stakeholder theory. *Academy of Management Review, 24*(2), 206–221.

Kay, J. (1996). *The Business of Economics*, Oxford – New York: Oxford University Press.

Kay, J. (2002). Stakeholding misconceived. *Financial Times*, 12 Feb 2002. Available at: http://www.johnkay.com/2002/02/12/stakeholding-misconceived/.

Kay, J. & Silberston, A. (1996). Corporate governance. *Perspectives on Company Law,* vol 2. Available in the website: http://www.johnkay.com/1996/08/31/corporate-governance-with-aubrey-silberston.

Keay, A. (2005). Formulating a framework for directors' duties to creditors: An entity maximisation approach. *Cambridge Law Journal, 64*(3), 614–646.

Keay, A. (2007). Tackling the issue of the corporate objective: An analysis of the United Kingdom's 'enlightened shareholder value approach. *Sydney Law Review, 29*(4), 577–612.

Keay, A. (2008). Ascertaining the corporate objective: An entity maximization and sustainability model. *Modern Law Review, 71*(5), 663–698.

Keay, A. (2010). Stakeholder theory in corporate law: Has it got what it takes? *Richmond Journal of Global Law and Business, 9*(3), 249–300.

Keay, A. (2011). Moving towards stakeholderism*?* Constituency statutes, enlightened shareholder value and all that: Much Ado about little? *European Business Law Review, 22*(1), 1–49.

Key, S. (1999). Toward a new theory of the firm: A critique of stakeholder 'theory'. *Management Decision, 37*(4), 317–328.

Kiarie, S. (2006). At crossroads: Shareholder value, stakeholder value and the enlightened shareholder value: Which road should the United Kingdom take. *International Company and Commercial Law Review, 17*(11), 329–343.

Langtry, B. (1994). Stakeholders and the moral responsibilities of business. *Business Ethics Quarterly, 4*(4), 431.

Laplume, A. O., Sonpar, K., & Litz, R. (2008). Stakeholder theory: Reviewing a theory that moves us. *Journal of Management, 34*(6), 1152–1189.

Lepineux, F. (2005). Stakeholder theory, society and social cohesion. *Corporate Governance, 5*(2), 99–110.

Letza, S., Sun, X., & Kirkbride, J. (2004). Shareholding versus stakeholding: A critical review of corporate governance. *Corporate Governance, 12*(3), 242–262.

Levitt, T. (1958). The dangers of social responsibility. *Harvard Business Review, 33*(5), 41–50.

Lian Yap, J. (2010). Considering the enlightened shareholder value principle. *Company Lawyer, 31*(2), 35–38.

Likierman, A. (2006). Stakeholder dreams and shareholders reality. *Financial Times*, 19 June 2006. Available at: http://www.ft.com/intl/cms/s/2/4759259a-fafa-11da-b4d0-0000779e2340.html#axzz1VpuFk6GZ.

Lorsch, J. W., & MacIver, E. (1989). *Pawns or potentates: The reality of America's corporate boards*. Boston: Harvard Business School Press.

Lovins, A. B., Lovins, H. L., & Hawken, P. (1999). A road map for natural capitalism. *Harvard Business Review, 77*(3), 145–158.

Macey, J. (1991). An economic analysis of the various rationales for making shareholders the exclusive beneficiaries of corporate fiduciary duties. *Stetson Law Review, 21*, 23–44.

Mayer, C. (1997). Corporate governance, competition and performance. *Journal of Law and Society, 24*(1), 152–176.

Miller, R. (1988). Ethical challenges in corporate- shareholder and investor relations: Using the value exchange model to analyze and respond. *Journal of Business Ethics, 7*(1–2), 117–132.

Orts, E., & Strudler, A. (2002). The ethical and environmental limits of stakeholder theory. *Business Ethics Quarterly, 12*(2), 215–234.

Parkinson, J. (2003). Models of the company and the employment relationship. *British Journal of Industrial Relations, 41*(3), 481–509.
Pfeffer, J. (2009). Shareholders first? Not so fast. *Harvard Business Review, 87*(7–8), 87–95.
Pichet, E. (2011). Enlightened shareholder theory: Whose interests should be served by the supporters of corporate governance. *Corporate Ownership and Control, 8*(2–3), 353–362.
Post, J. E., Preston, L. E., & Sachs, S. (2002). Managing the extended enterprise: The new stakeholder view. *California Management Review, 45*(1), 6–28.
Richardson, B. J. (2007). Do the fiduciary duties of pension funds hinder socially responsible investment? *Banking and Finance Law Review, 22*(2), 145–201.
Roach, L. (2005). The legal model of the company the Company Law Review. *Company Lawyer, 26*(4), 98–103.
Sachs, S., & Maurer, M. (2009). Toward dynamic corporate stakeholder responsibility: From corporate social responsibility toward a comprehensive and dynamic view of corporate stakeholder responsibility. *Journal of Business Ethics, 85*(3), 535–544.
Scholes, E., & Clutterbuck, D. (1998). Communication with stakeholders: An integrated approach. *Long Range Planning, 31*(2), 227–238.
Siems, M. (2002). Shareholders, stakeholders and the 'Ordoliberalism'. *European Business Law Review, 13*(3), 139–151.
Smith, A. (1974). *An inquiry into the nature and causes of the wealth of nations*. New York: Random House/Modern Library.
Solomon, J. (2010). *Corporate governance and accountability*. Essex: Wiley.
Sternberg, E. (1997). The defects of stakeholder theory. *Corporate Governance, 5*(1), 3–10.
Sundaram, A. K., & Inkpen, A. C. (2004). The corporate objective revisited. *Organization Science, 15*(3), 353–363.
Tricker, B. (2008). *Corporate governance, principles, policies and practices*. Oxford: Oxford University Press.
Van Marrewijk, M., & Verre, M. (2003). Multiple levels of corporate sustainability. *Journal of Business Ethics, 44*(2/3), 107–110.
Waxenberger, B., & Spence, L. (2003). Reinterpretation of a metaphor: From stakes to claims. *Strategic Change, 12*, 239–249.
Weaver, G., & Trevino, L. (1994). Normative and empirical business ethics: Separation, marriage of convenience, or marriage of necessity? *Business Ethics Quarterly, 4*(2), 129–143.
Werhane, P. H., & Freeman, R. E. (1999). Business ethics: the state of the art. *International Journal of Management Reviews, 1*(1), 1–16.