Understanding the Board of Directors after the Financial Crisis

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Abstract

There are numerous studies on the effectiveness of boards that primarily focus on legal formalities, including gender diversity, board size, remuneration, board evaluation and the role of the chairman of the board. While attempting to design a one-size-fits-all framework, scholars approaching board independence from an agency cost perspective have been less concerned with analyzing board structures that contribute to strategic decision-making and corporate performance. We examine the factors and board strategies that are associated with value creation and innovation by analyzing the composition of high-performance and high-growth companies. The paper shows that venture capitalists, with their specific expertise and experience, continue to play an important role as independent board members in the post-IPO period. We specifically investigate the importance of diversity, showing that there are significant differences between the companies in terms of age, gender diversity and business expertise (which is dependent on the stage in the company life-cycle).

Keywords: Board of Directors, Board Insulation, Corporate Governance, Corporate Law, Gender Diversity, Innovation, Stock Market Performance, Value Creation, Venture Capital

JEL Classifications: G34, K20, K22, L22, L25, L26, O16

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JOSEPH A. MCCAHERY AND ERIK P.M. VERMEULEN

There are numerous studies on the effectiveness of boards that primarily focus on legal formalities, including gender diversity, board size, remuneration, board evaluation and the role of the chairman of the board. While attempting to design a one-size-fits-all framework, scholars approaching board independence from an agency cost perspective have been less concerned with analyzing board structures that contribute to strategic decision-making and corporate performance. We examine the factors and board strategies that are associated with value creation and innovation by analyzing the composition of high-performance and high-growth companies. The paper shows that venture capitalists, with their specific expertise and experience, continue to play an important role as independent board members in the post-IPO period. We specifically investigate the importance of diversity, showing that there are significant differences between the companies in terms of age, gender diversity and business expertise (which is dependent on the stage in the company life-cycle).

INTRODUCTION

There is a general feeling that we need better corporate governance.[1] This is not surprising if we realize that the corporate governance frameworks that were developed by policymakers, regulators, academics and practitioners in the 2000s had little or no significant impact on the performance of listed companies during the crisis.[2] The last decade has seen attempts to answer some key questions including: What is the role of the board of directors? What is the most effective mix of directors? What are their responsibilities in terms of good governance?

The existing literature has mainly focused on the principal agent relationships between the shareholders, board of directors and senior and executive management in listed companies.[3] Scholars have emphasized that the monitoring and oversight role of the independent outside directors is crucial to prevent managerial misbehavior and misconduct and maximize shareholder wealth.[4] In countries with controlling shareholders, a second element has been added to the debate

[1] See, for instance, M. Barnier, 'Making Europe an Attractive Place To Do Business' (2010) <http://europa.eu/rapid/press-release_SPEECH-10-54_en.htm> accessed 29 June 2013.
[2] See K. Gupta, C. Krishnamurti and A. Tourani-Rad, 'Is Corporate Governance relevant During the Financial Crisis?' (2013) 23 *J. Int. Finan. Markets Inst. Money* 85; M. Humphery-Jenner, F. Lopez de Silanes and J.A. McCahery, Managerial Entrenchment, Credit Ratings, Covenants and Fees, Working Paper 2012.
[3] See J. Dahya, O. Dimitrov and J. McConnell, 'Dominant Shareholders, Corporate Boards and Corporate Value: A Cross-Country Analysis' (2008) 87 *J. Fin. Econ.* 73.
[4] See J.N. Gordon, 'The Rise of Independent Directors in the United States, 1950-2005: Of Shareholder Value and Stock Market Prices' (2007) 59 *Stan. L. Rev.* 1465. See L. Bebchuk and J. Fried, 'Executive Compensation as an Agency Problem' (2003) 17 *J. Econ. Perspect* 17; R.W. Masulis and S. Mobbs, 'Are All Inside Directors the Same? Evidence from the

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about the role of the board of directors: Board members should protect the interests of minority investors and other stakeholders in the company.[5] This is necessary because controlling shareholders may employ several strategies to extract resources and assets from companies they control.[6] The heterogeneity of large shareholders across firms and board structures may imply differences in the level of oversight and monitoring.

Following the financial crisis, however, recent studies have suggested that a predominantly independent board is essential to serve as the necessary and dynamic wedge between the company and its insiders on the one hand and the capital market and the short-term investors on the other hand,[7] thereby reducing the three-way agency problems between the executive managers and the varying types of investors and stakeholders.[8] There is a general impression that the board of directors should be insulated from shareholder influence and interventions as long as institutional shareholders fail to properly engage with executive management and the board of directors.[9] Board independence and insulation is necessary to offer resistance to the short-term mentality that currently prevails in the investor community and capital markets.[10] Additionally, policymakers and regulators seek to better understand the factors that impact the effectiveness of boards. So far, the discussion focuses on a number of legal formalities and requirements, including gender diversity, optimal board size, remuneration, board evaluation processes and the role of the chairman of the board.[11]

External Directorship Market' (2010) ECGI – Finance Working Paper No. 241/2009 <http://ssrn.com/abstract=1108036> accessed 29 June 2013.

[5] See W-G Ringe, 'Independent Directors: After the Crisis' (2013) *14 EBOR 401*.

[6] See M. Gutiérrez Urtiaga and M. Saez, 'Deconstructing Independent Directors' (2012) ECGI – Law Working Paper No. 241/2009 <http://ssrn.com/abstract=1986842> accessed 29 June 2013. See also C. Malberti and E. Sironi, 'The Mandatory Representation of Minority Shareholders on the Board of Directors of Italian Listed Corporations: An Empirical Analysis' (2007) Bocconi University Institute of Comparative Law "Angelo Sraffa" (I.D.C.) Legal Studies Research Paper Series, Research Paper No. 18 <http://ssrn.com/abstract=965398> accessed 29 June 2013.

[7] See e.g., J.N. Gordon, 'The Rise of Independent Directors in the United States, 1950-2005: Of Shareholder Value and Stock Market Prices' (2007) 59 *Stan. L. Rev.* 1465.

[8] See W.W. Bratton and M.L. Wachter, 'The Case Against Shareholder Empowerment' (2010) 158 U. Pa. L. Rev. 653.

[9] See for a different view, L.A. Bebchuk and A. Cohen, 'The Costs of Entrenched Boards' (2005) 78 *J. Fin. Econ*. 409; L.A. Bebchuk, 'The Myth That Insulating Boards Serves Long-Term Value' (2013) 113 *Colum. L. Rev.* (forthcoming) <http://ssrn.com/abstract=2248111> accessed 29 June 2013; J.A. McCahery, E.P.M. Vermeulen and M. Hisatake, 'The Present and Future of Corporate Governance: re-Examining the Role of the Board of Directors and Investor Relations in Listed Companies (2013) 10 *E.C.F.R.* 117, also available at < http://ssrn.com/abstract=2254520>.

[10] The short-term mentality is explained by M. Isaksson and S. Celik, 'Who Cares? Corporate Governance in Today's Equity Markets', OECD Corporate Governance Working Papers, No. 8, OECD Publishing (2013). The importance of board insulation is described by S.M. Bainbridge, 'Response to Increasing Shareholder Power: Director Primacy and Shareholder Disempowerment' (2006) 119 *Harv. L. Rev.* 1735. See for a different view M.J. Roe, 'Corporate Short-Termism – In the Boardroom and in the Courtroom' (2013) Harvard Law School Public Law & Legal Theory Working Paper Series Paper No. 13-18 <http://ssrn.com/abstract=2239132> accessed 29 June 2013.

[11] See M. Belcredi and G. Ferrarini, 'The European Corporate Governance Framework: Issues and Perspectives' (2013) ECGI – Law Working Paper No. 214/2013 <http://ssrn.com/abstract=2264990> accessed 29 June 2013. See also Heidrick & Struggles, 'European Corporate Governance Report 2011, Challenging Board Performance' <http://www.heidrick.com/PublicationsReports/PublicationsReports/HS_EuropeanCorpGovRpt2011.pdf> accessed 29 June 2013.

This article argues that the attempt to design a one-size-fits-all framework is based on a general misconception and misunderstanding about corporate boards, which often leads to counterproductive behavior.[12] The preoccupation with reducing agency cost and building long-termism in listed companies limits our understanding of boards. In this context, this leads to introducing a third dimension to corporate governance, which is usually associated with innovation and value creation and reflected to some extent by the strategies adopted by growth-oriented companies.[13] We construct this third dimension to allow us to identify the characteristics of independent directors associated with the expertise, skills, capabilities and affinities that can help give rise to a market leading company (which generally outperforms the stock market index and offers a better resistance against stock market volatility).

We make three distinct contributions to the research on boards. First, it highlights the importance of board dynamics as a source of change in a firm's corporate policy (which is often initiated by a disappointing stock price performance). Consider Apple, for example. The company's late CEO, Steve Jobs, understood early on the important role of the board of directors for Apple's growth and innovation needs, but also to build relationships with its suppliers and customers. In order for the board of directors to become a competitive advantage and help carry Apple forward, its members needed to have a thorough understanding of the computer industry and the firm's products.

Second, it confirms that the role of the board of directors is broader than constraining managerial misbehavior and maximizing shareholder value.[14] We look at how innovative and high growth companies, like Apple, differ from less successful ones in terms of the structure and the composition of the board of directors. In general, a major difference is that innovative and high growth firms focus on valued industry expertise and firm knowledge more than independence and appropriate risk-oversight qualities. Our central aim is to show that board structure and organization also come to play an important role in stimulating the focus on strategic advice and overall board effectiveness.

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[12] See also W. Drobetz, F. Von Meyerinck, D. Oesch and M.M. Schmid, 'Is Director Industry Experience a Corporate Governance Mechanism?' (2013) Working Paper <http://ssrn.com/abstract=2256477> accessed 1 July 2013; O. Faleye, R. Hoitash and U. Hoitash, 'The Costs of Intense Board Monitoring' (2011) 101 *J. Fin. Econ.* 160; D. Gilshan, 'A Call on U.S. Independent Directors to develop Shareholder Engagement Strategies' (The Harvard Law School Forum on Corporate Governance and Financial Regulation, 24 A pril 2013) <http://blogs.law.harvard.edu/corpgov/2013/04/24/a-call-on-u-s-independent-directors-to-develop-shareholder-engagement-strategies/#more-43830> accessed 1 July 2013.

[13] This view is not new. To be sure, in general, the corporate governance debate offers a single-minded analysis and overemphasizes the importance of risk-management and remuneration policies, the engagement of shareholders and independence of directors. Interestingly, however, the OECD Principles of Corporate Governance (2004) explicitly states in its preamble that '(t)o remain competitive in a changing world, corporations must innovate and adapt their corporate governance practices so that they can meet new demands and grasp new opportunities.' Still, policymakers generally seem to struggle with the implementation of entrepreneurial boards. See Barnier , op. cit., n. 1). It is therefore not surprising that in the aftermath of the financial crisis, the OECD launched an initiative to refocus the corporate governance discussion on value creation and growth. See OECD, *Corporate Governance, Value Creation and Growth, The Bridge between Finance and Enterprise* (2012).

[14] See O Faleye, R Hoitash and U Hoitash, 'The Costs of Intense Board Monitoring' (2011) 101 *J. Fin. Econ.* 160.

Third, we investigate the characteristics common to directors appointed to boards of growth-oriented companies.[15] What can we learn from these companies?[16] In order to give an answer, we make use of two new hand-collected data sets that consist of (1) seventy venture capital backed companies that were involved in IPOs on US stock markets between 2011 and the first half of 2012 (VC-70), and (2) the top-forty of the world's largest companies in the Financial Times Global 500 2012 List (including corporations from the United States, Europe and Asia) (FT-40).[17] The data allow us to obtain a clear understanding of the composition and dynamics within these boards. The evidence in the data holds important lessons for academics and other researchers, but also for policymakers, investors and company boards. Unsurprisingly, these lessons go beyond, and even contradict, the traditional and current thinking about the role of the board of directors in listed companies.

The article is structured as follows. Section 2 suggests that a new approach to corporate governance, which we have labeled the three-dimensional model, can be effective in understanding a firm's growth and innovation strategy.[18] To illustrate the dynamics of the model, we start with a succinct description of the Apple board to show how the composition and operations of the boards can contribute to the introduction of successful and innovative products and improved firm performance. The Apple case confirms that issues about board structure, composition and practices should be discussed against the background of a company's growth and value creation potential (and not only against the background of agency problems and long-termism). We then turn to Section 3 which contains an analysis of the empirical results. We examine the board practices and strategies that enhance firms' competitive advantage in their efforts to develop innovative products and services. Section 4 concludes.

'CONFLICTING' ROLES OF THE BOARD OF DIRECTORS

In this section, we begin with a very brief account of the crucial role played by the board of directors in Apple's history. Although the Apple case seems to suggest that there are two conflicting theories of the board of directors, it should be noted that most legal systems around the world recognize that boards not only have an vital role to play in the area of monitoring and risk oversight, but also in giving 'informal' advice and strategy support to management. Nevertheless, there is a gap between theory and practice. Because the legal corporate governance framework emphasizes the importance

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[15] See also AJ Epstein, *The Perfect Corporate Board, A Handbook for Mastering the Unique Challenges of Small-Cap Companies* (2013).

[16] It is argued that the structure, organization and management of boards can be significantly improved by learning from peers with high impact boards. See C. Bhagat, M. Hirt and C. Kehoe, Improving Board Governance: McKinsey Global Survey Results <http://www.mckinsey.com/insights/strategy/improving_board_governance_mckinsey_global_survey_results> accessed 28 September 2013. In this paper, we follow a similar approach by focusing on high growth companies.

[17] We have excluded energy, oil and gas producers and financial institutions from the dataset.

[18] See McCahery, Vermeulen and Hisatake, op. cit. n. 9.

of oversight, supervision and risk-management, there is usually simply not enough time for boards to perform their advisory function adequately. It is therefore timely to introduce a new wave of corporate governance research that redirects the role of a company's board to enhancing management decision-making and future growth and value creation.

1. The Apple Case Study

Corporate governance experts often struggle with the question: How is it possible that Apple is one of the world's most admired companies,[19] one of the world's most valuable companies,[20] and one of the world's most innovative companies?[21] Indeed, the question is sufficiently pertinent when one realizes that corporate governance experts often believe that Apple's culture of secrecy has severely weakened its corporate governance structure.[22] There are many things to say about Apple's governance structure. Our focus is on the distinctive features of the board of directors that have played a crucial, but allegedly increasingly obedient role, in Apple's history of success.

Recall, that it was the board that removed Steve Jobs as Head of the Macintosh division in 1985. Following his return in 1997, Jobs, who was initially employed in an advisory role (next to being the CEO and Chairman of a computer animation company, called Pixar), quickly regained more control over the company's affairs.[23] This became clear in the keynote address during the Macworld Expo in Boston on 6 August 1997,[24] where he explicitly avoided the announcement of new and innovative products, but revealed the appointment of four new, handpicked, board members.[25] Jobs was convinced that changing the composition of the board of directors was a necessary first step to bring back focus, relevance and interaction (with the outside world) to the company in its journey to introduce disruptive innovations and creative products to its potential customers.[26]

What is most interesting, in light of this article, is that Jobs knew that in order for the board of directors to become a competitive advantage and help carry Apple forward, its members needed to have experience in the computer industry and be passionate Apple users. Perhaps this is primarily

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[19] Apple ranks number one in the World's Most Admired Companies' ranking assembled by CNNMoney in 2008, 2009, 2010, 2011, 2012 and 2013 <http://money.cnn.com/magazines/fortune/most-admired/2013/snapshots/670.html> accessed 29 June 2013.

[20] See S. Russolillo, 'Apple Loses Throne as World's Biggest Company' *Wall Street Journal*, 17 April 2013.

[21] See H. Shaughnessy, 'Apple and Google, #1 and #2 Of World's Most Innovative Companies. Why?' *Forbes*, 15 January 2013 <http://www.forbes.com/sites/haydnshaughnessy/2013/01/15/apple-and-google-1-and-2-of-worlds-most-innovative-companies-why/> accessed 29 June 2013.

[22] See J. Nocera, 'Apple's Culture of Secrecy' *New York Times*, 26 July 2008. See also B. Stone and A. Vance, 'Apple's Obsession With Secrecy Grows Stronger' *New York Times*, 22 June 2009.

[23] See D. Kawamoto, 'Jobs Rejects Apple Chairman Post' *CNET News* 31 July 1997 <http://news.cnet.com/Jobs-rejects-Apple-chairman-post/2100-1001_3-201978.html> accessed 29 June 2013.

[24] See J. Davis, 'Jobs To Keynote Macworld Expo' *CNET* 29 July 1997 <http://news.cnet.com/Jobs-to-keynote-Macworld-Expo/2100-1001_3-201931.html> accessed 29 June 2013.

[25] See M. Costello, 'Apple Gets New Corps', *CNNMoney*, 6 August 1997 <http://money.cnn.com/1997/08/06/technology/apple/> accessed 30 June 2013.

[26] See <http://www.youtube.com/watch?v=PEHNrqPkefI> accessed 30 June 2013.

the reason why Mr. Woolard, Chairman and former CEO of Dupont, and Mr. Chang, a senior executive at Hughes Electronics, were 'allowed' to stay for their leadership skills and knowledge of the Asian market respectively. Mr. Ellison (software expertise and co-founder of Oracle), Mr. York (Former CFO with experience with reorganizations at both Chrysler and IBM), Mr. Campbell (CEO of Intuit and former Vice President of Sales and Marketing at Apple) were added to the Board of Directors. Expectedly, Jobs was also asked to join the Board of Directors.

The above discussion indicates that Jobs designed, modeled and molded the board of directors to Apple's growth and innovation needs, but also his personal tastes.[27] The latter has, of course, spurred the debate among conventional corporate governance experts about the quality and performance of the Apple board (particularly, after the corporate failures and corporate governance reforms of 2001-2002). From a traditional corporate governance standpoint, it is difficult to understand that Jobs valued industry expertise, passion and loyalty more than independence and appropriate risk-oversight qualities. The preference for outside directors with firm specific and industry knowledge became again clear when Mr. Gore Jr. joined the Apple Board in 2003. Jobs was excited about his election when he stated that: "Al [Gore] brings an incredible wealth of knowledge and wisdom to Apple from having helped run the largest organization in the world – the United States government – as a Congressman, Senator and our 45th Vice President. Al [Gore] is also an avid Mac user and does his own video editing in Final Cut Pro". Do these remarks of Jobs suggest marked differences in the role of directors advocated by traditional corporate governance experts? Indeed, when assessing the nomination, most expert commentators were critical of his monitoring and oversight value, effectively ignoring the fact that Gore was instrumental in launching public/private partnership efforts to bring technology to educational institutions in the United States.[28]

The above rationales offered against the Gore nomination suggest that the experts had a 'different type of governance model' used to evaluate appointments to boards. First, it is noteworthy that the experts argued that a politician without any business experience would add no value to the company. Second, they were of the opinion that Apple's board held too many 'friends of Steve'. That is, board members were (too) loyal to Jobs, which allegedly undermined the CEO's accountability to investors and other stakeholders. Interestingly, the institutional investors as well as the employees and the customers continued to show confidence in Jobs and 'his' board of directors. Consider the stock price performance of the company during the relevant period. Between 6 August 1997 (the day of the keynote address in Boston) and 23 August 2011 (the last day of Jobs as the CEO of Apple), the stock

[27] See W. Isaacson, *Steve Jobs* (2011).
[28] See D. Sellers, 'BusinessWeek: Gore Appointment to Apple Board A Mistake' *Macworld*, 27 March 2003 <http://www.macworld.com/article/1016691/byte.html> accessed 30 June 2013.

price soared from $25.25 to $360,30, increasing 1,327 per cent. An important question remained as to what would happen to the composition of the board after Jobs passed away in 2011. Corporate governance experts knew the answer.[29] The disappearance of a dominant CEO coincided with the demand for members of the board of directors to re-engage themselves by demanding more transparency, accountability and oversight. This created the opportunity to appoint a new outside chairman to the board of directors to assess the current members of the board.

Unsurprisingly, however, the composition and orientation of the board of directors has so far not undergone the expected major transformation, again challenging the traditional way of thinking about corporate governance. That is not to say that there were no changes to the composition of Apple's board. Think of boards of directors as 'fluid' in composition: They must evolve with the organizational and business needs of the company at any given time. This, in turn, explains why Genentech's chairman Mr. Levinson, who already served as a member of Apple's board since 2000, replaced Jobs as the chairman in November 2011. What is more striking is that by adding Mr. Iger, President and CEO of The Walt Disney Company and Jobs' friend and business partner, to the board of directors, Apple (as well as its investors and other stakeholders) continued to value industry expertise and firm-specific knowledge more than independence and risk-management skills. Consider the strong commercial ties between The Walt Disney Company and Apple, which arguably raise questions about Mr. Iger's independent oversight qualities,[30] but at the same time can explain why he is able to make a valuable contribution to Apple's further move to the media industry.[31] It is encouraging to see how investors and other stakeholders have given more importance to Mr. Iger's purchase of approximately $ 1 million worth of Apple shares in both November 2011 and November 2012, giving him 'more' skin-in-the-game, than his alleged relationship with Apple's executive managers.[32]

It follows from the Apple case study that we can roughly distinguish between two approaches to the theory and practice of the role of the boards of directors. Note first that under the traditional corporate governance model the boards of directors have generally evolved to perform an oversight function independently of the CEO and other executive managers. This contradicts Jobs' view, outlined in his keynote presentation in Boston in 1997, that the board serves as an extension of management, providing outside expertise and experience where and when needed. Presuming that

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[29] See J.S. Lublin, 'Apple Board Faces Scrutiny' *Wall Street Journal*, 7 October 2011.

[30] See I. King and P. Burrows, 'Apple Names Levinson Chairman, Disney's Bob Iger to Board' *Bloomberg*, 17 November 2011 <http://www.bloomberg.com/news/2011-11-15/apple-names-levinson-chairman-adds-iger-to-board-following-death-of-jobs.html> accessed 30 June 2013.

[31] See J.E. Vascellaro, 'Apple Adds Disney's Iger to Board, Names Levinson Chairman' *Wall Street Journal*, 16 November 2011.

[32] See O. Thomas, 'Disney's CEO Is Selling His Company's Stock And Buying Apple' *Business Insider*, 20 November 2012.

board members are dedicated and visionary, they can challenge management decision-making, identify opportunities and network with governments, society, investors and other stakeholders.[33]

2. The Three-Dimensional Model of Corporate Governance

The Apple case seems to suggest that policymakers, academics and corporate governance experts often ignore what really matters to the players in the corporate governance arena (such as short-term investors, long-term investors, customers and employees of a firm): value creation through sustainable growth and innovation. Our approach is to emphasize the three-dimensional corporate governance model, with a focus on the dynamics in the practice of corporate governance. In the one-dimensional model, which prioritizes shareholder wealth maximization, enhanced regulatory intervention is needed to resolve the principal-agent problems between the investors, the corporate insiders and other stakeholders. The responsibility for upholding corporate governance standards is shifted to policymakers and regulators. Although it is acknowledged that the rules and regulations that were introduced in the wake of the scandals at the beginning of the 21st century have created minimum standards and guidelines of corporate governance that actually improved the functioning of listed companies, it is far from clear whether more stringent and detailed rules for the companies would have a similar effect. A new two-dimensional corporate governance model, which accentuates the importance of long-termism, has confirmed this view. The proponents of the two-dimensional model suggest that, in order to build long-termism into the corporation, it is essential to change the behavior of the investors and insulate the board from the short-term nature of the capital markets.[34]

In an earlier paper,[35] we have already proposed a three-dimensional model that focuses primarily on future growth and value creation. This model is important for a number of reasons. First, the benefit is that it has the potential to resolve the corporate governance dilemma resulting from the imbalance between short-term investment strategies and a long-term outlook. Evidence suggests that shareholder (and stakeholder) value and long-term commitments are very much interrelated with a firm's growth and innovation prospects. Second, the importance of a growth-oriented model is that companies (and their executive managers and executive and non-executive directors) are in the first instance responsible for the implementation of governance arrangements that produce better firm and stock market performance.

Again, the three-dimensional model is already reflected in most of the legal frameworks. Irrespective of the legal structure, boards have an important responsibility in the area of risk oversight,

[33] See D. Cossin, 'Corporate Boardrooms are in Need of Education' *The Financial Times*, 9 January 2012.
[34] See C. Mayer, *Firm Commitment, Why the Corporation is Failing Us and How to Restore Trust in It* (2013).
[35] See McCahery, Vermeulen and Hisatake, op. cit. n. 9.

compliance and the setting of remuneration packages. But, in line with the three-dimensional model, the legal corporate law frameworks generally also envision a role in improving corporate performance by approving strategy directions and giving advice to the executive managers.[36] In practice, however, because the oversight and risk management tasks involve increasingly complex challenges the latter role receives less and less attention. Moreover, as this observation suggests, the traditional corporate governance discussions have framed corporate boards as nothing more than excessively formal control mechanisms on executive managers, particularly the CEO. For instance, most weight is put on procedures that ensure independence and long-termism, such as board composition requirements, age requirements, maximum term requirements, gender diversity,[37] and splitting the roles of chairman and CEO.[38] This view is confirmed by recent empirical studies.

The current (and often overregulated) legal corporate governance framework tends to overemphasize the importance of oversight, supervision and risk-management (which makes sense in light of the one-dimensional corporate governance model). There are four different factors that support this view. First, there is simply not enough time to discuss strategy development and value-creation due to the increasingly formal responsibilities of board members. Second, increasingly lawyers, governance experts and financial specialists, who are generally viewed as best qualified to engage in the supervisory and oversight role (but are not in the best position to contribute to strategy discussions), are appointed. Third, researchers have identified the link between excessive independent director oversight and the reduction in the quality of information, making it harder for boards to monitor effectively.[39] Fourth, the fear of inadvertently 'shirking' the risk oversight responsibilities (which could result in reputational damage and imprisonment) has resulted in a short-term, check-the-box, mentality.[40]

[36] See R. Adams, B.E. Hermalin and M.S. Weisbach, 'The Role of Boards of Directors in Corporate Governance: A Conceptual Framework & Survey' (2010) 48 *J. Econ. Lit.* 58; R. Adams, 'The Dual Role of Corporate Boards as Advisors and Monitors of Management: Theory and Evidence', AFA 2002 Atlanta Meetings. See also L.A. Bebchuk and M.S. Weisbach, 'The State of Corporate Research' (2010) 23 *Rev. of Fin. St.* 939.

[37] Countries increasingly promulgate legislation that mandates the appointment of a certain number (quota) of women on the board of directors of listed companies. For instance, quota legislation can be found in Austria, Belgium, France, Iceland, Italy, Norway and Spain. Other countries, like Australia, Finland, Germany, Greece, Poland, Slovenia, Sweden and the United Kingdom follow a softer approach by including gender diversity principles in their corporate governance codes. See L. Linnainmaa and A. Horttanainen, 'The Glass Ceiling is Cracking, Self-regulation Beats Quotas' *FinnCham*, 15 November 2012.

[38] See P. Whitehead, 'Non-Executive Director: A Task for Which No One is Qualified' *The Financial Times*, 10 April 2013.

[39] See R.B. Adams, 'Asking Directors About Their Dual Roles', Unpublished monograph, University of Queensland, 2009.

[40] The three-dimensional model thus offers an explanation for why active and experienced board members often prefer one-tier board systems to two-tier systems. See also Y. De Jong and J. Woudt, 'Kees Storm' *Financieele Dagblad*, 13 April 2013. The more direct interaction with executive management and involvement in determining business strategy and growth targets appear to be attractive characteristics of the one-tier board.

Given these considerations,[41] we propose an alternative approach that is in line with the three-dimensional model of corporate governance.[42] In order to have well-balanced boards, it is important to move beyond the usual selection criteria, such as independence, integrity, competence, reliability, good judgment and preferably a financial background. According to such logic, boards need outside directors who are product and market-oriented and able to ask the right, often technical, questions.[43] Arguably, a well-balanced board with a mix of compliance and growth/innovation-focused members was essential in making Apple the successful high growth company that has generated significant returns for its investors and other stakeholders.[44] To capture this insight with more precision, we present the results of our empirical findings in the section below.

THE BOARD OF DIRECTORS: EMPIRICAL EVIDENCE

In this section, we examine 110 listed companies that have either more than average growth potential or show a more than average interest in product and market innovation. We report that corporate governance mechanisms that contribute to value creation are difficult to capture in a one-size-fits-all and pre-defined rulebook. We do not attempt, however, to explain all the variance in corporate governance in firms. We utilize our database to investigate the influence of the third dimension in the composition and workings of the board. We attempt to show that there are some general points of good practice, which could provide companies with a competitive advantage. In this section, we will proceed as follows. First, we will describe the data. Second, we will discuss the board dynamics and composition of boards in the companies in our dataset.

1. The data

In this sub-section, we briefly describe our data and methodology. We use two hand-collected data sets to study 'best-practices' in growth-oriented listed companies. Our sample consists of 70 venture-capital backed companies that conducted an IPO on US stock exchange between 2011 and the first half of 2012 (VC-70) (see Appendix A). In order to avoid selection bias, we include all the venture-backed companies that went public between 2011 and mid 2012. We extract information for the

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[41] A common solution to the 'weaknesses' in the functioning of the board is to separate the oversight role from the strategy-oriented role. In this view, there will be two boards with different responsibilities: One board focuses on compliance issues and another – a strategic advisory board – deals with business challenges. See P. Whitehead, 'Think-tank Searches for Good Governance' *The Financial Times*, 5 June 2013. There may be something to this idea. Still, the separation is likely to dilute and fragment leadership and professional responsibilities. Moreover, since the board of directors is more embedded in the 'legal' structure of the corporation, a well-composed, balanced and knowledgeable board of directors is sure to create more value.

[42] See W.G. Bowen, *The Board Book, An Insider's Guide for Directors and Trustees* (2011).

[43] Experienced board members agree with this view. See D. Medland, 'Non-Executives Must 'Delve Into All Areas'' *The Financial Times*, 7 March 2013.

[44] Arguably, the board of directors also contributed significantly to making Steve Jobs the best performing CEO in the world in terms of creating shareholder returns. See M. Hansen, H. Ibarra and U. Peyer, '100 The Best-Performings CEOs in the World', Harvard Business review, January-February 2013.

companies listed in 2011 from the complete database directory of DowJones VentureSource. For 2012, the data on the complete set of companies that floated their shares was obtained from the Preqin Venture Deals Analyst database. To examine the board characteristics, particularly the information regarding the composition of the board of directors, and the experience and expertise of members of the board of directors at the time of their appointment, we were able to collect the relevant documents by analyzing the companies' websites.

Financial information regarding IPO performances was gathered from the Nasdaq's market activity website. We use the same sources to gather similar information for our second hand-collected database, which consists of the top-40 companies that appeared in the FT Global 500 2012 list (FT-40). Note that in order to make the comparison with the 'young' listed companies more relevant, we exclude companies that operate in the oil and gas industry and financial industry. The 40 companies in the sample are also listed in Appendix A.

The VC-70 and FT-40 companies have two important things in common. First, both the VC-70 and the FT-40 companies can be considered important 'job creators'. At the end of 2012, the VC-70 companies employed 90,482 persons. The FT-40 companies have created 599,671 new jobs between 2009 and 2012. Second, both the VC-70 and the FT-40 companies are growth-oriented firms. Firms in such a context have either aspirations to become world leaders in specific technologies (the venture capital backed companies) or are already considered to be world-class companies (the Top-40 of the FT Global 500). Both the VC-70 and FT-40 companies have a strong strategic focus on innovation. This is obvious for the VC-70 companies that are still venture capital backed. But also the FT-40 companies seem driven by innovation. This is evidenced by the fact that 80 percent are considered to belong to the list of most influential units in the area of corporate venturing and corporate venture capital.[45]

2. Board Dynamics and Composition

Our goal in this section is to underscore the importance of board dynamics and composition (particularly the role of board members with business experience and expertise, academics and venture capitalists) as key governance mechanisms that are often ignored in the corporate governance debate. While policymakers and regulators around the world have emphasized the need to increase the role of boards in the area of risk-management and managerial oversight, our assessment of the data indicates that boards of directors can play a much bigger role in the creation of growth and business value than initially thought.

[45] See www.globalcorporateventuring.com

Consider the VC-70 companies. These companies tend to follow a pre-determined life cycle. In order to survive the 'valley of death' (which can be defined as the period between the initial capital contribution and the time the company starts generating a steady stream of revenue), the start-up firm will attempt to attract investments from angel investors and venture capital funds (which will become shareholders in the respective companies). This brings us to the first observation: The important role of venture capitalists (or other private investors) on the board of listed companies.

(a) Venture Capitalists on the Board of Directors

Typically, venture capitalists prefer to have board seats on their portfolio companies to protect the funds' interests. However, venture capitalist board members are not only supposed to control and monitor the CEO's and other executive managers' actions, but arguably provide value-added services that help bring the company and its entrepreneurs to the next stage of their development. For example, venture capitalists as board members in start-up companies can be quite beneficial. It is likely that they have expertise in the general areas of governance and financing, but may also have experience and knowledge about product development, sales strategy and talent searches.[46] Importantly, entrepreneurs appreciate the contributions of venture capitalist board members. As for the facilitation of business, they recognize the necessity to have an engaged board that is interactive, candid, and passionate.[47] Furthermore, in order to be engaged, board members need to be strategically (not operationally) involved and understand the fundamental dynamics and drivers of the business.[48] Theoretically, the presence of venture capitalists continues until after the moment that private investors exit the company by floating it on the stock exchange (or selling it to another company).[49]

Prior studies have established that there is usually no lack of growth-oriented spirit on the boards of companies that just completed their IPOs. Lockup periods, which prevent venture capitalists to exit the company upon or immediately after the IPO, partly explain the position of venture capitalists on boards of newly listed companies (see Table 1). However, prior research also underscores the importance of having venture capitalists (with their specific expertise and experience) on the board

[46] See E. Mendel land M. Jeffers, 'A Seat at the Table', A Study of Venture-Backed Company Boards, DowJones and NVCA Presentation, 2005.
[47] See M. Blumberg, 'The Good, The Board, and The Ugly', Only Once, 25 July 2004.
[48] See M. Blumberg, 'The Board of Directors: Guest Post From Matt Blumberg', AVC Musings of a VC in NYC, 23 April 2012.
[49] Please note that most high potential companies do not follow the traditional life cycle. Trade sales (acquisitions by financial or strategic investors) are currently the most important and even preferred exit for private investors. The going public decision, under the life-cycle theory, is typically triggered by the insider owner's loss of information advantage over outside owners in making accurate valuations of their firm. See E. Maug, Ownership Structure and the Life-Cycle Theory of the Firm: A Decision to Go Public' (2001) 5 *Eur. Fin. Rev.* 167.

of these young listed companies and how they have a positive effect on their IPO performance.[50] That is not to say that, as we will discuss below, it is sometimes advisable to replace some venture capitalists for more independent financial experts in the board of such companies.[51]

Table 1: Board Composition and Diversity VC-70 companies (independent directors only) on 31 December 2012

Diversity Indicators	*Average*	*Median*	*Max.*	*Min.*
Number of Directors (total)	8	8	12	5
Number of Independent Directors	6	6	10	3
Age (years)	54.2	54	85	27
Time on the Board (years)	4.8	4.7	21	0
Women on the Board	< 1 (0 (49%) / 1 (47%) / 2 (4%)	1	2	0
General Expertise	< 1 (0 (51%) / 1 (33%) / 2-3 (16%)	0	3	0
Financial Expertise	< 1 (0 (49%) / 1 (43%) / 2 (8%)	1	2	0
Business Expertise	< 2 (0 (13%) / 1 (43%) / 2-4 (44%)	1	4	0
'Former' VCs	< 3 (0 (7%) / 1 (13%) / 2-5 (80%)	2	5	0
'Independent' Investors	< 1 (0 (61%) / 1 (25%) / 2 (14%))	0	3	0

Yet the role of venture capitalists remains important. It is common knowledge that companies often start losing their entrepreneurial spirit beyond the IPO. They may become less responsive to disruptive innovations and see talented employees leave for hotter start-up companies.[52] In this context, the recruitment of experienced venture capitalists on the board could provide a partial solution.[53] Moreover, they could assist a mature company's executive management with initiating open innovation strategies through which the company partners with (or acquires) smaller start-ups.[54] Certainly, these open innovation strategies, which are increasingly viewed as a successful 'healthy aging' model in the life cycle of listed companies,[55] provide a possible explanation for the relatively high number of private investors and venture capitalists that were appointed in the boards

[50] See S. Chahine and M. Goergen, 'VC Board Representation and IPO Performance' (2011) 38 J. Bus.Fin.and Accounting 413.
[51] See A.J. Epstein, 'Are Venture-Backed Companies Keeping Pace?' *NACD Directorship*, 5 March 2013. The accounting issues that Groupon experienced in their post-IPO era great examples of this. See D. Aubin, 'Analysis: Groupon Accounting Problems Put Spotlight On Board' *Reuters*, 12 April 2012. This also explains the renewed discussion about Apple's board of directors when director York passed away in 2010. He was viewed as an independent director who had to be replaced in order to maintain a balanced board. See Y.I. Kane and J.S. Lublin, 'On Apple's Board, Fewer Independent Voices' *Wall Street Journal*, 24 March 2010.
[52] See C. Cain Miller, 'Trying to Recapture Start-Up's Feel, Google's Chief Fights Hard Against What He Sees As Its Worst Enemy: Itself' *Harold Tribune*, 10 November 2011.
[53] See Bowen, op. cit. n. 48.
[54] See U. Celikyurt, M. Sevilir, and A. Shivdasani, 'Venture Capitalists Boards of Mature Public Firms'
[55] See S. Murray, 'Corporate R&D: Big Groups Struggle to Bring Ideas to Fruition' *The Financial Times*, 28 October 2011.

of directors of the FT-40 companies (see Table 2). In this respect, it is interesting to mention iFund, which is a US$200 million investment initiative created by Kleiner Perkins Caufeld Beyers (a renowned venture capital fund) in partnership with Apple. The investment collaboration targets the development of applications, services and components for Apple's iPhone, iPod Touch and iPad. Thus, it is not surprising that Al Gore is a senior partner at Kleiner Perkins Caufeld Beyers. From the perspective of the increasing importance of corporate venturing activities (as well as the three-dimensional corporate governance model), the awareness of their value-added contributions is beyond any doubt. It is only to be expected that this number will increase in the near future.[56]

Table 2: Board Composition and Diversity FT-40 companies (independent directors only) on 31 December 2012

Diversity Indicators	*Average*	*Median*	*Max.*	*Min.*
Number of Directors (total)	13	12	20[57]	7
Number of Independent Directors	9	10	16	0
Age (years)	61	61	92	35
Time on the Board (years)	7.7	7.5	43	0
Women on the Board	3	3	5	0
General Expertise	4	4	9	0
Financial Expertise	2	2	4	0
Business Expertise	2	2	7	0
Investors/VCs	1	1	4	0
CEO=Chairman		35%		
Chairman=Insider		42.5%		
Chairman=Outsider		22.5%		

(b) Board Diversity: Age, Gender and Business Expertise

An analysis of the FT-40 companies as well as the VC-70 companies clearly shows the importance of board diversity. Tables 1 and 2 present evidence on board diversity in terms of age, gender and expertise. The results indicate that there are significant differences between the VC-70 companies and the FT-40 companies. For instance, Tables 1 and 2 show that the average age of directors in the FT-40 companies is significantly higher than their average age in the VC-70 companies. The reasons

[56] Arguably, venture capitalist board members can play a crucial role in assisting executive managers to create a corporate culture in which the established (or to be established) corporate venturing unit can thrive. See J. Von Heimburg, 'Driving Innovation by Corporate Venturing: How to Master Governance and Culture Challenges' *Innovation Management*, 7 January 2013.

[57] Due to co-determination requirements, the German companies in our data set have relatively large boards of directors.

for this are straightforward. First, the directors of the FT-40 companies (compared to the directors of the VC-70 companies) have, as expected, served for a longer period on the board. Second, board members are usually recruited from the networks of the existing board members, which often consist of people of the same gender and age group.[58]

There are also differences in gender diversity. The FT-40 companies tend to take gender diversity more seriously than the VC-70 companies. The average percentage of women on the board of the FT-40 companies (20 percent) is much higher than the average percentage in the VC-70 companies (7 percent). One rationale for the increasing number of women directors is that the more mature FT-40 companies are more sensitive to the policy and media attention regarding gender diversity than the companies that just completed their IPOs. This is confirmed by the fact that more than 75 percent of the female independent board members were appointed in the period 2005-2012 (when gender diversity has gradually become a key corporate governance issue). The increased media and investor attention can also explain why most (85%) of the relatively few women on the boards of the VC-70 companies were generally appointed during the IPO preparation process (67 percent) or shortly after they floated their first shares on the stock market (23 percent) in either 2011 or 2012 (see the bar charts in Figure 1).

An obvious question that arises is whether companies with women on their boards are likely to outperform companies that do not take gender diversity seriously. Note that there is considerable debate about the role of women on boards and firm performance. A recent study suggests that gender diverse boards enhance financial and stock market performance.[59] Furthermore, gender diversity positively affects corporate social responsibility ratings, which in turn improves the reputation of a company.[60] Some authors have argued, however, that board diversity in general may restrict the ability of firms to adapt to changing business circumstances.[61] This view is supported by the results of another study that appears to show that gender diversity may reduce the appetite of companies for engaging in risk-taking activities. A possible explanation may be found in the empirical research that shows that there is a correlation between female management and risk aversion.[62] Interestingly, our findings are consistent with the latter study in the sense that only 5 percent of the FT-40 companies do not have gender diverse boards. This percentage is much higher (49 percent) in the more risky VC-70 companies.

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[58] Strong support for this view is provided by the FT-40 data set. It is striking to observe that board members usually hold the same additional positions in other profit and non-profit organizations.

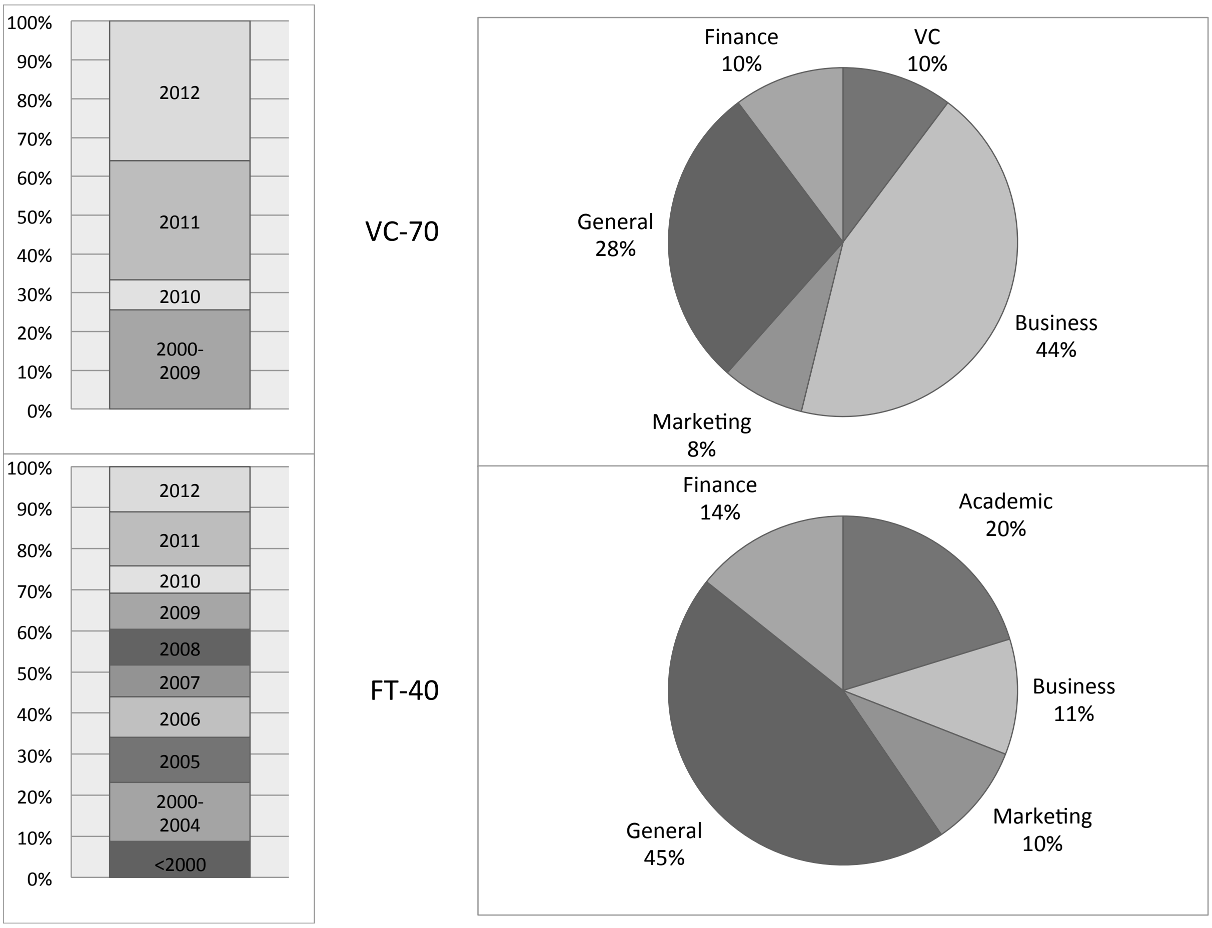
[59] See A. Chanavat and K. Ramsden, 'Mining the Metrics of Board Diversity' *Thomson Reuters*, June 2013.

[60] See S. Bear, N. Rahman and C. Post, 'The Impact of Board Diversity and Gender Composition on Corporate Social Responsibility and Firm Reputation (2010) 97 *J. Of Bus. Ethics* 207.

[61] See J. Goodstein, K. Gautam and W. Boeker, 'The Effects of Board Size and Diversity on Strategic Change' (1994) 15 *Strategic Mgmt. J. 241*.

[62] See Credit Suisse Research Institute, 'Gender Diversity and Corporate Performance, August 2012.

Figure 1: Gender Diversity in the Board of Directors of the VC-70 and FT-40 Companies (the bar charts show when the women were appointed as independent directors; the specific expertise and skills of the women is reflected in the pie charts)



It follows from this discussion that it is difficult (and often impossible) to provide clear-cut answers to questions of whether and, more importantly, why gender diversity has a positive, neutral or negative impact on firm performance. Moreover, it may be difficult to predict the most efficient level of board diversity. This becomes clear when we compare the percentage of women on the board to the stock price performance of the FT-40 companies in 2012. We find that the percentage of women on the board of the best performing companies (with a 2012-stock price performance in excess of 20 percent), varied from 0 percent to 25 percent. The percentage of women on the board of companies that showed a 2012 stock price performance lower than 15 percent was in the range between 12 percent and 45 percent. Yet, our results may provide a plausible explanation for why gender diverse boards could potentially outperform other boards.[63] Figure 1 provides evidence that the appointment of women to the board often increases the diversity in expertise and experience.[64] The pie charts show that 41 percent of the women on the boards of the FT-40 companies bring academic, business and marketing expertise and skills to the company. Figure 1 reveals also that 52 percent of the women that are introduced to the board of directors of the VC-70 companies shortly before or after the IPO add specific business or marketing value.

Consistent with these observations, most companies in our sample have boards that consist of members not only with general business expertise (which is usually met by the presence of other CEOs, former CEOs or business consultants), but also include financially literate people (accountants, CFOs or former CFOs). Our results also show substantial support for the view that the companies appear to take diversity seriously. What is more important is that boards of growth-oriented companies increasingly select a number of individuals with substantive knowledge of particular industries, sectors and/or markets.[65] Consider Toyota Motors' recent decision to appoint three real independent directors (which was approved by the shareholders in June 2013). Ikuo Uno, an adviser to Nippon Life Insurance Co.; Haruhiko Kato, president and chief executive officer of Japan Securities Depository Center Inc.; and Mark Hogan, a former group vice president at General Motors, were recently added to Toyota's board of directors. Historically, Toyota's seven 'auditor directors' focused mainly on financial oversight and internal control issues. The three additional independent directors, on the other hand, contribute general expertise in the area of transparency, but also business expertise that is likely to support the firm's global expansion plans.

As highlighted above, Figure 1 shows that 20 percent of the women on the boards of the FT-40 companies are academics. It should therefore come as no surprise that, if we look at the total dataset, a significant number of the independent board members holding academic positions, particularly in the area of biotech, medicine and engineering. This is of course a rather general observation in VC-70 companies that are typically spun out from universities and research centers. Similarly a comparison of the FT-40 companies further supports our view and shows that 35 percent of the directors appointed include one or more academics. This is consistent with our intuitions that their presence can be invaluable to identify technical issues and opportunities.[66] More importantly,

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[63] It is usually not clear why gender diverse board work better in practice. See K.D. Krawiec, J.M. Conley and L.L. Broome, 'The Danger of Difference: Tensions in Directors' Views of Corporate Board Diversity' (2013) *U. of Illinois L. Rev. 919.*

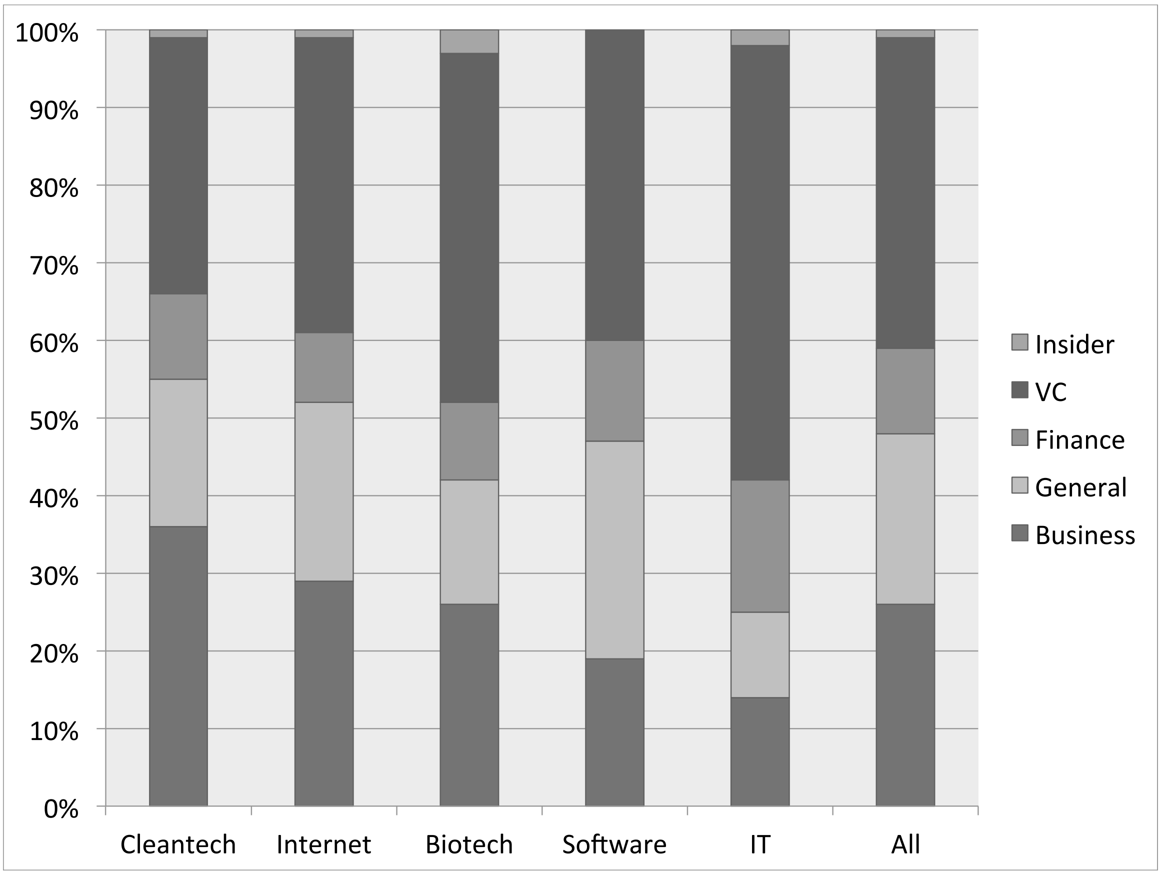
[64] This is confirmed by B. Groom, 'Females Add Diversity to Boards' *The Financial Times*, 3 Mach 2013. An identical argument can be made for the diversity in age. See Boardroom Age: Only a Number? *The Financial Times*, 6 September 2013.

[65] This number is higher in the VC-70 companies. However, we observe that the more mature companies increasingly understand the importance of experience and expertise diversity in boards of directors.

[66] See Bowen, op. cit. n. 48.

they are also able to add vision and passion to the board of directors.[67] The evidence indicates that most scientist are appointed to the boards of directors of companies that operate in uncertain or fast-moving and highly competitive markets, such as pharmaceuticals, biotech and internet (where specialized product and/or markets knowledge is necessary to identify the fast-changing market movements). This is also reflected in Figure 2, which confirms that the composition of the board of directors is sector-specific for the VC-70 companies. In addition, a more than average number of board members with specific business expertise can be found in companies that operate in volatile and unpredictable sectors, such as cleantech, internet and biotech (which are generally also characterized by lower IPO performances). For instance, the average 6-months IPO performance of the IT companies in our sample was 51 percent, whereas the average 6-months IPO performance of the cleantech companies was -31 percent.

Figure 2: Board Composition of the VC-70 Companies per Sector



[67] See P. Whitehead, 'Better Boards: Company Secretaries Give Their Views on Non-Executive Roles' *The Financial Times*, 19 June 2013.

(c) Board Dynamics and the Alleged Insulation from the Capital Markets

Our results in the previous section are reinforced by the Apple-case: there is no one-size-fits-all blueprint for the composition of the board of directors in the three-dimensional model. Board requirements are firm specific and vary across life cycle stages, sectors and cultures. And there is more. The unique governance issues that result from including growth in the corporate governance discussion are part of a complex, three-dimensional continuum, wherein each of the dimensions (managerial control, long-term commitments and growth) are intertwined and constantly evolving. For instance, it is only to be expected that if a company seeks to expand to emerging markets, it might require international experience on the board.[68] Consider a company that has board members with a wealth of international know-how but, at the same time, should also have other directors with more technical risk-management and accounting skills.

Corporate governance is thus dynamic in nature.[69] We predict that the many innovative and successful firms will tend to address board composition issues when the going gets tough.[70] This claim is confirmed by our analysis of the VC-70 companies. It turns out that Jobs' approach to make changes to the composition to the board of directors as a necessary first step to deal with business or accounting challenges is also followed by companies that have only recently completed the IPO process. These results confirm the general thesis that it makes good sense to add independent directors with economic and financial skills to the boards of companies with accounting problems. Accordingly, the accounting issues that Groupon experienced in their post-IPO era confirms this thesis. Thus, in order to immediately address the criticism of its financial reporting practices, Groupon appointed two new directors with extensive experience in the accounting and finance disciplines. What is more remarkable (and similar to the Apple story) is that companies that show a disappointing IPO performance often react with new appointments to the board of directors. In an effort to improve market acceptance and investor confidence, companies will usually appoint board members with specific market or sector expertise.[71] These findings are depicted in Table 3.

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[68] See J.H. Daum and J.C. Norris, 'Adding International Expertise: Opening The Board's Window On The World', SpencerStuart 2007.

[69] See also P. Zumbansen, 'Rethinking the Nature of the Firm: The Corporation as a Governance Object' (2012) 35 *Seattle University L. Rev.* 1469.

[70] See D. Aubin, 'Analysis: Groupon Accounting Problems Put Spotlight On Board', Reuters, 12 April 2012. This also explains the renewed discussion about Apple's board of directors when director York passed away in 2010. He was viewed as an independent director who had to be replaced in order to maintain a balanced board. See Y.I. Kane and J.S. Lublin, 'On Apple's Board, Fewer Independent Voices', *Wall Street Journal*, 24 March 2010.

[71] The conclusion that the composition of the board of directors is dynamic and should be adapted easily to new challenges supports Bebchuk's view that board members should be appointed for a one-year term (and are up for re-election every year). See L.A. Bebchuk, A. Cohen and C.C.Y. Wang, 'Staggered Boards and the Wealth of Shareholders: Evidence from a Natural Experiment', Working Paper, November 2010.

Table 3: The Dynamics of Boards in Relation to Stock Price Performance

Name	Date IPO	IPO Performance						Date of Appointment of New Director	Expertise of New Director
		1-day	30-day	60-day	6 months	12 months	31 Dec 2012		
InterXion	28 Jan 11	6	14	4	12	10	83	Jun 11 Jan 12	Business Accounting
Epocrates	2 Feb 11	37	38	25	0	-35	-45	Mar 12	Business (also CEO)
Neophotonics	2 Feb 11	20	64	5	-36	-48	-48	Oct 12	Business
Pacira Pharma	3 Feb 11	0	-1	0	47	53	150	Jun 11 Jun 11	Business Business
BG Medicine	4 Feb 11	15	24	13	-2	-2	-67	Feb 12	General
Gevo	9 Feb 11	10	24	69	-13	-40	-90	Mar 12	PE/VC
AcelRx Pharma	11 Feb 11	-9	-37	-35	-26	-36	-15	Sep 11	Business
Fluidigm Corp	11 Feb 11	4	10	12	7	7	6	Mar 11 Apr 11	Business Business
Cornerstone OnDemand	17 Mar 11	41	32	49	-4	52	119	Apr 12	Business
ServiceSource	25 Mar 11	22	18	101	38	54	-42	Nov 12	Business
Zipcar	14 Apr 11	56	49	11	0	-27	-54	Jun 12	General
Boingo	4 May 11	-10	-26	-33	-43	-21	-44	Aug 11	Business
RPX	4 May 11	26	51	51	-18	-11	-52	Apr 12	VC
Vanguard Health Systmens	22 Jun11	0	-1	-23	-47	-54	-32	Oct 11	Business Finance
KiOR	24 Jun 11	0	1	-33	-30	-41	-57	Jul 11 Jun 12	General Business
HomeAway	29 Jun 11	49	53	38	-14	-19	-19	Aug 12 Dec 12	Business Business
Horizon Pharma	28 Jul 11	2	-7	-10	-58	-30	-74	Mar 12	Business
Ubiquiti Networks	14 Oct 11	17	30	39	129	-17	-19	Oct 12	Business
ZELTIQ	19 Oct 11	19	8	-5	-57	-52	-64	Sep 12	Business
Groupon	4 Nov 11	31	-5	-4	-50	-81	-76	Jun 12	Finance Accounting
Angie's List	17 Nov 11	25	21	16	3	-20	-8	Feb 12 Nov 12	Finance General
Zynga	16 Dec 11	-5	-11	44	-44	-75	-76	Jul 12	Business
Verastem	27 Jan 12	11	9	7	-3	-	-12	Sep 12 Nov 12	Business (3x)
Ceres	22 Feb 12	14	22	14	-49	-	-65	Aug 12	Business
Bazaarvoice	24 Feb 12	38	51	64	24	-	-22	Apr 12 May 12	Finance PE/VC
CafePress	29 Mar 12	0	-11	-25	-52	-	-70	May 12	Business
Merrimack Pharma	29 Mar 12	-14	4	-2	34	-	-13	Jun 12 Jul 12	Business Finance
Facebook	18 May 12	1	-21	-26	-38	-	-30	Nov 12	Insider

In fact, 62 percent of the total VC-70 companies with a disappointing and declining IPO performance have appointed one or more members with specific experience and skills to their boards in 2011 and/or 2012 (see the last two columns in Table 3). This percentage is significantly lower when companies show a positive or an improving IPO performance (20%). These findings indicate that the boards of directors of the VC-70 companies do not operate insulated from the capital market and their investors. Moreover, if we for now assume (in line with the three-dimensional model of corporate governance) that the basis for generating an abundance of long-term investor interest is a compelling financial performance supported by future growth and a robust innovation pipeline, it is evident that the companies' potential and intentions are closely linked to the composition of the board of directors. It is noteworthy that the appointment of new directors with specific business expertise often has a positive affect on IPO performance in the months following the appointment. Conversely, it appears that a continuing declining IPO performance (and thus a failed attempt to reverse a company's growth and profitability perspectives) increases the pressures (from the capital markets) to seriously consider a corporate restructuring. In the cases of the car sharing company ZipCar and healthcare company Epocrates, the continuing underperformance resulted in the firms being acquired by Avis and Athenahealth respectively.

(d) The Role of the Chairman and CEO

In this sub-section we consider whether the roles of chairman and CEO should be separated? Consistent with prior research that has analyzed different type of board structure in terms of the firm's risk oversight responsibility, the answer would be in the affirmative. In practice, however, the one-person CEO-chairman model may be the preferred way of working since it avoids disharmony, conflicts and time-consuming ambiguous leadership issues.[72] Table 4 indicates that the one-person model is the preferred model in the VC-70 companies.[73] The results in Table 2 also show that the model is also frequently employed by the FT-40 companies.

Table 4: Who Is The Chairman?

Who?	*Percentage (on 31 December 2012)*	*IPO Performance (31 December 2012)*		
		Average	Max.	Min.
Chairman = Founder + CEO	27%	22%	363%	-76%
Chairman = CEO	23%	-24%	71%	-74%
Chairman = Founder	13%	23%	155%	-76%
Chairman = Former VC/CEO	20%	12%	150%	-90%
Chairman = Outsider	17%	-22%	98%	-86%

However, if we again link the board leadership models to the IPO performance of the VC-70 companies, we come to a surprising conclusion. Note that the 'separation of CEO and chairman'

[72] See W.G. Bowen, op. cit. n. 48.
[73] It should be noted, however, that 40 percent of the companies that incorporated the one-person model also appointed a lead director to balance the power within the boardroom.

model is extremely powerful if the founder or an experienced venture capitalist takes the chairman position. Based on the above discussion, this view is in line with an analysis of the FT-40 companies where more than 75 percent of the boards of directors have either combined the role of CEO and chairman or have appointed an insider (former CEO, founder or family member) as the chairman of the board.

4. Conclusion

Something is profoundly wrong with the way we currently think about the structure and functioning of the board of directors. Particularly, policymakers and regulators seem to believe that a more regulatory approach in this area will enhance the monitoring performance and accountability of the appointed directors. This belief is based on the assumption that directors will better serve the long-term interests of the company if they can embrace rules and regulations that offer them clear guidance about the best way in which to discharge their duties to investors and other stakeholders.

Ironically, the recent financial crisis has also led to studies that indicate that the excessively formal one-size-fits-all approach to the duties and tasks as well as the composition of the board of directors has turned, particularly non-executive, directors into 'toothless', unproductive and irrelevant watchdogs who are sometimes destructive to business growth. Overregulation makes companies bureaucratic and short-term oriented. Strict adherence to the corporate governance framework would then lead to companies not being able to reach their growth potential.

Mindful of this, high performance and high growth companies appear to take an 'ignored' dimension into account when structuring and organizing their boards of directors: the prospect of sustainable business growth and value creation. To show this, we analyzed the board composition of seventy venture capital backed companies that were involved in IPOs on US stock markets between 2011 and the first half of 2012 (VC-70 companies) and showed that venture capitalist (independent) directors continue to play a dominant role in the further development of the recently listed companies. We argued that this should come as no surprise in light of their continued stake in these companies which is largely due to lock-up provisions. Interestingly, however, we observed that certain venture capitalists remain on the boards of the companies, ensuring a continuation of the research and development intensity and innovation output. This also explains why we found on average one venture capitalist/investor on the board of the top-forty of the world's largest companies in the Financial Times Global 500 2012 list (FT-40 companies). This number would even be higher if we also included board members who have an advisory role at venture capital funds.

This brings us to the importance of board diversity. Again our data show that age and gender diversity are linked to diversity in expertise. We found that while the average age of directors in FT-40 companies is significantly higher than VC-70 companies, they have also served longer on the board. This suggests that board members are usually recruited from networks of existing board members, which often consist of people of the same gender and age group. It is interesting to see that female independent directors appear to add more diversity in expertise and skills, which arguably contributes to a company's growth and innovation potential. We also found that the FT-40 companies tend to take gender diversity more seriously than the VC-70 companies. The latter result is consistent with the view that the more mature FT-40 companies are more sensitive to the policy and media attention regarding gender diversity than the companies that just completed their IPOs

In terms of the other characteristics of board members, we found evidence that most companies in our data have boards that consist of members not only with general management and leadership expertise, which is usually met by the presence of other CEOs or former CEOs, but also include financially literate people (accountants, CFOs or former CFOs). In particular, we indicated that a significant number of board members hold academic positions, particularly in the area of biotech, medicine and engineering. This is a rather general observation of the VC-70 companies. However, we showed that this also holds true for the FT-40 companies where 35 per cent of the analyzed boards of directors appointed one or more academics. In our firm-level analysis, we observed that most scientists are appointed to the boards of directors of companies that operate in uncertain or fast-moving and highly competitive markets. That is, a more than average number of board members with specific business expertise can be found in companies that operate in the more volatile and unpredictable sectors, such as cleantech, internet and biotech.

Interestingly, our analysis of the VC-70 companies indicated that the composition of the board of directors is dynamic. An underperforming IPO often results in the appointment of new directors with specific experience, expertise and skills, necessary to refocus on growth and restore investor confidence. To be sure, the new directors sometimes replace venture capitalists that slowly but surely sell their stakes in the company. However, we observe that industry veterans and pioneers are often added to board to deal with immediate governance and growth challenges. In many cases, these leadership changes contribute to growth and performance of the companies.

Finally, we explored the question whether the roles of the chairman and CEO should be separated. Our analysis revealed that the one-person CEO-chairman approach is the preferred model in both the VC-70 companies and the FT-40 companies since this may avoid disharmony, conflicts and time-consuming leadership issues. More strikingly, we observed the separation of CEO and chairman when the founder, an experienced venture capitalist or other insider takes the chairman position.

Overall, to make further progress in this area, policymakers and regulators should be careful in deriving conclusions about the most effective structure and composition of corporate boards. The composition of the board of directors is firm specific and varies across life cycle stages, sectors, regions, countries and cultures. The board of directors is ‘fluid’ in that it should change over time according to evolving markets and shifting business strategies and practices. In the aftermath of the financial crisis we have the chance to avoid – or at least minimize – the regulatory debate regarding the monitoring and oversight role of the board of directors. Indeed, the focus on sustainable growth and value creation has led to new insights that may prove hard to ignore in future corporate governance discussions and reforms.

Appendix A

VC- 70 Companies		
AcelRx Pharmaceuticals	Gevo	Skullcandy
Angie's List	Groupon	Solazyme
Audience	HomeAway	Splunk
Bazaarvoice	Horizon Pharma	Supernus Pharmaceuticals
BG Medicine	Imperva	Synacor
Boingo	Infoblox	Tangoe
Brightcove	Intermolecular	Tesaro
CafePress	InterXion Holding	The Active Network
Carbonite	Invensense	Tranzyme
Cempra Pharmaceuticals	Jive Software	Ubiquiti Networks
Ceres	KiOR Inc	Vanguard Health Systems
Chemocentryx	LinkedIn	Verastem
Clovis Oncology	Merrimack Pharma	Vocera
Cornerstone OnDemand	Millennial Media	WageWorks
Demand Media	Neophotonics	Yandex
Demandware	Pacira Pharmaceuticals	Yelp
Ellie Mea	Pandora Media	ZELTIQ Aesthetics
Endocyte	Proofpoint	Zillow
Enphase Energy	Proto Labs	Zipcar
Epocrates	Renewable Energy Group	Zynga
Exa	Responsys	
ExactTarget	RPX Corp	
Facebook	Sagent Pharmaceuticals	
Fluidigm	ServiceNow	
Fusion-io	ServiceSource International	

FT-40 Companies		
Abbott Laboratories	IBM	Roche
Amazon.com	Intel	Samsung Electronics
Ambev	Johnson & Johnson	Sanofi
Anheuser-Busch Inbev	LVMH	SAP
Apple	McDonald's	Siemens
AT&T	Merck	Toyota Motor
Basf	Microsoft	Unilever
British American Tobacco	Nestle	Verizon Communications
China Mobile	Novartis	Vodafone Group
Cisco Systems	Oracle	Wal-Mart Stores
Coca-Cola	PepsiCo	
Comcast	Pfizer	
General Electric	Philip Morris International	
GlaxoSmithKline	Procter & Gamble	
Google	Qualcomm	

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