



Board Composition, Ownership Structure and Firm Value: Empirical Evidence from Switzerland

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Abstract

Various corporate law and governance theories inform us that board independence, management ownership and blockholder ownership are important elements of the overall corporate governance system. The empirical evidence on the effectiveness of these elements is, however, mixed at best. Moreover, the results and conclusions of prior theoretical and empirical research are typically country-specific and often not universally applicable. The empirical analysis conducted in this article is based on a panel data set consisting of 43 large public companies over a time frame of 6 years in the context of the small and open economy of Switzerland. The results of this analysis suggest that a larger fraction of independent directors on the company board decreases firm value and that a combined leadership structure may also increase value. Similarly, the results suggest that the presence of a controlling shareholder decreases firm value and that the presence of institutional investors as significant shareholders may also decrease value. The new evidence of this country study casts doubt on several generally accepted good corporate governance principles and highlights the need for a reconsideration of public policy towards board governance and blockholder governance. This article examines and discusses the most relevant policy implications based on the new evidence.

Keywords Corporate governance · Board composition · Independent directors · Ownership structure · Controlling shareholders

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1 Introduction

Even today, more than 80 years after the idea of the separation of ownership and control,¹ the principal-agent problem is still a core issue of corporate law and governance. According to the agency theory of the firm,² there are various ways in which management (the agent) may not act in the best interest of the shareholders (the principal), a problem generally known as moral hazard. In the corporate setting, moral hazard can come in many guises, such as managerial myopia (short-sightedness), insufficient effort, extravagant investments, entrenchment strategies or self-dealing.³ The strategies that aim to mitigate and eventually eliminate moral hazard problems are twofold. One approach focuses on incentives (the carrot). In the corporate context, this is generally achieved by high-powered management compensation schemes.⁴ The other approach focuses on screening (the stick), commonly referred to as monitoring. Within this approach, two types of monitors can be distinguished: internal and external monitors.⁵ The most important internal monitors are the board of directors (direct monitoring) and the shareholders (indirect monitoring). A simple typology of external monitors includes institutions such as investment analysts, credit rating agencies or accounting firms on the one hand, and markets such as the managerial labor market, the corporate control market or the product market on the other hand.⁶

This article analyzes the empirical evidence of certain corporate governance mechanisms related to board composition and ownership structure from the perspective of a small, open economy. It in particular approaches three interrelated sets of research questions. First, the article focusses on how board independence affects firm value. It has been close to conventional wisdom among scholars and practitioners that both independent directors and separated CEO and chairman roles are to be considered good corporate governance. This is because a board mainly consisting of inside directors cannot effectively monitor the management team and a combined CEO and chairman role concentrates too much power in one person. As a result, both institutions are usually prominently represented in corporate governance codices.⁷ However, there are still many open questions. This study addresses some of these questions and proposes appropriate policy implications. Second, the article focusses

¹ On the divergence of interest between ownership and control, see Berle and Means (1932), pp 119–126.

² Other conflicting theories, which arguably provide a less realistic characterization of the modern corporation, include the stewardship theory and the resource dependence theory. For a case-based test of these three theories of corporate governance, see Nicholson and Kiel (2007), pp 585–608.

³ For an overview, see Tirole (2006), pp 16–17.

⁴ See Jensen and Murphy (1990), pp 225–264.

⁵ See for example Boot and Macey (2004), pp 356–393.

⁶ See Fama (1980), pp 288–307 (managerial labor market); Jensen and Ruback (1983), pp 5–50 (corporate control market); Hart (1983), pp 366–382 (product market).

⁷ See items 12, 14, 19, 23, 25 and 26 and item 32 of appendix 1 of the Swiss Code of Best Practice for Corporate Governance of 2002, as last revised in August 2014 (status as of 29 February 2016). See also provisions A.2.1, B.1.1, B.1.2, B.2.1, C.3.1 and D.2.1 of the UK Corporate Governance Code of 1992, as last revised in April 2016.

on how management ownership affects firm value.⁸ Standard theory predicts that non-executive directors are more effective monitors when they have a larger financial stake in the company because their interests are better aligned with shareholders' interests. The incentives of executive directors and officers are, however, more complicated. While a similar alignment of interest logic applies, an additional effect comes into play: executive directors and officers are sometimes said to be more concerned about maximizing their bonuses than monitoring themselves (which is, in any case, hard to do). This study attempts to distinguish these effects and to treat them separately. Third, this article focusses on how blockholder ownership affects firm value.⁹ It is argued that controlling shareholders are efficient monitors because they manage to overcome collective action problems. At the same time, there is a risk that controlling shareholders extract private benefits of control. Similarly, it is argued that institutional investors are efficient monitors because they make better investment decisions and more closely monitor the companies they invest in. However, institutional investors might also pursue their own interests, thereby eventually hurting their portfolio companies. This study evaluates how effective controlling shareholders and institutional investors are in monitoring corporate management.

The article is organized as follows. Section 2 provides a literature review from a theoretical and empirical perspective. In this section, the article highlights how theory offers contradictory predictions with regard to the research questions and to what extent the empirical evidence is ambiguous. Section 3 explains the data and the methodology used in the country study conducted in this article. This study is based on a panel data set covering 43 firms over a time period of 6 years and uses standard regression analysis with a base model, two extensions thereof and three sensitivity modifications. At the same time, the article points to the limitations of this methodology. Section 4 presents the results of the regression analysis and a discussion of these results. The article at first shows some summary statistics and then presents the results of the multivariate analysis and the sensitivity analysis. Subsequently, the article discusses these results and draws appropriate policy implications, when applicable. Section 5 concludes by summarizing and situating the main findings in a broader context.

2 Literature Review

This section reviews the theoretical and empirical literature on board independence, management ownership and blockholder ownership.

⁸ For the purpose of this article, management ownership is defined as the shareholdings of non-executive directors (outsiders) and executive directors and officers (insiders).

⁹ For the purpose of this article, blockholder ownership is defined as the shareholdings of controlling shareholders and institutional investors.

2.1 Board Independence

The literature on board independence is very broad and covers many different aspects. For the purpose of this study, the article focusses on two related aspects, independent directors in general and dual CEO and chairman roles in particular.

2.1.1 Independent Directors

From a theoretical perspective, it is generally assumed that independent directors are better monitors than inside directors. There is, however, some disagreement as to the degree of independence within this group: many corporate governance advocates suggest that the board should be made up of all or a majority of independent directors,¹⁰ while other sources suggest that the board should include a balance of independent and executive directors.¹¹ These commentators generally adopt either the strong or semi-strong form of the ‘entrenchment’ hypothesis. In their view, independent directors are—as opposed to executive directors—expected to be free from the influence of the company’s management, which allows them to perform their duties more effectively than executive directors. This view has been challenged by other scholars.¹² The critics argue that monitoring by independent directors can be ineffective. According to the ‘knowledge’ hypothesis, independent board members usually have much less knowledge of the company and their judgment is largely based on (biased) information provided by company managers. Pursuant to the ‘skill’ hypothesis, since there is only a small pool of talented independent directors available in many smaller countries such as Switzerland, companies are either forced to have time-constrained skilled independent directors, who sit on the boards of multiple companies, or less competent independent directors on their boards.

The empirical literature on board independence is at best mixed with respect to whether this promotes shareholder interests. Studies have found that independent boards do well at performing discrete tasks such as disciplining poor CEO performance or responding to takeover bids.¹³ Nonetheless, studies generally find

¹⁰ On the role of monitoring in general, see Jensen and Meckling (1976), pp 323–326. On the merits of outside directors, see Fama (1980), pp 292–295 (describing the benefits of the inclusion of outside directors to the board of directors); Baysinger and Butler (1985), pp 121–122 (criticizing any public policy prescription in favor of a particular board composition); Lefort and Urzúa (2008), pp 619–621 (finding that an increase in the proportion of outside directors affects firm value).

¹¹ See American Law Institute (1994), § 3A.01, 110–114 (mandating independence ratios consisting of a majority of the directors in large publicly held corporations and at least three directors in all other publicly held corporations). See also item 2.3 of the Corporate Governance Policies of the Council of Institutional Investors, as last updated on 15 September 2017 (requiring the independence of at least two-thirds of the directors).

¹² Hermalin and Weisbach (1991), pp 106–111 (finding no relation between board composition and performance); Muth and Donaldson (1998), pp 14–26 (finding that board independence adversely affects shareholder value); Bhagat and Black (2002), pp 248–263 (challenging the conventional wisdom that a monitoring board is an important component of good corporate governance); Nicholson and Kiel (2007), pp 593–596 (finding that agency theory does appear to provide only a partial explanation of the board-performance link).

¹³ See Bhagat and Black (2002), pp 231–273.

insignificant relationships between board independence and accounting or long-term stock market performance.¹⁴ The international evidence is mixed as well.¹⁵ Overall, there is thus little evidence to show that the percentage of independent directors on a board increases firm value.¹⁶

2.1.2 CEO and Chairman

Another, rather specific aspect of this debate is the claim that the CEO and chairman roles should always be separated.¹⁷ According to the ‘separation’ hypothesis, the monitoring structure is more effective with two separate persons at the top of an organization. Pursuant to the ‘combination’ hypothesis, this is not the case because it is believed that one person unifying both roles is more efficient.

The empirical evidence on the separation of the CEO and chairman roles is also ambiguous. Prior international studies have led to contradictory results.¹⁸ The same is true for the few existing studies in the Swiss context.¹⁹ Against this background, it is therefore not possible to answer this question one way or the other.²⁰

2.2 Management Ownership

For some time, the literature on management ownership looked only at director and officer shareholdings together.²¹ Other studies, including the study in this article, trace non-executive and executive director (and officer) shareholdings separately.²²

¹⁴ See Baysinger and Butler (1985), pp 101–124.

¹⁵ For New Zealand, see Koerniadi and Tourani-Rad (2012), pp 3–18 (finding that independent directors negatively affect firm value and that independent directors have a positive effect on firm value only when they are in the minority). For China, see Ma and Khanna (2016), pp 1547–1557 (examining independent directors’ dissent on boards and identifying two specific instances in which independent directors are more likely to dissent because of a breakdown in social exchange relationships).

¹⁶ See Hermalin and Weisbach (2003), pp 7–26.

¹⁷ Brickley et al. (1997), pp 192–197 (arguing that the separation of the titles of CEO and chairman of the board has potential costs as well as potential benefits); Fosberg and Nelson (1999), pp 85–87 (discussing the two theories for and against a dual leadership structure, i.e. the agency problem theory and the normal succession theory).

¹⁸ Brickley et al. (1997), pp 197–217 (finding that the costs of separate leadership structure are for most large firms larger than the benefits of separation); Fosberg and Nelson (1999), pp 89–95 (finding that both theories, the agency problem theory and the normal succession theory, have merit with regard to firms which adopt dual leadership structures); Dey et al. (2011), pp 1595–1618 (suggesting that board leadership choices by firms and market responses are consistent with efficiency arguments).

¹⁹ Ammann et al. (2005), pp 1–22 (finding that combined CEO and chairman positions tend to affect performance positively); Schmid and Zimmermann (2008), pp 182–204 (finding no evidence of a systematic and significant difference in valuation between firms with combined and firms with separated functions).

²⁰ See Adams et al. (2010), pp 58–107.

²¹ See for example McConnell and Servaes (1990), pp 599–601.

²² See in particular Morck et al. (1988), pp 307–311; Mura (2007), pp 84–86.

2.2.1 Non-Executive Directors

The theoretical literature offers no predictions regarding the form of the relation between non-executive director shareholdings and firm value. Generally speaking, however, it could be expected that the higher ownership levels of non-executive directors would motivate them to more rigorously conduct their monitoring functions because they would otherwise presumably lose money due to falling stock prices (the ‘convergence of interests’ hypothesis). Alternatively, it is also conceivable that non-executive directors with large shareholdings could in fact dominate the board and thereby expropriate wealth from the company (the ‘entrenchment’ hypothesis).

The empirical literature on the effect of non-executive director shareholdings and firm value is quite sparse. The existing studies, mainly from the US and UK context, demonstrate different results. Earlier studies report that non-executive director shareholdings are related to firm value as follows: a positive relation for low levels, a negative relation for intermediate levels and again a positive relation for high levels.²³ More recent studies find no significant relation between non-executive director shareholdings and firm value.²⁴

2.2.2 Executive Directors and Officers

The initial groundbreaking idea was that management’s equity ownership helps resolve agency problems and improve the firm’s performance.²⁵ In other words, the propensity for managers to deviate from value maximization is a decreasing function of management ownership. This is commonly referred to as the ‘convergence of interests’ hypothesis. In contrast, other scholars argue that managers who own enough stock to dominate the board of directors could expropriate corporate wealth.²⁶ In their understanding, firm value is initially expected to increase for low levels of management ownership (the ‘market discipline’ hypothesis), then decrease for intermediate levels (the ‘entrenchment’ hypothesis) and finally increase beyond a critical ownership level (the ‘convergence of interests’ hypothesis).

²³ For the United States, see Morck et al. (1988), pp 295–307 (finding that Tobin’s Q rises in the 0–5% board ownership range, declines in the 5–25% range and slightly rises beyond the 25% range). For the United Kingdom, see Short and Keasey (1999), pp 93–98 (finding that the return on shareholders’ equity and the valuation ratio used rise in the 0–12% director ownership range, decline in the 12–41% range and again rise when the ownership level exceeds 41%).

²⁴ For the United States, see Bhagat and Black (2002), pp 261–262, 265–266 (documenting a non-correlation between stock ownership by outside directors and firm performance, but still suggesting that ‘independent directors who hold significant stock positions may add value, while other independent directors do not’). For the United Kingdom, see Mura (2007), pp 97–102 (documenting that the relationship between non-executive director share ownership and firm performance is insignificant in all models).

²⁵ For a theory of corporate ownership structure which takes into account the tradeoffs between inside and outside equity and debt, see Jensen and Meckling (1976), pp 343–351.

²⁶ On the fundamental relations between risk-bearing and decision processes, see Fama and Jensen (1983), pp 304–311. On the alleged vacuum in control by owners, see Demsetz (1983), pp 387–390.

The empirical literature on management ownership is not uncontested, but more or less robust. The first studies to examine the effect of management participation on firm value were conducted in the United States.²⁷ In more recent years, country studies for Australia, Spain, New Zealand and the United Kingdom followed.²⁸ The international evidence, suggesting that management ownership and firm value are positively related for low and high ownership levels and inversely related at intermediate levels of ownership, is fairly robust to differences in governance structures across markets.

2.3 Blockholder Ownership

Many earlier studies on blockholder ownership analyze only the size, but not the type of blockholder. More recent studies, however, usually take into account blockholder identity. The study conducted in this article examines the impact of both controlling shareholders and institutional investors.

2.3.1 Controlling Shareholders

The theoretical literature on controlling shareholders offers conflicting predictions on their role in enhancing firm value. The benefits of a controlling shareholder are highlighted under the ‘convergence of interest’ and the ‘efficient monitoring’ hypotheses. Pursuant to these hypotheses, controlling shareholders are likely to be more efficient than small and dispersed shareholders in monitoring company management. This is because such shareholders have substantial investments and significant voting power to protect their investments,²⁹ they manage to mitigate the

²⁷ Morck et al. (1988), pp 307–311 (reporting that Tobin’s Q rises in the 0–5% officer shareholding range, declines in the 5–25% range and slightly rises beyond the 25% range); McConnell and Servaes (1990), pp 601–609 (reporting that Tobin’s Q rises until executive ownership reaches approximately 40–50% and then slightly drops); Han and Suk (1998), pp 147–153 (finding that stock returns increase as insider ownership increases, but that excessive insider ownership tends to damage corporate performance); Demsetz and Villalonga (2001), pp 223–230 (finding no statistically significant relation between ownership structure and firm performance); Singh and Davidson (2003), pp 801–815 (finding that managerial ownership is positively related to asset utilization and concluding that managerial ownership significantly alleviates principal-agent conflicts).

²⁸ For Australia, see Fleming et al. (2004), pp 39–49 (reporting a positive relationship between equity agency costs and the separation of ownership and control). For Spain, see de Miguel et al. (2004), pp 1203–1204 (estimating the turning points for the entrenchment and alignment effects at 35% and 70%). For New Zealand, see Bhabra (2006), pp 150–152 (estimating the turning points for the entrenchment and alignment effects at 14% and 40%). For the United Kingdom, see Mura (2007), pp 95–102 (estimating the turning points for the entrenchment and alignment effects at 15% and 45%).

²⁹ See Berle and Means (1932), pp 47–68, 277–288 (presenting evidence on the dispersion of stock ownership in the US economy at the early 20th century and describing the resulting position of the stockholders); Jensen and Meckling (1976), pp 312–330 (analyzing the effect of large shareholders on agency costs by comparing the behavior of an owner-manager who sells off a portion of the residual claims on a firm to outside equityholders); Zeckhauser and Pound (1990), pp 149, 153–165 (arguing that large shareholders can reap large benefits for themselves and other shareholders by becoming informed and possibly by influencing corporate outcomes because they hold a block of voting power).

collective action problem faced by dispersed shareholders³⁰ or they engage in relational investing and are more committed to a company in the long run.³¹ The potential costs of a controlling shareholder are set out in terms of the ‘conflict of interest’ and the ‘strategic alignment’ hypotheses. The former argues that controlling shareholders may pursue non-profit maximizing objectives for their personal benefit to the detriment of minority shareholders.³² The latter argues that a controlling shareholder may often find it mutually advantageous to collude with the management in a way as to reduce firm value and to hurt the interests of the minority.³³

The empirical literature on blockholder ownership is very extensive and almost overwhelming. Like the corporate governance literature in general, this literature was for a long time mainly restricted to the triad of the United States, Europe, in particular the United Kingdom and Germany, and Japan.³⁴ While earlier studies focused mostly on the presence of large shareholders as such,³⁵ later studies took into account the identity and characteristics of such shareholders as well.³⁶ In more recent years, similar studies in the context of other developed countries such as

³⁰ See Dodd and Warner (1983), pp 404–407, 435 (examining the possible effect of proxy contests on share prices and confirming the hypothesis that such challenges benefit shareholders by transferring corporate resources to more highly valued uses); Shleifer and Vishny (1986), pp 465–471 (developing a theoretical model in which the presence of a controlling shareholder provides a partial solution to the collective action problem).

³¹ See Blair (1995), pp 172–189 (discussing the promise of relationship investing, the evidence on the impact of relationship investing and the pitfalls of relationship investing); Black (1998), pp 462–463 (summarizing the evidence on whether long-term relational investing by institutional investors correlates with improved firm performance).

³² See Shleifer and Summers (1988), pp 42–53 (showing how hostile takeovers can be privately beneficial and take place even when they are not socially desirable); Barclay and Holderness (1989), pp 373–394 (analyzing block trade premiums in public companies and arguing that these premiums reflect private benefits that accrue exclusively to the blockholder because of his or her voting power); Burkart et al. (1997), pp 719–720 (arguing that ownership concentration may be ex post efficient but constitutes ex ante an expropriation threat that reduces the level of non-contractible investments by managers).

³³ See Brickley et al. (1988), pp 271–283 (reporting evidence which suggests that institutions such as banks, insurance companies and trusts, which frequently derive benefits from lines of business under management control, are more subject to management influence); Pound (1988), pp 242–244, 259–260 (arguing that institutional investors may, due to conflict of interest pressures, vote with management against their own fiduciary interests and finding evidence that blockholders tend to be in strategic alliances with management).

³⁴ See Hopt et al. (1998) for an overview of the state of the art and emerging research in comparative corporate governance. See also Keasey et al. (1999) for a collection of the most important classic and contemporary papers on corporate governance.

³⁵ For the United States, see Holderness and Sheehan (1988), pp 344–345 (concluding that the identity of blockholders, although ignored in the literature, is potentially important). For Europe, see Thomsen and Pedersen (2000), pp 692–695, 679–702 (proposing and supporting the hypothesis that the identity of large owners has important implications for corporate strategy and performance). For Japan, see Hiraki et al. (2003), pp 241–243 (examining how alternative corporate governance mechanisms, in particular main banks and intercorporate shareholdings, work in Japan).

³⁶ For the United States, see Andersen and Reeb (2003), pp 1314–1324 (finding that family firms perform better than non-family firms). For Europe, see Maury (2006), pp 330–339 (finding that active family control is associated with higher profitability compared to non-family firms, whereas passive family control does not affect profitability). For Japan, see Yeh (2014), pp 324–327 (suggesting that large shareholder activism can perform roles that used to be played by the main banks in Japan).

Canada or Switzerland but also developing and transition economies—including for example Russia, the Czech and Slovak Republics, China or India—followed.³⁷ What a review of all these studies suggests is that the empirical evidence on blockholder ownership in general and controlling shareholders in particular is inconclusive and requires further research, while a differentiation among different types of large shareholders could eventually lead to more promising results.³⁸

2.3.2 Institutional Investors

The theoretical literature suggests that firms with a larger fraction of institutional investors tend to have a higher firm value because they are more closely monitored by those investment and asset management companies. Pursuant to this view, institutional investors are considered to be more efficient monitors than other shareholders because of their expertise and cost structure (the ‘efficient monitoring’ hypothesis).³⁹ However, institutional investors may not monitor, either because they find it profitable to form a coalition and collude with managers (the ‘strategic alignment’

³⁷ For Canada, see Bozec and Laurin (2008), pp 34–44 (finding that firm performance is lower when large shareholders have both the incentive and the opportunity to expropriate minority shareholders). For Switzerland, see Isakov and Weisskopf (2014), pp 8–14 (finding that family firms are more profitable than widely held companies or companies with a non-family blockholder). For Russia, see Blasi and Shleifer (1996), pp 79–103 (reporting certain corporate governance data in relation to Russian privatization). For the Czech and Slovak Republics, see Claessens (1997), pp 1650–1656 (finding evidence for the conflict of interest hypothesis with regard to bank-sponsored investment funds). For China, see Xu and Wang (1997), pp 94–95 (suggesting that institutional investors are important, state ownership is inefficient and an overly dispersed ownership structure is potentially problematic); Zhang et al. (2014), pp 445–456 (finding that controlling shareholders with excess control rights collude with managers by weakening performance-based incentives). For India, see Sarkar and Sarkar (2000), pp 189–191 (supporting the view that the identity of large shareholders matters in corporate governance); Jameson et al. (2014), pp 12–18 (finding that board membership of controlling shareholders appears to be costly for minority shareholders).

³⁸ See Edmans and Holderness (2017), pp 541–636, in particular pp 608–609 (summarizing that the evidence on the correlation between block size and firm value is mixed and that the correlation also depends on blockholder identity and other governance mechanisms). See also Holderness (2003), pp 51–64, in particular p 60 (summarizing that it has not been definitely established whether the impact of blockholders is positive or negative and that there is little evidence that the impact of blockholders on firm value is pronounced).

³⁹ See Pound (1988), pp 242–244 (proposing the hypothesis that institutional investors are efficient monitors because they abstain from voting in a proxy contest and instead follow street rules by selling their holdings rather than voting actively against management); Pozen (1994), p 140 (arguing that institutional investors are reluctant activists that almost never seek to obtain control of the board of directors of a public company because of legal restrictions or practical constraints); Bushee (1998), pp 319–330 (providing evidence that managers are less likely to reduce investment in research and development to reverse an earnings decline when institutional ownership is high); Han and Suk (1998), pp 147–153 (providing evidence that stock returns are positively related to institutional ownership); McConnell and Servaes (1990), pp 601–609 (finding a significant positive relation between Tobin’s Q and the fraction of shares owned by institutional investors).

hypothesis)⁴⁰ or because they must cooperate with managers in order to protect other business relationships (the ‘conflict of interest’ hypothesis).⁴¹

The empirical evidence on the effect of institutional investors on firm value is once more unclear. Several studies find a positive relationship between the shareholdings of institutional investors and firm value.⁴² Other studies find a negative relationship between these two variables⁴³ or contradictory results.⁴⁴ Against this background, some more recent studies point to the fact of institutional investor heterogeneity and to the resulting need to further distinguish between different types of institutional investors.⁴⁵

3 Data and Methodology

This section discusses the data used and the methodology implemented in the study.

⁴⁰ See Pound (1988), pp 242–244 (proposing the hypothesis that institutional investors maintain strategic alliances with incumbent management, in particular in acquisition-related proxy contests); Lehmann and Weigand (2000), pp 185–189 (concluding from the German evidence on the governed corporation that having financial institutions as largest shareholders of traded corporations improves corporate performance).

⁴¹ See Pound (1988), pp 242–244 (proposing the hypothesis that institutional investors may vote with management in a proxy contest because of conflict of interest problems); Agarwal and Elson (2001), pp 226–227, 228–229 (supporting the hypothesis that German universal banks may engage in rent-seeking activities and providing evidence of conflicting interests between creditors and shareholders).

⁴² See Barber (2007), p 78 (evaluating a public pension fund’s institutional activism in the United States and finding strong empirical evidence that improving shareholder rights improves shareholder value); Ruiz-Mallorquí and Santana-Martín (2011), pp 123–126 (finding that the voting rights of investment funds are positively related to firm value in the Spanish market); Bebchuk et al. (2015), pp 1101–1120, 1120–1135 (finding no evidence that hedge fund activism is followed by short-term gains in performance that come at the expense of long-term performance or that the initial positive stock price spike accompanying an activist intervention tends to be followed by negative abnormal returns in the long term); Fich et al. (2015), pp 23, 45–46 (focusing on the fraction of the institution’s portfolio represented by the firm and showing that a firm is likely to listen to a monitoring institution even if this investor is not a blockholder); de la Hoz and Pombo (2016), pp 205–208, 216 (finding that the presence of an institutional investor has a positive effect on firm value, especially in case of a blockholder coalition with an institutional investor).

⁴³ See Faccio and Lasfer (2000), pp 86–105 (finding no evidence that occupational pension funds are effective monitors in the United Kingdom); Ruiz-Mallorquí and Santana-Martín (2011), pp 123–126 (finding a negative effect of a bank’s voting rights on firm value in the Spanish market); Mietzner and Schweizer (2014), pp 202–203 (finding that hedge funds are not able to enhance shareholder value by reducing agency costs in Germany).

⁴⁴ See Bhattacharya and Graham (2009), pp 382–390 (finding a significant difference between the ownership of pressure-resistant and pressure-sensitive institutional investors on firm performance); Ruiz-Mallorquí and Santana-Martín (2011), pp 123–126 (providing evidence that reveals a different effect on firm value depending on whether the dominant institutional investor is a banking institution or an investment fund).

⁴⁵ See Bhattacharya and Graham (2009), pp 378–382, 390–391 (distinguishing pressure-resistant and pressure-sensitive institutional owners and suggesting a statistically significant difference among firm performances and equity ownerships between pressure-resistant and pressure-sensitive firms); de la Hoz and Pombo (2016), pp 208–212 (distinguishing independent and grey investors and finding that the presence of an independent investor has a positive effect, while the presence of grey investors has a negative effect).

3.1 Data

The study is based on data regarding the board composition and ownership structure of public companies in Switzerland. About 300 companies are listed on the Swiss stock exchange. Therefore, the research population consists of about 300 publicly traded companies. Data are available for the past two decades (or less, depending on each company's disclosure practices). This is because the Swiss stock exchange enacted a directive on corporate governance (the Corporate Governance Directive) in 2002, which requires all listed companies to disclose certain information on the board of directors, management shareholdings and significant shareholders. In 2007, the Swiss stock exchange amended its Corporate Governance Directive in many substantial ways, considerably increasing transparency of annual reporting on the corporate governance characteristics relevant to this study.⁴⁶

The sampling approach is twofold. On the one hand, this study focusses on the 50 largest public companies, which are part of the SMI Expanded (SMIEXP) stock market index. For several reasons—the same company has several SMIEXP-listed equity securities,⁴⁷ the company was included in the index over that period⁴⁸ or the company experienced a significant merger or demerger⁴⁹—seven companies were excluded, leaving a sample of 43 companies. Compared with other studies, it was further decided not to exclude companies operating in the financial sector. Other studies generally exclude these companies because the business dynamics are thought to be substantially different among financial and industrial companies or because of different regulatory requirements for such companies.⁵⁰ It was, however, decided not to do so because this article is supposed to investigate the effect of different corporate governance variables and these variables have enough variation among all groups of companies in the sample of this study. On the other hand, this study analyzes recent corporate governance data of these companies starting in 2007. This is mainly because of data availability reasons: as already mentioned, corporate disclosure and transparency considerably increased from then on. For methodological reasons, to be explained in the next subsection, the independent (corporate governance) variables are 1 year lagged to the respective dependent (performance) variables. Therefore, the years 2007 to 2012 are defined as the corporate governance period and the years 2008 to 2013 are defined as the performance period. It is further noteworthy that the performance period arguably represents a

⁴⁶ The Corporate Governance Directive was subsequently revised in October 2008 and September 2014 and further amended in April and December 2016 and March 2018. See also Art. 35 para. 2 of the Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading of 19 June 2015 (status as of 1 August 2017), SR 958.1 (the Financial Market Infrastructure Act).

⁴⁷ Swatch Group (registered stock and bearer share); Lindt (registered stock and participation certificate).

⁴⁸ Transocean (2010); DKSH (2012).

⁴⁹ Aryzta (merger, 2008); Julius Bär (demerger, 2009); GAM (demerger, 2009).

⁵⁰ The Swiss banking regulations, for example, require Swiss banks to have separated supervisory and executive boards and to staff these boards with different people, see Art. 11 para. 2 of the Ordinance on Banks and Savings Banks of 30 April 2014 (status as of 1 August 2017), SR 952.02.

full economic cycle of the relevant market: a simple look at the performance of the SMIEXP index reveals 2 years of recession (2008 and 2009), 2 years of stagnation (2010 and 2011) and 2 years of economic recovery (2012 and 2013). This methodological design basically leads to 6 consecutive years of data and generates a panel dataset consisting of 258 observations.

In the remainder of this subsection, the key variables of the regression analysis are discussed more closely.

3.1.1 Dependent Variables

In the regression analysis, three different sets of dependent variables are defined. According to the traditional finance literature, firm value can be measured either as stock market performance, accounting performance or a mix of both performance measures.⁵¹ However, none of those measures are perfect; each measure has its own advantages and disadvantages.

The first variable, referring to the market value of the company, measures a specific type of stock return: Cumulative Abnormal Return (CAR). Cumulative Abnormal Return is calculated by summing up the daily returns of each company on a yearly basis and subtracting the daily return of the SMIEXP index on a yearly basis in the corresponding year. Daily returns are calculated using daily price data retrieved from Bloomberg. However, the use of stock return as a performance measurement for corporate governance devices can be problematic for several reasons. According to the efficient market hypothesis, stock prices already incorporate the governance structure of a company, predicting that no observable effect should result.⁵² Also, it is not completely clear how this performance measurement should be interpreted, since a good corporate governance structure would not necessarily generate higher stock returns if markets are efficient.

The second variable, referring to the book value of the company, is a typical profitability ratio used in accounting: Return on Assets (ROA). This ratio is an indicator of how profitable a company is relative to its assets. Return on Assets gives an idea as to how efficient management is at using its assets to generate earnings. The relevant data is retrieved directly from Bloomberg. Return on Assets is calculated as trailing 12 month net income divided by average total assets and the quotient multiplied by 100. The main concerns with the use of accounting profit as a performance measurement for corporate governance are the measure's usefulness and comparability across firms and the disregard of expected future returns. Another concern is the potential for manipulation by management, which is true for both balance sheet (total assets) and income statement (net income) numbers.

The third variable, referring to both the market value and the book value of the company, is the ratio between the market value and the replacement value of

⁵¹ See for example Han and Suk (1998), pp 145–147 (stock return); Xu and Wang (1997), pp 85–94 (market-to-book ratio, return on equity, return on assets); Bhabra (2006), pp 146–147 (Tobin's Q, market-to-book ratio, return on equity).

⁵² See Fama (1970), pp 383–417.

the same physical asset: Tobin's Q (TSQ).⁵³ Most empirical corporate law studies use this performance measure or a variation thereof.⁵⁴ The relevant data is again retrieved from Bloomberg. As a general rule, yearly Tobin's Qs are used and average Tobin's Qs are calculated using either quarterly or semiannually reported Qs, whenever these data were available in the database. Tobin's Q is calculated as the sum of the company's market capitalization, liabilities, preferred equity and minority interest and this sum divided by total assets. This performance measure is arguably the least problematic. It can be interpreted intuitively as how much an investor gets out of each dollar he or she invested in the company.

3.1.2 Independent Variables

The independent variables of the regression analysis can be categorized as explanatory or control variables. The explanatory variables are the variables that characterize the corporate governance framework. In the author's understanding, all mentioned corporate governance elements (board independence, management ownership and blockholder ownership) have to be treated as explanatory variables since they all presumably affect firm value. There are no severe multicollinearity problems associated with these components, also because the inside and outside ownership dimensions do not overlap. By focusing only on one set of them, for example board independence, one would create an omitted variable problem. The control variables by definition do influence the dependent variable (firm value), but are not at the core of the research question (corporate governance).

3.1.2.1 Explanatory Variables The model tested in this study consists of six explanatory variables, two for each corporate governance device (board independence, management ownership and blockholder ownership). Both board independence variables can be substituted and/or complemented by several other variables. All relevant corporate governance data are hand-collected from companies' disclosures in their annual reports.

The first variable measuring board independence is the Independent Director Ratio (IDR), a percentage number representing the fraction of independent directors on the board of directors. This continuous variable ranges between 0.5 and 1. The critical question, however, is how an independent director is defined. Pursuant to the definition used in this study, which is based on the relevant soft law rules of the Swiss corporate governance code (the Swiss Code of Best Practice for Corporate Governance), a director is only independent if he or she is currently not in an executive position, has not been in an executive position for the preceding 3 business years, has no significant family relationship to any executive manager and has no significant business relationship with the company.⁵⁵ In addition, the study

⁵³ See Tobin (1969), pp 15–29.

⁵⁴ For a critique of the use of Tobin's Q, see Demsetz and Villalonga (2001), pp 213–214.

⁵⁵ See item 14 (board committee members) and item 32 of appendix 1 (compensation committee members) of the Swiss Code of Best Practice for Corporate Governance of 2002, as revised in 2007 and 2014 (defining an independent director as a non-executive board member who has never been a member of the

also contains an extended model to tease out the effect of why a director is considered non-independent by defining dummy variables representing current executive directors (the Current Executive Director Dummy, CED), former executive directors (the Former Executive Director Dummy, FED), significant family relationships (the Family Relationship Dummy, FRD) and significant business relationships (the Business Relationship Dummy, BRD).⁵⁶ These variables take the value 1 if there are one or more directors that fall within such category and 0 otherwise. In order to avoid potential multicollinearity problems, it is important to remove the independent director ratio from the regression equation when using these dummy variables.

The second variable measuring board independence is a dummy variable for combined or separated CEO and chairman functions (the CEO and Chairman Dummy, CCD). This variable equals 1 if one person is at the same time holding the chairman and the CEO functions and 0 otherwise. Alternatively, the study also contains an extended model to tease out the individual effects as to how these functions are cumulated.⁵⁷ This is done by defining two additional dummy variables, representing a CEO that sits on the board of directors without being chairman (the CEO on Board Dummy, CBD) and an executive chairman other than the CEO (the Executive Chairman Dummy, ECD). These variables are likewise defined as 1 if such persons are present and 0 otherwise. There is no multicollinearity problem, wherefore these variables can simply be added to the regression equation.

The first variable measuring management ownership is the Non-Executive Director Shareholding Ratio (NSR). There are basically two ways to measure director shareholdings. The standard measurement is what is referred to here as actual voting rights. This includes all shares owned by all non-executive directors, including restricted shares. The alternate measurement can be referred to as potential voting rights. In addition to the shares representing actual voting rights, this measure further includes unvested shares, unvested stock units and stock option of those directors. For the purpose of this analysis, actual voting rights and not potential voting rights are used because this more accurately represents how these persons can influence the company by way of voting power. This variable is a continuous variable, typically ranging from less than 0.001 to more than 0.5.

The second variable measuring management ownership is the Executive Director and Officer Shareholding Ratio (ESR). The same thoughts on the possible two measurements as with non-executive director shareholdings, actual and potential voting rights, also apply to executive director and officer shareholdings. For the same reason as mentioned above, actual voting rights and not potential voting rights are used

Footnote 55 (continued)

executive board or was a member thereof more than 3 years ago and who has no or comparatively minor business relations with the company).

⁵⁶ This is important because these variables ultimately allow drawing certain inferences on how independence should be defined, given a large enough sample.

⁵⁷ This is important because these aspects should also be taken into consideration when discussing single and dual leadership structures.

in this analysis. This variable is thus a continuous variable as well, typically ranging from less than 0.001 to more than 0.5.

The first variable measuring blockholder ownership is a dummy variable for whether or not a company has a controlling shareholder (the Controlling Shareholder Dummy, CSD). This variable is 1 if a company has a controlling shareholder and 0 otherwise. The central question is of course what threshold to apply. There are basically two different approaches. One approach is to identify *de iure* controlling shareholders.⁵⁸ This would suggest the use of a straightforward 50% threshold. Another approach is to identify *de facto* controlling shareholders.⁵⁹ For this approach, the threshold could be set as low as 20% or somewhere between 30% and 40%. Swiss takeover law, for example, assumes that any shareholder holding more than $33\frac{1}{3}\%$ of the voting rights of a company is a controlling shareholder.⁶⁰ In addition, the $33\frac{1}{3}\%$ threshold also represents a significant blocking minority with regard to all important resolutions of the general meeting of shareholders in Swiss corporate law.⁶¹ After all, this is an arbitrary decision. In pursuit of objectivity, a large shareholder is defined in this study as a person who holds a majority of the voting rights of the company, thus implementing the *de iure* definition with a threshold of 50%.

The second variable measuring blockholder ownership is a dummy variable of institutional investors (the Institutional Investor Dummy, IID). For the purpose of this variable, it is assessed whether the company has one or more institutional investors as significant shareholders—a shareholder holding more than 3% of the company's outstanding shares—that individually or collectively hold more than a 10% interest in the company. If this is the case, this variable equals 1, and if not, it equals 0. There is an underlying logic to the choice of the 10% threshold. In Swiss corporate law, minority shareholders holding more than 10% of outstanding shares have certain important minority rights.⁶² The rationale of institutional investors only makes sense when they can exercise these rights. Therefore, it is reasonable to use this threshold.

3.1.2.2 Control Variables Various control variables to be used in the regressions are defined, namely five firm-specific control variables and a set of industry control dummy variables.

The first firm-specific control variable is firm size (FS). It is controlled for firm size because larger companies have better access to capital markets and benefit from economies of scale and size-induced entry barriers.⁶³ Firm size is defined as the

⁵⁸ See for example Shleifer and Vishny (1986), pp 465–471.

⁵⁹ See for example la Porta et al. (1999), pp 476–480.

⁶⁰ See Art. 135 para. 1 of the Financial Market Infrastructure Act.

⁶¹ See Art. 704 para. 1 of the Federal Act on the Amendment of the Swiss Civil Code (Part Five: The Code of Obligations) of 30 March 1911 (status as of 1 April 2017), SR 220 (the Swiss Code of Obligations).

⁶² See Art. 699 para. 3 (convocation and agenda items), Art. 697b para. 1 (special audit), Art. 727 para. 2 (ordinary audit requirement) and Art. 736 no. 4 (dissolution of the company) of the Swiss Code of Obligations.

⁶³ For additional reasons to include this variable, see Mura (2007), pp 88–90.

natural logarithm of total assets in each year. The relevant data are retrieved from Bloomberg, whereas total assets are defined as the total value of all short- and long-term assets as reported on the balance sheet.

The second firm-specific control variable is capital expenditures (CE). This variable is used as a proxy for the firm's investments. This control variable is included because it has frequently been argued in the literature that investment has a positive effect on firm value.⁶⁴ Data on this variable are retrieved from Bloomberg. According to their definition, capital expenditures correspond to the amount the company spent on purchases of tangible fixed assets (excluding purchases of investments).

The third firm-specific control variable is cash flow (CF). A free cash flow variable is included because it was argued in the literature that agency conflicts may be greater when managers have discretion over a larger quantity of liquid assets.⁶⁵ In contrast, it was also argued that greater cash flows may permit companies to finance their investments internally, which reduces underinvestment and bankruptcy risks.⁶⁶ Data on free cash flows are retrieved from Bloomberg. In their database, cash flow is calculated as the cash flow from operating activities minus capital expenditures (defined as the amount the company spent on purchases of tangible fixed assets).

The fourth firm-specific control variable is the leverage ratio (LR). It is widely acknowledged that leverage is an important driver of firm value. Some scholars have predicted a positive relation between leverage and firm value due to the value of tax shields.⁶⁷ Other scholars have argued that leverage may limit the company's ability to raise new debt and thereby force it to pass up valuable investment opportunities.⁶⁸ The leverage ratio is defined as the ratio of total liabilities to total assets. Data on both a company's total liabilities (debt) and total assets are retrieved from Bloomberg.

The fifth firm-specific control variable is the dividend ratio (DR). Some scholars claim that dividend payments reduce the agency problems associated with excess liquid assets.⁶⁹ Others argue that firms with few profitable investment opportunities pay higher dividends.⁷⁰ The dividend ratio is defined as the ratio of dividends paid to total assets. Data on both paid dividends and total assets of the company are retrieved from Bloomberg.

Moreover, eight industry control dummy variables are defined. A firm's industry is identified by using the industry classification benchmark system (the ICB system) and gathering company data from the Swiss stock exchange. The industries represented in the sample include basic materials (ID1), industrials (ID2), consumer goods (ID3), health care (ID4), consumer services (ID5), telecommunications (ID6),

⁶⁴ See Jensen and Meckling (1976), pp 329–323; Mura (2007), pp 88–90.

⁶⁵ Jensen (1986), p 324.

⁶⁶ Mura (2007), pp 88–90.

⁶⁷ Modigliani and Miller (1963), pp 434–435.

⁶⁸ Myers (1977), p 166.

⁶⁹ Easterbrook (1984), pp 652–656.

⁷⁰ Smith and Warner (1979), pp 119–122.

financials (ID8) and technology (ID9).⁷¹ The sample does not include any companies in the oil and gas industry or utilities.

3.2 Methodology

This study uses panel data regression methodology. In this subsection, the regression models—the base model, its extensions and the sensitivity modifications—are described and the three main limitations of the methodology as implemented in this study are discussed.

3.2.1 Regression Models

The base model consists of six explanatory variables (two each for board independence, management ownership and blockholder ownership), five firm-specific control variables and eight industry dummy control variables:

$$\varphi = \alpha + \beta \times \vartheta + \gamma \times \sigma + \delta \times \tau + \varepsilon$$

whereas φ measures firm performance (CAR, ROA, TSQ), ϑ represents the explanatory variables (IDR, CCD, NSR, ESR, CSD, IID), σ represents the firm-specific control variables (FS, CE, CF, LR, DR) and τ represents the industry control dummy variables (ID1, ID2, ID3, ID4, ID5, ID6, ID8, ID9).

Furthermore, the base model is extended in two ways regarding board independence. This is because it is intended to capture the effect of independent directors on firm value more precisely. The first extension includes a substitute for the Independent Director Ratio. Instead of this ratio, it is tested why a director is considered to be non-independent (current executive director, former executive director, significant family relationship, significant business relationship). The second extension includes a complement to the CEO and Chairman Dummy. In addition to this dummy variable, the two other cases mentioned (CEO on board other than chairman, executive chairman other than CEO) are also tested for:

$$\varphi = \alpha + \beta \times \vartheta + \gamma \times \sigma + \delta \times \tau + \varepsilon$$

whereas φ measures firm performance (CAR, ROA, TSQ), ϑ represents the explanatory variables (CED, FED, FRD, BRD, CCD, NSR, ESR, CSD, IID), σ represents the firm-specific control variables (FS, CE, CF, LR, DR) and τ represents the industry control dummy variables (ID1, ID2, ID3, ID4, ID5, ID6, ID8, ID9), and

$$\varphi = \alpha + \beta * \vartheta + \gamma * \sigma + \delta * \tau + \varepsilon$$

whereas φ measures firm performance (CAR, ROA, TSQ), ϑ represents the explanatory variables (IDR, CCD, CBD, ECD, NSR, ESR, CSD, IID), σ represents the firm-specific control variables (FS, CE, CF, LR, DR) and τ represents the industry control dummy variables (ID1, ID2, ID3, ID4, ID5, ID6, ID8, ID9).

⁷¹ The number in the industry control dummy variables corresponds to the respective industry identifier pursuant to the ICB system.

The regressions run in this study consist only of fixed effects, but no random effects models. Both the base model and its extensions have industry-fixed effects. The sensitivity analysis includes year-fixed effects, firm-fixed effects and year- and firm-fixed effects models. For each model, three different performance measurements—a stock market-based, an accounting-based and a mixed measure—are used in order to generate more balanced results. In addition, the results are always reported for two different standard error corrections. First, the results with a robustness adjustment for heteroscedasticity of standard errors are presented. Second, the results with an adjustment for clustered standard errors by clustering individual firms are depicted.

3.2.2 Limitations

One quite big concern with board composition and ownership structure studies is endogeneity. It is not completely clear whether the independent variables influence the dependent variable and not the other way around. To address endogeneity concerns, at least to a certain extent, this study uses lags. As already mentioned, performance is measured in the year following a given corporate governance setting. Also, the use of year- and/or firm-fixed effects is supposed to reduce potential endogeneity problems.

Another potential issue is the problem of multicollinearity within the data. The various independent variables are in general not strongly correlated among themselves. This is especially true for the relation between the Non-Executive Director Shareholding Ratio and the Executive Director and Officer Shareholding Ratio. It could at most be problematic that total assets are used not only to calculate Return on Assets, but also to measure Firm Size, the Leverage Ratio and the Dividend Ratio, but there is no indication in the data that this would indeed be a problem.

Yet another possible shortcoming of studies like the one at hand relates to omitted variables. This study intends to circumvent omitted variable bias by including the most common control variables as discussed in the relevant literature. Various other variables might also affect firm performance, but cannot be measured (unobserved firm heterogeneity). This study aims at limiting omitted variable bias by controlling for year- and/or firm-fixed effects.

4 Results and Discussion

This section presents the results of the study—some summary statistics, the multivariate analysis and the sensitivity analysis—and interprets these results.

4.1 Summary Statistics

Shown in this subsection are a few summary statistics on performance measurement, board composition, ownership structure, financial figures and industry classification.

4.1.1 Performance Measurement

Performance and firm value are measured in various ways in this study. The stock return measurement, Cumulative Abnormal Return, fluctuates between negative 27% and positive 19% per year during the performance period (from 2008 to 2013). The accounting measurement, Return on Assets, varies between negative 14% and positive 42% on a yearly basis during this period. The mixed measurement, Tobin's Q, has a minimum value of 0.74 and a maximum value of 7.99 during this period. Besides the minimum and maximum values, the mean and standard deviation of these measures are reported in Table 1.

4.1.2 Board Composition

It is interesting to note that average board size slightly, but steadily, increased during the corporate governance period (from 2007 to 2012). Also, the number of independent directors relative to board size, the Independent Director Ratio, tended to increase over this period. Non-independent directors owe their status primarily to current executive functions and secondarily to former executive functions. One can further identify a certain trend that both of these numbers are declining in recent years, which is consistent with the observations regarding board size and the Independent Director Ratio. While only a small fraction of directors does not meet the independence status because of significant family or business relationships, these numbers must be analyzed with caution. All these conclusions are based on an analysis of the means as represented in Table 2.

Another observation from this table is that the CEO and chairman roles are often separated, especially more recently. There is at least some variation in this variable so that it can potentially lead to meaningful results. This also applies to the CEO on Board Dummy and, to a lesser extent, the Executive Chairman Dummy.

4.1.3 Ownership Structure

The shareholdings of non-executive directors more or less steadily increased during the corporate governance period (from 2007 to 2012), but decreased most recently. Executive director and officer shareholdings quite steadily increased during this period. Both values are expressed as median in Table 3 because these numbers have large outliers due to management blockholdings in some cases.

As the data in this table further show, the number of controlling shareholders is quite steady during this period, and so is the number of institutional investors, with the exception of the most recent year. It is in any case worth noting that there is enough variation for both the Controlling Shareholder Dummy and the Institutional Investor Dummy, implying that any results reported for these variables potentially have a meaningful interpretation.

4.1.4 Financial Figures

Firm Size, calculated as the natural logarithm of total assets, ranges from 5.66 to 14.63, with a mean of 9.16 and a standard deviation of 1.99. Capital Expenditures move between 0 and 5,273, with a mean of 538.95. Cash Flow can either be negative (minimum: −59,494) or positive (maximum: 128,398), depending on whether cash is flowing in or out of the company. The Leverage Ratio can theoretically take values between 0 and 1. The mean leverage of all sample firms is 0.58, meaning that the average sample firm has debt in the amount of 58% of total assets. The Dividend Ratio can also take any value between 0 and 1 in theory. On average, sample firms pay dividends in the amount of 3% of total assets. Further information can be retrieved from Table 4.

4.1.5 Industry Classification

About half of the 43 firms in the sample can be categorized either as industrials (26%) or as financials (23%). Seven (16%), five (12%) and four (9%) firms are in the health care, consumer goods and basic materials industries, respectively. The remaining firms operate in the technology (7%), consumer services (5%) and telecommunications (2%) industries, respectively. No utilities are represented in the sample. See Table 5.

4.2 Multivariate Analysis

A base model and two extensions thereof are tested in this subsection. The number of observations (n) is 258 and the number of groups (firms) is 43 in each of those models.

4.2.1 Base Model

The base model is an industry-fixed effects model with the six standard explanatory variables and the five firm-specific control variables besides the industry control dummy variables as independent variables. This model is run with all three performance specifications: Cumulative Abnormal Return ($R^2=0.0759$), Return on Assets ($R^2=0.6395$) and Tobin's Q ($R^2=0.6683$). In a first step, the results for the standard error adjustment for heteroscedasticity, as depicted in Table 6, are discussed.

With regard to board independence, statistically significant results can be reported for the Independent Director Ratio, but not for the CEO and Chairman Dummy. In the base model, the Independent Director Ratio is negatively related to Return on Assets ($p=0.022$) and Tobin's Q ($p=0.008$). It can thus be concluded that—after a certain threshold—firm value is reduced by adding more independent directors to the board.

Regarding management ownership, a statistically significant result can be reported for the Non-Executive Director Shareholding Ratio, but none for the Executive Director and Officer Shareholding Ratio. In the base model, the

Table 1 Performance measurement

	Mean	Standard deviation	Minimum	Maximum
Cumulative Abnormal Return	0.119778638	0.309736278	-1.27069516	1.1941273
Return on Assets	7.227587403	7.213833342	-14.1235	42.9754
Tobin's Q	2.046900581	1.181151608	0.7384	7.98625

Non-Executive Director Shareholding Ratio is positively related to Tobin's Q ($p=0.046$). This result suggests that firm value can be increased by a management participation program for non-executive directors.

As regards blockholder ownership, statistically significant results can be reported for the Controlling Shareholder Dummy, but not for the Institutional Investor Dummy. In the base model, the Controlling Shareholder Dummy is negatively related to Cumulative Abnormal Return ($p=0.094$), Return on Assets ($p=0.095$) and Tobin's Q ($p=0.005$). These results lead to the conclusion that the presence of a controlling shareholder does not increase, but decreases firm value.

In respect of the firm-specific control variables, all but one—Capital Expenditures—of the control variables are statistically significant. Firm Size is negatively related to Return on Assets ($p=0.020$) and Tobin's Q ($p=0.028$). Cash Flow is positively related to Cumulative Abnormal Return ($p=0.000$) and Return on Assets ($p=0.001$). The Leverage Ratio is negatively related to Return on Assets ($p=0.048$). The Dividend Ratio is positively related to Return on Assets ($p=0.000$) and Tobin's Q ($p=0.009$). These results indicate that Firm Size and the Leverage Ratio decrease firm value, while Cash Flow and the Dividend Ratio increase firm value.

In a second step, the results for the standard error adjustment for clustering, as depicted in Table 7, are discussed. The previous conclusions are largely confirmed using this method of standard error adjustment. Therefore, it is only noted when a certain variable falls below or jumps above the relevant level of statistical significance.

There is one change regarding management ownership. The Non-Executive Director Shareholding Ratio is no longer statistically significant ($p=0.135$). The weak evidence suggesting that management participation programs of non-executive directors have a positive effect on firm value is thus not very reliable.

In addition, there are some changes in respect of the control variables. With cluster-adjusted standard errors, Capital Expenditures is positively related to Return on Assets ($p=0.063$). At the same time, the Leverage Ratio is no longer negatively related to Return on Assets ($p=0.113$). Finally, Cash Flow is positively related to Tobin's Q ($p=0.043$). These results indicate that Firm Size decreases firm value, while Capital Expenditures, Cash Flow and the Dividend Ratio increase firm value. The overall evidence thus suggests that Firm Size decreases firm value and Cash Flow and the Dividend Ratio increase firm value.

Table 2 Board composition

	2007	2008	2009	2010	2011	2012
Board size	8.53	8.65	8.79	9.09	9.30	9.33
Independent directors	86.20%	88.2%	87.56%	87.24%	88.91%	89.48%
Current executive directors	21	18	22	19	16	17
Former executive directors	9	10	9	11	10	6
Family relationships	1	2	1	1	1	1
Business relationships	1	1	2	4	3	3
CEO and chairman	7	5	8	4	5	5
CEO on board	8	6	7	7	6	6
Executive chairman	3	4	4	4	3	3

Table 3 Ownership structure

	2007	2008	2009	2010	2011	2012
Non-executive directors	0.34%	0.43%	0.69%	0.67%	0.71%	0.44%
Executive directors and officers	0.10%	0.11%	0.13%	0.14%	0.14%	0.15%
Controlling shareholders	8	9	8	7	8	6
Institutional investors	11	11	12	11	12	19

Table 4 Financial figures

	Mean	Standard deviation	Minimum	Maximum
Firm Size	9.159455024	1.986219408	5.663783058	14.6374427
Capital Expenditures	538.9463372	998.1129768	0	5,273
Cash Flow	1,857.139314	12,223.10045	− 59,494	128,398
Leverage Ratio	0.579170761	0.210659128	0.167349849	0.980734901
Dividend Ratio	0.030803079	0.037433041	0	0.203240994

Table 5 Industry classification

	Absolute numbers	Relative numbers
Basic materials	4	9%
Industrials	11	26%
Consumer goods	5	12%
Health care	7	16%
Consumer services	2	5%
Telecommunications	1	2%
Utilities	0	0%
Financials	10	23%
Technology	3	7%

Table 6 Base model (t-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.1042589 (0.2345391)	-9.990626** (4.365646)	-1.427751*** (0.5357805)
CEO and Chairman Dummy	0.0376464 (0.0612265)	0.5381584 (0.9066003)	0.0472856 (0.1347182)
Non-Executive Director Shareholding Ratio	0.216768 (0.2003671)	6.351297 (4.036281)	1.062242** (0.5315363)
Executive Director and Officer Shareholding Ratio	0.2177204 (0.2504593)	-1.887763 (7.615012)	0.6164716 (1.096311)
Controlling Shareholder Dummy	-0.1608434* (0.0961741)	-3.302702* (1.975969)	-0.6060952*** (0.2166458)
Institutional Investor Dummy	-0.0814942 (0.0578275)	0.6932805 (0.838262)	0.0749728 (0.1163916)
Firm Size	-0.0069573 (0.0223568)	-1.105673** (0.4747351)	-0.2114608** (0.09628)
Capital Expenditures	-0.0000281 (0.0000268)	0.0012433 (0.0008299)	0.0000608 (0.0000942)
Cash Flow	0.00000328*** (0.000000927)	0.0000198*** (0.00000598)	0.00000117 (0.0000012)
Leverage Ratio	0.0750621 (0.1972285)	-6.980461** (3.526071)	-0.7329356 (0.5459694)
Dividend Ratio	-0.34669 (0.6351736)	64.52222*** (17.85204)	7.864328*** (3.010192)

4.2.2 Extensions

The base model is extended by focusing on board independence, namely by looking more closely at the Independent Director Ratio and the CEO and Chairman Dummy.

4.2.2.1 Director Extension In the first extension, the Independent Director Ratio is dropped and the Current Executive Director Dummy, the Former Executive Director Dummy, the Family Relationship Dummy and the Business Relationship Dummy are included in the model. The explanatory power of the director extension model is about the same as in the base model for all the stock return performance ($R^2=0.0819$), accounting performance ($R^2=0.6365$) and mixed performance ($R^2=0.6648$) specifications. Table 8 contains the results of this extended model.

Concerning the director extension, one statistically significant result can be reported for the Current Executive Director Dummy. The Current Executive Director Dummy is positively related to Tobin's Q ($p=0.066$). This result suggests that having current executive directors on the board adds value.

With reference to management ownership and blockholder ownership, the results from the base model are confirmed. In the director extension model, the Non-Executive Director Shareholding Ratio is positively related to Return on Assets ($p=0.058$) and Tobin's Q ($p=0.066$). Also, the Controlling Shareholder Dummy is negatively related to Cumulative Abnormal Return ($p=0.091$) and Tobin's Q ($p=0.016$).

When testing for clustered standard errors, the results of the heteroscedasticity test are largely confirmed. There are, however, some changes, which shall be discussed. See Table 9.

Concerning the director extension, two additional statistically significant relations appear when clustering the standard errors among firms. The Current Executive Director Dummy is positively related to Return on Assets ($p=0.089$). The Former Executive Director Dummy is positively related to Tobin's Q ($p=0.074$). There is thus good reason to conclude that current executive directors in fact add value. There is also some evidence that board members, which were previously in an executive role at the company, add value.

As in the base model, the variables on management ownership are no longer statistically significant. The Non-Executive Director Shareholding Ratio is neither related to Return on Assets ($p=0.103$) nor to Tobin's Q ($p=0.188$). Again, these results turn out to be not very reliable.

4.2.2.2 Leadership Extension In the second extension, the CEO on Board Dummy and the Executive Chairman Dummy are included in the model. This modification does not change much of the explanatory power of the model for all the stock return performance ($R^2=0.0886$), accounting performance ($R^2=0.6493$) and mixed performance ($R^2=0.6707$) specifications. Table 10 contains the results of this extended model.

Concerning the leadership extension, two statistically significant results can be reported for the CEO on Board Dummy and the Executive Chairman Dummy. The

Table 7 Base model (cluster-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.1042589 (0.2359075)	- 9.990626** (4.319147)	- 1.427751** (0.6231661)
CEO and Chairman Dummy	0.0376464 (0.0627679)	0.5381584 (0.7437184)	0.0472856 (0.1393732)
Non-Executive Director Shareholding Ratio	0.216768 (0.2109631)	6.351297 (4.422889)	1.062242 (0.711522)
Executive Director and Officer Shareholding Ratio	0.2177204 (0.1734859)	- 1.887763 (6.08541)	0.6164716 (0.9795032)
Controlling Shareholder Dummy	- 0.1608434* (0.0923572)	- 3.302702* (1.965109)	- 0.6060952** (0.2796336)
Institutional Investor Dummy	- 0.0814942 (0.0532045)	0.6932805 (0.9352024)	0.0749728 (0.1249408)
Firm Size	- 0.0069573 (0.0132043)	- 1.105673** (0.5241095)	- 0.2114608** (0.1044675)
Capital Expenditures	- 0.0000281 (0.0000171)	0.0012433* (0.0006676)	0.0000608 (0.0001002)
Cash Flow	0.00000328*** (0.000000573)	0.0000198** (0.00000854)	0.00000117** (0.000000577)
Leverage Ratio	0.0750621 (0.1300502)	- 6.980461 (4.405363)	- 0.7329356 (0.7403272)
Dividend Ratio	- 0.34669 (0.5951996)	64.52222*** (19.99005)	7.864328** (3.374983)

Table 8 Director extension (t-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Current Executive Director Dummy	-0.0462789 (0.0590966)	1.834196 (1.20094)	0.3057726* (0.166016)
Former Executive Director Dummy	0.0019375 (0.0498487)	0.453958 (0.8110318)	0.1131351 (0.0828266)
Family Relationship Dummy	0.0772882 (0.0985227)	1.440189 (1.553)	-0.2597575 (0.2781893)
Business Relationship Dummy	0.0788184 (0.0774353)	-1.225893 (1.046441)	-0.0276614 (0.1270905)
CEO and Chairman Dummy	0.0516331 (0.0690178)	0.3457955 (1.131808)	-0.0202095 (0.1616389)
Non-Executive Director Shareholding Ratio	0.2168902 (0.1863267)	7.277156* (3.843086)	1.075331* (0.5839925)
Executive Director and Officer Shareholding Ratio	0.2242525 (0.2501247)	-0.8318782 (8.021023)	0.8485392 (0.9841117)
Controlling Shareholder Dummy	-0.1651444* (0.0978211)	-2.972309 (1.911438)	-0.5571974** (0.2306781)
Institutional Investor Dummy	-0.0799487 (0.0590172)	0.6445603 (0.8539042)	0.0595881 (0.1125862)

Table 9 Director extension (cluster-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Current Executive Director Dummy	-0.0462789 (0.0580267)	1.834196* (1.077573)	0.3057726* (0.1776912)
Former Executive Director Dummy	0.0019375 (0.0460645)	0.453958 (0.7149674)	0.1131351* (0.0812248)
Family Relationship Dummy	0.0772882 (0.1122557)	1.440189 (1.27673)	-0.2597575 (0.1455286)
Business Relationship Dummy	0.0788184 (0.0541034)	-1.225893 (1.428131)	-0.0276614 (0.1814875)
CEO and Chairman Dummy	0.0516331 (0.0740326)	0.3457955 (0.9380107)	-0.0202095 (0.1667516)
Non-Executive Director Shareholding Ratio	0.2168902 (0.1950262)	7.277156 (4.458821)	1.075331 (0.8172888)
Executive Director and Officer Shareholding Ratio	0.2242525 (0.1929856)	-0.8318782 (6.926409)	0.8485392 (0.8333513)
Controlling Shareholder Dummy	-0.1651444* (0.0994714)	-2.972309 (2.017438)	-0.5571974* (0.3125005)
Institutional Investor Dummy	-0.0799487 (0.0543552)	0.6445603 (0.9303876)	0.0595881 (0.116167)

CEO on Board Dummy is positively related to Return on Assets ($p=0.076$) and the Executive Chairman Dummy is positively related to Cumulative Abnormal Return ($p=0.094$). These results suggest that it adds value when top executives are also sitting on the board and board members also have an executive function.

With reference to board independence, management ownership and blockholder ownership, the results of the base model are confirmed. On the one hand, the Independent Director Ratio is negatively related to Tobin's Q ($p=0.033$) and the Non-Executive Director Shareholding Ratio is positively related to Tobin's Q ($p=0.028$). On the other hand, the Controlling Shareholder Dummy is negatively related to both Return on Assets ($p=0.100$) and Tobin's Q ($p=0.006$).

When testing for clustered standard errors, the results of the heteroscedasticity test are largely confirmed. There are, however, some changes, which shall be discussed. See Table 11.

Concerning the leadership extension, one statistically significant relation disappears when clustering the standard errors among firms. The CEO on Board Dummy is no longer related to Return on Assets ($p=0.243$). In contrast, the Executive Chairman Dummy becomes even stronger with the clustering effect ($p=0.006$). Overall, these results still suggest that having a person with an executive function on the board adds value.

The variables on board independence, management ownership and blockholder ownership remain statistically significant in this model specification, although at a lower level of statistical significance. This is especially true for the mixed performance specification: the correlations between Tobin's Q and the Independent Director Ratio ($p=0.067$), the Non-Executive Director Shareholding Ratio ($p=0.078$) and the Controlling Shareholder Dummy ($p=0.020$) are all a bit weaker in this model.

4.3 Sensitivity Analysis

A year-fixed effects, a firm-fixed effects and a year- and firm-fixed effects model are tested in this subsection. The number of observations ($n=258$) and the number of groups (43 firms) remain unchanged.

4.3.1 Year-Fixed Effects

In the year-fixed effects model, the explanatory power of the stock return performance specification is still quite low ($R^2=0.2676$), while the explanatory power of both the accounting performance ($R^2=0.6636$) and mixed performance ($R^2=0.7058$) specifications is quite high. Table 12 shows the results of this model.

With regard to board independence, statistically significant results can be reported for the Independent Director Ratio. The Independent Director Ratio is negatively related to Return on Assets ($p=0.033$) and Tobin's Q ($p=0.038$). The initial finding from the base model—that adding more independent directors reduces firm value—is thus confirmed in this model.

Table 10 Leadership extension (t-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.2272925 (0.2725876)	- 6.54799 (4.596236)	- 1.090248** (0.510613)
CEO and Chairman Dummy	0.038143 (0.0658913)	1.216159 (1.039772)	0.1246471 (0.1389695)
CEO on Board Dummy	-0.0514634 (0.0689739)	2.386691* (1.346447)	0.2560917 (0.210662)
Executive Chairman Dummy	0.1647941* (0.0984305)	1.787102 (1.654261)	0.2924845 (0.2252765)
Non-Executive Director Shareholding Ratio	0.1345751 (0.201828)	6.442918 (3.939984)	1.099268** (0.5004897)
Executive Director and Officer Shareholding Ratio	0.3096362 (0.2699937)	- 2.85612 (7.100342)	0.4989607 (1.157423)
Controlling Shareholder Dummy	-0.1452778 (0.0964876)	- 3.068502* (1.865391)	- 0.6048527*** (0.2185342)
Institutional Investor Dummy	-0.0829177 (0.0558699)	0.8772392 (0.7963664)	0.0980861 (0.1091217)

Table 11 Leadership extension (cluster-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.2272925 (0.2987215)	−6.54799 (4.566695)	−1.090248* (0.5951681)
CEO and Chairman Dummy	0.038143 (0.069259)	1.216159 (0.8901098)	0.1246471 (0.1392733)
CEO on Board Dummy	−0.0514634 (0.0589162)	2.386691 (2.043592)	0.2560917 (0.2305751)
Executive Chairman Dummy	0.1647941*** (0.0602891)	1.787102 (1.464965)	0.2924845 (0.278358)
Non-Executive Director Shareholding Ratio	0.1345751 (0.2101431)	6.442918 (3.934796)	1.099268* (0.623875)
Executive Director and Officer Shareholding Ratio	0.3096362 (0.1993974)	−2.85612 (5.55735)	0.4989607 (1.01612)
Controlling Shareholder Dummy	−0.1452778 (0.0910911)	−3.068502* (1.820385)	−0.6048527** (0.2607079)
Institutional Investor Dummy	−0.0829177 (0.0519434)	0.8772392 (0.9060596)	0.0980861 (0.1167362)

Regarding management ownership, statistically significant results can be reported for both variables under examination. The Non-Executive Director Shareholding Dummy is positively related to Tobin's Q ($p=0.073$) and the Executive Director and Officer Shareholding Dummy is positively related to Cumulative Abnormal Return ($p=0.064$). These results indicate to some degree that management participation programs increase firm value.

As regards blockholder ownership, statistically significant results can be reported for the Controlling Shareholders Dummy. The Controlling Shareholder Dummy is negatively related to Cumulative Abnormal Return ($p=0.038$) and Tobin's Q ($p=0.013$). These results again confirm the initial finding that the presence of a controlling shareholder decreases firm value.

The results do not change much when making a standard error adjustment for clustering instead of simply adjusting for heteroscedasticity. See Table 13.

As in the base model, one variable on management ownership—the Non-Executive Director Shareholding Ratio—is no longer statistically significant. The Non-Executive Director Shareholding Ratio is no longer related to Tobin's Q ($p=0.233$) in this specification. As in the base model and its extensions, the results with regard to this variable are again not very reliable.

4.3.2 Firm-Fixed Effects

In the firm-fixed effects model, the explanatory power of the stock return performance specification is again quite low ($R^2=0.1758$), while the explanatory power of both the accounting performance ($R^2=0.8056$) and the mixed performance ($R^2=0.8846$) specifications is very high. Table 14 shows the results of this model.

With regard to board independence, none of the variables—neither the Independent Director Ratio nor the CEO and Chairman Dummy—are statistically significant. That the statistical significance of the Independent Director Ratio disappears in this model is not an unexpected result, since the firm-fixed effects basically reduce the individual sample to six (yearly) observations. The lack of statistical significance is thus largely due to sample size and data availability problems, respectively.

Regarding management ownership, two statistically significant but contradictory results can be reported with regard to one variable. On the one hand, the Executive Director and Officer Shareholding Ratio is negatively related to Return on Assets ($p=0.003$). On the other hand, the Executive Director and Officer Shareholding Ratio is positively related to Tobin's Q ($p=0.003$). The direction of this relationship is thus not clear.

As regards blockholder ownership, statistically significant results can be reported for both variables. The Controlling Shareholder Dummy is negatively related to Return on Assets ($p=0.031$) and Tobin's Q ($p=0.036$). The Institutional Investor Dummy is negatively related to Cumulative Abnormal Return ($p=0.062$). These results confirm the initial finding regarding controlling shareholders. In addition, these results indicate that the presence of institutional investors can have a negative effect on firm value.

The results do not change much when making a standard error adjustment for clustering instead of simply adjusting for heteroscedasticity. See Table 15.

Table 12 Year-fixed effects (t-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.1199304 (0.2183519)	-9.255848** (4.341975)	-1.0553** (0.5089529)
CEO and Chairman Dummy	0.0756364 (0.0675911)	-0.0301437 (0.937088)	0.0136707 (0.1360427)
Non-Executive Director Shareholding Ratio	0.2807276 (0.1882688)	5.442122 (3.914736)	0.904435* (0.5041505)
Executive Director and Officer Shareholding Ratio	0.3962577* (0.2141545)	-2.89638 (7.997468)	0.4308772 (0.8643146)
Controlling Shareholder Dummy	-0.1857562** (0.0895396)	-2.983137 (1.878398)	-0.5074203** (0.2038306)
Institutional Investor Dummy	-0.0638122 (0.0513449)	0.7491806 (0.8259749)	0.0659526 (0.10723)

Table 13 Year-fixed effects (cluster-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.1199304 (0.2204301)	-9.255848** (4.381012)	-1.0553* (0.6160134)
CEO and Chairman Dummy	0.0756364 (0.0664094)	-0.0301437 (0.7208536)	0.0136707 (0.1436411)
Non-Executive Director Shareholding Ratio	0.2807276 (0.218867)	5.442122 (4.487552)	0.904435 (0.7586976)
Executive Director and Officer Shareholding Ratio	0.3962577*** (0.1309121)	-2.89638 (6.681502)	0.4308772 (0.6980297)
Controlling Shareholder Dummy	-0.1857562* (0.0952933)	-2.983137 (1.871925)	-0.5074203* (0.2984616)
Institutional Investor Dummy	-0.0638122 (0.0488731)	0.7491806 (0.9191179)	0.0659526 (0.1179782)

Table 14 Firm-fixed effects (t-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.4917853 (0.4823762)	-0.4536547 (1.437225)	-0.2420818 (0.4735645)
CEO and Chairman Dummy	0.1283431 (0.0827701)	-0.0338833 (0.2905696)	0.0973257 (0.1293306)
Non-Executive Director Shareholding Ratio	-0.1655844 (0.5686306)	-1.28008 (0.9489111)	-0.7609185 (0.8019356)
Executive Director and Officer Shareholding Ratio	-0.1683577 (0.486036)	-1.120971*** (0.7842553)	2.2506*** (0.7626232)
Controlling Shareholder Dummy	-0.1770525 (0.1108294)	-0.3942741** (0.0401691)	-0.5595902** (0.2662698)
Institutional Investor Dummy	-0.1577255* (0.0843569)	-0.3230619 (0.0076109)	0.1117748 (0.1212097)

The only change worth mentioning is that the key variable on blockholder ownership—the Controlling Shareholder Dummy—becomes statistically significant with regard to stock market performance in this specification as well. The Controlling Shareholder Dummy is negatively related to Cumulative Abnormal Return ($p=0.055$).

4.3.3 Year- and Firm-Fixed Effects

In the year- and firm-fixed effects model, the explanatory power of the stock return performance specification is quite low ($R^2=0.3642$), while the explanatory power of both the accounting performance ($R^2=0.8164$) and the mixed performance ($R^2=0.9046$) specifications is very high. Table 16 shows the results of this model.

With regard to board independence, one variable is statistically significant with regard to one performance specification. The CEO and Chairman Dummy is positively related to Cumulative Abnormal Return ($p=0.042$). This result indicates that a combined leadership structure can add value.

Regarding management ownership, one variable is statistically significant with regard to two performance specifications. The Executive Director and Officer Shareholding Ratio is negatively related to Return on Assets ($p=0.004$), but positively related to Tobin's Q ($p=0.084$). The direction of this relationship thus remains unclear.

As regards blockholder ownership, both variables are statistically significant with regard to one performance specification. The Controlling Shareholder Dummy is negatively related to Return on Assets ($p=0.020$). The Institutional Investor Dummy is negatively related to Cumulative Abnormal Return ($p=0.059$). These results once more confirm the initial finding regarding controlling shareholders. In addition, these results also indicate that the presence of institutional investors able to trigger minority rights has a negative effect on firm value.

The results do not change in any relevant way when making a standard error adjustment for clustering instead of simply adjusting for heteroscedasticity. See Table 17.

4.4 Discussion

The implications of the reported results in the multivariate and sensitivity analysis are more closely discussed in this subsection.

4.4.1 Independent Directors

The first hypothesis tested in this study is whether independent directors increase or decrease firm value. Based on the results of the base model, the leadership extension model and the year-fixed effects model, it can be concluded that after a certain threshold is met, firm value is reduced by adding more independent directors to the board. At the same time, the results of the director extension model suggest that having current or former executive directors on the board adds value.

Table 15 Firm-fixed effects (cluster-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.4917853 (0.5970035)	1.596558 (5.311108)	-0.2420818 (0.443342)
CEO and Chairman Dummy	0.1283431 (0.0993806)	1.009605 (0.7535468)	0.0973257 (0.1618532)
Non-Executive Director Shareholding Ratio	-0.1655844 (0.3275077)	-4.357929 (9.237983)	-0.7609185 (0.8423643)
Executive Director and Officer Shareholding Ratio	-0.1683577 (0.2615511)	-20.47994*** (5.719522)	2.2506*** (0.5790311)
Controlling Shareholder Dummy	-0.1770525* (0.0923038)	-5.298577** (2.679009)	-0.5595902* (0.2968644)
Institutional Investor Dummy	-0.1577255* (0.0893436)	1.137063 (1.046995)	0.1117748 (0.1322507)

Table 16 Year- and firm-fixed effects (t-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.4180262 (0.4451519)	1.956487 (4.457165)	0.2867668 (0.5211443)
CEO and Chairman Dummy	0.1774007** (0.0874173)	0.5456761 (0.9307846)	0.0905473 (0.1354348)
Non-Executive Director Shareholding Ratio	- 0.0127068 (0.4547023)	- 5.586845 (5.114254)	- 0.8914854 (0.6935335)
Executive Director and Officer Shareholding Ratio	0.4037606 (0.4625614)	- 21.54211*** (7.397181)	1.317481* (0.7619155)
Controlling Shareholder Dummy	- 0.1479419 (0.1466415)	- 5.192033** (2.239876)	- 0.4660665 (0.2964371)
Institutional Investor Dummy	- 0.1474585* (0.0779715)	1.083775 (0.9442883)	0.0966878 (0.1144875)

Both the accounting performance and mixed performance specifications of the base model and the year-fixed effects model show a very high statistically significant negative correlation between the number of independent directors sitting on the board and firm value. These results, however, do not mean that independent directors are not important.⁷² Instead, given that at least 50% of the directors of all companies under examination were considered to be independent at all times, these results must be interpreted on the examined 0.5 to 1 scale so that, once the majority threshold is met, additional independent directors do not add, but diminish value. The corresponding policy implication of that finding is that a majority rule, requiring at least 50% independent directors on Swiss boards, should be more efficient than a supermajority rule, which, for example, requires a minimum of 66 $\frac{2}{3}$ % or 75% of independent board members.⁷³ This finding has meanwhile been implemented in the guidelines and recommendations of the Swiss Code of Best Practice for Corporate Governance, which now provides that the board should consist not only of a majority of 'non-executive' (2007) members, but a majority of 'independent' (2014) members.⁷⁴

After having tackled the issue of the independence ratio, how director independence is defined in the Swiss context is of crucial importance.⁷⁵ The independence rules of the Swiss Code of Best Practice for Corporate Governance are quite narrow (essentially capturing only current and former executive functions and significant business relations), but also flexible (with regard to cross directorships and further independence criteria).⁷⁶ The respective rules of the UK Corporate Governance Code for instance are a lot stricter in this regard, also including significant family relationships, the representation of a significant shareholder or a term-of-office limitation.⁷⁷ Although the Swiss Code of Best Practice for Corporate Governance explicitly says otherwise,⁷⁸ one dimension that should definitely be considered to be included as an independence criterion in Switzerland is the relationship to a significant shareholder. In the author's view, directors who represent a significant

⁷² See Gordon (2007), pp 1563–1564 (arguing that independent directors are more valuable than insiders because they look to outside performance and are less captured by internal perspectives).

⁷³ See Bhagat and Black (1999), p 950 (concluding that firms with supermajority independent boards perform worse than other firms and that firms with more inside than independent directors perform about as well as firms with majority-independent boards).

⁷⁴ See item 12 of the Swiss Code of Best Practice for Corporate Governance of 2002, as revised in 2007 and 2014.

⁷⁵ See Zen-Ruffinen and Bauen (2017), pp 434–435, 442 (discussing the relevant best practice recommendations on board composition and board independence in Switzerland).

⁷⁶ According to item 14 of the Swiss Code of Best Practice for Corporate Governance of 2002, as last revised in August 2014, independent directors are defined as non-executive board members who have never been members of the executive board or members thereof more than 3 years before and who have no or comparatively minor business relations with the company, whereas cross-involvement with other boards is supposed to be examined on a case-by-case basis and the board may define further criteria of institutional, financial or personal independence. See also the expert report to the revision by Hofstetter (2014), pp 11–13.

⁷⁷ See provision B.1.1 of the UK Corporate Governance Code of 1992, as last revised in April 2016.

⁷⁸ According to item 32 of appendix 1 of the Swiss Code of Best Practice for Corporate Governance of 2002, as last revised in August 2014, independent board members who are themselves or represent significant shareholders may be members of the compensation committee.

Table 17 Year- and firm-fixed effects (cluster-adjusted standard errors)

	Cumulative Abnormal Return	Return on Assets	Tobin's Q
Independent Director Ratio	0.4180262 (0.5012686)	1.956487 (5.133015)	0.2867668 (0.5521365)
CEO and Chairman Dummy	0.1774007* (0.0980661)	0.5456761 (0.6835227)	0.0905473 (0.1747309)
Non-Executive Director Shareholding Ratio	-0.0127068 (0.3131307)	-5.586845 (9.674019)	-0.8914854 (0.9564505)
Executive Director and Officer Shareholding Ratio	0.4037606 (0.2646557)	-21.54211*** (6.11998)	1.317481** (0.6601564)
Controlling Shareholder Dummy	-0.1479419 (0.1413463)	-5.192033** (2.20425)	-0.4660665 (0.3488237)
Institutional Investor Dummy	-0.1474585* (0.0846188)	1.083775 (1.064465)	0.0966878 (0.1327283)

shareholder can by definition not be qualified as independent since they are serving such a (controlling) shareholder, but not the company and/or the public shareholders, which would in fact be part of their role.⁷⁹

The above reported findings on independent directors are in line with the results of the director extension model, suggesting that a board composition that includes current or former executive directors increases firm value.⁸⁰ On the one hand, both the accounting performance and mixed performance specifications of the model show a somewhat high statistically significant positive correlation between the presence of current executive directors and firm value. This finding is supported by intuition: an executive has more accurate and timely information about the current state of the company, which can be of great importance to the board.⁸¹ On the other hand, the evidence in the mixed performance specification of the model suggests that former executive directors positively affect firm value. The same reasoning thus also applies here: board members, who have recently served in an executive role, know the company and the industry better and are therefore in a position to create additional value for the shareholders.⁸² Therefore, a potential policy implication would be to require that the board of a public company includes at least one director, who currently or recently held an executive function in the company.

4.4.2 CEO and Chairman

The second hypothesis tested in this study is whether a combined CEO and chairman position adds value or not. Most regressions run in this respect are not statistically significant. However, the results of the year- and firm-fixed effects model, arguably the most meaningful model specification, suggest that there is some evidence that a combined CEO and chairman role may increase firm value. This finding is further supported by the leadership extension model, according to which a chairman with executive functions or a CEO who sits on the board may also add value.

The results of the year- and firm-fixed effects model indicate that a combined CEO and chairman role can increase stock market performance. A possible interpretation of this finding is that the market actually undervalues such a combined leadership structure, which can potentially add value. This finding can further serve as a basis to argue that public policy should not prevent public companies from appointing the same person as CEO and chairman. Against this background,

⁷⁹ See Dahya et al. (2008), pp 96–97 (finding that firm value is positively correlated with the fraction of directors unaffiliated with dominant shareholders); Lefort and Urzúa (2008), pp 619–621 (finding that only board members elected without the controlling shareholder votes affect firm value, whereas board members elected with such votes did not affect firm value). See also Bebchuk and Hamdani (2017), p 1315 (arguing that some independent directors should be accountable to public investors).

⁸⁰ See Müller et al. (2014), pp 724–727, in particular p 725 (discussing the advantages and disadvantages of board members with and without executive functions under the relevant Swiss rules and regulations).

⁸¹ See Fairfax (2010), pp 164–167 (discussing independent directors' knowledge deficit).

⁸² See Mirvis and Savitt (2016), p 481 (pointing to the detailed operational knowledge and firm-specific commitment of such directors).

the approach chosen in the Swiss Code of Best Practice for Corporate Governance seems appropriate.⁸³

The above finding is further confirmed by the results of the leadership extension model, according to which there is some evidence that a CEO sitting on the board and a chairman with executive functions can add value. On the one hand, the accounting performance specification of the model suggests that a CEO, who is also a member of the board, may positively affect firm value. On the other hand, the stock market performance specification of the model shows a somewhat high statistically significant positive correlation between an executive chairman and firm value. These findings thus suggest that a combined or overlapping leadership structure can be superior to strictly separated functions. This implies that public policy should not prohibit such organizational forms and calls for a policy building upon the freedom of organization.⁸⁴ Furthermore, this is in line with the above findings on independent directors and highlights the importance of having executive level know-how represented on the board.

4.4.3 Non-Executive Directors

The third hypothesis tested in this study is whether non-executive director shareholdings affect firm value. There is some evidence in the base model, the director and leadership extension models and the year-fixed effects model that non-executive director shareholdings could increase firm value. However, since all other models show no significant correlations in this respect, these results do not seem to be very robust.

Consequently, no policy implications can be made at this stage. Further research is needed to investigate the relationship between non-executive director shareholdings and firm value.

4.4.4 Executive Directors and Officers

The fourth hypothesis tested in this study is whether executive director and officer shareholdings affect firm value. Although the evidence in the year-fixed model suggests that executive director and officer shareholdings increase firm value, the evidence in the firm-fixed effects and year- and firm-fixed effects models leads to conflicting interpretations along this dimension, depending on the performance specification. One possible explanation for this finding could be that the incentive effect from management compensation, which has not been examined more closely

⁸³ According to item 19 of the Swiss Code of Best Practice for Corporate Governance of 2002, as last revised in August 2014, the board should in general entrust its chairman and the CEO position to two people (i.e., provide for dual leadership), but in case it decides that a single person should perform both positions, it should ensure that there are adequate control mechanisms in place, namely by appointing an experienced non-executive member ('lead director') to perform this task.

⁸⁴ The same conclusion was reached in the expert report of the working group 'corporate governance' regarding the partial revision of Swiss company law of 30 September 2003, see Böckli et al. (2003), pp 76–78. On the freedom of organization in listed companies, see Häusermann (2015), pp 37–54.

in this study, overlays and crowds out any monitoring effects. For this reason and because all other models do not show any statistically significant results in this regard, these results again do not appear to be very robust.

Therefore, no policy implications can be made with regard to executive director and officer shareholdings. Further research, which takes into account the mentioned incentive effect, is required.

4.4.5 Controlling Shareholders

The fifth hypothesis to be tested is whether the presence of a controlling shareholder of the company increases or decreases firm value. Based on the results of the base model, the director and leadership extension models and the year-fixed effects, firm-fixed effects and year- and firm-fixed effects models, it can be concluded that the presence of a controlling shareholder does not increase, but decreases firm value.

All performance specifications in the base model and for the large part also in its extensions, two performance specifications in the year-fixed effects model, all three performance specifications in the firm-fixed effects model and one performance specification in the year- and firm-fixed effects model show a very high statistically significant negative correlation between the presence of a controlling shareholder and firm value.⁸⁵ Given these unambiguous results, it is quite straightforward to conclude that controlling shareholders are not good monitors and in fact decrease firm value. According to the reasoning of the mainstream literature as set out above, this is arguably because such shareholders are not in a position to effectively police management, but because they are more likely to use their power in order to extract private benefits from the company.⁸⁶ This discussion has been reframed as the controlling shareholder tradeoff, which consists of two different agency problems: the conflict of interest that arises from the separation of ownership and control (i.e., monitoring the management) and the conflict between a controlling shareholder and non-controlling shareholders over the extraction of private benefits of control.⁸⁷ Referring to this framework highlights that the shareholder rights of the majority and the minority cannot be considered adequate and well balanced in Switzerland and calls for a public policy focusing on the protection of minority shareholders.

⁸⁵ While the reported results did not change too much when using a 33 $\frac{1}{3}$ % threshold instead of the 50% threshold, the statistical significance of the correlations pretty much disappeared when using a 20% threshold. Therefore, it has to be noted that these findings are only applicable to controlling shareholders, but not to any other large shareholders.

⁸⁶ For the mainstream, see for example Barclay and Holderness (1989), pp 373–394.

⁸⁷ See Gilson and Gordon (2003), pp 785–786, 843 (defining the controlling shareholder tradeoff and concluding that Delaware doctrine restricts the extent to which controlling shareholders can extract private benefits of control); Gilson (2006), pp 1652–1673, 1673–1678 (suggesting a more complex controlling shareholder taxonomy and pointing to the need to eliminate inefficient controlling shareholder systems). See also Hofstetter (2006), pp 622–657, 661–663 (distinguishing internal and external private benefits of control and arguing that efficient rules must differentiate between different forms of private benefits of control).

One approach would be to strengthen certain minority rights in Swiss corporate law.⁸⁸ With regard to the ongoing revision of Swiss corporate law, it has to be noted that various proposals have been suggested in order to consolidate the position of minority shareholders. In the most current legislative materials, it is proposed that the information rights are reinforced, the relevant thresholds of certain minority rights are adjusted and the requirements of certain shareholder actions are facilitated.⁸⁹ Against this background, these policy proposals have to be assessed favorably.

Another measure of minority protection, which has been suggested more recently, is the introduction of a majority of the minority vote as a default rule for Swiss public companies.⁹⁰ It is concretely suggested that in a controlled company, all decisions of the general meeting of shareholders shall also be approved by the majority of the minority shareholders (or 90% of the outstanding share capital). Another scholar has meanwhile cast doubt on this proposal.⁹¹ Pursuant to this view, such a veto rule would be opposed to the legitimate concerns to provide for balanced minority protection because it would lead to two different sets of voting rules applicable to public companies, abolish the supermajority requirement for nine important decisions in all public companies with a controlling shareholder and, most importantly, allow for arbitrary blockades (so-called ‘hold-ups’) by ever smaller opposition groups. In the author’s view, the majority of the minority vote does in fact have a legitimate scope of application, namely when the minority rights are endangered.⁹² Typical examples for such a situation would include the introduction of an opting-out clause in relation to the obligation to submit a public tender offer⁹³ or the ex post introduction of

⁸⁸ See Kunz (2001), ch. 18 paras. 61–76 (proposing several legislative measures that are aimed at reinforcing the minority rights of shareholders at the turn of the millennium); Vogt (2012), pp 15–17 (discussing shareholder rights and minority protection in the context of shareholder democracy, thereby distinguishing between the introduction of additional minority rights and facilitations in the exercise of existing minority rights).

⁸⁹ See the message of the Swiss Federal Council to the Swiss Parliament of 23 November 2016 on the company law reform, BBl 2017, pp 399–682, in particular pp 455–456 (information and inspection rights), pp 456–459 (adjustment of thresholds regarding agenda items, motions, convocation and special investigation) and pp 459–460 (restitution action). See also von der Crone and Angstmann (2017), pp 10–12, 17–19.

⁹⁰ See Häusermann (2014), pp 213–218 (suggesting the introduction and discussing the implementation of such a vote); Häusermann (2017), pp 343–348 (discussing the effects of such a vote on the protection of minority shareholders).

⁹¹ See Böckli (2016), pp 449–451 (arguing that a majority of the minority veto rule would be opposed to the legitimate concerns to provide for a balanced minority protection).

⁹² See von der Crone (1997a), p 51; von der Crone (1997b), pp 100–101 (limiting the scope of application of such a vote to the abolition of voting stock, a merger with the controlling shareholder and an opting-out from the obligation to submit a public tender offer).

⁹³ According to the current practice of the Swiss Takeover Board (decision 518/01 of 11 October 2012, consid. 4 and 5; decision 531/01 of 26 April 2013, consid. 4; decision 539/01 of 24 June 2013, consid. 1; decision 594/01 of 5 March 2015, consid. 1.2; decision 600/01 of 22 April 2015, consid. 1; decision 686/01 of 20 March 2018, consid. 1) regarding Art. 125 para. 4 of the Financial Market Infrastructure Act, the introduction of an opting-out clause is only valid if shareholders have been transparently informed about the introduction and consequences of such clause and the introduction of such clause meets the approval of the majority of all shareholders and the majority of the minority shareholders.

a share transfer restriction regime. However, admitting such a rule in general (even only as a default rule) would not be in line with established corporate law and doctrine, namely the model of ‘subjection of the minority to the majority’, and should therefore be avoided.

Another possible alternative for providing a more balanced protection of minorities would be to impose a duty of loyalty on the controlling shareholder (vis-à-vis the company and/or other shareholders).⁹⁴ It is however recognized as a guiding principle in Swiss corporate law that a shareholder has no other duty than to pay its capital contribution.⁹⁵ Therefore, current mainstream doctrine and practice in Switzerland do not allow for a duty of loyalty of a controlling shareholder. Unlike this understanding, case law in the United States and under certain conditions also in the United Kingdom has recognized a fiduciary duty incumbent on controlling shareholders.⁹⁶ Similarly, according to more recent case law and the prevailing view in legal doctrine in Germany, the individual shareholder is generally perceived to be subject to a duty of loyalty toward the company and other shareholders, which is quite unusual for a continental European jurisdiction.⁹⁷ In this framework, it would further be conceivable that a controlling shareholder could be held responsible and liable for the damage it causes to other shareholders. But, as the permissibility of this construct under Swiss law as it stands is unclear (and that is putting it mildly), it would eventually require new legislation to introduce such a concept into Swiss law.

4.4.6 Institutional Investors

The sixth hypothesis tested in this study is whether the presence of institutional investors in the shareholder base adds value or not. Most regressions run in this regard are not statistically significant. However, the results of the firm-fixed effects and year- and firm-fixed effects models, arguably the most meaningful models, suggest that there is some evidence that the presence of institutional investors may in fact decrease firm value.

The stock market performance specification of the firm-fixed effects and year- and firm-fixed effects models show a statistically significant negative correlation

⁹⁴ See Wohlmann (1968), pp 110–111 (supporting the idea of a general duty of loyalty of a controlling shareholder). See also Nenninger (1974), p 110 (in favor of a duty of loyalty of large shareholders).

⁹⁵ Pursuant to Art. 680 para. 1 of the Swiss Code of Obligations, a shareholder may not be required to contribute more than the amount fixed for subscription of a share on issue. This principle, which excludes a duty of loyalty of the shareholder, has also been confirmed by the Swiss Federal Supreme Court (BGE 91 II 298, consid. 6a; BGE 105 II 114, consid. 7b) and the prevailing doctrine (Forstmoser et al. (1996), ch. 42 paras. 26–32; Böckli (2009), ch. 13 para. 659; von der Crone (2014), ch. 8 para. 69).

⁹⁶ See Cohen (1991), pp 380–389 (comparing Israeli law with English and American law). See also Lim (2018), pp 133–140 (focusing on the common law jurisdictions in Asia).

⁹⁷ See II ZR 75/87 (*Linotype*), BGHZ 103, pp 184–197, in particular pp 194–195 (majority shareholder); II ZR 205/94 (*Girmes*), BGHZ 129, pp 136–177, in particular pp 142–144 (minority shareholders). See also Bungeroth (2016), preliminary remark to Art. 53a paras. 18–47, in particular para. 19, with further references; Spindler (2016), Art. 117 paras. 71–86.

between institutional investors and firm value.⁹⁸ This suggests that the presence of institutional investors with a relevant minority interest does not increase, but decreases firm value and may lead to the conclusion that institutional investors are not good corporate governance monitors. One explanation might be that the market actually overvalues an ownership structure with a large part of institutional investors as minorities, which indicates that such company should eventually be traded at a discount. This discussion can however also be reframed as the institutional investor tradeoff, which consists of two different agency problems: besides the traditional conflict of interest arising from the separation of ownership and control (i.e., monitoring the management), institutional investors nowadays often find themselves in another conflict of interest situation, in which the ultimate beneficiary of the institutional investor acts as the principal and the portfolio manager acts as the agent.⁹⁹ Using this framework, the interests of the portfolio manager might thus far differ from those of his or her ultimate beneficiary in that the manager presumably wants higher fees, even if this comes with a lower return for the beneficiary. This could arguably be the reason why shareholders are still generally perceived to be too passive and often seem to be focused on short-term results, which calls for a public policy that promotes active involvement and engagement of all sorts of institutional investors in the company and encourages a long-term investment horizon among all types of institutional investors.¹⁰⁰

One way to promote an active involvement and engagement of all sorts of institutional investors in the company would be to enable and facilitate the exercise of their participation and voting rights. In 2013, shortly after the release of the UK Stewardship Code, several Swiss commercial and trade organizations issued a similar soft law instrument, the guidelines for institutional investors regarding the exercise of their participation rights in stock corporations (the Guidelines for Institutional Investors).¹⁰¹ In 2014, the Swiss legislator introduced new rules requiring pension funds to exercise their voting rights at the general meeting of shareholders and to

⁹⁸ The author of this study has also defined a 3% threshold, a (not aggregated) 10% threshold and another concentration variable, but none of those variables could capture the effect of institutional investors.

⁹⁹ See Frentrop (2012), pp 43–49 (framing the double agency problem related to short-termism of institutional investors, in particular with regard to the different roles of the portfolio manager).

¹⁰⁰ For the recent developments on the level of the European Union in this context, see the directive 2007/36/EC of the European Parliament and of the Council of 11 July 2007 on the exercise of certain rights of shareholders in listed companies, OJ 2007, L184/17–24 (the Shareholder Rights Directive) and the recently passed directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending the Shareholder Rights Directive as regards the encouragement of long-term shareholder engagement, OJ 2017, L132/1–25.

¹⁰¹ See in particular principles 1, 2 and 4 of the Guidelines for Institutional Investors, according to which institutional investors are supposed to exercise their participation rights (by being registered as shareholder with voting rights in the share register and exercising their voting rights at the general meeting of shareholders), pursue a long-term perspective and sustainable approach and disclose in their regulations *inter alia* whether they form a coalition with other investors or use proxy advisory services for these purposes.

disclose how they actually voted.¹⁰² Therefore, these policies, which are already in place, have to be assessed favorably.

An instrument that encourages a long-term orientation of institutional investors would be the issuance of loyalty shares (i.e., shares with multiple voting or dividend rights) to long-term shareholders.¹⁰³ This instrument, consisting of loyalty voting rights and loyalty dividends, has been developed by and is still in force in France.¹⁰⁴ While the permissibility of loyalty shares in Switzerland remains unclear, scholars have already addressed this issue.¹⁰⁵ It is therefore up to the Swiss legislator to consider, eventually in the context of the ongoing corporate law reform, whether or not to introduce this instrument into the law.

5 Conclusion

Mainstream corporate governance theory argues that a company board should mainly consist of independent directors and that the chairman and other members of the board should not simultaneously serve as CEO or in another executive function at the same company. Also, it is often argued by mainstream theory that all shareholders benefit from the presence of a controlling shareholder or institutional investors with large shareholdings in the company. However, the empirical evidence from this country study leads into another direction. First of all, the results of the analysis with regard to board independence suggest that a larger fraction of independent directors on the company board does in fact not increase, but decreases firm value. This first finding has to be interpreted in a way so that after a certain threshold is met, adding more independent directors to the board does not increase, but decreases firm value. In the same context, a positive correlation between the presence of current or former executive directors on the board and firm value is reported. This second finding highlights the importance of having executives represented on the board in order to ensure smooth information flows and to mitigate coordination problems. The results on the other board-related issue under examination indicate that a combined leadership structure may increase firm value. According to this third finding, a dual leadership structure is thus not a one-size-fits-all

¹⁰² See Art. 95 para. 3 of the Federal Constitution of the Swiss Confederation of 18 April 1999 (status as of 12 February 2017), SR 101 and Arts. 22 and 23 of the Ordinance against Excessive Compensation with respect to Listed Stock Corporations of 20 November 2013 (status as of 1 January 2014), SR 221.331.

¹⁰³ See Bolton and Samama (2013), pp 89–94 (proposing to amend the standard common stock contract by introducing a financial reward for long-term investors in order to enable companies to correct some of the short-term biases they may be exposed to).

¹⁰⁴ See Art. L225-123 of the Commercial Code of France (status as of 18 May 2018), JO of 22 June 2000 (the French Commercial Code), as amended by Act no. 2014-384 of 29 March 2014 ('Loi Florange'), and Art. L232-14 of the French Commercial Code.

¹⁰⁵ See Daeniker (2015), pp 160–163 (arguing that loyalty voting shares are not permissible as the law stands and loyalty dividends are most likely also not permissible and in any case not practicable under the current regime). See also Forstmoser et al. (2015), pp 1–11 (advocating the enactment of a legal basis for the issuance of loyalty shares in the context of the ongoing Swiss corporate law reform).

governance principle. In this context, a positive correlation between a chairman with executive functions or a CEO who sits on the board and firm value is reported. This fourth finding underlines the importance of having top executives represented on the board in order to simplify information flows and address coordination problems. The results of the analysis with regard to blockholder ownership further suggest that the presence of a controlling shareholder does in fact not increase, but decreases firm value. This fifth finding implies that public policy for controlled companies should focus on the protection of minority shareholders. Finally, the results on the other blockholder-related issue examined indicate that the presence of institutional investors as significant shareholders may decrease value. This sixth finding implies that public policy towards such shareholders should promote an active involvement and engagement of institutional investors and encourage a long-term investment horizon of such investors.

Against this background, it is interesting to note that the relevant rules and regulations in Switzerland, in most other European countries (including the United Kingdom) and in the United States require a corporate board to be independent and emphasize the importance of having separated leadership roles at the top of the organization. Moreover, the activities of controlling shareholders and institutional investors are largely not addressed, or at least not enough, by the current legal systems in Switzerland and elsewhere in the world. In the author's view, modern corporate governance theory and public policy and rule-making in this area should in particular focus on the following four patterns. The first and second findings on independent directors imply that a majority rule of independent directors seems to be sufficient and more efficient than a supermajority rule, the independence definition should include the representation of significant shareholders and soft law should provide for a certain minimum number or percentage of executive directors. The third and fourth findings on dual leadership structures imply that the CEO and chairman functions should not by rule of law or recommendation be required to be separated and there should be enough room for top executives to engage with and ultimately join the company board. The fifth finding on controlling shareholders implies that the minority rights should be further strengthened, a majority of the minority vote should be introduced for certain key situations in which the entrenchment risk of the controlling shareholder is evident and whether controlling shareholders should be subject to a duty of loyalty towards the company and/or the public shareholders has to be seriously considered. The sixth finding on institutional investors implies that the exercise of the participation and voting rights of such investors should be further enabled and facilitated and a legal basis for the issuance of loyalty shares to long-term investors should be created.

These contradictory evaluations call for a reconsideration of public policy towards board governance and blockholder governance, not only in Switzerland, but also at the international level. The results of this country study are, in the author's view, not only relevant in the Swiss context, but have a broader impact for other European countries with similar ownership structures, such as Germany, France and Italy, and eventually also on a global level. Although corporate governance systems might differ in many important respects between various countries, the core concepts analyzed and discussed in this article are relevant in some way or other in

all the countries of interest. This being said, the findings and conclusions of this study essentially cast doubt on—and point to the need for a fundamental revision of—generally accepted international understandings of what constitutes ‘good’ corporate governance norms today. This is especially true for the concept of independent directors, which was long believed to be the panacea in corporate governance, notably in controlled companies, and gives rise to further research on blockholder governance, in particular to a systematic and thorough analysis of companies with a controlling shareholder. Since the times are changing and the allocation of power between management and shareholders is currently being readjusted, we also have to rethink the corporate governance and public policy particularities relating to board composition and ownership structure of publicly-traded companies.

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