

The effects of managerial discretion on moral hazard related behaviour: German evidence on agency costs

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Abstract Based on a sample of German quoted firms in the period 2006–2010 this paper measures the impact of managerial incentives, entrenchment and blockholder monitoring on managerial behaviour typically associated with moral hazard. This is motivated by the observation that while typically the German institutional environment is characterised by the type-II conflict between large and dispersed investors, a number of regulatory and behavioural changes suggest that the issue of managerial leeway and complacency has gained in importance. I find that managerial entrenchment as proxied by excess compensation is associated with higher agency costs, i.e. lower asset turnover and higher discretionary expense ratio and acquisition activity, respectively. In contrast, there is no evidence of an incentive alignment effect of long-term compensation components. Concerning blockholder influence, while general blockholder presence has inconclusive effects, the presence of a blockholder belonging to the traditionally influential group of families, strategic investors and banks is significantly associated with lower agency costs. However, the presence of any other blockholder is associated with higher agency costs stemming from managerial discretion. Overall, this partly conforms to the hypothesis that German corporate governance may be changing in that the problem of managerial complacency and entrenchment has gained in importance; at the same time dominant blockholders still seem to exert influence on corporate policy.

Keywords Agency costs · Compensation · Corporate governance · Ownership

JEL Classification G3 · G34 · L25

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1 Introduction

Drawing on the empirical literature using asset turnover, discretionary expense ratio and acquisition activity as measures of managerial behaviour related to moral hazard (i.e. agency costs),¹ this study analyses a sample of German quoted companies to assess the impact of incentives, entrenchment and blockholder monitoring.

Agency costs arise from a misalignment of the interests of management and shareholders as well as conflicting interests of dominant and minority investors (Shleifer and Vishny 1997; Tirole 2006). In this regard, the German system of corporate governance has typically been classified as a bank-centred insider system where managerial discretion is curtailed by large investors, i.e. blockholders and commercial banks (Goergen et al. 2008b; La Porta et al. 2000). Consequently, research situated in the German setting has usually considered the effects dominant investors have on corporate policy and performance, thereby implicitly assuming that the agency conflict between dispersed and influential shareholders outweighs the classical manager-shareholder conflict (Andres 2008; Dittmann et al. 2010; Gorton and Schmid 2000; Lehmann and Weigand 2000).

However, beginning in the mid-1990s institutional and regulatory reforms, an almost complete withdrawal of the large commercial banks from German corporate governance and a gradual decomposition of the cross-shareholdings typical for German corporate governance have taken place (Dittmann et al. 2010; Hackethal et al. 2003, 2005; Weber 2009). In turn, elements associated with Anglo-American style corporate governance have gained in importance; executive compensation has been rising, which has triggered discussions on its appropriateness or excessiveness, respectively (Rapp and Wolff 2010). Overall, this has led to the hypothesis that the balance of power in German companies may be shifting, a certain control vacuum may emerge, and that the problem of unconstrained managerial discretion may have gained in relative importance. This is why based on recent data this study researches the effects managerial incentives and discretion as well as blockholder monitoring have on direct measures of managerial behaviour.

This paper complements and extends existing research in a number of ways by testing above ideas on a sample of 674 firm-year observations based on the 149 German companies traded on Frankfurt Stock Exchange over the 5-year period 2006–2010. Firstly, the influence of corporate governance mechanisms is typically researched using market or accounting based performance metrics. In contrast, this study uses asset turnover, discretionary expense ratio and acquisition activity as dependent variables that directly address managerial behaviour. Thus, these measures should indicate i.a. the extent of managerial effort, excessive spending and acquisition-based investment policy (Ang et al. 2000; Caprio et al. 2011; McKnight and Weir 2009; Singh and Davidson 2003; Yafeh and Yosha 2003).

Secondly, German corporate governance so far has largely been researched under the premise of a stable system of insider control (Andres 2008; Dittmann et al.

¹ Cf. the contributions by i.a. Ang et al. (2000), Singh and Davidson (2003), Le and Buck (2011), McKnight and Weir (2009) and Caprio et al. (2011).

2010). However, while the type-II agency conflict of dominant and dispersed investors can still be considered important in German firms, recent deliberations based on a number of regulatory and structural changes as well as empirical evidence focussing on managerial behaviour and discretion suggest that the type-I manager-shareholder conflict has gained in importance (Goergen et al. 2008a; Hackethal et al. 2005; Rapp et al. 2012; Rapp and Wolff 2010; Sudarsanam and Broadhurst 2012; Weber 2009). Nonetheless, the German system of corporate governance can still be assumed to be sufficiently distinct, making Germany a worthwhile research setting.

Regarding the findings of this study, the overall evidence suggests that agency costs stemming from managerial entrenchment may be substantial, which corresponds to recent comments based on executive compensation.² In particular, I find that excess compensation is strongly associated with lower asset turnover, higher discretionary expenses and higher acquisition activity. In contrast, I do not find an incentive alignment effect of share-based long-term compensation. Furthermore, investigating the role blockholders may play with regard to above measures of managerial behaviour, there are inconclusive results for general blockholder presence. However, when looking at blockholder type the evidence suggests that the existence of a blockholder belonging to the traditionally influential groups of investors (families, banks and strategic investors) is associated with lower agency costs. In contrast, the presence of any other blockholder is associated with higher agency costs.

Concerning the overall relevance and implications of this research, I document that internal corporate governance in the form of compensation is at the core of determining the managerial playing field, i.e. how rents are being distributed between stakeholders. Thus, there is evidence that the increased attention paid to executive compensation (and its disclosure) in recent years is duly justified as it addresses a key governance mechanism. Moreover, I show that while the distribution of power in German companies may be changing, the traditional influence of blockholders remains.

The remainder of this paper is organised as follows. Section 2 introduces the fundamental agency conflicts, assesses the current state of German corporate governance, reviews related literature and develops the hypotheses. In Sect. 3 data, variables and methods are explained. Section 4 reports results and presents robustness and sensitivity checks. Section 5 concludes.

2 Theoretical background and hypothesis building

2.1 Agency conflicts and moral hazard

Berle and Means (1932) are most prominently associated with bringing to the foreground the danger of a divergence of interests between management and

² Cf. Rapp and Wolff (2010) who suggest high type-I agency costs with regard to executive compensation in German companies and Hitz and Werner (2012) who find that resistance to disclose executive compensation is driven i.a. by above average compensation.

shareholders in public companies with dispersed ownership. Thereby, management may possibly govern unrestrained because, due to a free-rider dilemma, dispersed shareholders exhibit “rational apathy” instead of actively monitoring management (Black 1992; Grossman and Hart 1980). Jensen and Meckling (1976) formalise this relationship in the framework of agency theory and posit that, given information asymmetries, managerial self-interest may lead to a behaviour which is to the detriment of shareholders. In line with these considerations managerial discretion is expected to result in opportunistic decision making, which may take various forms of how management does not act in the owners’ best interest, e.g. by exerting insufficient effort, devoting time to negligible activities, spending on extravagant investments and lax cost control (Jensen and Meckling 1976; Tirole 2006). Because they will fully enjoy the benefits, but only partly (if at all) feel the losses associated with their actions, managers may foster pet projects and waste money on perquisites (Bruton et al. 2002; Yafeh and Yosha 2003). Corporate investment policy may be driven by empire building motives or managerial hubris resulting in value-decreasing, overpaid transactions (Jensen 1986; Morck et al. 1990; Roll 1986). To conclude, above forms of behaviour are expected to preponderate in large public companies with atomistic owners where management is not subject to external monitoring.

In contrast to above considerations, traditionally, in most institutional environments outside the Anglo-American sphere more concentrated ownership structures seem to be the norm (La Porta et al. 1999). Large investors have the incentives and power to effectively control management, thereby limiting managerial discretion and entrenchment (Demsetz and Lehn 1985; Jensen and Meckling 1976; Shleifer and Vishny 1986). However, their presence can also come at a cost if large investors realise private benefits of control³ at the expense of dispersed shareholders. Thus, blockholders may possibly influence corporate policy to their own benefit, which can create agency costs from the point of view of dispersed investors (Shleifer and Vishny 1986, 1997). For example, blockholders possibly follow different investment rationales than diversified shareholders, e.g. by favouring long-term growth and firm survival rather than maximization of cash flows and their presence may in effect prevent the bidding by other investors (Anderson and Reeb 2003; Barclay and Holderness 1989; Fama and Jensen 1985); finally, they may transfer resources from the company (Johnson et al. 2000). Consequently, the containment of the manager-shareholder conflict through large investors may at the same time involve adverse consequences stemming from conflicts of interest of dominant and minority investors.

2.2 Institutional environment: current state of German corporate governance

Traditionally, the German model of corporate governance has been characterised as a bank-centred insider system for which influential shareholders, large commercial banks but also a particular two tier board structure are considered the most distinctive features (Goergen et al. 2005; La Porta et al. 2000). Internally, the

³ Cf. Nenova (2003) and Dyck and Zingales (2004).

governance of German firms is characterised by a strict separation of supervisory and management boards, whereby the management board legally enjoys far-ranging independence.⁴ Furthermore, traditionally, compensation does not contain strong incentives,⁵ which is why the governance of German companies has been characterised as “managerialism subject to limits and controls” (Rieckers and Spindler 2004). Formally, the management board is controlled by the supervisory board, which typically consists of representatives of blockholders, employees, banks and former top managers, who form a “governing coalition” of which small shareholders and institutional investors usually are not part (Dittmann et al. 2010; Hackethal et al. 2003). Thereby, the large commercial banks used to constitute a major pillar of this governing coalition; besides aforementioned supervisory board representation, their power mainly derived from the traditionally large reliance of German firms on bank financing, the exercise of proxy votes and actual shareholding (Elston and Goldberg 2003). Finally, many German companies are typically seen as dominated by controlling blockholders mainly in the form of families and strategic owners;⁶ this dominance of blockholders was furthermore facilitated by cross-holdings, ownership pyramids and dual class shares (Franks and Mayer 2001; Goergen et al. 2008a). To conclude, referring to aforementioned agency conflicts, while legally the management board is accorded some discretion, the dominant role of large investors used to contain managerial self-interest; in turn, the conflict of large and dispersed investors has typically been considered to dominate in German companies (La Porta et al. 2002).

However, beginning in the mid-1990s the regulatory framework,⁷ but also the behaviour of the key stakeholders in German corporate governance have changed. Concerning the legal framework, there have been attempts to strengthen financial markets, i.a. by increasing disclosure and transparency, banning voting caps and multiple voting rights,⁸ limiting proxy voting of banks and disallowing restricted tender offers.⁹ Moreover, the sale of blocks of equity was made exempt from capital gains tax, which has led to a decrease in ownership concentration, prompted a decomposition of the cross-shareholdings typical for the German system, and, consequently, somewhat reduced the power of top-blockholders (Sudarsanam and Broadhurst 2012; Weber 2009).

⁴ This independence i.a. derives from the fact that shareholders have no right to instruct management to act in their interest (cf. Rieckers and Spindler 2004), but also the management board’s duty of promoting the somewhat ambiguous “interest of the firm” (cf. Baums and Scott 2005).

⁵ Both compensation levels and the extent of equity-based pay used to be comparably low (cf. Conyon and Schwalbach 2000).

⁶ I.e. the typical institutional investors traditionally do not play an important role.

⁷ See Goergen et al. (2008a) for a concise overview.

⁸ However, it must be noted that the issuance of preference shares is still permitted under §§139–140 of the German commercial code (HGB) up to 50 % of nominal capital.

⁹ The most influential reforms include the securities tradings act (Wertpapierhandelsgesetz) of 1994, the third act on the promotion of financial markets (Drittes Finanzmarktförderungsgesetz) of 1998, the act on the control and transparency of corporations (KonTraG) of 1998 and the takeover act (Wertpapiererwerbs- und Übernahmegesetz) of 2002.

At the same time the large commercial banks have largely absented themselves from the governance of German firms. Concerning their traditional spheres of influence, German banks' ability to exercise voting rights via proxy voting has been curtailed, they have largely sold their shareholdings, their presence on supervisory boards has declined dramatically and they have reduced corporate lending activities (Dittmann et al. 2010; Hackethal et al. 2005). This has led to the suggestion, that a key element of the old governance system may have disintegrated (Hackethal et al. 2003, 2005). In turn, there is but little indication that governance mechanisms associated with Anglo-American style corporate governance have gained in importance¹⁰ (Franzke et al. 2004; Sudarsanam and Broadhurst 2012). More importantly, managerial compensation has come under increasing focus; pay packages have been rising and high-powered incentives with larger share-based components are being arranged, which, in turn, has triggered corresponding disclosure regulation¹¹ and public discussions on their appropriateness or excessiveness, respectively (Rapp and Wolff 2010; Tuschke and Sanderson 2003).

To conclude, in assessing the state of German corporate governance, it seems that while some features are (formally) unchanged, at the same time a convergence in function and a decrease in effectiveness of the existing system are observed, which may imply a re-emergence of the Berle-Means problem of unchecked management (Goergen et al. 2008a; Hackethal et al. 2003, 2005). Thus, the problem of managerial complacency and entrenchment may have gained in importance (Sudarsanam and Broadhurst 2012).

2.3 Related literature

Agency conflicts in German firms and the governance mechanisms that are deemed to be of importance have largely been studied under the premise of an insider-system. Consequently, the majority of studies focuses on the effect banks and blockholders have on corporate policy and performance. Concerning the role of banks, for example Cable (1985), Gorton and Schmid (2000), Edwards and Nibler (2000) and Lehmann and Weigand (2000) find that bank control enhances firm performance, which they attribute i.a. to internal capital markets and the incentives, power and knowledge to monitor effectively. In contrast, the most recent evidence suggests that banks use their influence most notably to promote their own business and possibly affect firm performance negatively. However, by now they have largely withdrawn from their governance role (Dittmann et al. 2010).

Regarding ownership, for instance, Lehmann and Weigand (2000) focus on the performance of "governed corporations" and show mixed results for the general effect of ownership concentration on profitability. In contrast, Januszewski et al.

¹⁰ In 2002 Vodafone conducted a hostile takeover of Mannesmann; in 2005 Deutsche Boerse contemplated a takeover bid for the London Stock Exchange, which, however, was ultimately thwarted by shareholder activism, also leading to the resignation of high profile board members.

¹¹ For example, while the German Corporate Governance Code recommends individual disclosure of executive compensation, this has met with resistance, cf. Chizema (2008). Since 2006, according to the Disclosure of Management Board Compensation Act (VorstOG) of 2005, this has been made mandatory in the German commercial code (cf. Hitz and Werner 2012).

(2002) find firms under the control of a dominant owner to exhibit higher productivity growth. Turning to owner identity, there is evidence that family ownership in German firms is very stable and that these firms outperform non-family firms. This effect seems to be especially strong if the founder (founding family) is still actively involved in management (Andres 2008; Barontini and Caprio 2006; Ehrhardt et al. 2006; Kaserer and Moldenhauer 2008). Moreover, (family) ownership seems important in determining corporate policy such as acquisition activities (Caprio et al. 2011). Thereby, family owners may also extract private benefits of control at the expense of minority shareholders such as evidenced by the use of dual class share structures and control premia paid (Ehrhardt and Nowak 2003a, b). Overall, while existing evidence is partly inconclusive, the governance role of ownership in the German setting seems to be related to owner type.

In recent years the role of executive compensation in German corporate governance has come under increasing attention. Thereby, there seems to exist conflicting evidence with regard to the pay-performance relationship (Conyon and Schwalbach 2000; Elston and Goldberg 2003; Kaserer and Wagner 2004). In a recent investigation Rapp and Wolff (2010) find little pay-performance sensitivity, while corporate governance aspects seem to play an important role in explaining executive compensation; this suggests a high level of agency costs stemming from the manager-shareholder conflict in German companies. Moreover, there is evidence that the structure of compensation influences managerial behaviour and decision making. A higher proportion of share-based compensation seems to be connected to a managerial long-term focus as reflected by investment policy; however, generally no improvement in performance can be observed (Rapp et al. 2009, 2012). Finally, German firms have been found to partly resist individualised disclosure of managerial remuneration, which is i.a. driven by compensation levels and above-average compensation, thus suggesting that compensation may possibly not be optimally designed (Hitz and Werner 2012). All in all, this stresses the importance, but also controversy of compensation in German corporate governance.

2.4 Hypothesis building

2.4.1 *Incentive alignment and entrenchment through compensation*

As outlined above, the interests of management and shareholders may diverge and management, if unconstrained, may take opportunistic decisions that maximise personal benefits rather than shareholder value. Starting i.a. with Jensen and Meckling (1976) it has been argued that well-designed executive compensation plans can mitigate this conflict by aligning the interests of management and shareholders. For instance, share-based incentives permit an alignment of the risk-preferences and planning horizons of management and shareholders (Dechow and Sloan 1991; Jensen and Murphy 1990, 2004). Under optimal contracting efficient incentives are expected to favour managerial behaviour consistent with shareholder value maximisation (Aggarwal 2008; Core et al. 2003). At the same time, however, executive compensation has been interpreted as part of the agency conflict and reflective of managerial entrenchment. Compensation contracts may be the outcome

of the rent-seeking of powerful managers rather than efficient contracting on the part of the principals (e.g. supervisory board and shareholders). If managerial power is the underlying force shaping compensation contracts, these misguided contracts may in turn set incentives for undesirable managerial behaviour (Bebchuk and Fried 2003; Bebchuk et al. 2002; Jensen and Murphy 2004). Thus, given the opposing *alignment* and *entrenchment* hypotheses, from a theoretical perspective the effect of the structure of executive compensation on managerial behaviour and effort seems uncertain. This is also supported by aforementioned empirical evidence.¹²

Apart from its structure, the actual extent of compensation is often seen as the chief concern and a topic of controversy (Core et al. 1999, 2008). Thereby, drawing on the considerations of optimal contracting, the economic determinants of executive compensation should consist of characteristics that are related to managerial and corporate performance, the efforts associated with leading a complex organisation, but also the compensation afforded by similar companies. In turn, any compensation beyond that “normal” level, i.e. that which a firm should pay given above economic determinants, may be characterised as excess compensation (Barontini and Bozzi 2011; Core et al. 2008; Robinson et al. 2011). Excess compensation can be expected be the result of managerial rent-seeking and entrenchment. Accordingly, it should be related to a behaviour that is aimed at increasing the benefits of management and the managerial power base. Based on above considerations the following hypotheses stated in alternative form are predicted:

H1 The existence of share-based compensation affects managerial behaviour, i.e. the extent of agency costs.

H2 The extent of excess compensation detrimentally affects managerial behaviour, i.e. a positive relation with the extent of agency costs.

2.4.2 Blockholder monitoring

As indicated above, dominant blockholders may alleviate the manager shareholder conflict, because they can overcome the free-rider dilemma of dispersed shareholders (Alchian and Demsetz 1972; Fama and Jensen 1983). They are expected to reduce information asymmetries because their intervention is less expensive, they can react sooner and have the capacity to control (Krivogorsky and Burton 2012). Thus, they may limit the discretion afforded to management (Gedajlovic and Shapiro 1998). For example, large shareholders can be expected to scrutinise acquisition plans, thereby inhibiting empire building and non-value enhancing investments, which may result in a lower acquisition activity (Caprio et al. 2011). Moreover, when drawing on the German institutional environment, especially families, strategic investors and banks are ascribed greater power to influence business decisions and monitor management (Andres 2008; Gorton and Schmid 2000; Krivogorsky and Burton 2012; Pedersen and Thomsen 2003).

¹² Cf. Rapp et al. (2009, 2012), who detect overall inconclusive evidence regarding optimal-contracting versus rent-seeking hypotheses in German firms.

While above aspects indicate, that blockholders, especially if part of the traditional governing coalition, should possess the ability to monitor management and influence managerial decision making, it seems a priori uncertain whether they will actually do so. First of all, the motives of blockholders may be distinct from that of dispersed shareholders, because their utility possibly derives from sources beyond shareholder value creation (Hart 1995; Shleifer and Vishny 1986, 1997). For instance, strategic shareholders can utilise their power to further concerns of the parent company; banks may work towards promoting their own business; family owners possibly want to secure positions within the firm for family members; generally, dominant owners can strive to realise private benefits of control (Bertrand et al. 2002; Demsetz and Lehn 1985; Dittmann et al. 2010). Secondly, some blockholders (e.g. institutional investors, government, foreign shareholders) may not monitor efficiently, because they have a desire for investment liquidity, or lack expertise and time (Florackis and Ozkan 2009; Johnson et al. 2010). Finally, management may have fostered close ties to a long-term blockholder, which may weaken blockholder scrutiny and make him indulgent in the face of behaviour aimed at furthering managerial benefits and influence, i.e. blockholder ownership may facilitate managerial entrenchment (Kester 1992; Krivogorsky and Burton 2012; Thomsen et al. 2006). Hence, drawing on above considerations it seems theoretically unclear how the presence of a blockholder will affect opportunistic managerial behaviour. Given the peculiarities of the German institutional setting, a different role of blockholders belonging to the traditional governing coalition can be expected. Thus, the following undirected hypotheses stated in alternative form are predicted:

H3a The existence of a blockholder affects managerial behaviour, i.e. the extent of agency costs.

H3b The effect of blockholders on managerial behaviour varies with blockholder identity, i.e. there will be a difference in effect between traditional blockholders and other blockholder types.

3 Data and methods

3.1 Sample selection

The empirical analyses are based on a sample of German companies traded on Frankfurt Stock Exchange over the 5-year period 2006–2010. The starting point is determined by the Disclosure of Management Board Compensation Act (VorstOG), which has made detailed disclosure of executive compensation from 2006 onwards mandatory. Moreover, as many variables, including the dependent variables, are accounting-based a consistent definition of accounting items is important. Since IFRS have been adopted in the EU (and Germany) in 2005, for a dataset starting in 2006 a reliable application of accounting standards is to be expected.

Concerning sample cross-section, all German companies that at any point in time during the 2006–2010 sample period were included in HDAX and SDAX indices¹³ are identified. As the deletion and addition of companies to the respective indices is a continuous process, over the entire time period a total of 210 companies are considered for the underlying initial sample. Following related literature financial firms (SIC codes 6000–6999) are excluded due to the characteristics of their financial ratios and the application of different regulation. Then, all companies that have gone bankrupt and have been delisted, all companies not legally registered in Germany and those for which no compensation and ownership information is available are deleted. Finally, all observations with missing information are excluded. This process results in an unbalanced sample of 674 firm-year observations based on 149 companies. Sample construction is illustrated in Table 1.

Compensation data is collected manually from the respective annual reports and/or compensation reports.¹⁴ Ownership and board data are collected from Hoppenstedt Aktienfuhrer, which currently is the most pertinent source of information regarding German publicly traded companies, i.a. ownership and board information.¹⁵ Ownership chains are traced back to the ultimate owner so as to be able to identify blockholders.¹⁶ All other (i.e. accounting and market) data are obtained from WRDS Compustat Global.

3.2 Managerial behaviour related to moral hazard: measuring agency costs

Uncontrolled moral hazard on the part of management may result in a number of typical forms of behaviour that, while in the interest of management, may be to the detriment of shareholders. Existing studies have mainly approached the measurement of the consequences of managerial moral hazard using market-based or accounting-based performance metrics.¹⁷ Thereby, the implicit assumption is that these measures capture the aggregate effects of opportunistic decision making. In contrast, based on earlier literature this study considers three direct measures of agency costs. Thus, rather than aggregate market- or accounting-based performance metrics the measures used in this study have been proposed as suitable for depicting precise forms of managerial behaviour typically associated with the manager-shareholder conflict. Drawing on the approach of Ang et al. (2000), Singh and

¹³ HDAX is the combination of DAX, MDAX and TecDAX indices and includes 110 companies. SDAX covers 50 companies below MDAX. Consequently, at any point in time 160 companies (including financial firms) are contained in the indices.

¹⁴ According to the Disclosure of Management Board Compensation Act (VorstOG) of 2005, disclosure of executive compensation in the notes to the financial statement and/or a separate compensation report has been made mandatory from 2006 onwards.

¹⁵ Cf. the current contributions by Dittmann et al. (2010) and Rapp et al. (2012) who also rely on information provided by Hoppenstedt.

¹⁶ Unlike earlier studies cf. Franks and Mayer (2001) and Faccio and Lang (2002) there is little evidence of pyramidal ownership structures. This can be attributed to the timeliness of the data and corresponds to the aforementioned decomposition of cross-shareholdings; see also Weber (2009).

¹⁷ Cf. exemplarily for a large body of empirical contributions based on market- and/or accounting metrics of performance (Morck et al. 1988; McConnell and Servaes 1990; La Porta et al. 2002; Anderson and Reeb 2003; Thomsen et al. 2006; Andres 2008; Dittmann et al. 2010).

Table 1 Sample construction

Total number of companies included in HDAX and/or SDAX indices of Deutsche Boerse at the beginning of each respective year from start of 2006 to end of 2010	210
Excluding financial firms (SIC 6000-6999)	-37
Excluding firms not registered in Germany and for which corporate governance data is not available	-16
Total number of companies included in starting sample	157
Total number of firm-year observations included in starting sample	732
Excluding observations for which basic information is unavailable	-58
Total number of firm-year observations included in final sample	674
Corresponding number of companies in final sample after exclusion of 58 observations	149

The sample selection procedure starts with the overall index composition for all years from which first all financial firms and secondly all firms not registered in Germany for which ownership data is not available are deleted. From the resulting unbalanced panel all observations for which basic information is unavailable are excluded

Davidson (2003) and Le and Buck (2011) asset turnover and the discretionary expense ratio are used as measures of firm-level agency costs. Moreover, following i.a. McKnight and Weir (2009) and Caprio et al. (2011) corporate acquisition activity is used as a dependent variable indicating a moral hazard-induced investment policy.

Asset turnover is calculated as total sales scaled by total assets. A higher value of asset turnover is interpreted as an indicator of lower agency costs, i.e. asset turnover is an inverse measure of agency costs. Generally, the financial statement analysis literature considers this ratio a measure of the efficiency of the employment of capital (Bernstein et al. 2001). With respect to agency conflicts it should address lack of managerial effort in utilising existing assets. Moreover, it might also reflect investments in declining industries and outdated technologies where existing management possesses special expertise (Shleifer and Vishny 1989; Tirole 2006). Finally, investment decisions based on managerial risk aversion may adversely affect asset turnover (Amihud and Lev 1981; Morck et al. 1990). However, as McKnight and Weir (2009) point out, the measure entails some drawbacks. Firstly, sales generation in itself may not necessarily coincide with the interest of shareholders, because the profitability of the activities is not accounted for. Secondly, higher sales may result in higher free cash flows, which in turn may be expropriated by management.

The discretionary expense ratio is calculated as the difference of total operating expenses and costs of goods sold, scaled by total sales. Drawing on early value relevance studies of fundamental accounting information, this measure is associated with inefficient cost management and excessive overheads (Lev and Thiagarajan 1993). Under an agency perspective, the discretionary expense ratio should reflect managerial behaviour related to lax cost control, excessive spending and consumption of perquisites (Bruton et al. 2002; Jensen and Meckling 1976; Yafeh and Yosha 2003). Thus, the discretionary expense ratio is treated as a direct measure of agency costs, i.e. a higher agency costs should be reflected in higher discretionary expenses. Again, it is worth noting an impediment in interpreting above measure;

i.a. Anderson et al. (2003) point out that in the case of a sudden bump in revenues managers may keep up capacity levels for strategic (i.e. not moral hazard) reasons (cost-stickiness phenomenon).

Finally, acquisition activity is proxied by dividing the total value of acquisitions made by total assets. The underlying rationale for that measure derives from agency literature which has identified several motives of unconstrained management resulting in an excessive, value decreasing acquisition activity. For instance, managerial hubris may imply that managers overpay for target firms because they overestimate their own ability to run that firm, the idea of empire building suggests that managers want to maximise the resources under their control (Jensen 1986; Morck et al. 1990; Roll 1986; Tirole 2006). As above, however, a caveat is in order when interpreting that measure because acquisition activity per se is not necessarily to the detriment of shareholders and may well be part of a sound corporate policy.

Obviously, above measures are highly sensitive to firm-specific aspects. For instance, industry affiliation, size and time effects can be expected to be important drivers. This is why, based on previous literature, potential influences are controlled for, which are outlined in the following chapter.

3.3 Variable specification and control variables

The specification of all variables (including above dependent variables) is described in Appendix 1. Incentive alignment via executive compensation is captured by calculating the proportion long-term (stock-based) incentives to total compensation (Dey 2008; Rapp et al. 2012). Following related research, the measure of excess compensation is derived from a regression analysis where first the natural logarithm of total compensation is explained by standard economic determinants of executive compensation (size, growth, accounting and market return, board size¹⁸ and industry controls).

$$y_{i,t} = \alpha_0 + \alpha_1 Size + \alpha_2 DaxDum + \alpha_3 BkMkt + \alpha_4 Ret + \alpha_5 L.Ret + \alpha_6 ROA + \alpha_7 L.ROA + \alpha_8 BSize + Industry_i + \varepsilon_{i,t}$$

where $y_{i,t}$ refers to the natural logarithm of total compensation and all other variables are as outlined above, $Industry_i$ indicates industry fixed effects and the indices i and t refer to firm i in year t . Then, excess compensation is calculated as the difference of actual compensation and estimated expected compensation (Barontini and Bozzi 2011; Core et al. 2008; Croci et al. 2012; Robinson et al. 2011).¹⁹

$$\% Excesscompensation = \log(totalcompensation) - \log(expectedcompensation)$$

While excess compensation is derived from annual cross-sectional regressions, for illustrative purposes the results of a pooled cross-section estimation with time controls is displayed in Appendix 2. Blockholder monitoring is captured by a binary

¹⁸ In this context the board refers to the management board, i.e. the “Vorstand” in the German two-tier board system.

¹⁹ As in Barontini and Bozzi (2011) and unlike Core et al. (2008) I do not control for tenure because I look at total management board compensation rather than CEO compensation.

variable taking on the value of 1 if a blockholder is present and zero otherwise. Thereby, given the statutory peculiarities of the German system, a blockholder is defined as an investor holding at least 25 % of voting equity.²⁰ Moreover, a dummy variable for the presence of influential blockholders is created that takes on the value of 1 if a blockholder belongs to the traditionally influential groups, i.e. families, strategic investors and banks, and zero otherwise. Finally, a dummy variable is created that takes on the value of 1 if any other blockholder (e.g. institutional investors, government, foreign shareholders) is present and zero otherwise.

As mentioned above, a number of control variables are taken into account which can be expected to be important drivers of the dependent variables. Firm size is likely to influence above measures, because they address aspects of corporate efficiency, where, among other things, economies of scale but also increasing complexity and different forms of behaviour of larger organisations might be important (Williamson 1967). As the dependent variables and other control variables are scaled by total assets and total sales, respectively, I refrain from using size measures based on these accounting items in order to minimise the problem of a spurious correlation of variables and multi-collinearity. This is why firm size is computed as the natural logarithm of the number of employees.²¹ Debt financing may affect the manager-shareholder conflict and, thus, above measures, because the contractually guaranteed payment of interest and principal in the following periods may act as a bonding mechanism and reduce agency costs from free cash flow. Moreover, large creditors may fulfil a monitoring function, but can also affect corporate policy adversely (Grossman and Hart 1982; Jensen 1986; Shleifer and Vishny 1997). The leverage ratio is calculated as total debt scaled by total assets. Growth may affect firm efficiency and acquisition activity, but also have effects on agency costs due to the underinvestment problem, information asymmetry and the free cash flow problem (Jensen 1986; Jensen and Meckling 1976; Myers 1977). Growth is calculated as the one-period growth in total sales. Dividend payout may lower agency costs, because it reduces free cash flow and forces firms to turn to the capital market more regularly, where management is subject to external monitoring (Easterbrook 1984; Rozeff 1982). Dividend payout is calculated as total cash dividends paid scaled by income before extraordinary items. The debt maturity structure may also affect the extent of managerial leeway. Myers (1977) emphasises the role of short-term debt in mitigating the underinvestment problem. Flannery (1986) and Diamond (1991) point out the signalling function of the debt maturity profile, with a high share of short-term financing implying a credible signal of the optimistic expectations of company insiders. The short-term debt ratio is computed as the proportion of short-term debt to total debt.

²⁰ The threshold of 25 % is due to the regulations of the stock corporations act (AktG) where a majority of at least 75 % of voting equity is necessary effect major decisions during the annual general meeting, e.g. changing the corporate charter and control and profit pooling agreements; e.g. see §179 and §293 stock corporations act (AktG).

²¹ However, my results are immune to different size proxies such as the natural logarithm of total assets and total sales, respectively. See the robustness section for further details.

Finally, time and industry effects are controlled for using dummy variables. Following related research, two-digit standard industry classification (SIC) codes are used in order to account for industry specific peculiarities of the dependent variables (Andres 2008; Singh and Davidson 2003). Based on two-digit SIC codes I find that my firms belong to 35 different industry groupings.

3.4 Methods and empirical design

In order to test the effects the extent of the manager-shareholder conflict has on above measures of managerial behaviour, the following model is tested:

$$y_{i,t} = \alpha_0 + \alpha_1 PropLTI + \alpha_2 XSComp + \alpha_3 Block + \alpha_4 Size + \alpha_5 Lev + \alpha_6 Growth + \alpha_7 Payout + \alpha_8 PropSTD + Year_t + Industry_i + \varepsilon_{i,t}$$

where $y_{i,t}$ refers to the measures of asset turnover, discretionary expense ratio and acquisition activity, respectively and all other (control) variables are as outlined above; $Year_t$ and $Industry_i$ indicate year and industry fixed effects and the indices i and t refer to firm i in year t .

When performing multiple regression analyses a number of prerequisites must be fulfilled if the results are to be meaningful. When testing for homoscedasticity and linear independence of the errors I find that my data might not comply with these assumptions;²² this is why I use t-statistics based on heteroscedasticity consistent standards errors, which also allow for autocorrelation of one lag (Newey–West).²³ I assess the normality requirement by doing a residual test/histogram-normality test, which suggests that residuals are approximately normally distributed and do not contain extreme outliers.²⁴

While, given the construction of my key independent variables, I do not expect multi-collinearity to be a major problem, I also compute variance inflation factors (VIF). However, a mean VIF of 1.42 and a maximum VIF of 2.12 (Size) for the explanatory variables (other than year and industry fixed effects) indicate that multi-collinearity does not seem affect my analyses.

As in most empirical corporate governance research endogeneity can be expected to be a pose problem because causality may run in both ways and dependent and independent variables may be jointly influenced by unobserved omitted variables. This is why in the robustness section I follow recent research that undertakes comparable analyses on a similar dataset in explicitly addressing this problem (Dittmann et al. 2010). Thus, apart from time and industry fixed effects that can be expected to filter out unobserved heterogeneity I use (i) lagged independent variables and (ii) check the robustness of my results by including the lagged

²² I test for heteroscedasticity using the modified Wald test for groupwise heteroscedasticity and for autocorrelation using the Wooldridge test for autocorrelation in panel data.

²³ In the following analyses t-statistics based on standard errors allowing for one lag are shown. However, all results are robust to standard errors controlling for autocorrelation of higher lags.

²⁴ Cf. Rashid (2013) for this approach.

dependent variable as a further explanatory variable.²⁵ In addition, recent methodical papers suggest that in case of both cross-sectional and time-series dependence one-dimensionally clustered standard errors may be biased whereas two-dimensionally clustered standard errors will be well-specified (Gow et al. 2010; Petersen 2009). This is why in the robustness section I also repeat the analyses using standard errors clustered by both firm and year.²⁶ Finally, because of the nature of the acquisition activity variable, where observations are censored at zero, I use tobit regressions with this dependent variable to obtain unbiased results.

4 Results and analysis

4.1 Descriptive statistics

Summary statistics of the variables used are presented in Table 2. Panel A shows the statistics for the entire sample. Mean (median) asset turnover is 1.18 (1.05), discretionary expenses amount to 28 % (25 %) of total sales and on average companies spend about 2 % of total assets on acquisitions. Regarding the key independent variables, mean (median) proportion of long-term incentives amounts to 11 % (0 %) of total compensation. Excess compensation by design has zero mean and median. 52 % of all companies are dominated by a blockholder, whereof 37 % belong to the traditionally influential groups of families, strategic investors and banks and 15 % have other identities. Regarding the control variables, size measured as the natural logarithm of the number of employees stands at 8.63 (8.60), debt amounts to 21 % (19 %) of total assets, sales grow on average by 9 % (7 %), payout on average is 44 % (22 %) of earnings, short-term debt stands at 34 % (26 %) of total debt. Panel B shows the development of the key dependent variables by year. Looking at the dependent variables, there is some indication of the recent financial crisis, which is reflected in a decline in asset turnover, discretionary expense ratio and acquisition activity in 2008. Regarding the explanatory variables, the proportion of long-term incentives seems to be steadily increasing. As before, by design excess compensation is centred at a mean of zero. The proportion of companies with a blockholder seems to be somewhat increasing, which also holds when looking at blockholder type.

Table 3 shows the pairwise Pearson and Spearman correlation coefficients between the dependent and independent variables used in the main regression analyses. Regarding the pearson correlation coefficients of dependent and key explanatory variables, I find that excess compensation correlates significantly with all dependent variables and the existence of influential blockholders correlates significantly with asset turnover and discretionary expenses. The existence of a

²⁵ These so-called Granger causality regressions are regarded as a conservative method to control for endogeneity because they remove much of the cross-sectional variation (cf. Granger (1969)). Moreover, given that corporate governance variables often are stable over time using an instrumental variables regression does not seem an appropriate method to address endogeneity. Cf. Thomsen, Pedersen and Kvist (2006) and Dey (2008) for this approach.

²⁶ Cf. Sánchez-Ballesta and García-Meca (2011) for a similar application.

blockholder other than the traditionally influential groups correlates significantly negatively with discretionary expenses. Overall, the correlations between the explanatory variables are all on low to moderate levels, which, in addition to aforementioned variance inflation factors, suggests that multi-collinearity is not a problem.²⁷

4.2 Multivariate analysis

The results of the multivariate analysis using asset turnover as dependent variable are displayed in Table 4. In all models I use the proportion of long-term incentives and the extent of excess compensation as key explanatory variables. Moreover, for reasons of model specification I test the effect of the existence of any blockholder in model 1, the existence of a blockholder belonging to the traditionally influential groups in model 2 and the existence of any other blockholder in model 3. All three specifications indicate no measurable incentive alignment effect through the use of long-term incentives in executive compensation. In contrast, a higher extent of excess compensation is throughout highly significantly associated with lower asset turnover (i.e. higher agency costs). Concerning the role of blockholders, I do not detect an effect for general blockholder ownership (model 1). However, the existence of a blockholder belonging to the traditionally influential groups is significantly associated with higher asset turnover (model 2). Surprisingly, the existence of any other blockholder is highly significantly associated with lower asset turnover (model 3). Thus, there is evidence in line with hypotheses 2, 3a and 3b.

The results for discretionary expenses as dependent variable are displayed in Table 5. Model specifications are constructed in analogy to Table 4. Neither specification displays an effect for long-term incentives. Again, higher excess compensation is highly significantly associated with higher discretionary expenses (i.e. higher agency costs). General blockholder existence (model 1) and, particularly, the existence of a blockholder not belonging to the traditionally influential groups (model 2) is associated with higher discretionary expenses. Thus, there is support for hypotheses 2, 3a and 3b.

Table 6 shows the results for acquisition activity as dependent variable. As the acquisition activity variable is censored, i.e. many observations take on the value of zero, OLS regressions may deliver biased results. Consequently, using a Tobit model is appropriate. Looking at the coefficient estimates there is no effect of long-term incentives in executive compensation. Again, throughout the models I find significantly positive effects for the extent of excess compensation, i.e. higher excess compensation is associated with higher acquisition activity. Finally, general blockholder ownership (model 1) and, particularly, ownership of blockholders belonging to the traditionally influential groups (model 2) is significantly negatively associated with acquisition activity. Consequently, this evidence is in line with hypotheses 2, 3a and 3b.

²⁷ While there are strong and significant correlations between the blockholder variables, these correlations are due to the construction of the variables. Because of this reason, in the following analyses I test these variables in separate model specifications.

Table 2 Summary statistics

	N	Mean	SD	10 %	Median	90 %
<i>Panel A</i>						
AssetTurnover	674	1.18	0.62	0.53	1.05	1.97
DiscExpenses	674	0.28	0.17	0.10	0.25	0.48
AcqAct	674	0.02	0.06	0.00	0.00	0.04
PropLTI	674	0.11	0.15	0.00	0.00	0.34
XSComp	674	0.00	0.37	-0.49	0.00	0.47
Block	674	0.52	0.50	0.00	1.00	1.00
BlockInfl	674	0.37	0.48	0.00	0.00	1.00
BlockOther	674	0.15	0.36	0.00	0.00	1.00
Size	674	8.63	1.94	6.28	8.60	11.31
Lev	674	0.21	0.16	0.01	0.19	0.42
Growth	674	0.09	0.23	-0.15	0.07	0.34
Payout	674	0.44	1.38	0.00	0.22	0.77
PropSTD	674	0.34	0.28	0.03	0.26	0.82
Bk/Mkt	674	2.11	1.91	0.53	1.56	4.38
Bsize	674	1.31	0.40	0.69	1.39	1.79
DAXDummy	674	0.18	0.38	0.00	0.00	1.00
Log(sales)	674	7.31	1.86	5.08	7.12	9.93
RET	674	0.20	0.64	-0.51	0.12	0.89
ROA	674	0.03	0.10	-0.04	0.04	0.12
<i>Panel B</i>						
Year		2006	2007	2008	2009	2010
N		124	132	140	141	137
AssetTurnover		1.25 (0.62)	1.24 (0.66)	1.03 (0.55)	1.21 (0.66)	1.16 (0.59)
DiscExpenses		0.29 (0.17)	0.29 (0.17)	0.25 (0.15)	0.30 (0.17)	0.28 (0.17)
AcqAct		0.04 (0.09)	0.02 (0.05)	0.01 (0.04)	0.02 (0.05)	0.01 (0.03)
PropLTI		0.08 (0.13)	0.09 (0.15)	0.10 (0.15)	0.12 (0.17)	0.15 (0.15)
XSComp		0.00 (0.38)	0.00 (0.33)	0.00 (0.38)	0.00 (0.40)	0.00 (0.35)
Block		0.51 (0.50)	0.52 (0.50)	0.51 (0.50)	0.53 (0.50)	0.55 (0.50)
BlockInfl		0.36 (0.48)	0.37 (0.48)	0.36 (0.48)	0.36 (0.48)	0.39 (0.49)
BlockOther		0.15 (0.35)	0.14 (0.35)	0.15 (0.36)	0.17 (0.38)	0.16 (0.37)

This table presents descriptive statistics of the variables used in the analyses. Panel A presents summary statistics for the entire sample. Panel B presents the yearly development of arithmetic mean (standard deviation) of the key variables. Definitions for all variables are provided in Appendix 1

Table 3 Correlation coefficients

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 AssetTurnover		-0.073	-0.015	-0.064	-0.090	0.086	0.140	-0.069	-0.116	-0.216	0.056	0.097	0.103
2 DiscExpenses	-0.201		-0.020	-0.094	0.076	0.111	0.183	-0.091	-0.221	-0.153	-0.079	-0.048	0.058
3 AcqAct	0.007	0.064	0.038	0.081	0.035	-0.065	-0.087	0.026	0.125	0.043	0.059	0.054	0.033
4 PropLTI	-0.033	-0.073	0.112	0.186	0.125	-0.081	-0.107	0.030	0.287	0.056	0.042	0.048	-0.080
5 XSComp	-0.105	0.123	0.112	0.186	0.125	-0.066	-0.028	-0.054	0.009	-0.093	0.041	-0.058	-0.116
6 Block	0.071	0.070	-0.052	-0.047	-0.086	-0.066	0.730	0.409	-0.036	0.009	0.007	0.096	0.050
7 BlockInfl	0.115	0.136	-0.037	-0.072	-0.053	0.730	0.409	-0.326	-0.082	-0.066	0.018	0.062	0.079
8 BlockOther	-0.055	-0.086	-0.022	0.032	-0.048	0.409	-0.326	0.085	0.060	0.100	-0.014	0.050	-0.036
9 Size	-0.150	-0.275	0.021	0.239	0.006	-0.016	-0.080	0.085	0.280	0.280	-0.180	0.250	-0.095
10 Lev	-0.215	-0.173	-0.087	0.029	-0.091	0.012	-0.064	0.103	0.242	-0.091	-0.075	0.034	-0.105
11 Growth	0.093	-0.131	0.074	0.031	0.032	-0.003	0.006	-0.013	-0.225	-0.091	-0.073	-0.073	-0.037
12 Payout	-0.039	0.004	-0.029	0.024	-0.048	0.045	0.009	0.051	0.090	0.064	-0.097	-0.073	-0.073
13 PropSTD	0.109	0.068	0.004	-0.048	-0.051	0.052	0.083	-0.038	-0.152	-0.182	-0.016	-0.037	-0.073

This table presents the correlation coefficients of all variables used in the main analyses. Pearson correlation coefficients are displayed below and Spearman rank-correlation coefficients are displayed above the diagonal. Statistical significance of at least the 5 % level is indicated by bold coefficients. Definitions for all variables are provided in Appendix 1

Summarising above results, I find that incentive alignment via a higher proportion of long-term (share-based) incentives does not seem to significantly affect managerial behaviour and agency costs. In contrast, the extent of excess compensation, i.e. the proportion of executive compensation that cannot be explained by standard economic determinants and, thus, should reflect managerial entrenchment, throughout significantly affects asset turnover, discretionary expenses and acquisition activity. This means that there is evidence indicating that managerial entrenchment, i.e. a more pronounced manager-shareholder conflict, leads to typical forms of behaviour associated with lack of effort, excessive spending and lax cost control and empire building. This is in contrast to the stylised picture of German firms, where the type-I conflict is supposed to be dominated by the type-II conflict. However, it corresponds to the more recent general conjecture, that the problem of unconstrained management has gained in importance in German firms (Hackethal et al. 2005; Sudarsanam and Broadhurst 2012) and, more specifically, to evidence indicating that agency costs manifest in executive compensation may be considerable in German firms (Rapp and Wolff 2010).

Finally, the effects of blockholder presence seem somewhat inconclusive. General blockholder presence is associated with higher discretionary expenses, but lower acquisition activity. However, when the individual effects of blockholders belonging to the traditionally influential groups, and all others, respectively, are regarded separately a different picture emerges. Here, I find that the presence of a traditionally influential blockholder is associated with both higher asset turnover and lower acquisition activity, both of which corresponds to a constriction of managerial leeway, for example due to a higher congruence of the interests of management and shareholders and better monitoring. Overall, this indicates that blockholders belonging to the traditionally influential groups still exert some influence over the policies of German firms (Goergen et al. 2008a). While not detectable throughout, the presence of these blockholders seems to bring about managerial behaviour in line with the interests of dispersed shareholders, which conforms to some of the more recent evidence (Andres 2008; Kaserer and Moldenhauer 2008). Turning to the effect of other blockholders, I find that their presence is associated with lower asset turnover and higher discretionary expenses. This indicates that the presence of blockholders that do not traditionally hold much power in German corporate governance may be accompanied by an increase in managerial discretion. This could stem from a situation where such a blockholder fails to exert efficient monitoring himself, but at the same time shields management from other sources of monitoring. Alternatively, it could also reflect a detrimental effect of these blockholders, i.e. a form of private benefits of control, in that corporate policy is influenced in an adverse way. More generally, the evidence on blockholder ownership seems to suggest that ownership still is an important determinant of managerial behaviour and corporate policy in German companies. However, interpreted cautiously, there is no evidence that the traditionally influential groups have lost their grip on German companies, nor do the results imply that other forms of ownership, e.g. institutional investors, should be looked for as an alternative governance mechanism aligning the interests of management and shareholders.

Table 4 The effects of managerial discretion on asset turnover

Variables	Exp.	OLS		
		1	2	3
PropLTI	+/-	0.027 (0.14)	0.041 (0.21)	0.073 (0.39)
XSComp	-	-0.206 (3.15)***	-0.196 (3.10)***	-0.220 (3.50)***
Block	+/-	-0.009 (0.18)		
BlockInfl	+/-		0.131 (2.52)**	
BlockOther	+/-			-0.283 (4.45)***
Size	+/-	-0.032 (1.69)*	-0.033 (1.75)*	-0.026 (1.43)
Lev	+/-	-0.567 (3.79)***	-0.535 (3.63)***	-0.489 (3.36)***
Growth	+/-	0.185 (1.75)*	0.177 (1.66)*	0.217 (2.09)**
Payout	+	-0.001 (0.04)	-0.002 (0.09)	0.002 (0.06)
PropSTD	+	-0.053 (0.63)	-0.066 (0.79)	-0.076 (0.90)
Constant		1.447 (7.53)***	1.448 (7.74)***	1.430 (7.66)***
Industry effects		Included	Included	Included
Year effects		Included	Included	Included
Adj. R ²		0.5157	0.5241	0.5332
Groups		149	149	149
N		674	674	674

This table shows the regression estimates of OLS regressions with asset turnover as dependent variable. All explanatory variables are lagged by 1 year. See Appendix 1 for a definition of all variables. For each explanatory variable, the table displays the coefficient estimate and t-statistics in parentheses. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics of models 1–3 are based on heteroscedasticity consistent standard errors which also allow for autocorrelation of one lag (Newey–West). The results are based on the full sample of 149 companies over the years 2006–2010

* Indicates statistical significance at the 10 % level, ** at the 5 % and *** at the 1 % level

4.3 Robustness and sensitivity checks

4.3.1 Endogeneity and biasedness of standard errors

Any study empirically investigating aspects of corporate governance typically is challenged by the issue of endogeneity. Given the characteristics of the variables

Table 5 The effects of managerial discretion on discretionary expense ratio

Variables	Exp.	1	2	3
PropLTI	+/-	-0.017 (0.39)	-0.017 (0.37)	-0.031 (0.71)
XSComp	+	0.062 (3.46)***	0.058 (3.16)***	0.063 (3.67)***
Block	+/-	0.033 (2.41)**		
BlockInfl	+/-		-0.002 (0.12)	
BlockOther	+/-			0.080 (4.54)***
Size	+/-	-0.015 (2.21)***	-0.015 (2.18)***	-0.018 (2.66)***
Lev	+/-	-0.057 (1.17)	-0.058 (1.16)	-0.082 (1.67)*
Growth	+/-	-0.109 (3.48)***	-0.108 (3.44)***	-0.124 (3.83)***
Payout	-	0.002 (0.35)	0.003 (0.43)	0.002 (0.30)
PropSTD	-	0.011 (0.44)	0.013 (0.52)	0.022 (0.85)
Constant		0.395 (5.11)***	0.399 (5.27)***	0.416 (5.30)***
Industry effects		Included	Included	Included
Year effects		Included	Included	Included
Adj. R ²		0.3963	0.3874	0.4182
Groups		149	149	149
N		674	674	674

This table shows the regression estimates of OLS regressions with discretionary expense ratio as dependent variable. All explanatory variables are lagged by 1 year. See Appendix 1 for a definition of all variables. For each explanatory variable, the table displays the coefficient estimate and t-statistics in parentheses. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics of models 1–3 are based on heteroscedasticity consistent standard errors which also allow for autocorrelation of one lag (Newey–West). The results are based on the full sample of 149 companies over the years 2006–2010

* Indicates statistical significance at the 10 % level, ** at the 5 % and *** at the 1 % level

under consideration, I address this issue by estimating Granger-causality regressions, where a lagged dependent variable is included in the regression specifications. Tables 7, 8 and 9 repeat above regression estimations while at the same time taking into account the lagged dependent variable as an additional right hand variable. Throughout I find that, while coefficients get somewhat smaller and lose in statistical significance, the key results shown in Tables 4, 5 and 6 remain valid. Long-term incentives do not appear to drive managerial behaviour. Higher excess

Table 6 The effects of managerial discretion on acquisition activity

Variables	Exp.	Tobit		
		1	2	3
PropLTI	+/-	0.007 (0.31)	0.006 (0.27)	0.007 (0.32)
XSComp	+	0.017 (1.89)*	0.017 (1.95)*	0.018 (2.03)**
Block	+/-	-0.013 (1.84)*		
BlockInfl	+/-		-0.014 (1.93)*	
BlockOther				0.000 (0.02)
Size	+/-	0.006 (2.81)***	0.006 (2.72)***	0.006 (2.74)***
Lev	+/-	-0.030 (1.46)	-0.031 (1.50)	-0.030 (1.43)
Growth	+/-	0.023 (1.37)	0.023 (1.35)	0.023 (1.37)
Payout	-	-0.003 (1.78)*	-0.003 (1.83)*	-0.003 (1.97)**
PropSTD	-	0.013 (1.09)	0.014 (1.13)	0.013 (1.02)
Constant		-0.048 (1.66)*	-0.045 (1.57)	-0.047 (1.62)
Industry effects		Included	Included	Included
Year effects		Included	Included	Included
Pseudo R ²		0.1419	0.1430	0.1342
Groups		149	149	149
N		674	674	674
Uncensored		381	381	381

This table shows the regression estimates of Tobit regressions with acquisition activity as dependent variable. All explanatory variables are lagged by 1 year. See Appendix 1 for a definition of all variables. For each explanatory variable, the table displays the coefficient estimate and t-statistics in parentheses. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics of models 1–3 are based on robust standard errors (White). The results are based on the full sample of 149 companies over the years 2006–2010. N refers to the total number of observations

* Indicates statistical significance at the 10 % level, ** at the 5 % and *** at the 1 % level

compensation is associated with lower asset turnover and higher discretionary expenses and acquisition activity, respectively. General blockholder ownership is ambiguous; however, looking at the role the typically influential blockholders play I find them to be significantly associated with higher asset and lower acquisition activity, respectively. In turn, other blockholder ownership is significantly

negatively related to asset turnover, but positively related to discretionary expenses, i.e. associated with higher agency costs.

Furthermore, because recent methodical papers have suggested that one-dimensionally clustered standard errors may be biased, I repeat above analyses using two-way clustered standard errors (Gow et al. 2010; Petersen 2009). Tables 7, 8 and 9, models 4–6 display the respective results. I find that the results obtained in the initial analyses remain qualitatively unaffected when using standard errors clustered at the firm and year level. Key results are very similar to those in Tables 4, 5 and 6.

4.3.2 *Measurement of explanatory variables*

Throughout my analyses I fail to detect any significant influence of the proportion of long-term incentives on my dependent variables, i.e. it appears as if the attempt at an alignment of incentives via different compensation components does not affect managerial behaviour as measured by the dependent variables. While this result partly conforms to evidence suggesting that these incentives are not necessarily associated with better performance, it contrasts results that find that a management incentivised by share-based compensation will engage in a long-term investment policy, i.e. have its interests more aligned with those of shareholders (Rapp et al. 2009, 2012). Thus, to check the robustness of these results I use alternative measures that possibly better capture managerial incentives.²⁸ However, no significant effects are detectable.

Above results suggest, that the extent of managerial entrenchment as proxied by excess compensation is influential in explaining managerial behaviour associated with moral hazard, i.e. the measures asset turnover, discretionary expenses and acquisition activity. To test the robustness of these results, I follow Core et al. (1999, 2008) and test an alternative specification where excess compensation is based on regressions with cash compensation only (i.e. excluding any yet unrealised compensation components such as option grant values etc.). As before, for illustrative purposes a pooled regression of the first step is shown in Appendix 2 (model 2). Furthermore, above measure of excess compensation is based on a regression using the natural logarithm of total compensation as dependent variable. I alternatively use the untransformed amount of total compensation as dependent variable to calculate excess compensation. In the light of both robustness checks, the results for all three dependent variables are qualitatively unaltered, but tend to gain in statistical significance. Furthermore, when estimating excess compensation using a panel model (e.g. as shown in Appendix 2) rather than annual regressions all effects remain qualitatively unchanged. Finally, I also try to capture the extent of managerial entrenchment by board size. While the results somewhat mirror those of excess compensation, they are not as robust. Given the fact that board size is a rather rough proxy measure of managerial entrenchment, that it cannot be interpreted

²⁸ I alternatively use a dummy variable for the existence of any long-term incentives, a dummy variable for share-based incentives only, the ratio of long-term incentives and fix (rather than total) compensation and the proportion of share-based compensation (rather than all long-term incentives) to total compensation (fix compensation), cf. Rapp et al. (2009, 2012).

Table 7 Robustness of the effects of managerial discretion on asset turnover

Variables	OLS			Two-way cluster		
	1	2	3	4	5	6
L.AssetTurnover	0.798 (17.24)***	0.793 (17.30)***	0.790 (17.21)***			
PropLTI	0.019 (0.16)	0.024 (0.20)	0.001 (0.01)	0.020 (0.11)	0.031 (0.19)	0.066 (0.40)
XSComp	-0.054 (1.81)*	-0.050 (1.69)*	-0.058 (1.96)**	-0.206 (2.37)**	-0.196 (2.39)**	-0.220 (2.63)***
Block	-0.014 (0.57)			-0.007 (0.11)		
BlockInfl		0.043 (1.75)*			0.132 (1.94)*	
BlockOther			-0.119 (3.78)***			-0.283 (3.36)***
Control variables	Included	Included	Included	Included	Included	Included
Industry effects	Included	Included	Included	Included	Included	Included
Year effects	Included	Included	Included	-	-	-
Adj. R ²	0.8096	0.8104	0.8129	0.5329	0.5409	0.5491
Groups	149	149	149	149	149	149
N	674	674	674	674	674	674

This table shows the regression estimates of OLS regressions with asset turnover as dependent variable. All explanatory variables are lagged by 1 year. See Appendix 1 for a definition of all variables. For each explanatory variable, the table displays the coefficient estimate and t-statistics in parentheses. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics of models 1–3 are based on heteroscedasticity consistent standard errors which also allow for autocorrelation of one lag (Newey–West). Models 4–6 are based on robust standard errors clustered at the firm and year level (Petersen). The results are based on the full sample of 149 companies over the years 2006–2010

* Indicates statistical significance at the 10 % level, ** at the 5 % and *** at the 1 % level

unambiguously and that it is not considered a feature of particular relevance in the German system of corporate governance, I leave the results unreported.

Above results indicate, that influential blockholders exert significant influence on asset turnover and acquisition activity; however, this does not extend to the discretionary expense ratio. While for statistical purposes I use binary indicators for the existence of influential blockholders, I repeat the analyses using the actual proportion of shares held by the biggest owner. Results are largely unaltered, but for acquisition activity as dependent variable where the effect of ownership loses statistical significance in some specifications. Furthermore, I also test the effects of individual blockholder identities by including separate indicator variables for insider/family, strategic and bank blockholders, respectively. Including individual blockholder identities in my regression specification delivers results that are comparable to those of the aggregate specifications regarding the direction of the effect, but partly lose in statistical significance. I attribute this to the fact that there are too few observations for certain categories. Overall, this is in line with the idea

Table 8 Robustness of the effects of managerial discretion on discretionary expense ratio

Variables	OLS			Two-way cluster		
	1	2	3	4	5	6
L.DiscExpenses	0.804 (19.67)***	0.808 (20.13)***	0.799 (19.68)***			
PropLTI	0.013 (0.50)	0.013 (0.51)	0.007 (0.28)	-0.025 (0.51)	-0.024 (0.49)	-0.035 (0.70)
XSComp	0.015 (2.35)**	0.014 (2.11)**	0.016 (2.35)**	0.062 (2.77)***	0.058 (2.47)**	0.062 (2.89)***
Block	0.010 (1.64)			0.031 (1.81)*		
BlockInfl		0.001 (0.19)			-0.004 (0.21)	
BlockOther			0.021 (1.93)*			0.079 (4.48)***
Control variables	Included	Included	Included	Included	Included	Included
Industry effects	Included	Included	Included	Included	Included	Included
Year effects	Included	Included	Included	-	-	-
Adj. R ²	0.8339	0.8331	0.8317	0.4326	0.4257	0.4457
Groups	149	149	149	149	149	149
N	674	674	674	674	674	674

This table shows the regression estimates of OLS regressions with discretionary expense ratio as dependent variable. All explanatory variables are lagged by 1 year. See Appendix 1 for a definition of all variables. For each explanatory variable, the table displays the coefficient estimate and t-statistics in parentheses. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics of models 1–3 are based on heteroscedasticity consistent standard errors which also allow for autocorrelation of one lag (Newey–West). Models 4–6 are based on robust standard errors clustered at the firm and year level (Petersen). The results are based on the full sample of 149 companies over the years 2006–2010

* Indicates statistical significance at the 10 % level, ** at the 5 % and *** at the 1 % level

that with regard to monitoring of management these types of blockholders may be aggregated because they follow similar long-term objectives (Hackethal et al. 2005). Moreover, I test the effect of the existence of a dual class share structure with non-voting preference shares. Here I find (unreported) that the existence of preference shares, which may give management room for self-serving behaviour, is significantly associated with lower asset turnover and higher discretionary expenses; this means that similarly to the effect of other (not typically influential) blockholders, the existence of a dual class share structure may shield management from external sources of monitoring. Again, these results are unreported.

Finally, acknowledging the conditional nature of corporate governance mechanisms (e.g. Dedman and Filatotchev 2008; Wiseman et al. 2012) and the fact that executive compensation may partly be determined by governance and ownership aspects (e.g. Rapp and Wolff 2010; Barontini and Bozzi 2011), I investigate the role blockholders may play concerning the effects of excess compensation via

Table 9 Robustness of the effects of managerial discretion on acquisition activity

Variables	Tobit			Tobit (two-way)		
	1	2	3	4	5	6
L.AcqAct	0.027 (0.69)	0.025 (0.64)	0.031 (0.79)			
PropLTI	0.006 (0.26)	0.005 (0.23)	0.006 (0.26)	-0.007 (0.41)	-0.008 (0.48)	-0.006 (0.40)
XSComp	0.016 (1.78)*	0.017 (1.84)*	0.017 (1.91)*	0.018 (2.40)**	0.018 (2.71)***	0.019 (2.68)***
Block	-0.012 (1.81)*			-0.013 (2.53)***		
BlockInfl		-0.014 (1.88)*			-0.015 (2.74)***	
BlockOther			0.000 (0.00)			-0.000 (0.04)
Control variables	Included	Included	Included	Included	Included	Included
Industry effects	Included	Included	Included	Included	Included	Included
Year effects	Included	Included	Included	-	-	-
Pseudo R ²	0.1408	0.1417	0.1334	0.1096	0.1104	0.1014
Groups	149	149	149	149	149	149
N	674	674	674	674	674	674
Uncensored	381	381	381	381	381	381

This table shows the regression estimates of Tobit regressions with acquisition activity as dependent variable. All explanatory variables are lagged by 1 year. See Appendix 1 for a definition of all variables. For each explanatory variable, the table displays the coefficient estimate and t-statistics in parentheses. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics of models 1–3 are based on robust standard errors (White). Models 4–6 are based on robust standard errors clustered at the firm and year level (Petersen). The results are based on the full sample of 149 companies over the years 2006–2010. N refers to the total number of observations

* Indicates statistical significance at the 10 % level, ** at the 5 % and *** at the 1 % level

interaction terms. However, I do not find that the presence of a blockholder alters the effect excess compensation has on my dependent variables.

4.3.3 Measurement of control variables and omitted variables

In above analyses I control for the effects of size, debt financing, growth, dividend policy and debt-maturity structure. When I use alternative proxy measures for these control variables, all results of my key explanatory variables are qualitatively unchanged and some even gain in statistical significance.²⁹ Moreover, I follow

²⁹ I use the natural logarithm of total assets and total sales, respectively, to control for size; I use the debt-equity ratio to control for the influence of debt financing, I use one period change in total assets to control for growth, I use cash dividends paid scaled by EBIT to capture the role of dividends and I use short-term debt to long-term debt to control for the debt maturity structure.

related literature and control for a number of further aspects that might constitute omitted variables and, thus, affect my results. When I include the ratio of tangible assets (property, plant and equipment) to total assets, cash and short-term investments to total assets, book-market-ratio (Caprio et al. 2011), capital expenditures to total assets (Dittmann et al. 2010) and firm age (Rashid 2013) results are qualitatively unchanged.

5 Discussion and conclusions

In this paper I examine the impact of internal and external governance in the form of executive compensation and blockholder monitoring on asset turnover, discretionary expense ratio and acquisition activity as measures of managerial behaviour associated with moral hazard. Thereby, a premise of this investigation is the hypothesis of i.a. Hackethal et al. (2005) and Sudarsanam and Broadhurst (2012) that the distribution of power in the German system of corporate governance may have changed, possibly resulting in a control vacuum rendering the problem of managerial complacency and entrenchment relatively more important.

To begin, I look at the role of executive compensation because it has strongly increased in recent years and, accordingly, received considerable attention, which suggests that it may have gained an important role in the corporate governance of German firms. Here, I find that higher managerial entrenchment in the form of excess compensation is significantly associated with lower asset turnover, higher discretionary expense ratio and higher acquisition activity, i.e. higher agency costs stemming from managerial moral hazard. Thus, this evidence contributes to the recently stated hypothesis suggesting a high level of type-I, compensation-related agency costs in German companies (Rapp and Wolff 2010). Furthermore, this result corresponds to the fact that I fail to detect any incentive alignment via long-term, share-based compensation components, i.e. a higher proportion of compensation components formally aimed at aligning the interests of management and shareholders does not measurably affect managerial behaviour. While this somewhat contrasts with results by Rapp et al. (2012), it is in line with evidence suggesting that a general issuance of stock-based incentives is not associated with firm performance (Rapp et al. 2009). More generally, the findings suggest that executive compensation in German firms corresponds with rent extraction rather than optimal contracting motives, which, in turn, seems in line with recent Continental European evidence (Melis et al. 2012).

Furthermore, as banks have largely withdrawn from the governance of German firms, blockholder ownership appears to be the remaining distinctive feature typically associated with German corporate governance (Andres 2008; Dittmann et al. 2010; Kaserer and Moldenhauer 2008; Weber 2009). Looking at their influence on managerial behaviour, I find the effects of general blockholder presence to be inconclusive. However, the existence of a blockholder belonging to the traditionally influential groups of families, strategic investors and banks, is associated with higher asset turnover and lower acquisition activity, i.e. lower agency costs. In contrast, the presence of any other blockholder is associated with

lower asset turnover and higher discretionary expenses, i.e. higher agency costs. In summary, this suggests that, firstly, the impact of blockholders on managerial behaviour seems to be conditional on their rootedness in the corporate governance system, i.e. to depend on blockholder type. Secondly, to interpret these latter results cautiously, there is no evidence that the traditionally influential groups of investors have lost their grip on German companies, nor that other types of blockholder seem promising in affecting corporate policy in a way that is in the interests of minority investors.

This paper suffers from potential limitations. Most importantly, the analyses are based upon the premise that asset turnover, discretionary expense ratio and acquisition activity constitute measures of managerial behaviour associated with type-I agency costs. While these measures are drawn from a number of previous contributions, nonetheless they entail some drawbacks, i.e. with regard to alternative interpretations. For instance, asset turnover may not correspond to the performance metrics that are of importance to shareholders (Singh and Davidson 2003); higher discretionary expenses may be due to other reasons (e.g. the cost stickiness phenomenon) rather than managerial slack (Anderson et al. 2003); acquisition activity is not per se to the detriment of (minority) shareholders. In addition, as most empirical corporate governance research this study potentially is subject to the issue of endogeneity. I adopt Granger-causality regressions that have been proposed as a conservative method to tackle this point; here, the key results are confirmed. Nonetheless, one cannot definitely rule out this issue (Dittmann et al. 2010). Finally, while compensation and blockholder presence appear to constitute key aspects of the governance of German firms, since there is no well-developed theory encompassing the complexity of corporate governance nor a conceptual basis for selecting relevant factors to consider empirically, corresponding analyses necessarily are somewhat exploratory in nature (Larcker et al. 2007).

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Appendix 1: Variable description and data sources

See Table 10.

Table 10 This table lists the variables used in this paper, their definitions and the respective data sources. All continuous variables are winsorised at the 0.01 and 0.99 level

Variable name	Definition	Source
AssetTurnover	Total sales/total assets	Compustat
DiscExpenses	(Operating expenses—cost of goods sold)/total sales	Compustat
AcqAct	Total value of acquisitions made/total assets	Compustat
PropLTI	Long-term, share-based incentives/total compensation	Annual reports
XSComp	Percentage of compensation not explained by standard economic determinants; residual from estimation outlined in Appendix 2	Own computation
Block	Binary indicator variable taking on the value of 1 if any shareholder holding more than 25 % of voting stock is present and zero otherwise	Hoppenstedt Aktienfuehrer
BlockInfl	Binary indicator variable taking on the value of 1 if a blockholder typically considered influential (family, strategic, bank) is present and zero otherwise	Hoppenstedt Aktienfuehrer
BlockOther	Binary indicator variable taking on the value of 1 if any other blockholder is present and zero otherwise	Hoppenstedt Aktienfuehrer
Size	Log(number of employees)	Compustat
Lev	Total debt/total assets	Compustat
Growth	(Total sales _t - total sales _{t-1})/total sales _{t-1}	Compustat
Payout	Cash dividends paid/income before extraordinary items	Compustat
PropSTD	Short-term debt/total debt	Compustat
Bk/Mkt	Total assets/(total liabilities + market capitalisation)	Compustat
Bsize	Log(management board size)	Hoppenstedt Aktienfuehrer
DAXDummy	Binary indicator variable taking on the value of 1 if a company is included in the DAX-Index in the respective year and zero otherwise	Deutsche Boerse
Log(sales)	Log(total sales)	Compustat
RET	Firm's 1 year share return	Compustat
ROA	Income before extraordinary items/total assets	Compustat

Appendix 2: Estimating excess compensation

See Table 11.

Table 11 This table shows the regression estimates of pooled cross-sectional OLS regressions for the logarithm of total executive compensation (total cash compensation) and standard economic determinants

Variables	Log(total comp)	Log(cash comp)
Log (sales)	0.346 (19.07)***	0.309 (16.12)***
DAXDummy	0.123 (1.88)*	0.106 (1.52)
Bk/Mkt	-0.037 (3.15)***	-0.019 (1.50)
RET	0.139 (3.41)***	0.097 (2.32)**
L.RET	0.015 (0.50)	-0.028 (0.95)
ROA	0.889 (3.78)***	0.904 (3.34)***
L.ROA	-0.153 (0.59)	-0.213 (0.79)
Bsize	0.725 (11.22)***	0.739 (10.62)***
Constant	4.672 (23.17)***	4.570 (19.80)***
Year controls	Included	Included
Industry controls	Included	Included
Adj. R ²	0.8072	0.8168
Groups	149	149
N	674	674

The sample consists of 674 observations stemming from 149 companies over the years 2006–2010. Definitions for all variables are provided in Appendix 1. (L) refers to the 1 year lagged value of the respective variable. Fixed effects for year and two digit SIC codes are included but coefficients not tabulated. T-statistics using White-type robust standard errors are reported in parentheses below coefficient estimates. N refers to the total number of observations

* Indicates statistical significance at the 10 % level; ** at the 5 % and *** at the 1 % level

References

- Aggarwal, R. K. (2008). Executive compensation and incentives. In B. E. Eckbo (Ed.), *Handbook of corporate finance. Empirical corporate finance* (Vol. 2, pp. 497–538). Amsterdam: Elsevier.
- Alchian, A. A., & Demsetz, H. (1972). Production, information costs and economic organization. *American Economic Review*, 62(5), 777–795.
- Amihud, Y., & Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers. *Bell Journal of Economics*, 12(2), 605–617.

- Anderson, M. C., Banker, R. D., & Janakiraman, S. N. (2003). Are selling, general and administrative costs “sticky”? *Journal of Accounting Research*, 41(1), 47–63.
- Anderson, R. C., & Reeb, D. M. (2003). Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301–1327.
- Andres, C. (2008). Large shareholders and firm performance—An empirical examination of founding-family ownership. *Journal of Corporate Finance*, 14(4), 431–445.
- Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *Journal of Finance*, 55(1), 81–106.
- Barclay, M. J., & Holderness, C. G. (1989). Private benefits from control of public corporations. *Journal of Financial Economics*, 25(2), 371–395.
- Barontini, R., & Bozzi, S. (2011). Board compensation and ownership structure: Empirical evidence for Italian listed companies. *Journal of Management and Governance*, 15(1), 59–89.
- Barontini, R., & Caprio, L. (2006). The effect of family control on firm value and performance: Evidence from continental Europe. *European Financial Management*, 12(5), 689–723.
- Baums, T., & Scott, K. E. (2005). Taking shareholder protection seriously? Corporate governance in the United States and Germany. *American Journal of Comparative Law*, 53(1), 31–75.
- Bebchuk, L., & Fried, J. M. (2003). Executive compensation as an agency problem. *Journal of Economic Perspectives*, 17(3), 71–92.
- Bebchuk, L., Fried, J. M., & Walker, D. I. (2002). *Managerial power and rent extraction in the design of executive compensation*. NBER Working Paper 9068.
- Berle, A. A., & Means, G. (1932). *The modern corporation and private property*. New York: Transaction Publishers.
- Bernstein, L. A., Subramanyam, K. R., & Wild, J. J. (2001). *Financial statement analysis*. Boston: McGraw Hill.
- Bertrand, M., Mehta, P., & Mullainathan, S. (2002). Ferreting out tunneling: An application to Indian business groups. *Quarterly Journal of Economics*, 117(1), 121–148.
- Black, B. S. (1992). Agents watching agents: The promise of the institutional investor voice. *UCLA Law Review*, 39(4), 811–894.
- Bruton, G. D., Keels, J. K., & Scifres, E. L. (2002). Corporate restructuring and performance: An agency perspective on the complete buyout cycle. *Journal of Business Research*, 55(9), 709–724.
- Cable, J. (1985). Capital market information and industrial performance: The role of West German banks. *Economic Journal*, 95(377), 118–132.
- Caprio, L., Croci, E., & Del Giudice, A. (2011). Ownership structure, family control and acquisition decisions. *Journal of Corporate Finance*, 17(5), 1636–1657.
- Chizema, A. (2008). Institutions and voluntary compliance: The disclosure of individual executive pay in Germany. *Corporate Governance: An International Review*, 16(4), 359–374.
- Conyon, M. J., & Schwalbach, J. (2000). Executive compensation: Evidence from the UK and Germany. *Long Range Planning*, 33(4), 504–526.
- Core, J. E., Guay, W. R., & Larcker, D. F. (2003). Executive equity compensation and incentives: A survey. *Economic Policy Review*, 9(1), 27–50.
- Core, J. E., Guay, W. R., & Larcker, D. F. (2008). The power of the pen and executive compensation. *Journal of Financial Economics*, 88(1), 1–25.
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation and firm performance. *Journal of Financial Economics*, 51(3), 371–406.
- Croci, E., Gonenc, H., & Ozkan, N. (2012). CEO compensation, family control and institutional investors in Continental Europe. *Journal of Banking & Finance*, 36(12), 3318–3335.
- Dechow, P. M., & Sloan, R. G. (1991). Executive incentives and the horizon problem—An empirical investigation. *Journal of Accounting and Economics*, 14(1), 51–89.
- Dedman, E., & Filatotchev, I. (2008). Corporate governance research: A contingency framework. *International Journal of Managerial Finance*, 4(4), 248–258.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93(6), 1155–1177.
- Dey, A. (2008). Corporate governance and agency conflicts. *Journal of Accounting Research*, 46(5), 1143–1181.
- Diamond, D. W. (1991). Debt maturity structure and liquidity risk. *Quarterly Journal of Economics*, 106(3), 709–737.
- Dittmann, I., Maug, E., & Schneider, C. (2010). Bankers on the boards of German firms: What they do, what they are worth, and why they are (still) there. *Review of Finance*, 14(1), 35–71.

- Dyck, A., & Zingales, L. (2004). Private benefits of control: An international comparison. *Journal of Finance*, 59(2), 537–600.
- Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *American Economic Review*, 74(4), 650–659.
- Edwards, J. S. S., & Nibler, M. (2000). Corporate governance in Germany: The role of banks and ownership concentration. *Economic Policy*, 15(31), 237–267.
- Ehrhardt, O., & Nowak, E. (2003a). *Private benefits of control and minority shareholder expropriation*. Humboldt University Working Paper.
- Ehrhardt, O., & Nowak, E. (2003b). Private Kontrollrenten in deutschen Familienunternehmen. *Die Betriebswirtschaft*, 63(4), 361–375.
- Ehrhardt, O., Nowak, E., & Weber, F.-M. (2006). *Running in the family—The evolution of ownership, control and performance in German family owned firms 1903–2003*. Swiss Finance Institute Research Paper Series No 06–13.
- Elston, J. A., & Goldberg, L. G. (2003). Executive compensation and agency costs in Germany. *Journal of Banking & Finance*, 27(7), 1391–1410.
- Faccio, M., & Lang, L. H. P. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics*, 65(3), 365–395.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301–325.
- Fama, E. F., & Jensen, M. C. (1985). Organizational form and investment decisions. *Journal of Financial Economics*, 14(1), 101–119.
- Flannery, M. J. (1986). Asymmetric information and risky debt maturity choice. *Journal of Finance*, 41(1), 19–37.
- Florackis, C., & Ozkan, A. (2009). The impact of managerial entrenchment on agency costs: An empirical investigation using UK panel data. *European Financial Management*, 15(3), 497–528.
- Franks, J., & Mayer, C. (2001). Ownership and control of German companies. *Review of Financial Studies*, 14(4), 943–977.
- Franzke, S., Grohs, S., & Laux, C. (2004). Initial public offerings and venture capital in Germany. In Jan P. Krahnert & Reinhard H. Schmidt (Eds.), *The German financial system* (pp. 233–260). Oxford: Oxford University Press.
- Gedajlovic, E. R., & Shapiro, D. M. (1998). Management and ownership effects: Evidence from five countries. *Strategic Management Journal*, 19(6), 533–553.
- Goergen, M., Manjon, M. C., & Renneboog, L. (2005). Corporate governance in Germany. In Enterprise Accountability, International Comparisons, Kevin Keasey, Steve Thompson, & Mike Wright (Eds.), *Corporate governance* (pp. 285–326). Chichester: Wiley.
- Goergen, M., Manjon, M. C., & Renneboog, L. (2008a). Is the German system of corporate governance converging towards the Anglo-American model? *Journal of Management and Governance*, 12(1), 37–71.
- Goergen, M., Manjon, M. C., & Renneboog, L. (2008b). Recent developments in German corporate governance. *International Review of Law and Economics*, 28(3), 175–193.
- Gorton, G., & Schmid, F. A. (2000). Universal banking and the performance of German firms. *Journal of Financial Economics*, 58(1–2), 29–80.
- Gow, I. D., Ormazabal, G., & Taylor, D. J. (2010). Correcting for cross-sectional and time-series dependence in accounting research. *Accounting Review*, 85(2), 483–512.
- Granger, C. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica*, 37(3), 424–438.
- Grossman, S. J., & Hart, O. (1980). Takeover Bids, the free-rider problem, and the theory of the corporation. *Bell Journal of Economics*, 11(1), 42–64.
- Grossman, S. J., & Hart, O. (1982). Corporate financial structure and managerial incentives. In J McCall (ed.), *The economics of information and uncertainty* (pp. 107–140), mcca82-1. NBER Books. <http://www.nber.org/chapters/c4434.pdf>.
- Hackethal, A., Schmidt, R. H., & Tyrell, M. (2003). Corporate governance in Germany: Transition to a modern capital-market-based system? *Journal of Institutional and Theoretical Economics*, 159(4), 664–674.
- Hackethal, A., Schmidt, R. H., & Tyrell, M. (2005). Banks and German corporate governance: On the way to a market-based system? *Corporate Governance: An International Review*, 13(3), 397–407.
- Hart, O. (1995). Corporate governance: Some theory and implications. *Economic Journal*, 105(430), 678–689.

- Hitz, J. M., & Werner, J. R. (2012). *Why do firms resist individualized disclosure of management remuneration?* University of Göttingen Working Paper.
- Januszewski, S. I., Köke, J., & Winter, J. K. (2002). Product market competition, corporate governance and firm performance: An empirical analysis for Germany. *Research in Economics*, 56(3), 299–332.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, 76(2), 323–329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top-management incentives. *Journal of Political Economy*, 98(2), 225–264.
- Jensen, M. C., & Murphy, K. J. (2004). *Remuneration: Where we've been, how we got to here, what are the problems, and how to fix them.* ECGI Working Paper 44/2004.
- Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, 90(2), 22–27.
- Johnson, R. A., Schnatterly, K., Johnson, S. G., & Chiu, S.-C. (2010). Institutional investors and institutional environment: A comparative analysis and review. *Journal of Management Studies*, 47(8), 1590–1613.
- Kaserer, C., & Moldenhauer, B. (2008). Insider ownership and corporate performance: Evidence from Germany. *Review of Managerial Science*, 2(1), 1–35.
- Kaserer, C., & Wagner, N. (2004). *Executive pay, free float and firm performance: Evidence from Germany.* CEFS Working Paper 6.
- Kester, W. C. (1992). Industrial groups as systems of contractual governance. *Oxford Review of Economic Policy*, 8(3), 24–44.
- Krivogorsky, V., & Burton, F. G. (2012). Dominant owners and performance of continental European firms. *Journal of International Accounting Research*, 11(1), 191–221.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1999). Corporate ownership around the world. *Journal of Finance*, 54(2), 471–517.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, 58(1–2), 3–27.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2002). Investor protection and corporate valuation. *Journal of Finance*, 57(3), 1147–1170.
- Larcker, D. F., Richardson, S. A., & Tuna, I. (2007). Corporate governance, accounting outcomes and organizational performance. *Accounting Review*, 82(4), 963–1008.
- Le, T. V., & Buck, T. (2011). State ownership and listed firm performance: A universally negative relationship? *Journal of Management and Governance*, 15(2), 227–248.
- Lehmann, E., & Weigand, J. (2000). Does the governed corporation perform better? Governance structures and corporate performance in Germany. *European Finance Review*, 4(2), 157–195.
- Lev, B., & Thiagarajan, S. R. (1993). Fundamental information analysis. *Journal of Accounting Research*, 31(2), 190–215.
- McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27(2), 595–612.
- McKnight, P. J., & Weir, C. (2009). Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *Quarterly Review of Economics and Finance*, 49(2), 139–158.
- Melis, A., Carta, S., & Gaia, S. (2012). Executive remuneration in blockholder-dominated firms. How do Italian firms use stock options? *Journal of Management and Governance*, 16(3), 511–541.
- Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20(1), 293–315.
- Morck, R., Shleifer, A., & Vishny, R. W. (1990). Do managerial objectives drive bad acquisitions? *Journal of Finance*, 45(1), 31–48.
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5(2), 147–175.
- Nenova, T. (2003). The value of corporate voting rights and control: A cross-country analysis. *Journal of Financial Economics*, 68(3), 325–351.
- Pedersen, T., & Thomsen, S. (2003). Ownership structure and value of the largest European firms: The importance of owner identity. *Journal of Management and Governance*, 7(1), 27–55.
- Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435–480.

- Rapp, M. S., Schaller, P. D., & Wolff, M. (2009). *Stock-based incentives: Design and implications for firm performance*. CEFS TUM Working Paper.
- Rapp, M. S., Schaller, P. D., & Wolff, M. (2012). Fördern aktienkursbasierte Vergütungsinstrumente langfristig orientierte Unternehmensentscheidungen? Lehren aus der Kreditkrise. *Zeitschrift für Betriebswirtschaft*, 82(10), 1057–1087.
- Rapp, M. S., & Wolff, M. (2010). Determinanten der Vorstandsvergütung: eine empirische Untersuchung der deutschen Prime-Standard-Unternehmen. *Zeitschrift für Betriebswirtschaft*, 80(10), 1078–1112.
- Rashid, A. (2013). CEO duality and agency cost: Evidence from Bangladesh. *Journal of Management and Governance*, 17(4), 989–1008.
- Riechers, O., & Spindler, G. (2004). Corporate governance: Legal aspects. In Jan P. Krahen & Reinhard H. Schmidt (Eds.), *The German financial system* (pp. 350–385). Oxford: Oxford University Press.
- Robinson, J. R., Xue, Y., & Yue, Y. (2011). Determinants of disclosure noncompliance and the effect of the SEC review: Evidence from the 2006 mandated compensation disclosure regulations. *Accounting Review*, 86(4), 1415–1444.
- Roll, R. (1986). The hubris hypothesis of corporate takeovers. *Journal of Business*, 59(2), 197–216.
- Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout policy. *Journal of Financial Research*, 5(3), 249–259.
- Sánchez-Ballesta, J. P., & García-Meca, E. (2011). Ownership structure and the cost of debt. *European Accounting Review*, 20(2), 389–416.
- Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of Political Economy*, 94(3), 461–488.
- Shleifer, A., & Vishny, R. W. (1989). Management entrenchment: The case of manager-specific investments. *Journal of Financial Economics*, 25(1), 123–139.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737–783.
- Singh, M., & Davidson, W. N. (2003). Agency costs, ownership structure and corporate governance mechanisms. *Journal of Banking & Finance*, 27(5), 793–816.
- Sudarsanam, S., & Broadhurst, T. (2012). Corporate governance convergence in Germany through shareholder activism: Impact of Deutsche Boerse bid for London Stock Exchange. *Journal of Management and Governance*, 16(2), 235–268.
- Thomsen, S., Pedersen, T., & Kvist, H. K. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance*, 12(2), 246–269.
- Tirole, J. (2006). *The theory of corporate finance*. Princeton: Princeton University Press.
- Tuschke, A., & Sanderson, W. G. (2003). Antecedents and consequences of corporate governance reform: The case of Germany. *Strategic Management Journal*, 24(7), 631–649.
- Weber, A. (2009). An empirical analysis of the 2000 corporate tax reform in Germany: Effects on ownership and control in listed companies. *International Review of Law and Economics*, 29(1), 57–66.
- Williamson, O. E. (1967). Hierarchical control and optimum firm size. *Journal of Political Economy*, 75(2), 123–138.
- Wiseman, R. M., Cuevas-Rodríguez, G., & Gomez-Mejia, L. R. (2012). Towards a social theory of agency. *Journal of Management Studies*, 49(1), 202–222.
- Yafeh, Y., & Yosha, O. (2003). Large shareholders and banks: Who monitors and how? *Economic Journal*, 113(1), 128–146.

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