

THE MORE THE MERRIER? THE RELATIONSHIP BETWEEN STRUCTURAL CONFIGURATIONS OF CORPORATE GOVERNANCE AND FIRM PERFORMANCE

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ABSTRACT

This study provides insights concerning the effects of corporate governance structures on firm performance, focusing on an initial sample of the 500 most capitalized European firms. We argue that corporate governance is a highly situational and contextual concept underlying an interdependent nature. Prior studies attempted to empirically verify the theoretical link between specific configurations of governance mechanisms and performance, yet no conclusions could be drawn with regard to the interplay of structural corporate governance arrangements. Against this background we investigate the relationships between the board and audit committee size and meetings in terms of their effect on performance, while taking account of selected firm-specific properties as moderators. Our results are based on two hierarchical regression models that distinguish between the effects on accounting-based and market-based performance. This differentiation finally allows us to derive theoretical contributions by integrating the implications of principal agency and institutional theory, specifically regarding the influence of shareholder expectations on corporate governance design and effectiveness.

KEYWORDS: Corporate governance, board of directors, audit committee, firm performance, debt intensity

INTRODUCTION

Effective corporate governance is more than ever a central question in the realm of management as it has been theoretically linked higher firm performance (Hillman & Dalziel, 2003). Despite the aforementioned connection between these two high-level concepts, corporate governance research thus far has remained rather fragmented. The pronounced level of fragmentation is likely on one hand to be due to the soft law nature of corporate governance, endowing firms with high flexibility and as to which governance approach they regard as most effective. On the other hand, the number of potential governance mechanisms is quite manifold so that scholars tended to focus on single mechanisms as part of their empirical undertakings. The black box however remains unsolved how these mechanisms interact in their entirety, although recent research has made strides to provide first insights (e.g. Misangyi & Acharya, 2014). We intend to build upon the evidence that corporate governance must be considered as a bundle of interrelated activities (Rediker & Seth, 1995; Agrawal & Knoeber, 1996; Sundaramurthy et al., 1997) and hereby concentrate on the structural mechanisms established by the firm, precisely the board of directors and the audit committee. Further we differentiate between accounting-based and market-based performance effects, allowing us not only to contribute to principal agency theory but also to institutional theory.

AGENCY AND INSTITUTIONAL THEORY PERSPECTIVES

Corporate governance has preponderantly been considered in the context of principal agency theory which states that managers in their role as agents have different agendas and risk preferences than shareholders (Ross, 1973; Jensen and Meckling, 1976; Fama, 1980; Fama & Jensen, 1983). Due to diverging interests as well as organizational contexts characterized by high degrees of complexity, the quality of the principal's information is decreased and losses of organizational welfare are consequently incurred on the shareholder side (Grossman and Hart, 1983). In the light of high information asymmetry between managers and owners, managerial behavior must be controlled in order to ensure adequate risk taking as well as proper alignment with the needs and expectations of the firm's shareholders. Inferring from these notions, strong and effective governance might carefully be attributed with higher firm performance due to better monitoring and lower agency-related costs. The prevention of managerial override and

decisions not in alignment with the owners' risk appetite should hence reduce financial losses resulting from moral hazard. The manner and concrete fashion in which such corporate governance must be established is nonetheless a question not fully answered. The ongoing subjectivity in what constitutes good corporate governance is hereby significantly caused by relatively loose regulatory fences for most industries, rendering corporate governance essentially a soft law, as well as by a very wide array of possible mechanisms. Aguilera & Jackson (2003) analyzed the concrete corporate governance choice of firms as the dynamic result of various factors, comprising the organization's management, capital structure and labor. It becomes thus clear that the interplay between different configurations of possible mechanisms need to be taken account of. While principal agency theory provides a rounded and mature theoretical framework for corporate governance, research has established the need to expand the theoretical frame beyond the control perspective toward a more holistic lens. Accordingly, in the past few years, corporate governance research has witnessed a shift from being primarily concerned with ways to overcome the agency problem to assessing the effectiveness of corporate governance by its capacity to accommodate to the expectations of stakeholders and society at large (Donaldson & Preston, 1995; Mitchell et al., 1997; Friedman & Miles, 2002; Bosse et al., 2009). The prominent extension of principal agency theory – stakeholder theory – suggests an intrinsic motivation of firms to accommodate all of their stakeholders. A related, yet an opposing view to stakeholder theory is presented by institutional theory which surmises firms adapt to stakeholder demands by making certain decisions in an attempt to secure long-term economic survival (Scott, 1987; DiMaggio & Powell, 1991; Dillard, Rigsbi & Goodman, 2004). In coherence with institutional theory, institutional pressures presented by the regulator and firms' stakeholder base have been attributed with increased board involvement in strategic decisions (Judge & Zeithaml, 1992), discrepancies between company policy and managerial decision-making in the face of information asymmetry (Crilly et al., 2012), transferring specific activities to less visible subsidiaries (Surroca et al., 2013) or increased propensity to innovate in the environmental realm (Berrone et al., 2013). Joseph et al. (2014) on the other hand attributed institutional logics with the formation CEO-only board structures. Against the background of these findings, it may be a congruous conclusion that firms react to the expectations of their respective environments

also in terms of their corporate governance structures. Meyer and Rowan (1977) suggest that complying with the expected norms may prevent firms from falling behind competitors with respect to salient properties and hence avoiding negative repercussions. The annotation of economic survival or competitive advantage seem sufficient to incentivize firms to anticipate their stakeholders' expectations, establishing a cycle of accommodation and hypothetical reward. This, nonetheless, renders firms highly reactive to institutional pressures presented and might bring upon the risk of adapting ineffective processes and mechanisms. When scholars attempted to delineate the relationship between adapting to these influences and firm-level outcomes, they predominantly used mediators but rarely firm performance as such (e.g. Tashman & Rivera, 2015).

In essence, agency theory and institutional theory hence present researchers with potentially conflicting implications regarding the effectiveness of corporate governance. While higher standards of corporate governance may be equated with better monitoring and processes according to agency theory, the market might reward the visibility and salience of such structures irrelevant of their actual (accounting-based) performance effects. Both approaches, while theoretically remaining valid and sound over the years, yielded inconclusive findings when tested empirically in many studies, although overall a systematic positive relationship between board size and firm performance could be established through a meta-analysis (Dalton et al., 1999).

CORPORATE GOVERNANCE AND BOARD RESEARCH

Boards and governance research witnessed increased focus and attention following the prominent theory-building papers by Jensen & Meckling (1976) and Fama & Jensen (1983), establishing why corporate governance and organizational control are needed to solve the agency issue. Surprisingly, only quite narrow links to actual performance have been attempted, reconciling the predominant theoretical foundations of effective governance with empirical evidence. Until recently, the focus of research lay on the effects of certain corporate governance characteristics on intermediate outcomes such as strategic decision making (Baysinger & Hoskisson, 1990; Deutsch, 2005; Deutsch et al., 2007). More conclusive works were provided by Peng (2004) as well as by Post & Byron (2015). In his study, Peng examined

Chinese companies during institutional transitions and found that outside directors on the board are positively linked with higher performance. Post & Byron (2015) reviewed the results of 140 studies, determining that the effect of board composition concerning the appointment of female directors on firm performance is contingent on the legal and sociocultural context. Nonetheless, corporate governance research in combination with performance was largely limited to the board of directors, henceforth casting only a dimmed light on its subordinate committees. Regarding the latter, various works were put forward in their own right, yet being associated with only limited strategic relevance and providing rather singular evidence on committee effectiveness (e.g. Choi et al, 2014). It is only recently that scholars studied the dynamics of corporate governance, acknowledging also in their study design the notion that corporate governance must be regarded as a "system of interdependent elements" (Rediker & Seth, 1995, p. 87). In this respect, Misangyi and Acharya (2014), who studied the interplay of internal and external corporate governance mechanisms on a more disaggregated level with regard to complementary or substitutional effects, point out the necessity to "delve more fully into board structural arrangements, i.e. combinations of the qualities (independence, ownership) of the directors or chairs comprising the various committees (...) that have been deemed critical to board functioning in recent legislation" (p. 1702). Any hypothetical link drawn to firm performance may thus depend "on the efficiency of a bundle of governance mechanisms in controlling the agency problem" (Rediker & Seth, 1995, p. 87). In fact, while the effects of ownership concentration and structure have been studied and empirically evidenced (e.g. Salancik & Pfeffer, 1980; Baysinger et al., 1991) – no such link has been established for internal structural configurations, specifically the board of directors including its subordinate committees.

Based on the previously outlined theoretical foundations and selected examples of their empirical underpinnings in boards and governance research, we hence identify two main research gaps: First, there is extant uncertainty in the extent to which more elaborate governance structures have an effect on actual firm performance. Second, there is little evidence in how far the establishment of such structures – primarily the board and its subordinate committees – is rewarded either from an agency theoretical or from an institutional point of view. It would be of high relevance in this regard to

study in more detail the different effects of structural governance configurations on accounting-based performance and on market-based performance, respectively. Given the relationship is stronger for the latter, this result might provide valuable indication that the set-up of supervisory structures tends to happen more in response to institutional pressures, rather than due to actual effectiveness in terms of monitoring the company. In order to make a valid assessment of the effectiveness of certain choices, an empirical study must thus bear the following characteristics: (i) the configuration of firms' corporate governance mechanisms as predictors and (ii) performance as the dependent (outcome) variable. By applying these elements, we hope to provide insight into whether certain structural configurations of corporate governance are actually linked to firm performance. In addition, by differentiating between accounting-based performance and market-based performance, we may carefully derive implications on whether the adaptation of certain governance structures empirically verifies the premises of agency theory or of institutional theory. In the following section, we will separate according to principal agency theory and institutional theory, deriving two sets of hypotheses (H1-H2d; H3).

HYPOTHESES

In line with the implications of principal agency theory, more governance facilitates effectiveness and efficiency of organizational oversight, so that faulty processes and decisions can be identified and replaced quickly. Due to sheer organizational size and complexity, "separation of decision and risk-bearing functions observed in large corporations is common to other organizations such as large professional partnerships, financial mutual, and nonprofits" (Fama & Jensen, 1983, p. 301). Therefore, separation of management and ownership is prevalent not only across large organizations but also across those that require advanced knowledge or that are characterized by a high degree of widespread but interwoven business activities. It is further argued that the handling of principal agency issues can be significantly eased by the "benefits of specialization of management and risk bearing". Such specialization makes particular sense in large firms where information and monitoring capacities are dispersed among several actors, implying efficiency gains. In smaller organizations, risk-sharing gains outweigh the benefits brought upon by any such specialization (Fama & Jensen, 1983, p. 307). It is important to underscore the established logic that "since specific knowledge in complex organizations is

diffused among agents, diffusion of decision management can reduce costs by delegating (...) decisions to the agents with valuable relevant knowledge" (p. 308). Following this rationale, it is common practice for the board to have subordinate committees that assist in performing specific tasks. Most notably, audit committees are established in an attempt to allow more targeted deliberation processes. Consequently, more governance structures should equal fewer agency costs and higher performance.

Hypothesis 1 (H1): Board size and audit committee size as well as the total number of board and audit committee meetings are positively related with higher accounting-based performance.

Further drawing on principal agency theory, the agency cost effects of more and more specialized corporate governance functions and bodies within the firm are likely to play out more profoundly the more complexly the firm is structured. While complexity may be approximated through several measures, such as the number of divisions or the extent of geographical expansion, these indicators are not uniformly reported in our data. Firm size may thus be considered a more generalizable proxy for complexity for the purposes of our analysis, underlying the assumption that firm size reasonably tends to correlate with the former characteristics. Likewise, firm size may go along with more hierarchical organization, therefore more likely requiring specialized corporate governance structures to monitor operative processes on each level. As a consequence, firm size may be a consistent variable to factor in when assessing the effectiveness of the corporate governance system (Dalton et al., 1999).

Hypothesis 2a (H2a): The relationships proposed in Hypothesis 1 are moderated by firm size.

In addition, a key element of principal agency theory is that the risk appetites of owners and managers must be realigned through effective mechanisms. It is subsequently relevant to not ignore the potential effects of a risk measure on the implementation of corporate governance. As the firm takes on more risk, more monitoring may ensure that an adequate risk-reward relationship is being maintained. In our study, the level of risk the firm takes on is approximated through the amount of debt in relation to its total assets.

Hypothesis 2b (H2b): The relationships proposed in Hypothesis 1 are moderated by

debt intensity for board size and audit committee size.

Not only the debt level may have an effect on the relationship between internal corporate governance structures and firm performance, effective monitoring and oversight over organizational processes is also key when the firm's operations are expanding. The board and the audit committee in theory have a critical role in ensuring that increased income potential is adequately translated into return. If agency theory holds and internal governance mechanisms reduce costs of moral hazard and contribute to increase shareholder value, an increase in sales should result in higher rates of accounting-based return. In this respect, effective and stronger oversight is likely to result in higher rates of return in the presence of high sales growth.

Hypothesis 2c (H2c): The relationships proposed in hypothesis 1 are moderated by sales growth.

While the implications of principal agency theory are quite clear and established, the theory comes short in answering the question of whether the different governance structures may serve as substitutes for one another. In this case, more functions might at one point not have any marginally positive effect on actual performance, as soon as other mechanisms are already established (Misangyi & Acharya, 2014). In order to accommodate to the requirement that corporate governance is regarded as an interdependent bundle of activities, it is important to acknowledge the presence and influence of other governance mechanisms that are not governance functions and bodies in the organization. In previous research, it was pointed out that foremost large shareholdings can play a strong role in steering and monitoring managerial decisions. Salancik and Pfeffer (1980) found that stock ownership structure mediates the relationship between executive tenure and corporate performance. In addition, Baysinger et al. (1991) found that besides board structure, ownership structure in terms of high percentages of institutional equity ownership increases corporate R&D spending. Therefore, it appears that institutional investors have solid bargaining power and are hence able to serve as a powerful governance mechanism with an effect on firm performance (Glassman & Rhoades, 1980; Hill & Snell, 1989). Thomson and Pedersen (2000) furthermore evidenced not only "a positive effect of ownership concentration on shareholder value" but also on profitability in terms of asset

returns (p. 689). They also define ownership structure in relation to the "share and identity" of owners (p. 695). In this respect, it may be argued that large shareholders have significant bargaining power and are able to influence the decision making of the board and management. In the presence of other governance mechanisms present, the board and the audit committee are likely to have less notable effects on firm performance, implying that external and internal mechanisms act as a dynamic set of activities complementing or substituting each other. Rediker and Seth (1995) find against this background that "there are strong substitution effects between monitoring by outside directors vs. monitoring by large shareholders" (p. 97). Therefore, the partial relevance of a corporate governance mechanism may become diminished if other internal or external structures, such as large shareholders monitoring the corporation, are in place.

Hypothesis 2d (H2d): The relationships proposed in hypothesis 1 are moderated by shareholder power.

While above hypotheses suggest that the effectiveness of corporate governance may be contingent on situational and/or firm-specific factors, it remains to evaluate whether any of these structural configurations might have a different effect on market-based performance. It should be noted that accounting-based performance is a highly complex outcome, consisting of multiple and highly dynamic factors, which is therefore unlikely to be very strongly influenced by structures alone. Market-based performance, however, relatively straightforwardly reflects shareholders' perception towards a corporation and specifically provides an indication about how shareholders anticipate future financial performance and economic concern of the firm. Consequently, by performing a separate analysis for market-based performance, we intend to pay tribute to two aspects in particular: (i) the *perceived* value of a company by shareholders and (ii) expected *future* performance.

The anticipation of the effects of more governance structures on market-based performance is however not unambiguous. Yermack (1996) found in a large sample of US corporations that market valuation was higher for smaller boards, inferring from higher board efficiency at smaller sizes rather than from institutional theory. Institutional theory requires the market to react to these corporate governance choices accordingly. That is because the market

is quite sensitive and might interpret information based on heuristics and biases. For instance, it might compare information with information provided by competitors or interpret new data on the grounds of an already existing and established frame of reference. Such psychological anchoring was evidenced to hold significant explanatory power for decision making (Ballinger & Rockmann, 2010). If the common standard of corporate governance in firms of a certain size is to have a certain standard of governance structures established, any deviation from this reference might be interpreted negatively. While too few internal governance resources might indicate limited resources for oversight, too many may be seen as evidence that the firm's internal processes are susceptible to error and therefore necessitate higher levels of organizational control. Likewise, if current or future profitability is likely to decrease or underperform relative to competitors, more internal governance efforts can be taken as signal to counteract these developments. By this means, we correspond to the implications drawn by Yermack (1996), building upon them with the assumption that no linear effect is underlying the relationship between corporate governance structures and market-based performance. Following institutional theory, we assume that organizations on average tend to follow the most publicly salient governance practices of their peers, thereby intending to avoid negative backlash. Since corporate governance is relatively laxly regulated with the exception of very few industries, following the example of other large firms might serve as a means to manage the uncertainty brought upon by non-existent regulations. If the rationale of institutional theory holds true, this should reflect in market-based performance.

Hypothesis 3 (H3): Board size and audit committee size are related to market-based performance in an inverted U-shaped – curvilinear – relationship.

VARIABLES AND CONTROL VARIABLES

Most variables were operationalized in a highly straightforward manner. Accounting-based performance was measured by return on assets while market-based performance was captured by the ratio of market capitalization to book value, being employed congruously to the study by Thomsen & Pedersen (2000). Board size and the size of the subordinate committees could be extracted from the Bloomberg database based on the sample firms' annual reports for the financial year 2015. With regard to the moderators, firm

size, represented by total assets, was log-transformed in order to reduce heteroscedasticity. Debt intensity was measured as the ratio between total debt and total assets and shareholder power was operationalized as the ratio of float shares over total shares outstanding.

As we focus on only a limited range of independent variables and their effect on firm performance, we carefully selected additional indicators as potential control variables for our proposed relationships. Including control variables accommodates to the complexity of firm performance as a construct and contributes to relativizing the impact of corporate governance on this concept as a whole. Further, by including variables that are significantly correlated with both the independent variable(s) and the dependent variable, we reduced the risk of omitted variable bias and hence the risk of unstable results. With firm performance as dependent variable, control variables are plenty yet it is impossible to include them all. Common approaches of previous studies were to control for firm size, debt level, R&D expenses or specific team compositions (Haleblian & Finkelstein, 1993). R&D expenses were not significantly correlated with return on assets in our sample and hence excluded as a control variable. We however further controlled for past performance and the percentage of float shares held by institutions, which correlated both with board size and with return on assets. In any model where audit committee size and/or meetings were included as explanatory variables, we additionally held the effects of board size constant. Lastly, we controlled for the age of the oldest director after testing for variables potentially related to board/audit committee effectiveness in our collinearity diagnostic. Concerning market capitalization or, controls included again firm size and growth opportunities operationalized by R&D expenditure and P/E-ratio in accordance with Yermack (1996).

SAMPLE

As the size and factual establishment of governance structures, foremost with regard to further committees of the board of directors, we chose a sample of 500 European companies listed in the Bloomberg European 500 Index. The free-float index comprises the largest European corporations based on market capitalization. By focusing on highly-capitalized firms, we increased the probability of the implications of principal agency theory to hold due to firm size and presumed operational complexity. The variables exported from Bloomberg Professional

were selected based on the annual reports concerning the fiscal year 2015. Firms in this index whose annual reports were not compiled according to IAS/IFRS as accounting standard were eliminated from the analysis, resulting in a preliminary sample of 485 firms. Missing values were accounted of by list-wise deletion, hence the final sample varied with different models.

METHOD

In order to test our hypotheses, we performed a linear regression analysis. We checked for linearity for hypotheses 1-2d by analyzing the scatterplots and for independence of the residuals by using the Durbin-Watson statistic. For hypotheses 1-2d, we selected return on assets (RoA) as the dependent variable to explain accounting-based performance. Following the rationale of our first hypothesis, we added board size and audit committee size as well as board meetings and audit committee meetings (per year, log-transformed), while continuously controlling for the previously set control variables. We computed the potential moderating variables by multiplying the independent variable with the moderating variable and adding the computed interaction term subsequently to the regression equation. In line with Kerlinger (1973) and Haleblan & Finkelstein (1993), we also log-transformed firm size in order to reduce heteroscedasticity between firm size and board size. For hypothesis 3, both performed a linear regression procedure with the squares of explanatory variables and also plotted them graphically against the ratio of market capitalization to book value, corresponding to the dependent variable used by Thomsen & Pedersen (2000). As according to institutional theory, the market might reward only the most salient structures and react less noticeably to more covert efforts, the relationships were only tested for board size and audit committee size rather than for board meetings and audit committee meetings. Significant results for structure size might however justify follow-up analyses also for annual meeting frequencies, respectively.

Table 1: Correlation Statistic

	Mean	S.D.	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Return on Asset	5,64	12,60	484	1,00	.819**	-.135**	-.08	-.06	-.114*	-.330**	-.149**	.110*	.132**	0,00	-.139*	0,06	0,05	.932**	.873**	.220**	-.06	0,01
2 Market Capitalization to Book Value	5,50	30,02	484	.819**	1,00	-.007	-.01	-.04	-.02	-.182**	-.02	0,06	0,07	0,00	-.002	-.01	0,04	.818**	.808**	0,08	0,01	-.02
3 Board Size (Log)	1,03	0,14	451	-.135**	1,00	-.108*	-.108*	-.108*	-.108*	.442**	.299**	.424**	0,00	-.009	-.276**	-.295**	.395**	.113*	0,02	-.151**	-.179**	-.05
4 Board Meetings (Log)	0,93	0,16	422	-.008	-.001	1,00	-.108*	-.108*	-.108*	.442**	.236**	.148**	0,01	-.153**	0,08	-.133*	-.08	-.150**	-.08	-.097*	0,01	0,08
5 Audit Committee Size (Log)	0,60	0,12	428	-.006	-.004	.442**	1,00	-.108*	-.108*	.442**	.236**	.148**	0,01	-.153**	0,10	.122*	0,05	-.152**	-.06	-.07	-.120*	-.05
6 Audit Committee Meetings (Log)	0,73	0,17	400	-.114*	-.002	.299**	.413**	0,03	1,00	.383**	0,09	-.06	-.213**	-.06	0,08	0,04	-.04	-.104*	-.157**	-.135**	0,06	0,00
7 Total Assets (Log)	4,25	0,78	485	-.330**	-.182**	.424**	.236**	.173**	.383**	1,00	0,05	-.04	-.357**	0,03	0,08	0,00	-.06	-.347**	-.359**	-.125**	-.09	0,01
8 Total Debt to Assets (Log)	24,77	15,64	485	-.149**	-.002	0,00	.148**	-.02	0,00	.009	0,05	1,00	0,03	-.007	0,00	-.02	0,05	0,01	-.127**	-.155**	0,02	-.09
9 Float Shares / Shares Out	0,75	0,23	484	.110*	0,06	-.09	0,01	0,04	-.06	-.04	0,03	1,00	.275**	.365**	-.010	0,04	-.153**	.108*	0,07	-.01	0,01	0,08
10 Pct. Float Shares held by Institutions	63,82	31,45	484	.132**	0,07	-.276**	-.153**	-.09	-.213**	-.357**	-.07	.275**	1,00	.103*	-.011	0,03	-.111*	.165**	.184**	-.04	0,08	-.05
11 Percentage of Independent Directors	63,71	19,20	396	0,00	0,00	-.295**	0,08	0,10	-.06	0,03	0,00	.365**	.103*	1,00	-.009	0,09	-.195**	0,01	0,00	-.09	0,08	0,00
12 Age of Oldest Director	69,93	5,26	291	-.139*	-.002	.395**	-.133*	.122*	0,08	0,08	-.02	-.10	-.11	-.009	1,00	.375**	.145**	-.164**	-.184**	0,02	0,11	-.07
13 Chairman Age	63,40	7,18	445	0,06	-.001	.113*	-.08	0,05	0,04	0,00	-.05	0,04	0,03	0,09	.375**	1,00	.187**	0,00	0,00	0,06	0,05	-.06
14 Chairman Tenure	6,11	5,01	446	0,05	0,04	0,02	-.150**	-.152**	-.04	-.06	0,01	-.153**	-.111*	-.195**	.145**	1,00	.187**	0,04	0,05	0,03	0,03	-.06
15 3 Yr. Average RoA	5,82	11,65	481	.932**	.818**	-.151**	-.08	-.06	-.104*	-.347**	-.127**	.108*	.165**	0,01	-.164**	0,00	0,04	1,00	.963**	0,02	-.04	0,02
16 5 Yr. Average RoA	5,66	9,92	465	.873**	.808**	-.179**	-.097*	-.07	-.157**	-.359**	-.155**	.07	.184**	0,00	-.184**	0,00	0,05	.963**	1,00	-.01	-.04	-.03
17 Sales Growth	9,24	60,01	484	.220**	0,08	-.05	0,01	-.120*	-.135**	-.125**	0,02	-.01	-.04	-.009	0,02	0,06	0,03	0,02	-.01	1,00	0,01	0,06
18 PE Ratio	31,88	70,44	432	-.006	0,01	0,05	0,08	-.05	0,06	-.09	0,00	-.01	0,08	-.08	0,11	0,05	0,03	-.04	-.04	0,01	1,00	0,04
19 R&D Expenditure / Net Sales	0,28	6,01	373	0,01	-.002	-.02	0,06	-.149**	0,00	0,01	-.09	0,08	-.05	0,00	-.07	-.06	-.06	0,02	-.03	0,06	0,04	1,00

** Correlation is significant at the 0.01 level (2-tailed).

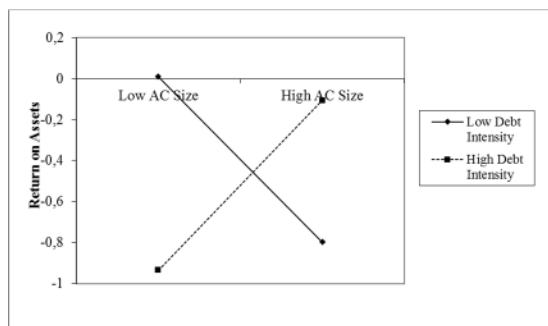
* Correlation is significant at the 0.05 level (2-tailed).

RESULTS

The correlation diagnostics are presented in table 1 while an overview of the regression models is provided in table 2.

Regarding hypothesis 1 (H1), neither the size of the board of directors nor the size of its subordinate committees was significantly related with return on assets. The same finding could be determined for the level of board and audit committee meetings per year. Nonetheless, since agency theory plays out particularly in highly complex and large-scale corporate environments, hypothesis 2a (H2a) set out to approximate firm size for complexity and tested for an interaction effect that would lead to enhanced accounting-based performance. As table 2 shows, no such interaction effect concerning firm size could be confirmed. Since shareholder structure has been found to have significant association with firm performance (Rediker & Seth, 1995), shareholder power operationalized as the ratio of float shares over total shares outstanding was added to the regression as an interaction with each of the explanatory variables. In our analysis, we can confirm not only a significant direct effect of debt intensity on return on assets, but also a moderating effect regarding the interactions with audit committee size. To That implies, that when debt pressure is high, larger audit committees contribute higher returns. When the ratio of debt to total assets is relatively low however, smaller audit committees were found to be correlated to higher accounting-based performance. This result can be interpreted to be in line with principal agency theory, and reinforcing the relevance of audit committees when the firm bears more risk through debt.

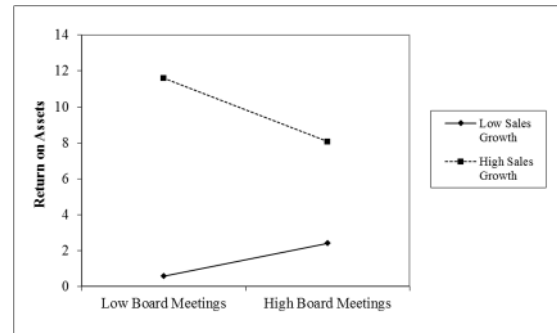
Figure 1: Debt Intensity Moderation



Results for hypothesis 2c (H2c) yielded astonishing results as well, however weakening the validity of principal agency theory. Precisely, sales growth was found to moderate the relationship between board meetings and return on assets negatively. More board meetings

reduced the translation of sales into return on assets. If sales growth was low on the other hand, more board meetings tended to have a positive effect on accounting-based performance, although the slope of the interaction is not as steep as in the case of high sales growth.

Figure 2: Sales Growth Moderation



Concerning hypothesis 2c (H2c), shareholder power, at least when operationalized by the ratio of float shares over shares outstanding, substantiated no evidence to moderate the relationship between structural configurations of corporate governance and firm performance.

Performing the regression procedure with the market capitalization-to-book value-ratio as dependent variable for hypothesis 3 (H3), we could confirm that larger boards and committees are not significantly linearly related to the market performance. Plotting the relationships for each governance structure through curve estimation revealed that both a quadratic and a linear relationship were not adequately suited to predict the relationship. Based on these results we can carefully state that the market as a representation of shareholders does not profoundly reward salient governance structures. Similar results were found by Bushee et al. (2013). Although shareholders are not the only interest group that may exert pressures on the organization with regard to their corporate governance design, our results suggest limited applicability of institutional theory in our data.

Table 2: Regression Results

	Return on Assets (ROA)																
<i>Controls</i>																	
Total Assets (Log)	.021	.012	---	---	.015	.021	.021	.026	.021	.019	---	---	.014	.001	.019	.006	.008
Total Debt to Total Assets	-.017	.012	-.020	-.014	---	-.024	.026	-.022	-.014	-.020	.035	---	---	---	-.023	-.019	-.020
Pct. Float Shares (Inst.)	.017	.006	.020	.017	.019	.015	.018	.018	.018	.000	.012	.001	.012	.002	.002	.014	.002
Age of Oldest Director	.004	-.046	.007	.017	.007	.001	.014	.011	.010	.003	-.040	-.040	-.040	-.045	-.038	-.042	.002
3 Yr. Average Return on Assets	.891***	.877***	.891***	.894***	.889***	.886***	.887***	.885***	.892***	.890***	.878***	.889***	.878***	.887***	.887***	.874***	.877***
Sales Growth	.051 ⁺	.056*	.051 ⁺	.051 ⁺	.051 ⁺	.046	.054*	.054 ⁺	---	---	.052*	.053 ⁺	.052*	.053 ⁺	.055*	.054 ⁺	---
Board Size	---	-.028	---	-.020	---	-.017	---	-.027	---	-.021	-.016	-.012	-.016	-.012	-.021	-.015	-.019
<i>Main effects</i>																	
Board Size	-.021	---	.071	---	-.050	---	.081	---	---	---	---	---	---	---	---	---	---
Audit Committee Size	-.001	---	---	-.127	---	-.097*	---	-.027	.005	---	---	---	---	---	---	---	---
Board Meetings	---	-.041	---	---	---	---	---	---	---	---	---	-.108	---	---	.062	---	-.338
Audit Committee Meetings	---	.004	---	---	---	---	---	---	---	---	.013	---	---	.013	---	-.042	---
<i>Moderated effects</i>																	
Board Size (Log) x Total Assets (Log)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
AC Size (Log) x Total Assets (Log)	---	---	---	.190	---	---	---	---	---	---	---	---	---	---	---	---	---
Board Size (Log) x Debt Intensity	---	---	---	---	.180	---	---	---	---	---	---	---	---	---	---	---	---
AC Size (Log) x Debt Intensity	---	---	---	---	---	.328*	---	---	---	---	---	---	---	---	---	---	---
Board Size (Log) x Owner Concentration	---	---	---	---	---	---	.081	---	---	---	---	---	---	---	---	---	---
AC Size (Log) x Owner Concentration	---	---	---	---	---	---	---	-.104	---	---	---	---	---	---	---	---	---
Board Size (Log) x Sales Growth	---	---	---	---	---	---	---	---	.341	---	---	---	---	---	---	---	---
AC Size (Log) x Sales Growth	---	---	---	---	---	---	---	---	---	.005	---	---	---	---	---	---	---
Board Meetings (Log) x Total Assets (Log)	---	---	---	---	---	---	---	---	---	---	.100	---	---	---	---	---	---
AC Meetings (Log) x Total Assets (Log)	---	---	---	---	---	---	---	---	---	---	---	-.060	---	---	---	---	---
Board Meetings (Log) x Debt Intensity	---	---	---	---	---	---	---	---	---	---	---	---	-.075	---	---	---	---
AC Meetings (Log) x Debt Intensity	---	---	---	---	---	---	---	---	---	---	---	---	---	.013	---	---	---
Board Meetings (Log) x Owner	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.062	---	---
AC Meetings (Log) x Owner	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.049	---
Board Meetings (Log) x Sales Growth	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-.338 [†]
AC Meetings (Log) x Sales Growth	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Adj. R ²	.820	.828	.820	.820	.820	.823	.822	.821	.821	.820	.845	.823	.845	.823	.846	.823	.84
N	277	257	290	277	290	277	290	277	290	277	272	258	272	258	272	258	27

Standardized regression coefficients

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

By adding a polynomial trend line (2nd degree order) to the simple plot between board size and audit committee size and market-based performance, the graphical representation provides first cues that a polynomial (non-linear, non-quadratic) logic might describe the relationship between aforementioned variables most adequately. Figures 3 and 4, albeit merely in a rule-of-thumb-manner, confirm the conclusions drawn by Yermack (1996), stating that smaller boards tend to have higher market capitalization. Furthermore, a slight upward trend for very large structures is present both for board size and for audit committee size.

Figure 3: Board Size - Market Cap Plot

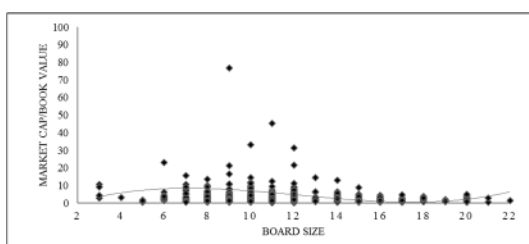
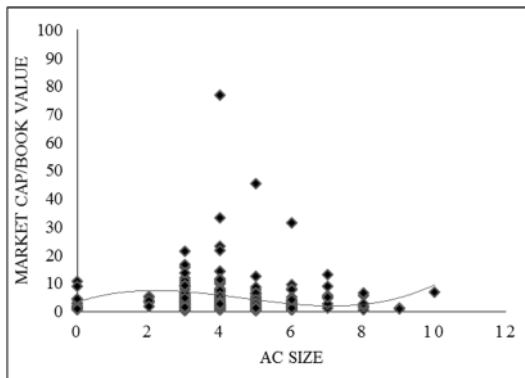


Figure 4: AC Size - Market Cap Plot



DISCUSSION

Our results uncovered quite a few relevant implications both for theory and for practice. It became evident that the board and the audit committee alone did not have any significant relationship with performance. This result mirrors the inconclusive findings by previous studies and is reflected in our analysis by changing effects (positive to negative, and vice versa) on firm performance. Overall, it can hence be concluded that the isolated effects of boards and audit committees on firm performance explain only a very limited fraction of the variance. While the academic discussion revolving around board of director independence

is quite salient, no significant relationship neither with the dependent variable directly nor via an interaction effect could be confirmed, leading to the exclusion of the variable from our main analysis. This rational happens to coincide with the argumentation by Joseph et al. (2014), stating that director independence may be perceived as a “taken for granted feature” (p. 1854) and may not lead to increased shareholder value. In this regard, the most intuitive premises of principal agency theory were not confirmed in our analysis. Nonetheless, we could strongly confirm that corporate governance is a highly situational and contextual concept, finding evidence that the importance of the board and the audit committee changes significantly in the light of certain conditions, such as debt intensity or sales growth. Likewise, we could confirm at least in part the findings by Yermack (1996) that smaller boards tend to have a higher market value. We could extend these implications to the audit committee and show a slight upward slope for very large boards and audit committees. If we had eliminated these very large board and audit committee sizes as outliers in our analysis, a curvilinear relationship as anticipated by us could likely have been confirmed. To conclude, our results provide partial confirmation for both principal agency and institutional theory and we hope to raise awareness of the conditions under which such structures may actually provide real value to the organization. We therefore strongly confirm the interdependent nature of corporate governance and refute the “one-model-fits-all”-approach especially in terms of the desire to achieve higher firm performance.

LIMITATIONS AND FUTURE RESEARCH

Our study investigates the performance-implications of the structural configurations of corporate governance functions and bodies. The main limitation of our approach lies in the fact that performance is a multi-faceted and dynamic construct which cannot be explained by a single factor, such as internal governance configurations. This intuitive notion is reflected in the limited additional variance explained by corporate governance mechanisms. Further, the scope of our analysis is limited to very specific internal governance structures comprising the board and the audit committee as these were likely to be related most profoundly with accounting-based performance in theory. For this reason, the analysis was conducted on a rather aggregate level and did not consider in depth further committees or more detailed characteristics, such as the educational background of the board or committee members

as an indication of their capacity to monitor the organization. Future research might build upon our study by analyzing more potential moderating variables which leverage the relationship between structural configurations and firm performance. Although not reported, we found first evidence for a moderating effect of the percentage of float shares held by institutions on the relationship between board meetings and return on assets (significant below the 0.05 and close to the 0.01-level). Since we theoretically considered our eventually selected variable a better operationalization for shareholder power, we dismissed the percentage of float shares held by institutions as a moderator from our analysis. Future researchers might however take this first indication up and analyze more in depth whether and how this interaction could be verified across different samples. It would furthermore be interesting to elaborate whether the number of foreign subsidiaries or the number of divisions influence the effectiveness of larger governance functions. In addition, future research might take a more industry-oriented, sub-sample approach and investigate to what extent uncertainty is being managed through more visible governance structures. By focusing on the relationship between external uncertainty and corporate governance structures, scholars might provide valuable theoretical contributions in the realm of resource dependence theory. If they can find such confirmation, this would strengthen and underpin our results in so far that corporate governance structures might not always have a significant effect on the high-level construct of firm performance per se, but can serve the firm in other regards. Notably the management of uncertainty and the provision of resources for economic survival might be subordinate to firm performance but present a sine qua non precondition for it.

CONCLUSION

Our study suggests that the implications of principal agency do not hold in general. The final sample of 485 multinational firms listed on the Bloomberg European 500 Index revealed that the establishment of more governance structures in the firm do not always serve the organization as intended. This finding henceforth tends to at least partially support the view that too much governance may lead to managerial entrenchment and suffocation, particularly in case of a large board of directors. The question in turn arises under which conditions internal corporate governance structures can represent an effective choice for firms. This fundamental question is further fueled as the market did not

“reward” larger boards and committees either. Therefore, we argue that the establishment of sophisticated structures involving ever-increasing monitoring bodies and more meetings per year may be linked to reasons other than performance. It remains now at the discretion of future research to uncover the rationale behind this. A first presumption would go in the direction of institutional theory, implying that firms expect backlash from shareholders and other associated parties if these structures are not in place. While such backlash only partially be confirmed in our sample, it might very well be that the firm otherwise becomes less attractive to employees, suppliers and customers if it downsizes its internal governance.

On a final note, can we overall confirm the implicit “the more the merrier”-assumption underlying principal agency and institutional theories? Clearly – no. However, we conclude that it is noteworthy that our findings are coherent with the recently developing understanding that effective governance reaches far beyond the financial perspective (i.e. the long-presumed agency conflict between owners and managers) – and hence must be treated as the complex process that it is (Tihanyi et al., 2008). A paradigm shift more towards unexplored realms such as “organizational architecture, coordination, and collaboration” as well as to “(external) social processes and policies” (p. 3) will consequently become inevitable in order to accommodate adequately to these new insights. While such emerging views correspond to the concept of the organization as a system and give new rise to systems theory, they provide future researchers with valuable first pieces of information to grasp the essence of what makes organizations truly performant.

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