Presence of Blockholders on the Board: Evidence from Germany

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Declaration

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To my parents and siblings,
who inspired me to begin this journey,
to my loving wife,
for her unconditional support to end it.

In memory of my aunt ...

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Contents

List of Acronyms

Adj	Adjusted
AG	Stock Corporation
AO	Fiscal code
AktG	Stock Corporation Act
Bafin	Federal Financial Supervisory Authority
BHR	Buy and hold return
BHAR	Buy and hold abnormal return
Board	Supervisory board / Board of directors
DCGK	German Corporate Governance Code
EU	European Union
Etc	Et cetera
CAR	Cumulative average abnormal return
DEF	Definitive Proxy Statement
FE	Fixed effects
Inst	Institutional
IPO	Initial public offering
LPM	Linear probability model
LSDV	Least squares dummy variable
NACE	Statistical classification of economic activities in the European community
SE	Societas Europaea
SEC	Securities Exchange Commission
Strat	Strategic
US	United Kingdom

US	United States
WpHG	Securities Trading Act
Yr	Year

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Abstract

The presence of blockholder-directors on the board can improve firm value. Nevertheless, a blockholder's decision to take a board seat can entail high indirect costs as it may convey a negative signal to outside investors, leading to a liquidity shock. Collectively, only a few blockholders tend to seek board representation. The adverse market reaction does not necessarily indicate rent extraction on the part of the blockholder. However, it reveals private information about agency problems preventing the company from operating at its full potential. Since the blockholder cannot simply exit once she holds formal board positions, she becomes an active monitor to resolve the issue. Empirical evidence suggests that legacy shareholders drive the negative relationship, while the results for activist blockholders are consistent with US shareholder activism, thereby inducing a positive signal.

Keywords: blockholder-directors, board and committee composition, exit, investor horizon, monitoring, shareholder value

JEL classification: G30, G32, G34, G39

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1 Introduction

1.1 Motivation and contribution

'*Blockholders are ubiquitous*' (Edmans and Holderness, 2017, p. 542) and critical to governing a firm (Cronqvist and Fahlenbrach, 2008; J Hadlock and Schwartz-Ziv, 2019). Due to the separation of ownership and control, managers ultimately retain control rights, typically creating information asymmetries at the detriment of shareholders (Jensen and Meckling, 1976). This argument follows the rationale that in the absence of oversight, managers could engage in value-destroying activities (e.g., investments distortions) in pursuit of self-serving goals (Core et al., 1999; Jensen, 1986). Consistently, theory advocates that increasing block ownership motivates blockholders to become active monitors and intervene in the management process (Jensen and Meckling, 1976; Shleifer and Vishny, 1986).[1] Therefore blockholders may be incentivized to seek representation on the board *(i)* to get access to insider information (Marquardt, 2020) and *(ii)* have the power to exercise control (Agrawal and Nasser, 2019), which are crucial elements of a blockholder's influence (Edmans and Holderness, 2017). As Donaldson et al. (2020, p. 2) put it, '*[t]he board of directors is the highest decision-making authority in a corporation. But sometimes boards struggle to make decisions.*' In recognition of boards being not necessarily a panacea for achieving good corporate governance (Adams et al., 2010), some situations may require (legacy) blockholders to become active monitors to engage in board seat formation. Still, the literature on blockholder board representation has been largely silent despite ample anecdotal evidence.

By intuition, blockholders are expected to have strong incentives to seek board representation as it grants them an exclusive forum to monitor management (Agrawal and Nasser, 2019). However, related work indicates the contrary. Cronqvist and Fahlenbrach (2008, p. 3971) find that about 10.9% of blockholders dispatch a representative to the board, thereby inferring sig-

[1] As a *rule of thumb*, anecdotal evidence states that shareholders in Germany are generally entitled to a board seat if they own about 10% of the firm's outstanding shares. *Source: Handelsblatt (2020) - Cerberus-Attacke auf die Commerzbank – richtige Analyse, falscher Ton, accessed 31.10.2021*.

nificant influence on corporate policy and performance. Agrawal and Nasser (2019, p. 46) report that 15.50% of S&P 1500 firm-years have independent blockholder-directors between 1998 and 2006 and show that the presence of blockholders on the board is linked to lower excess CEO compensation. Similarly, Marquardt and Sanchez (2021, p. 3) present evidence inferring that about 20% of S&P 1500 firms from 2005 to 2015 are associated with an outside blockholder-director, resulting in lower credit spreads. Overall, the empirical results state that blockholders on the board facilitate good corporate governance; nonetheless, blockholders rarely seem to have a seat on the board. This finding raises unresolved questions: Why do so few blockholders seek board representation? What role do blockholder-directors play in board monitoring? How do blockholder-directors influence corporate policy and performance? In general, little is known about the 'decision-making process' to obtain board seats and the mechanism as to how blockholders exert control over the board (Edmans and Holderness, 2017). The underlying thesis attempts to resolve these questions based on the following rationale:

'A (legacy) blockholder acquires private information that a company may not be operating at its full potential due to unobserved agency problems. The blockholder could capitalize on this by selling her block ownership (Edmans and Manso, 2011). However, if this happens, the agency problem is not resolved, leaving the company with untapped potential. The alternative would prompt the blockholder to engage in board seat formation to increase firm value. The announcement to take a board seat should thus be a positive signal, considering the blockholder's involvement in the management process. Contrary to the common belief, under certain circumstances the signaling effect of board representation can be equally be also negative, as it may reveal private information. The announcement could lead to a negative stock market reaction, causing the blockholder to incur a liquidity shock (Maug, 1998), thereby limiting her ability to 'cut and run' (Coffee, 1991). To emphasize, the negative market reaction does not necessarily reflect rent extraction (Edmans et al., 2017). Instead, outside investors might reevaluate expectations about the firm's prospects and conclude that some of the investment distortions are presumably irreversible or very costly to fix (Shleifer and Vishny, 1989). The blockholder ends up in a lock-in situation that prompts her to become an active monitor on the board to resolve the issue. Even without any such liquidity constraints the blockholder should be incentivized to exert effort. According to intuition, the blockholder takes on additional board responsibilities (i.e., serve as chairman) and participate in board committees to increase board monitoring (Klein, 1998). Arguably, a blockholder would improve firm value to all shareholders, the more so in the presence of agency problems. In closing, significant indirect costs may, however, discourage blockholders from taking a seat on the board, even if board representation can be valuable to the company.'

Using hand-collected German data allows addressing concerns about drawing inferences on endogenous board representation (Hermalin and Weisbach, 2003). First, German law requires the two governing bodies of the firm to be legally separated. Against this background, corporate management is typically not involved in the election process of the supervisory board. By comparison, in the US, shareholders are more likely to acquire board seats if they are strategically aligned with the CEO (Gordon and Pound, 1993).[2] Second, in Germany, the announcement of *(i)* establishing a block position and *(ii)* the intention to seek board representation do not necessarily coincide.[3] Third, new directors in Germany are usually announced around the shareholder's meeting, so several confounding events could interfere with these announcements. The thesis takes advantage of the German jurisdiction as some directors are appointed by a court ruling (Section 104 AtkG). Co-determination rules require firms to maintain a specified number of board members depending on firm size. If the supervisory board no longer has a quorum, the court appoints a representative at the request of the management. Since the announcement is at the discretion of the acting judge, the announcement by the court becomes possibly quasi-random, which would mitigate concerns about confounding events.

To this end, literature on blockholder governance examines the channels of blockholder intervention, such as informed voting, activist campaigns, or behind-the-scenes engagement (Admati and Pfleiderer, 2009; Brav et al., 2008; Edmans et al., 2019; Maug, 1998; Maug and Rydqvist, 2009; McCahery et al., 2016). Yet, none of these papers is concerned with blockholder intervention through board representation. Blockholders on the board may come along with favorable implications for reducing agency problems and facilitating monitoring (Agrawal and Nasser, 2019; Marquardt, 2020). In contrast, blockholder-directors may exacerbate conflicts of interest and create a deadlock (Donaldson et al., 2020; Schwartz-Ziv and Volkova, 2020) hampering board monitoring. As is evident from the brief discussion, understanding the role of blockholder-directors on the board is critical to understanding the mechanisms through which blockholders can intervene in the management process and influence corporate policy. While blockholders on the board '*may in secret be asleep at the switch*' (Holderness, 2009, p. 1397), the underlying proposition is that blockholder representation facilitates board monitoring; otherwise, it is unclear why blockholders would want to take costly board seats (Edmans and Holderness, 2017).

[2] US CEOs have considerable discretion in the election of directors. Masulis and Zhang (2019) find that executive and affiliate directors are poor monitors as their relationship with the CEO becomes close.

[3] Any blockholder in the US holding more than 5% of the firm's outstanding shares is obliged to provide a 13D filing stating the investment's purpose and the degree of intervention being sought. In a similar vein, blockholders are more likely to obtain board seats through private negotiations (Gow et al., 2014) and proxy contests (Brav et al., 2021), specifically if their threats are more credible (Bebchuk et al., 2020). OECD (2012, p. 95) also criticizes director elections in the US to 'resemble a shareholder ratification process [rather] than a real contest for the board seats.'

The empirical framework tests eight hypotheses to elaborate on the outlined rationale. Evidence implies that only 21% (and 14% without insiders) blockholder-firm-years of German firms between 2004 and 2018 are associated with board seats. As blockholders take board seats, substantial indirect costs commit them to become active monitors requiring them to exert effort:

Table 1: Summary of key findings (*Source: Own illustration*)

Hypothesis	Key finding
H1:	*Blockholders are incentivized to seek representation on the board as block ownership increases. With that being said, a 10% change in ownership increases the likelihood of attaining board seats by 29.56%. In addition, blockholders are 1.5% more likely to seek board representation if the firm's adjusted stock market performance decreases by 1%.*
H2:	*Evidence suggests a significantly negative CAR of 1.04% (65 mil. Eur) around the announcement of blockholders joining the board. In addition, firms exhibit a BHAR of -4.8% in the year blockholders take a board seat. While legacy blockholders mainly drive the result, activist blockholders are associated with a BHAR of 18.9%.*
H3:	*Blockholders trading on long-term information and low liquidity needs tend to take board seats. Consequently, insider and other strategic investors are 16.3%, 7.0% more likely, and institutional investors are 14.2% less likely to join the board. Further, legacy blockholders on the board decrease the probability of others taking board seats by 19.9%.*
H4:	*A board seat commits blockholders to take a long-term position as the probability to exit in the next (three) year(s) by 9.3% (10.2%) decreases. However, blockholders seem to condition their exit on the stock's market performance as they are 4.5% more likely to exit in the next year if the firm's adjusted stock market performance increases by 1%.*
H5:	*There is evidence that blockholder-directors are significantly more likely to be the chairman of the board of about 5.6% or members of important board committees. They are 11.4%, 13.2%, 16.7%, and 23.2% more likely to sit on the nomination, personnel, presiding, or strategy committee. The audit committee is statistically insignificant.*
H6:	*Directors are 12.2%, 23.9%, and 24.4% more likely to be blockholder-directors when they are bankers, politicians, or former executives of the firm. Thus, blockholders seem to prefer director attributes associated with superior financial and negotiation skills required for board monitoring and board communication with other stakeholders.*
H7:	*Board and committee meetings significantly increase with the presence of blockholder-directors by 4.9% and 7.4% in the year of joining the board. Similarly, meetings of the audit, presiding, and personnel committee increase by 5.8%, 18.4%, and 9.4%, respectively, although the latter is statistically insignificant.*
H8:	*The presence of blockholder-directors leads to an improvement of firm value by 0.535 units, for a 1% increase in the value of cash (proxied by the cash-to-Q-sensitivity). Hence, board representation is valuable in the presence of agency issues. Additionally, blockholder board representation is positively linked to long-term investors.*

A growing body of research investigates the mechanisms of monitoring (Donaldson et al., 2020; Malenko, 2014; Palladino, 2019). As empirical evidence attributes blockholder-directors with superior financial and negotiation skills, it appears an interesting avenue for future research to study their influence on board communication and monitoring. The thesis also questions the definition of blockholder-directors as non-independent directors, while empirical evidence does not indicate that blockholder-directors engage in rent extraction or shirking.

1.2 Framework and research outline

The remainder of the thesis is organized as follows. Section 2 introduces the theoretical framework and discusses the prevailing theories to situate the underlying topic into the relevant strand of theory. Since using German data, Section 3 discusses the taxonomy of the German corporate governance regime and summarizes the three central governance bodies within a listed firm.

Section 4 reviews the established shareholder classifications in blockholder research and applies a classification scheme that reflects German ownership, respectively. The section summarizes the general attributes of different blockholder types to facilitate an understanding of investor identity. Section 5 conducts a comprehensive literature review on blockholder research in general and board representation specifically. The section concludes with eight specific hypotheses regarding the outlined proposition and shall be tested as part of the empirical framework.

Section 6 presents the empirical setting. Subsequently, the data collection process is discussed in light of the different data sources on the firm, blockholder, and director levels. The thesis discusses the definition of blockholder-directors to ensure a consistent identification approach, and the section further elaborates on the control variables subject to the various test specifications. The baseline regression model is briefly discussed, including the merits of panel data analysis. Section 7 presents a battery of supplementary descriptive statistics to review the presence of blockholder-directors from different perspectives and provide first answers.

Following, Section 8 documents the main regression results on blockholder board representation. The empirical framework includes different test specifications on firm-, blockholder-, and director-firm-year levels to address endogeneity concerns (Agrawal and Nasser, 2019). The test specifications include fixed-effects regressions using LSDV and logistic models, propensity score matching, and an event study. The thesis tests whether the empirical results provide sufficient evidence to support the hypotheses. Section 9 complements the empirical analysis by conducting a robustness check to ensure that the results are consistent across different governance systems. For that matter, the empirical framework is applied to an alternative setting that includes campaigns by US activists specifically targeting board representation.

Finally, Section 10 reviews the critical findings on blockholder board representation in regards to the outlined proposition and discusses potential implications for future research.

2 Theoretical framework

The section introduces the theoretical framework and discusses the general concepts of corporate governance. Thereby, the competing definitions of corporate governance are revisited and discussed against the backdrop of the German corporate governance system. Further, the relevant theories of New Institutional Economics and stewardship theory are reviewed to help situate the research question of blockholder board representation into the relevant strand of theory.

2.1 Defining corporate governance

According to Jensen and Meckling (1976)'s, the firm represents a nexus of contractual relationships in which conflicting interests between shareholders and managers are balanced. Ever since Jensen and Meckling (1976)'s paradigm facilitates a rich discussion in the corporate governance debate on what constitutes good practices whether corporate governance matters. One strand of literature examines the mechanisms of shareholder intervention (Brav et al., 2008; McCahery et al., 2016), which has become an emerging field in contemporary literature. As outlined previously, the thesis intends to provide novel insights into the 'decision-making process' of taking board seats. For purposes of comprehension, it is important to define corporate governance first since there is no universally accepted standard for defining corporate governance applicable to a wide range of institutional settings (Brickley and Zimmerman, 2010). To narrow down the options, the most prevailing definitions are summarized in Table 2:

Panel A highlights the definitions from the shareholder's perspective, in which shareholder supremacy represent the primary objective (Shleifer and Vishny, 1997, p. 737). The main conflict of interest arises between the shareholders and the firm's management (Becht et al., 2003). While Shleifer and Vishny (1997) and Denis (2001) adopt a monetary stance, Becht et al. (2003) centers on the existence of conflicting interests among shareholders and corporate managers and views governance through shareholder intervention. Although, all definitions agree on the notion

of control. The ultimate goal of corporate governance is to minimize opportunistic behavior on the part of self-serving managers to protect shareholders' interests (Denis, 2001, p. 192). In contrast, the set of definitions in Panel B assumes stakeholders to be as equally important as shareholders. Thus, it is about internalizing the welfare of investing and non-investing stakeholders (Goergen, 2018, p. 28). As non-investing stakeholders of a firm are typically tied up with all their capital and intuitively require more protection. As such, profitability tends to be of secondary importance and serves to accomplish sustainable goals (Tirole, 2001, p. 4).

Concluding, the thesis adopts the definition of Goergen (2018) for the underlying research design, as the definition is consistent with the German governance taxonomy (i.e., German law explicitly recognizes the interests of stakeholders to ensure long-term sustainable value creation of the firm). Consequently, firm value derives from the shareholder value concept but inevitably acknowledges the interests of (non-investing) stakeholders. Goergen (2018) acknowledges the idea of shareholder primacy, but the author proposes a universal definition that applies to a wide range of corporate governance systems (i.e., shareholder vs. stakeholder). This definition applies to various conflicts of interest between *(i)* managers and shareholders, *(ii)* controlling and non-controlling shareholders, and *(iii)* shareholders and stakeholders.

Table 2: Corporate governance definitions (*Source: Own illustration*)

Shareholder Perspective	**'Corporate governance is defined as . . . '**
Shleifer and Vishny (1997, p. 737)	*'. . . the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.'*
Zingales (1998, p. 4)	*'. . . the complex set of constraints that shape the ex-post bargaining over the quasi-rents generated by a firm.'*
Denis (2001, p. 192)	*'. . . the set of institutional and market mechanisms that induce self-interested managers (the controllers) to maximize the value of the residual cash flows of the firm on behalf of its shareholders (the owners).'*
Becht et al. (2003, p. 1)	*'. . . whenever an outside investor wishes to exercise control differently from the manager in charge of the firm.'*
Stakeholder Perspective	**'Corporate governance is defined as . . . '**
Tirole (2001, p. 4)	*'. . . the design of institutions that induce or force management to internalize the welfare of stakeholders.'*
Aglietta and Rebérioux (2005, p. 46)	*'. . . management of the firm must be oriented to satisfying the interests of the entity itself, and not the interests of one of its constituents.'*
Goergen (2018, p. 28)	*'. . . deals with conflicts of interests between the shareholders and the managers; the shareholders and the debtholders; the shareholders and the non-financial stakeholders; different types of shareholders (mainly the large shareholder and the minority shareholders) and the prevention or mitigation of these conflicts of interests.'*

2.2 New institutional economics

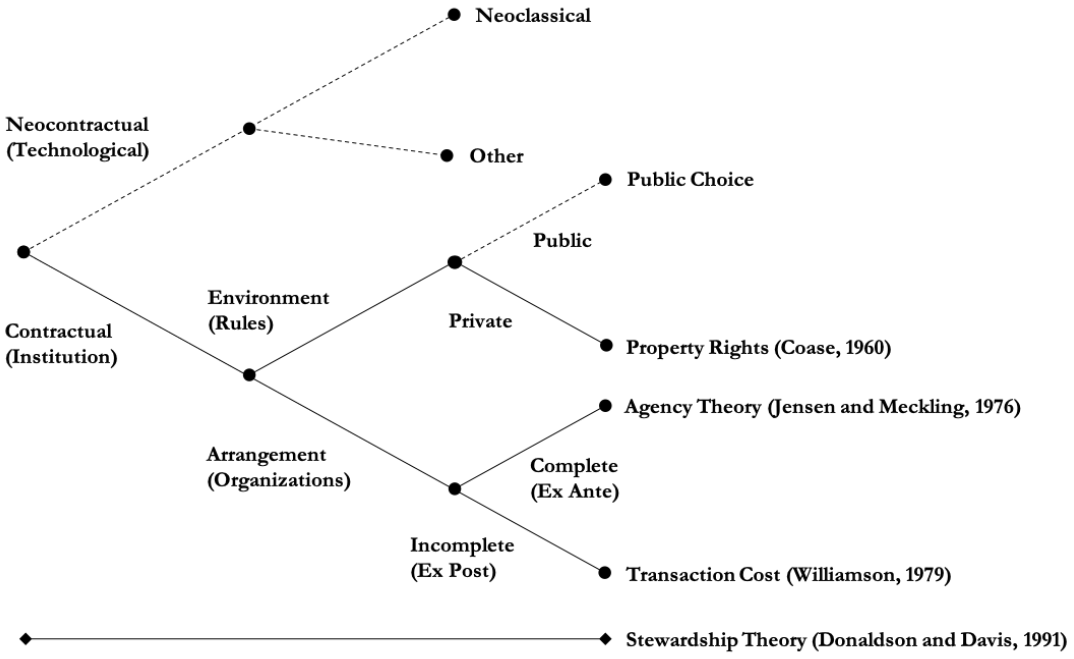
Several related strands of economic theory are briefly reviewed to establish the theoretical framework, given that there is no comprehensive framework to explain corporate governance in its entirety (Welge and Eulerich, 2014, pp. 9). The central tenet of corporate governance, despite its multitude of taxonomies around the world, is the process of bringing conflicts of interest into equilibrium when making decisions under uncertainty and information asymmetries (Williamson, 1985, p. 5). Accordingly, the section discusses the merits of property rights theory (Coase, 1960), transaction costs theory (Williamson, 1979), principal-agent theory (Jensen and Meckling, 1976), and stewardship theory (Donaldson and Davis, 1991).

The new institutional economics has evolved due to the limited applicability of neoclassical economics in real-world situations. The latter assumes friction-less markets in which financial intermediaries are redundant, for which institutional economics, however, accounts for (Opper, 2001, p. 601). Frictions (including transaction costs) arise due to *(i)* irrational agents pursuing self-serving goals to maximize their utility, *(ii)* bounded rationality and *(iii)* opportunism (Williamson, 1985, p. 32). Hence, institutions, as the set of rules based on legal or contractual agreements, represent a central element (North, 1990, p. 3), to coordinate decision-making and reduce uncertainty in economic transactions (Richter and Furubotn, 2003, p. 39).

Following Hansch et al. (2021); Welge and Eulerich (2014); Williamson (1990), Figure 1 classifies the various branches of economic theories applicable to organizations. Herein, Williamson (1990) distinguishes among non-contractual and contractual approaches to economics.[4] Thereby, contractual economics is concerned with the theory of economic organization based on institutions. The branch of theory further distinguishes between the concepts of institutional environment and institutional arrangements. Thereby, theories of private economics (e.g., property rights) deal with the institutional environment and specify the underlying rules of the system. The school of institutional arrangements, on the other hand, is concerned with the optimal design of organizational settings. Further, theoretical concepts distinguish whether institutional arrangements are ex-ante or ex-post. For example, the principal-agent theory describes the ex-ante setting, assuming complete contracts. In contrast, transaction cost theory assumes that contracts are incomplete, so ex-post control is critical in organization theory. Although each branch is subject to different assumptions, all are concerned with the design of transactions through optimal contracting (Welge and Eulerich, 2014, p. 10).

[4]Non-contractual economics based on technological factors (i.e., production function) is not discussed.

Figure 1: Economic theories of organizations (in line with Williamson (1990, p. 62))



2.2.1 Property rights theory

The property rights theory propagates that a commodity (i.e., good or service) is associated with a set of valuable rights (Picot et al., 2020, p. 80). With that being said, the value of a commodity constitutes both its tangible and intangible attributes, while property rights include the rights to *(i)* use, *(ii)* alter the appearance, *(iii)* transfer to third parties, and *(iv)* realize a profit or loss from selling the commodity (Alchian and Demsetz, 1972, p. 783). However, the acquisition and enforcement of property rights lead to transaction costs involving *(i)* information, *(ii)* negotiation, *(iii)* monitoring, and *(iv)* contractual costs (Coase, 1937). The net benefit of acquiring and enforcing property rights depends on the *degree of dilution* that results from transaction costs. As property rights become increasingly diluted (i.e., being subject to institutional constraints or being shared among an increasing number of beneficiaries), the value of the commodity decreases with two implications (Picot et al., 2020, p. 81). First, institutions influence economic behavior between market participants through contractual agreements and determine the value of transferred rights. Second, firms as collective entities do not behave like individuals. So, their behavior constitutes the sum of the actions of a large number of individuals with divergent and partly self-interested preferences (Richter and Furubotn, 2003, p. 201).

The framework suggests that institutions determine the rights and actions of individuals. In this regard, property rights theory posits that the first-best solution is when individuals exercise

complete and exclusive control over a commodity's property rights (Alchian and Demsetz, 1972; Palladino, 2019). If so, the sole beneficiary of the commodity becomes accountable for her actions so that the beneficiary has incentives to increase the utility of the commodity through efficient resource allocation. As soon as circumstances lead to the violation of completeness and exclusivity (i.e., transfer of property rights), transactions costs and external effects accrue, which market mechanisms cannot resolve, but contractual agreements can (Picot et al., 2020, p. 82). Property rights theory, thus, applies to the theory of the firm (Hansch et al., 2021, p. 30). Accordingly, entities in complete control of a firm achieve the highest net benefit because they hold all the rights inherent in being its ultimate owner. Because a single entity controls all ownership rights (i.e., no frictions arise, and coherently transaction costs are minimized (Edmans and Holderness, 2017, p. 544)), no institutional framework is required to promote governance as the situation already represents the optimal design set from an institutional perspective.

The separation of control from ownership involves control rights being transferred from shareholders of the firm to corporate managers (Jensen and Meckling, 1976). Edmans and Holderness (2017, p. 544) speak of '*collocation*' and '*alienability*'. The former incentivizes owners to make value-maximizing decisions regarding their commodity, while the latter deals with transferring rights to those who can make better decisions on their behalf. The authors note that these are the driving forces of corporate governance. In the process, shareholders retain exclusive rights as the company's owners (i.e., the exclusive right to appoint directors, make a profit or loss arising from the company's day-to-day operations, and dispose freely of the company's shares (Edmans and Holderness, 2017, p. 544)). In turn, managers hold the right to run the firm exclusively. However, the separation of ownership and control dilutes property rights so that the first-best solution is no longer available (Hansch et al., 2021, p. 30). Considering that individuals pursue their self-interested goals to maximize utility, conflicting interests could arise among company owners and corporate managers. As a result, stock corporations inevitably deviate from the first-best solution of a single owner. The outlined arrangement requires owners to monitor managers continuously, thereby incurring transaction costs (Alchian and Demsetz, 1972, p. 783). So, an optimal corporate governance framework can minimize frictions and efficiently allocate ownership rights. Collectively, owners of the firm will need to weigh which rights to transfer, in what form to institutionalize their interests, and how to efficiently exercise control over management while minimizing transaction costs (Metten, 2010, pp. 33).

With regards to the underlying research question, two organizational settings increase the dilution of property rights (Welge and Eulerich, 2014, p. 11), namely dispersed ownership and

co-determined boards (Hansch et al., 2021, p. 31). In essence, both ultimately lead to increased conflicts of interests and costly monitoring (Edmans and Holderness, 2017, p. 546). In analogy to managers, employee representatives could engage in value-destroying actions, primarily when represented on the board (i.e., prioritizing job security over profitability). In Germany, co-determination rules apply to large stock corporations requiring supervisory boards to have employee representatives.[5] As of 2004, companies can opt for the European equivalent, the 'Societas Europaea (SE).' In part, firms can circumvent the co-determination laws and have more leeway to negotiate with stakeholders directly on the level of employee representation in the firm (Hansch et al., 2021, p. 186), arguably reducing transaction costs.

Overall, the decision to seek board representation can be explained by the blockholder's intentions to retrieve some of the (diluted) property rights, which allows her to exert control and increase board monitoring. In addition, blockholders may use the supervisory board to communicate with employee representatives and negotiate with management board members (i.e., since both groups may pursue self-serving goals). Obtaining a board seat can be subsumed as transaction costs as it effectively reduces a shareholder's net benefit from her block ownership. In summary, property rights theory offers to some extent, a sound theoretical framework for the underlying discussion and can be supplemented with other theories.

2.2.2 Transaction costs theory

The transaction cost theory is concerned with interactions between participants in economic systems in which transactions are coordinated by market mechanisms and hierarchical organizational settings (Williamson, 1975). As such, Coase (1937) describes the production process as a series of transactions coordinated by firms through contractual agreements. While earlier work limits the scope of transactions to the physical transfer of resources, Richter and Furubotn (2003, p. 592) applies the concept to intangible rights, while contracts form the *'basic unit'* in the market to coordinate transactions efficiently (Williamson, 1985, p. 41). However, factors including *(i)* environment complexity, *(ii)* uncertain future events, *(iii)* asymmetric information, or *(iv)* cognitive biases can cause contracts to be incomplete (Richter and Furubotn, 2003, p. 195). Continuing this line of thought, Coase (1937) argues that certain transactions may be too costly, so it is reasonable to replace the market mechanism with a coordinated hierarchy structure or vice versa. Coherently, the selection of the adequate institutional structure is at the crux of transaction cost theory. Starting at some point in the production chain, the agent

[5] Welge and Eulerich (2014, p. 11) argues that each firm is equally influenced by co-determination laws so that co-determination is irrelevant within the governance system in question.

determines whether the next transaction is performed in the firm or exchanged in the market through contractual agreements. In this regard, Williamson (1985, p. 41) defines a transaction as the transfer of goods or services '*across technologically separable interfaces.*'

The theory differentiates among costs that are either ex-ante or ex-post (Williamson, 1985, pp. 20). Ex-ante refers to all costs which result before contract signing and comprise *(i)* searching and screening activities, as well as *(ii)* contractual agreement costs (Picot et al., 2020, p. 91). In contrast, ex-post refers to the costs incurred after contract signing, including *(i)* setting up a control system, *(ii)* unexpected changes in quality, quantity or price, *(iii)* compliance and bargaining costs, or *(iv)* costs arising from any activity to enforce binding commitments (Hansch et al., 2021, pp. 26). After contract signing, the parties involved are bound in a bilateral relationship (Richter and Furubotn, 2003, p. 195). Since contractual parties are in a lock-in situation, transaction-specific investments and sunk costs accrue in the event of a contractual breach. Both parties are confronted with opportunistic behavior of the other party, especially when the contracting parties hold unequal positions of power (Welge and Eulerich, 2014, p. 12). Subsequently, in an ex-post setting, a governance framework is required to complement contractual agreements (Williamson and Streissler, 1990, p. 33).

In this respect, corporate governance represents the combination of bilateral and hierarchical governance mechanisms (Richter and Furubotn, 2003, p. 198). In this, transaction costs accrue either because of human behavior (i.e., bounded rationality or opportunistic behavior) or environmental factors (i.e., 'specificity', 'uncertainty', 'complexity', and 'frequency') (Williamson, 1991, p. 281). Consistent with the property rights theory, firms can be exposed to methodological individualism and opportunistic behavior. In light of increasing uncertainty and complexity, cognitive limitations may impair an individual's ability to act rationally and follow self-serving goals. In addition, environmental factors influence transactions equally. That is, an increase in the factors *(i)* specificity, *(ii)* complexity, and *(iii)* uncertainty increases transaction costs, while frequency decreases them. Likewise, transaction costs are influenced by the design and setup of the institutional framework. In this, a company stands in competition with the market, as both mechanisms attempt to coordinate transactions cost-efficiently (Hansch et al., 2021, p. 25). Thus, there is a trade-off between hierarchical firm coordination and external market coordination. Market coordination is superior to firm coordination when transactions only require unspecific investments regardless of their frequency. In this setting, market control provides sufficient protection for all contracting parties against opportunistic behavior (Williamson and Streissler, 1990, p. 83). Otherwise, corporate coordination is to be preferred.

In line with the property rights theory, dispersed ownership and co-determined boards increase transaction costs. First, shareholders face coordination problems to incentivize corporate managers to ensure they take action on behalf of shareholders. (Hansch et al., 2021, p. 27). This is because shareholders transfer control rights to managers, which grants them control over the firm's resources (Richter and Furubotn, 2003, p. 199). Since both parties are locked-in contractual agreements, the manager can hold up on the shareholder (Welge and Eulerich, 2014, p. 12). So, transaction cost theory propagates that institutional arrangements for corporate governance regulation should primarily address shareholders' needs and provide a standardized framework to monitor management (Williamson, 1985, p. 304). The main objective of such institutional arrangements is to amend incomplete contracts, mitigate opportunistic behavior, and lower potential ex-post enforcement costs (i.e., misappropriation of corporate assets by managers or controlling shareholders). Second, co-determination laws in Germany may result in an increase in transaction costs within a company due to the higher coordination efforts and complex decision-making (Hansch et al., 2021, p. 28). If firms can choose the most cost-effective form of organization at a given time (i.e., AG or SE), and if co-determination laws limit a firm's ability to select the most cost-efficient contracts, then co-determination can increase inefficiency (Metten, 2010, p. 42). Collectively, the decision to take board seats can be explained by the blockholder's intention to reduce transaction costs and increase monitoring on the board. However, transaction cost theory may be limited in its applicability to the underlying research question since not every conflict within an organizational setting is solvable through transactions (Welge and Eulerich, 2014, p. 14). At best, transaction cost theory can supplement the other economic approaches, namely property rights theory or principal-agent theory.

2.2.3 Principal-agent theory

Jensen and Meckling (1976)'s seminal work of the principal-agent theory propagates the separation of ownership and control. A principal-agent relationship prevails anytime an agent is entrusted with some level of decision-making authority by the principal (i.e., transfer of property rights), whereby the agent is assumed to act within the boundaries of the principal's expectations (Jensen and Meckling, 1976, p. 308). The theory establishes a conceptual framework to explain the existence of information asymmetries and provides a sound rationale for establishing an organized monitoring body to supervise the firm's management. As organizations grow larger in size and scale, they can no longer be run by a single owner-manager which requires the delegation of control rights to agents. In general, what causes transaction costs is that the agent is better informed than the principal (Hansch et al., 2021, p. 16). Thus, it is expected

that the agent may act opportunistically and pursue self-serving goals (Jensen and Meckling, 1976, p. 308). Therefore, the challenge is to reconcile management's corporate decisions with the interests of shareholders. Accordingly, principal-agent theory propagates that a corporate governance system (i.e., institutionalizing control mechanisms) is needed to resolve conflicts of interest arising from asymmetric information and incomplete contracts. Following this, different agency problems arise at the specific time of contract signing, as summarized in Table 3:

Table 3: Principal-agent issues (in line with Hansch et al. (2021, p. 17))

Principal-agent issue	**Timing**	**Cause of origin**
Hidden characteristics	ex-ante	*The agent exhibits characteristics that are unobservable to the principal before contract signing. There is a market for the quality of agents in which the price facilitates market coordination and allows separating poor agents from highly skilled ones. Adverse selection is costly as firms fail to extract the same level of surplus as under complete information.*
Hidden information	ex-ante	*The agent may withhold information hidden from the principal before contract negotiations and signing. Although the principal can observe the agent's actions, she cannot assess the quality due to a lack of expertise or only retrieving the information at a very high cost. So there is a trade-off that the agent can use to exchange information for advice.*
Hidden action	ex-post	*The agent acts in a way that is not observable to the principal. Since the principal lacks adequate monitoring mechanisms, her ability to control the agent's choices at any time is limited. The situation provides incentives for the agent to deviate from contractual terms. The principal can infer what decisions the agent has made by assessing the outcome of the manager's actions.*
Hidden intention	ex-post	*The agent conceals her true intentions from the principal. Although the principal can observe the agent's actions and decisions, she cannot observe the agent's attitudes and goals, which creates a co-dependent relationship. Thus, the principal is exposed to the agent's post-contractual incentives. The principal can anticipate the agent's behavior and adjust contractual arrangements.*

Consistent with Jensen and Meckling (1976, p. 308) agency costs comprise of *(i) 'monitoring costs'*, *(ii) 'bonding costs'* and *(iii)* the *'residual loss'*. The agency costs are defined as follows:

Table 4: Principal-agent costs (in line with Jensen and Meckling (1976, p. 308))

Agency costs	**Explanation**
Bonding costs	*To prevent market failure due to asymmetric information, the agent is incentivized to incur bonding costs (i.e., investing in her reputation or increasing transparency) arising from signaling her qualities and making reasonable efforts to reveal her intentions to the principal.*
Monitoring costs	*To overcome prevailing information asymmetries and meet monitoring needs, the principal must establish costly mechanisms (e.g., setting up a board of directors, budget controls, etc.). These monitoring mechanisms shall facilitate information gathering and align incentives.*
Residual loss	*To reflect the costs incurred by the principal as a result of the welfare loss. The residual loss is due to the differences between the agent's discretionary decisions and the principal's hypothetical decisions that maximize the principal's welfare as a function of monitoring and commitment activities.*

Against this background, Table 5 summarizes the consequences and respective solutions arising from the principal-agent problem:

Table 5: Principal-agent solutions (in line with Funk (2008, p. 64))

	Hidden characteristics	**Hidden information**	**Hidden action**	**Hidden intention**
Problem	establishing contractual relationship	assessing decision-making	assessing conduct and performance	enforcing contractual claims
Consequence	adverse selection selecting inadequate agent	moral hazard making sub-optimal decisions	moral hazard showing inadequate work ethics	hold-up harming interests of principal
Solution by principal	conducting screening activities, self-selection	implementing incentive,control, information system	implementing incentive,control, information system	conducting vertical integration
Solution by agent	signaling	compliance	compliance	signaling

The principal-agent-theory distinguishes between *(i)* adverse selection and *(ii)* moral hazard. Models of adverse selection formalize a situation in which the ignorant party lacks information before entering into a contract (i.e., negotiating the terms of the transaction) (Richter and Furubotn, 2003, p. 239). In contrast, in moral hazard models, the ignorant party lacks information to evaluate the quality of the agreed transaction (i.e., performance) or fails to enforce contractual claims in a hold-up situation. Indeed, the latter case is less related to asymmetric information than to the problem of incomplete contracts. The hold-up, therefore, presents a problem in which the principal must make an irreversible investment (i.e., sunk costs) that gives the agent the bargaining power to renegotiate the terms of the contract after it is signed. In doing so, the principal runs the risk of being exploited by the agent (Richter and Furubotn, 2003, p. 305).

There are several mechanisms to address problems arising from adverse selection and moral hazard. For example, the principal can conduct screening activities to mitigate the risks arising from hidden characteristics and hidden intentions. Also, the principal can establish comprehensive contractual agreements to prevent opportunistic actions by agents. The principal can, thus, offer a variety of contractual options, thereby enabling the agent to self-select the best contractual arrangement from among the available options. In this way, the principal can infer the agent's qualities from her contractual preferences (Hansch et al., 2021, p. 22). Ultimately, the principal can set up an incentive system to address agency costs from hidden information or hidden actions (e.g., rewarding the agent for the highest possible level of performance through objectively measurable performance-related components). Also, the principal could institutionalize a monitoring

system (e.g., by establishing a supervisory board) (Holmström, 1979, p. 74). In doing so, the principal incurs agency costs (Jensen and Meckling, 1976, p. 308). Conversely, the agent can use signaling to convince the principal of her superior attributes and her intentions to take actions that resonate with the principal's interest (Spence, 1978). The agent can also reduce conflicting interests by complying with monitoring and reporting mechanisms to promote transparency and integrity. Much as in the principal's case, any activity aimed at avoiding principal-agent problems results in agency costs, as the agent refrains from self-interested, opportunistic actions that would be beneficial to her (Jensen and Meckling, 1976, p. 308). Therefore, with asymmetric information, a first-best solution is no longer possible, so the agency cost is the difference that exists between the first-best and the second-best solution (Picot et al., 2020, pp. 106).

Table 6: Examples of principal-agent issues (in line with Welge and Eulerich (2014, p. 17)

Agency issues	**Explanation**
Empire building	*A manager (agent) may increase the firm size (e.g., through aggressive acquisitions) beyond the optimal scope to increase the manager's prestige and compensation since both positively correlate with size. Therefore, a manager's pursuit of maximizing her utility may lead to sub-optimal decisions to the detriment of shareholders (Jensen, 1986).*
Entrenchment investments	*A manager (agent) can choose manager-specific investment projects, in that firm value is higher under her leadership than under an alternative manager. Given that these projects are irreversible, they remain valuable to shareholders (i.e., it is more costly for shareholders to replace them) even if the manager-specific investments are not value-maximizing (Shleifer and Vishny, 1989).*
Perk consumption	*A manager (agent) may enjoy private benefits through perk consumption (Yermack, 2006). Perk consumption may indicate poor management and signal that managers have cash not being invested in value-enhancing projects. Nevertheless, perks may be beneficial in certain circumstances for motivating managers and enhancing performance Fama (1980).*

The literature also acknowledges the limitations of the principal-agent theory, which is summarized by Welge and Eulerich (2014, p. 19). Amongst others, Perrow (1986, p. 232) highlights that the theoretical concept does not explain essential aspects of an individual's behavior, such as loyalty. In this context, Kim and Mahoney (2006, pp. 9) argue that the literature needs to expand its understanding of the board's role as the ultimate monitoring body. This understanding requires a theoretical paradigm that considers the changing role of the board as an advising body (Hermalin and Weisbach, 2017, pp. 8). Consistent with the previous theoretical concepts, diffuse ownership makes monitoring relatively more costly since the shareholder in question incurs monitoring costs. At the same time, all shareholders share the benefits (i.e., security benefits of control). However, in the absence of controlling shareholders, institutionalized governance mechanisms are needed to protect minority shareholder interests. As a result, the principal-agent theory justifies a standardized control system (i.e., a one- or two-tier board)

that facilitates monitoring of a manager's actions (Welge and Eulerich, 2014, p. 18). Given a board's central role, attributes such as board composition and board independence have been subject to countless research studies as these attributes have real implications on board monitoring. The thesis extends the literature and accounts for blockholder-directors on the board as an additional board attribute since blockholders are incentivized to increase board monitoring. Also, conflicting interests presumably increase under the shared governance regime (Jäger et al., 2019) since employee representatives may pursue goals that are detrimental to firm value (Palladino, 2019). Consistent with Goergen (2018) the principal-agent problem is not limited to the US-centric shareholder-manager conflict but also occurs between majority and minority shareholders as well as between shareholders and stakeholders, so blockholder-directors can utilize the supervisory board as a forum to communicate with employees.

In summary, the principal-agent theory provides a sound theoretical framework for the corporate governance debate and applies to various conflicts of interest. In line with the rationale, different corporate governance mechanisms and ownership structures are expected to prevail in different settings (Hermalin and Weisbach, 2003). In light of the discussed research setting, blockholders may possess private information about prevailing agency problems in the firm, restricting it from operating at its full potential. Consequently, the blockholder is required to join the board and become an active monitor to resolve the agency problem. In addition, the board seat grants the blockholder access to the firm's resources, thereby reducing information asymmetries. However, the brief discussion also reveals that the principal-agent theory is mainly limited to resolving conflicting situations but fails to account for behavioral factors of individuals within an organizational setting (Welge and Eulerich, 2014, pp. 19). In sum, comprehending the role of blockholder-directors at the board and committee levels cannot be fully explained by the principal-agent theory and requires additional theoretical concepts such as the stewardship theory to comprehend the actions of blockholder directors with and within boards entirely.

2.3 Stewardship theory

Stewardship theory recognizes the complexity that arises from behavioral relationships in organizational structures and challenges the behavioral assumptions of prevailing economic approaches (Welge and Eulerich, 2014, p. 24). In this Davis et al. (1997, p. 20) consider psychological and behavioral characteristics of individuals that are subject to prevailing situational conditions. The theoretical concept assumes that as the needs of individuals are satisfied, financial motives become secondary, and the economic agent does not pursue self-interested goals but collective goals instead. The economic agent acts as a steward on behalf of the principal (Davis et al., 1997, p. 21). Moreover, managers who occupy a fiduciary role are intrinsically motivated to act in good faith to increase long-term organizational performance. The rationale is based on Argyris (1973)'s behavioral concept of the *'self-actualizing man'* that is characterized by high ethical standards and integrity toward the company and assumes an advisory role.

According to the '*self-actualizing man*', the behavior of individuals is primarily determined by higher-order needs such as performance achievement and cooperation within the organization. As such, managers do not misuse their institutional power to exploit their position but rely on their skills and expertise to work toward achieving collective goals (Davis et al., 1997, p. 27). Accordingly, the steward prioritizes corporate goals over personal benefits, including improving firm value and reputation. Thus, instead of organizational culture-based monitoring and control, as emphasized by traditional approaches in the new institutional economics, stewardship theory promotes a corporate culture characterized by trust and low power distance (Davis et al., 1997, p. 32). The stewardship theory propagates an institutional framework where conflicts of interest do not occur because the steward's actions align with the shareholders. The need to implement extrinsic incentive systems to reduce information asymmetries is irrelevant (Hansch et al., 2021, p. 32). Consequently, neither monitoring nor signaling mechanisms are needed to minimize agency or transaction costs. Nevertheless, the underlying theoretical concept has implications for the corporate governance debate for studying the role of blockholder-directors interacting with and within boards.

Table 7 summarizes the different principal-agent relationships in line with Davis et al. (1997, p. 39). A classical principal-agent relationship exists if both parties mutually interpret the manager's function as an agent. In this constellation (quadrant 1), the main concern is to minimize agency and transaction costs by establishing (institutional) control mechanisms and contracting. Managers are extrinsically motivated and pursue self-interested goals, so contracts are required

to align interests among the parties involved. A stewardship relationship exists if both parties interpret the manager's function as a steward. The relationship in quadrant 4 is primarily about trust, high commitment, and sharing expertise. In this, the manager derives private benefits by serving the collective and maximizes corporate performance (Davis et al., 1997, p. 40) and in turn, the principal grants her the opportunity to run the firm at her full discretion. In contrast to quadrant 1, supportive leadership does not require control mechanisms.

If the situational conditions induced by the principal are mainly consistent with the manager's behaviors and expectations, the general economic approaches provide clear solutions, as shown for quadrant 1 and quadrant 4. In these scenarios, the principal and manager act in concert, resulting in stable corporate governance structures in which the self-interest-maximizing behavior of the other party can be anticipated and mitigated. In both cases, corporate governance enables mutually beneficial cooperation. However, the situational complexity increases when the parties' behaviors diverge, exhibiting significant conflicts of interest. Therefore, the situation is less evident in quadrant 2 and quadrant 3. The principal creates situational conditions which conflict with the manager's actual personality. Thus, both situations are susceptible and ultimately lead to a termination of the cooperation.

Because the manager performs her role as a steward, she may feel betrayed by the principal when the latter creates a situation in which the manager is expected to act as an agent (quadrant 3). A manager behaves like a steward, but she is controlled as being an agent (e.g., by establishing a board of directors). Two implications could arise for the principal-agent relationship (Davis et al., 1997). First, the manager does not benefit from her intrinsic motivation to serve the collective, and the dysfunctional collaboration likely results in distrust, frustration, and poor organizational performance. Second, because of the existing information asymmetries, the principal is incentivized to act opportunistically and extract private benefits to the detriment of the manager. To mitigate the problem in quadrant 3, the manager can signal her intentions to act as a steward, which may induce the principal to reduce the level of control. Similarly, a manager who perceives her role as an agent may pursue self-serving goals. She will likely act opportunistically when the principal interprets the manager's role as a steward (quadrant 2). The conflict leads to a situation in which the principal feels betrayed by the manager because the latter acts opportunistically, allowing her to extract private benefits to the detriment of the principal (Davis et al., 1997). A legitimate solution to quadrant 2 is the implementation of controls and contractual agreements by the principal. Alternatively, the principal may use strategies emphasizing voice (i.e., monitoring, informed voting) to discipline the manager or even replace

her. Alternatively, the principal may employ strategies emphasizing exit from the firm by selling off her block ownership.

Table 7: Stewardship choice (in line with Davis et al. (1997, p. 37))

		Principal's choice	
		Agent	Steward
Manager's choice	Agent	Minimize potential costs Mutual agency relationship	Agent acts opportunistically Principal is angry Principal is betrayed
	Steward	Principal acts opportunistically Manager is frustrated Manager is betrayed	Maximize potential performance Mutual stewardship relationship

Overall, quadrants 2 and 3 exhibit a high probability of conflicts (Davis et al., 1997). The conflict resolution will favor either the principal or the agent, depending on their respective power levels. The discussion shows that stewardship theory is particularly relevant to designing a corporate governance framework. Because of the increasing trend of blockholder intervention, the board's role as the ultimate governing body is evolving (Ma et al., 2020). Anderson et al. (2007) advocate that board members increasingly assume an oversight role and become strategic partners for CEOs seeking advice. Hence, the board of directors evolves from a passive role (i.e., monitoring) to a more active role (i.e., advising). The optimal design of corporate governance subsequently depends primarily on how the reciprocal relationship between a company's principals and its management is defined. The implication is that a governance system cannot be based on good faith alone (Grundei, 2008, p. 149). Management may inadvertently disseminate false information that shareholders do not critically scrutinize (Welge and Eulerich, 2014). Governance mechanisms that promote information dissemination and subsequently reduce information asymmetries are thus not necessarily indicative of conflicting interests. However, an overly strict governance system ultimately leads to mistrust between managers and principals and hinders management's intrinsic motivation to maximize firm performance.

Within the framework of the research setting, obtaining a board seat could be interpreted as a signal that shareholders will take corrective action if they are dissatisfied with the performance of the firm's management. A board seat could allow shareholders to signal long-termism and

communicate with management and other key stakeholders. In the same vein, a shareholder's presence on the board could also be an overly tight control mechanism that may frustrate management to improve firm value, so it is critical to comprehend the role of blockholder-directors and their interactions with and within boards. In sum, stewardship theory provides a theoretical framework that helps to understand the new role of boards of directors as (active advisors) and not exclusively as (passive) controllers (Anderson et al., 2007). Against this background, the stewardship theory does not represent a complete substitute for the principal-agent theory to explain the underlying research questions but rather complements it.

2.4 Critical assessment

The discussion of the theoretical framework demonstrates that each strand of theory has its raison d'être in the corporate governance debate. To some extent, the theories are based on common assumptions and complement each other.

The theory of property rights states that every commodity is associated with a bundle of valuable rights (i.e., the right to use the commodity, to change its appearance, to transfer the rights to the commodity to third parties, and the right to make a profit or loss from the sale of the commodity). Furthermore, the control rights are transferred from shareholders to the firm's managers. As a result, acquiring and enforcing ownership rights is costly because of transaction costs incurred from the necessity to engage in activities that facilitate control over the firm's management. Accordingly, a well-defined corporate governance framework is required to minimize costs, increasing the efficiency of distributing ownership rights. In summary, property rights theory provides a theoretical framework for the underlying research question because blockholders can partly reduce the dilution of property rights by seeking representation on the board and subsequently regain some of the control rights that otherwise reside with the firm's management.

Transaction costs theory analyses the value of transactions on comparative terms and seeks to determine the mechanism which minimizes costs between hierarchical firm coordination and external market coordination. In this context, transactions form the basic unit of all economic activity in a system. Given that not every aspect of economic activity is quantifiable, its application is limited regarding the applied empirical framework, and the theory tends to complement the alternative economic approaches. By transferring control rights from the shareholders to the management, the management can run the company as it sees fit. Therefore, transaction cost theory propagates that institutional arrangements for corporate governance regulation should primarily consider shareholders' needs and provide a standardized and efficient framework for disciplining management. The primary purpose of such institutional arrangements is to amend incomplete contracts and reduce the risk of opportunistic behavior and potential ex-post enforcement costs resulting from conflicting actions of managers. So transaction cost theory provides theoretical justification for blockholders seeking board representation to increase monitoring and reduce transaction costs.

The principal-agent theory describes the separation of ownership and control in organizational settings. Moreover, the theory is concerned with information asymmetries and opportunistic be-

havior that cause agency problems and decrease firm value. The approach provides a solid basis for establishing a supervisory board to oversee and advise management. The discussion highlights that the principal-agent theory mainly focuses on conflict resolution and does not consider the behavioral factors of individuals. It falls short of explaining blockholder theory and does not explain the strategies blockholders may use to control management. Blockholders may possess private information about prevailing agency problems, restricting the firm from operating at its full potential. The blockholder may conclude that she requires a board seat to mitigate the existing agency problem, allowing her to reduce information asymmetries.

Stewardship theory recognizes the complexity of behavioral relationships in organizational structures and challenges the behavioral assumptions of prevailing approaches to economics. Furthermore, the theory identifies the psychological and behavioral characteristics of individuals subject to situational conditions in the organization. The economic approach assumes that the economic agent does not pursue self-interested goals but serves the collective. By doing so, the economic agent acts as a steward for the benefit of the principals. Considering the rise of blockholder intervention in recent decades, the role of the board of directors is undergoing a significant shift from one of control to one of advice. Boards increasingly assume a monitoring role and contribute to an effective governance system by providing management with expertise and skills. Stewardship theory, thus, provides a theoretical framework to comprehend the new role of boards as active advisors rather than passive controllers.

Overall, the principal-agent theory is the dominant approach to the empirical framework, as it deals with the resolution of conflicts. For example, blockholders may be incentivized to engage in board seat formation to alleviate agency problems and improve firm value. Given the limitations of each approach, the competing theoretical concepts should be acknowledged as a collective to establish a comprehensive theoretical framework for the remainder of the thesis.

3 Corporate governance framework

The section outlines the corporate governance framework in Germany to help understand the inherent role of blockholders in governing a firm. In addition, the main features of the German jurisdiction and the salient features of the corporate governance system are discussed. The section goes on and elaborates on the governing bodies of listed companies and sheds light on their mutual interdependencies. Thereby the discussion highlights the case for board seat formation.

3.1 Legal framework and primary source of law in Germany

Corporate governance is contingent on the ability to express a '*highly complex human system in a standardized framework*' (Larcker and Tayan, 2015, p. 468). In corollary, a corporate governance system is the sum of institutions, practices, and rules that can vary widely from country to country (Goergen, 2018, p. 3). The section begins with a general overview of Germany's legal framework and primary source of law. Moreover, the German corporate governance system is discussed in light of the most recent regulatory changes. The primary legal sources, provisions, and regulations that relate to the overall governance system in Germany are following:[6]

- **EU Market Abuse Directive (Directive 2014/57/EU):** promoting the integrity of European financial markets and increasing investor confidence;
- **EU Regulation on Short Selling (Regulation No. 2012/236/EU):** regulating aspects of short selling and introduce uniform transparency requirements;
- **EU Shareholders' Rights Directive (Regulation No. 2017/828/EU):** promoting long-term shareholder engagement and introducing say on pay;
- **EU Transparency Directive (Directive 2013/50/EU:** promoting long-term investment and shareholder engagement;
- **Co-Determination Act ('Mitbestimmungsgesetz' (MitbestG)):** establishing co-

[6]In line with https://eur-lex.europa.eu, https://www.bundesjustizamt.de, or https://www.bafin.de.

determination rights in companies with more than 2,000 employees;

- **Commercial Code ('Handelsgesetzbuch' (HGB)):** establishing basic governance rules and accounting principles for commercial companies;
- **German Corporate Governance Code ('Deutscher Corporate Governance Code' (DCGK):** defining best practice rules on the governance of German stock corporations based on 'comply-or-explain' approach;
- **Listing rules:** enacted by stock exchanges in Germany, containing additional reporting and disclosure obligations for listed companies;
- **One-Third Participation Act('Drittelgesetz' (DrittelbG)):** establishing co-determination rights in companies with 500 to 2,000 employees;
- **Reorganisation of Companies Act ('Umwandlungsgesetz' (UmwG)):** regulating corporate restructuring for firms in Germany;
- **Securities Acquisition and Takeover Act ('Wertpapiererwerbs- und Übernahmegesetz' (WpÜG)):**, containing rules on voluntary and mandatory takeover bids;
- **Securities Trading Act ('Wertpapierhandelsgesetz' (WpHG)):** regulating insider trading and disclosure obligations; and
- **Stock Corporation Act ('Aktiengesetz' (AktG)):** containing a detailed framework for the establishment and governance of stock corporations.

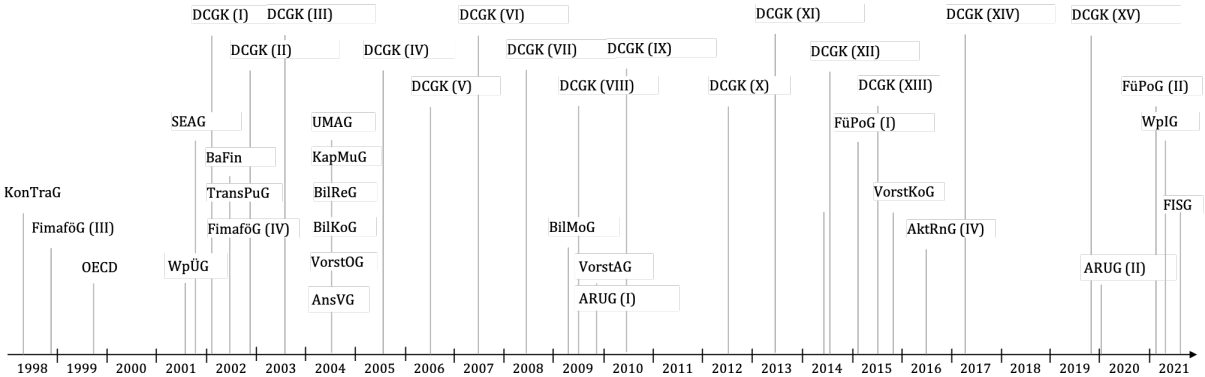
The German governance framework is established using multiple legal sources. It is supplemented with additional regulations by federal authorities and the European Commission. Although the German parliament enacts the legal rules and regulations on corporate governance, these are aligned with EU directives aimed at harmonizing corporate governance systems, promoting transparency, and encouraging long-term shareholder engagement. In recent years, the latter has been at the center of attention and the driving force behind the significant changes in the German legal framework. Coherently, the German Stock Corporation Act (AktG) provides the main legal framework for establishing and governing a firm (Goergen et al., 2015). In particular, the laws provide an extensive catalog of legal rights available to shareholders with varying ownership stakes (e.g., 1%, 5%, 10%, 25%, and 50%).

In addition, the Federal Financial Supervisory Authority (BaFin) oversees all activities related to securities trading, takeover procedures, and disclosure requirements of listed stock corporations under the Securities Trading Act (WpHG). The statutory provisions are supplemented by the non-binding but comprehensive (i.e., 'comply-or-explain') German Corporate Governance

Code (DCGK), which is concerned with establishing a state-of-the-art governance framework. Accordingly, the DCGK is influenced by competing governance frameworks such as Anglo-Saxon governance codes (i.e., the US and the UK), prompting a substantial transition of the German framework to adopt market-based elements. The DCGK contains specific recommendations on board independence and composition and transparency. Although stock corporations are not obliged to follow the DCGK, under Section 161 AktG, firms are required to disclose a declaration of conformity in which they must explain why they deviate from the DCGK. Finally, German courts have a decisive impact on corporate governance regulation as shareholders can effectively enforce shareholder rights through court proceedings. In sum, the thesis primarily addresses the legal provisions of the AktG, WpHG, DCGK, and the co-determination laws.

Figure 2 summarizes the most critical legal and regulatory changes concerning corporate governance in Germany. Most of these changes aim to strengthen shareholder rights, promoting transparency and the integrity of capital markets. As Figure 2 highlights, the German governance regime has gone through a series of regulatory changes, which has led to the demise of the infamous 'Germany Inc.' (Andres et al., 2011; Franks and Mayer, 2001). These legal changes raise essential questions about to what extent the German model transitions towards the Anglo-Saxon model. The transitional process is likely to have far-reaching implications on how blockholders will intervene in the management process in the future.

Figure 2: Overview of legal changes in Germany (in line with Welge and Eulerich (2014, p. 114))



AktRnG Law to change the Corporation Act (*Gesetz zur Änderung des Aktiengesetzes*)
AnSVG Investor Protection Improvement Act (*Anlegerschutzverbesserungsgesetz*)
ARUG Implementing the Shareholder Rights Directive (Umsetzung der Aktionärsrechterichtlinie)
BaFin Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*)
BilMoG Accounting Law Modernisation Act (*Bilanzrechtsmodernisierungsgesetzes*)
BilReG Accounting Law Reform Act (*Bilanzrechtsreformgesetz*)
BilKoG Balance Sheet Reform Act (*Bilanzkontrollgesetz*)
DCGK German Corporate Governance Code (*Deutscher Corporate Governance Kodex*)
EUCGF EU corporate governance framework (*EU Corporate Governance Rahmenwerk*)
FimaföG Capital Market Promoting Act (*Finanzmarktförderungsgesetz*)
FiMaNoG Amending Financial Market Regulations (*Finanzmarktnovellierungsgesetz*)
FISG Financial Market Integrity Strengthening Act (*Finanzmarkt-integritätsstärkungsgesetz*)
KapMuG Capital Markets Model Case Act (*Kapitalanleger-Musterverfahrensgesetz*)
KonTraG Law on Corporate Control and Transparency (*Gesetz zur Kontrolle und Transparenz im Unternehmensbereich*)
LeerVkAG Short Selling Act (*Leerverkaufs-Ausführungsgesetz*)
OECD Organisation for Economic Co-operation and Development (*Organisation für wirtschaftliche Zusammenarbeit und Entwicklung)*
SEAG SE Implementation Act (*SE-Ausführungsgesetz*)
TransPuG Transparency and Disclosure Act (*Transparenz- und Publizitätsgesetz*)
UMAG Modernization of the Right of Avoidance (*Modernisierung des Anfechtungsrechts*)
VorstOG Executive Board Remuneration Disclosure Act (*Vorstandsvergütungs-Offenlegungsgesetz*)
VorstKoG Law governing the Appropriateness of Board Remuneration (*Gesetz zur Verbesserung der Kontrolle der Vorstandsvergütung*)
WpIG (*Wertpapierinstitutsgesetz*)
WpÜG Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*)

3.2 The transition of the German governance system

Historically, the German corporate governance is known as Germany Inc., which symbolizes a complex and nontransparent network of interlocked boards, corporate cross-shareholdings, and concentrated ownership by insiders (Andres et al., 2011). As opposed to the outsider system, controlling shareholders (i.e., families or companies) are responsible for monitoring and disciplining corporate management within the insider system (Goergen et al., 2008a,b). Additionally, the 'Hausbanks' (i.e., the firm's leading bank) had traditionally a tight grip on the supervisory board of firms to whom they provided debt capital to (Andres et al., 2011). Similarly, the strong position of banks has been traditionally a salient feature of the German corporate governance jurisdiction (Franks and Mayer, 2017, p. 704) in which banks represented the primary source of funding, as opposed to the market-based system in the US. Thus, market-based mechanisms such as *(i)* institutional (outsider) shareholders, or *(ii)* the market for corporate control have played a minor role in Germany in correcting managerial failure.

During the past two decades, the German institutional setting has been continuously evolving (Goergen et al., 2008b) which led to a series of regulatory initiatives to strengthen shareholder rights and address shortcomings relating to due diligence, transparency, and accountability, as shown in Figure 2. Consistently, the ban on cross-shareholdings and the introduction of the DCGK have spurred a transitional process towards a market-based, outsider system (Goergen et al., 2008b). Nowadays, capital markets have become a central source of financing and have replaced the strong position of the banking system (Andres et al., 2011). The regulatory changes have strengthened minority shareholder rights, market-based mechanisms are gradually being implemented, and shareholder engagement is integral to German governance. Nevertheless, the German governance model has remained resilient to its key attributes: the dual board structure, co-determination (i.e., shared governance), and the stakeholder orientation (Goergen et al., 2008b, p. 175). All stakeholders, including shareholders, owe a fiduciary duty to the firm to ensure long-term and sustainable value creation (e.g., Sections 93, 111, and 121 AktG). The German governance model is often cited when the Anglo-Saxon paradigm of shareholder supremacy is criticized. Hayden and Bodie (2020, p. 5) describes Germany as '*an island of economic stability*' given that firms proved more resilient than most after the financial crisis. Nowadays, US-centric shareholder supremacy has lost some of its shine, and scholars and practitioners are looking for alternative concepts (Hansch et al., 2021, p. 184). In this regard, Hwang and Nili (2020) coin the term 'shareholder-driven stakeholderism' promoting companies to weigh in the concerns of stakeholders along with shareholder interests.

This is consistent with Bebchuk and Roe (1999)'s suggestion that the development of corporate governance systems tends to be *path-dependent* as a country's structures and regulations (legal, cultural, political, or economic) prevail. Goergen et al. (2008a, p. 41) outlines that most of the changes take the form of a '*functional convergence*' and not a '*formal convergence*'. A functional convergence occurs when an inferior system transitions fully to another (more superior) system by adopting its institutional setting, best practices, and statutory framework. A system in which poor-performing managers can stay in control without effectively being disciplined may not prevail in the long-term (Gilson, 2001, p. 338). However, each system has a certain level of flexibility so that a formal convergence does not necessarily occur but a functional convergence. The flexibility allows even less efficient systems to evolve as long as the institutional setting changes to changing circumstances. Therefore, the transitional process is mainly dependent on what is already in place (Goergen et al., 2008a, p. 40).

Table 8 resents some selected summary statistics on ownership in Germany for several subsample periods to assess the transition of German corporate governance. The statistics are based on blocks equal to or more than 3% of a firm's outstanding shares. The average block size gradually decreases from 19% (i.e., period of 2003 to 2005) to 12% (i.e., period of 2017 to 2019). In the same period, the proportionate share of foreign investors has nearly doubled from 24% to 43%.[7] While ownership of insider (and other strategic) blockholders tends to decrease, the proportion of institutional shareholders has increased from 31% to 37%.[8] In the same vein, the number of blockholders (the average voter turnout) in a firm has increased from 2.4 to 4.0 (from 58% to 69%), signaling increased shareholder engagement in Germany. Finally, the number of shareholders with block ownership of less than 10% is growing while the Herfindahl concentration index decreases over the sample period. The summary statistics highlight that German ownership is gradually becoming diffuse dominated by smaller blockholders. To a substantial part, these changes are likely pushed by foreign institutional investors as German firms increasingly attract capital from abroad. Although the underlying statistics provide a simple overview, the thesis concludes that the German ownership structure is subject to a transition towards a market-based, outsider system, although retaining its most distinctive features. On average, German ownership remains concentrated and insider-dominated. The recent developments in

[7] In untabulated results, the proportionate share of foreign investors is about 57% when considering all shareholders with ownership of 0.01%. Since 2013, a growing body of foreign investors has held more voting rights than domestic shareholders, with far-reaching implications for the German corporate governance system. As Aggarwal et al. (2011) argue, foreign institutional investors are associated with exporting their domestic governance practices abroad to relatively weaker governance systems. Arguably, German governance practices will gradually transition towards the Anglo-Saxon governance model.

[8] The distribution of the proportionate shares of the various investor types is based on the nominal value of the voting shares held.

the legal system are likely to impact how shareholders will acquire board seats as the number of institutional shareholders increases gradually.

Table 8: German ownership structure (*Source: Refinitiv, own illustration*)

	2003-**2004**-2005	2010-**2011**-2012	2017-**2018**-2019
# Blockholders (3%)	2.4	3.6	4.0
Block $1^{st} - 2^{nd}$ (%)	27	23	22
Foreign ownership (%)	24	37	43
Free-float (%)	54	54	53
Ownership (%)	19	13	12
Ownership concentration (%)	19	16	15
Presence (%)	58	64	69
Distribution (%):			
- Insider (d)	28	27	22
- Inst. investor (d)	31	33	37
- Other strat. investor (d)	29	23	22
- Corporate (d)	12	17	18
Count block below 3%	2,922	4,271	5,766
Count block below 10%	194	405	449
Count block above 10%	172	163	162

Accordingly, the German model follows a modified shareholder value paradigm that considers shareholder value but retains its stakeholder orientation. Despite significant changes in the legal framework, the German governance regime can be, at best, classified somewhere between 'shareholder-driven stakeholderism' or 'stakeholder-driven shareholderism' (Eberhardt, 2013; Hwang and Nili, 2020). The status quo inevitably raises the question of whether the German system has to converge to the market-based system in the first place, given that each governance system is a set of its legal, cultural and political system (Goergen, 2018, p. 3). Accordingly, the answer to this question is contingent on the versatility of the German system to adapt to changing environments. Recent corporate scandals, amongst others, the cases of Bayer AG (i.e., 'Monsanto takeover'), Volkswagen AG (i.e., 'Dieselgate'), or Wirecard AG (i.e., 'accounting fraud'), highlights that the German governance system remains receptive towards corporate governance scandals. Practitioners scrutinize that the German corporate governance still fuels the perception of being a close-knit debating group with too little interference from outside and less shareholder-focused than it should be.[9] Several barriers of convergence remain in place, which should favor insider blockholders to seek board representation relative to outsider blockholders.

[9] *Source: Financial Times (2019) - German governance must be fit for purpose, accessed 23.09.2021.*

3.3 Governing bodies of German stock corporations

A salient feature of the German governance model is the two-tier board system, which is split between the executive body (i.e., the management board) and the monitoring body (i.e., the supervisory board), respectively. Both boards have a fiduciary duty to the firm and may not engage in activities that could be detrimental to the firm's interests (Sections 117, and 243 AktG). The composition of the supervisory must be independent of the management board in pursuing its oversight duties. Similarly, supervisory must not give directions to the firm's managers. However, the two boards are expected to regularly meet and exchange information so that close corroboration is critical for good corporate governance (Section 90 AktG). Additionally, the two-tier board system is supplemented by a third governing body, namely the shareholder's meeting, which represents the main forum of shareholders to exert control.

Management board. The management board has the exclusive right to manage the firm's assets independently and run the day-to-day operations in the firm's best interest (Section 76 (1) AktG). In addition, this includes the responsibility for developing and implementing the corporate strategy. Similarly, the management board represents the firm before investors, courts, and third parties. The management board members are jointly responsible for the firm's management irrespective of their skills, professional experience, and responsibilities for the day-to-day operations. Matters relating *(i)* to hiring and firing managers, *(ii)* remuneration of executives, and *(iii)* other management-related issues fall within the responsibility of the supervisory board and not the shareholder's meeting (as is the case within the US framework). For example, if shareholders lose confidence in a management board member, they cannot intervene directly but must pass a resolution at the shareholders' meeting first. In turn, the supervisory board decides whether to revoke the management's appointment (Section 84 AktG).

Supervisory board. In contrast, the primary purpose of the supervisory board is to engage in monitoring and advising the firm's management (Section 111 AktG). Further, the supervisory board evaluates the manager's performance and reports annually to the shareholder's meeting (Goergen et al., 2015). The report also outlines the supervisory board's measures (including its sub-committees) to oversee the management process. In this context, the DCGK recommends establishing an appropriate number of committees to increase the board's efficacy. The supervisory board shall transfer specific tasks to specialized groups (Principle 14 DCGK) that would otherwise be challenging for the entire supervisory board to deal with (Charkham, 2005). The supervisory board is split between shareholder and employee representatives, whereas the degree

of co-determination is determined by firm size. Whereas work councils and trade unions appoint employee representatives, shareholder representatives are appointed to the board at the shareholders' meeting (Sections 96, and 111 AktG).[10]

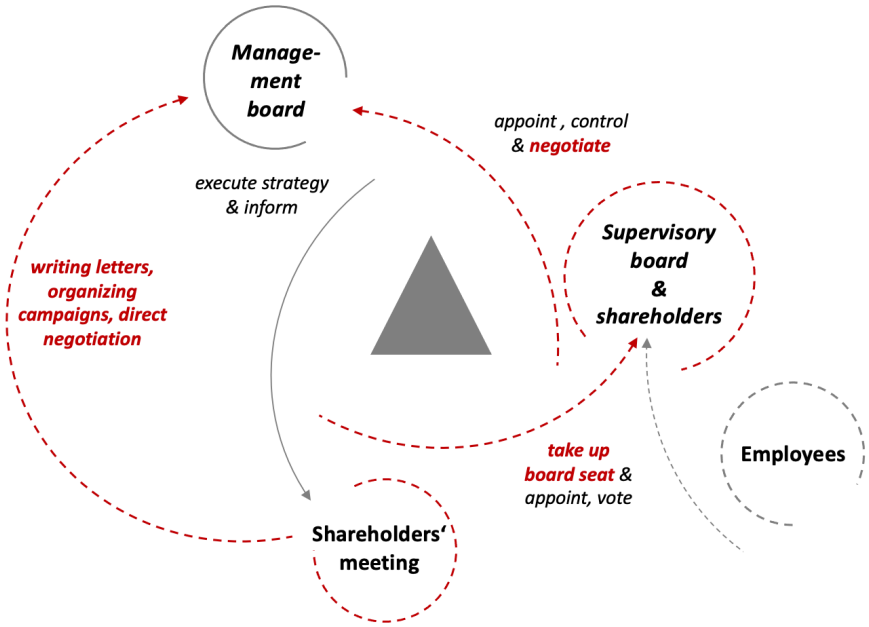
Shareholder meeting. The shareholders' meeting is the controlling body of the company. It represents the most central forum for shareholders (as the ultimate owners of the firm) to participate in the management process through informed voting (Yermack, 2010). Jensen and Ruback (1983, p. 5) define control as '*the rights to determine the management of corporate resources – that is, the rights to hire, fire, and set the compensation of top-level managers*'. In light of the two-tier board system, the discussion reveals, however, that Jensen and Ruback (1983)'s definition of control is not applicable analogously since shareholders can predominantly nominate, appoint and dismiss members of the supervisory board only. Most of the resolutions adopted at the shareholders' meeting are fundamental matters unrelated to the firm's day-to-day operations (Section 90 AktG). Nevertheless, some decisions remain reserved exclusively for the shareholders' meeting, for example, 'the appropriation of the net income' (Section 119 AktG). The legal framework in Germany grants all shareholders some fundamental rights, regardless of the voting rights to which the respective shareholder is entitled to exercise: Every shareholder of the firm has a right to be informed and speak at the shareholder's meeting according to Section 131 AktG.

Furthermore, the shareholder is entitled to additional rights if her shareholding exceeds a certain threshold of 1%, 5%, 10%, 25%, or 50%. The provision includes the right to appoint a special auditor (Section 142 AktG) or to request a shareholders' meeting to be convened (Section 122 AktG) when the shareholder owns more than 1% or 5%, respectively. Shareholders owning 10% have the right to propose candidates to the supervisory board in a privileged manner and demand a special vote on dismissing board members (Sections 120, and 137 AktG). As such, 10% blockholders already have a significant influence on the composition of the supervisory board and are classified as material investors (Recommendation C13 DCGK). Also, shareholders with blocking minority (i.e., 25%) can block the issue of new shares and prevent resolutions by the shareholders' meeting according to Section 179 (2) and Section 179a (1) AktG). Shareholders exceeding 50% can initiate a vote of no confidence against the members of the supervisory board (Sections 84, and 103 AktG). In sum, shareholders receive significantly more statutory rights with increasing block ownership and thus influence the firm's governance.

[10] In cases in which the board no longer has a quorum, the court appoints a representative at the request of the management according to Section 104 AtkG.

Figure 3 presents the interaction of the three governing bodies of publicly listed firms in Germany. The arrows indicate the direction of delegation among the three governing bodies. As opposed to the one-tier US model, employee representation is an integral part of the shared governance model as employee representatives sit on the board next to shareholder representatives. Based on the underlying paradigm, shareholders can primarily govern through informed voting at the shareholder's meeting but lack formal mechanisms to directly intervene in the management's decision-making process relating to the firm's day-to-day operations. Based on statutory law, the shareholder's scope of action is arguably limited to appointing, supervising, and dismissing shareholder representatives of the supervisory board. However, to effectively exert control, shareholders have incentives to use other voice channels, such as behind-the-scenes engagement (including writing letters, launching activists campaigns, seeking coalitions) or seeking access to the firm's boardroom. The latter allows the blockholder to increase monitoring and discipline management. Consequently, shareholders can actively use a board seat to preserve and improve long-term shareholder value, thereby mitigating prevailing agency issues that may hinder the firm from operating at its full potential. Similarly, a board seat also provides a blockholder with a forum to communicate with other key stakeholders of the firm.

Figure 3: Governing bodies of German listed firms (*Source: Own illustration*)



3.4 Critical assessment

The institutional framework in Germany is gradually transitioning from a bank-based insider system to a market-based outsider system. German legislators have made considerable efforts over the last two decades to strengthen the rights of minority shareholders and facilitate shareholder engagement (Welge and Eulerich, 2014, p. 114). However, it is unlikely that the German system would complete a formal convergence, owing to the two-tier system, the co-determination laws, and the prevailing stakeholder-orientation (Goergen et al., 2008a,b). The summary statistics show that average block ownership is gradually decreasing while the number of institutional (foreign) shareholders is expanding, presumably facilitating a functional convergence towards market-based mechanisms within the German governance framework.

Similarly, the role of the German board of directors is gradually evolving from a passive, close-knit control body to a dynamic supervisory body. As anecdotal evidence reveals, foreign practitioners still complain that the pace of these changes is moving too slowly and call for a greater emphasis on shareholder value. Moreover, recent corporate scandals have put the German corporate governance system under scrutiny, which is likely to prompt significant regulatory changes in the future concerning the composition of supervisory boards and their interaction with management and shareholders. These changes are also expected to influence the decision of shareholders to intervene in the management process.

The discussion within the corporate governance framework highlights the limited scope of action available to shareholders to intervene in the management process due to the structure of the three management bodies. To this end, the effective involvement of shareholders in managing the company is concentrated on fundamental decisions and the composition of the supervisory board. In addition, the statutory rights of the shareholders' meeting generally do not grant shareholders any direct influence on the strategy or day-to-day business of the company. Thus, the shareholders' meeting may not be the appropriate forum if blockholders seek to become active monitors. Against this background, it appears intuitive that blockholders are incentivized to obtain board seats to increase monitoring and advise the firm's management on strategic decisions. Overall, it is reasonable to assume that blockholders are motivated to engage in board seat formation, given the prevailing agency problems that may be preventing the company from working to its full potential.

4 Blockholder framework

The section defines blockholders within the scope of the German corporate governance taxonomy. This is followed by a discussion of the set of rules for the systematic and consistent identification of blockholder directors. Before addressing the rationale outlined in the opening of the thesis, the primary channels of blockholder intervention (i.e., exit and voice) are discussed. Against this background, the competing shareholder classification schemes in the literature are revisited, and a novel approach to categorizing blockholders is presented. And finally, the section discusses the potential motivations of various blockholders for seeking board seat formation.

4.1 Defining blockholders

The presence of a blockholder is a widespread phenomenon in most companies worldwide. For example, Edmans and Holderness (2017, p. 542) note that about 96% of US companies are associated with one or more blockholders. While there is no universal definition, an intuitive methodology defines blockholders based on a certain ownership threshold. Hence, the legal framework can induce a consistent cutoff point. For example, US-centric literature refers to the Code of Federal Regulations. Under this framework, any person or group whose ownership exceeds 5% of a company's outstanding shares must complete a 13D or 13G filing within ten days. The shareholder in question must state in writing the purpose of the transaction, which the company discloses in its annual proxy statement to facilitate informed decision-making (Marquardt, 2020). Although the standard approach is well-established in the literature, Edmans and Holderness (2017) question its legitimacy given that there is no theoretical underpinning and encourage to study blocks that fall well below the threshold of 5% of ownership or even to study block ownership in alternative governance regimes.

The thesis follows suit and examines blockholders through the lens of German firms. A beneficial feature of the German legal system is that ownership succumbs to a tight regime of disclosure requirements which contributes to a level playing field, promoting transparency and preventing hidden stake-building activities by shareholders. According to Section 33 WpHG, shareholders must notify the stock corporation and BaFin without undue delay if the attributed voting rights 'reach, exceed, or fall below the following thresholds: 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50% or 75%' (Section 33 WphG). Consistent with the standard approach in the literature, a shareholder is defined as a 'blockholder', when her block ownership exceeds 3% of the firm's outstanding shares. In analogy to the US setting, it should be noted that there is also no

theoretical rationale for the underlying identification strategy. Lowering the cutoff point below the 3% threshold could be even more informative and may provide a fruitful avenue for future studies in this field of research.

In addition, any shareholder whose voting rights exceed the threshold of 10% must comply with additional statutory laws. For example, since 2008, shareholders who exceed the threshold of 10% must disclose in writing the purpose of the respective investment (Section 43 WphG (formerly 27a WphG)). Following this, shareholders must declare their intentions about their block-building engagement, including whether they plan to increase their ownership stake or make amendments to the constitution of the corporate boards or the capital structure. However, blockholders could remain below the threshold of 10% and still attain board seats, so the 3% threshold is more suitable for the empirical framework.[11]

[11]In unreported analysis, all specifications are additionally conducted with a threshold of 0.1% for about 57.262 firm-year observations. The alternative setting produces economically and statistically more significant results than the standard approach.

4.2 Defining blockholder-directors

Given the central role of supervisory boards in listed companies, the thesis examines the implications of blockholders seeking board representation. The rationale is that *blockholder-directors* have close access to a firm's resources to intervene in the management process and signal their commitment to other key stakeholders. Consequently, blockholder-directors play a key role in governing a firm. A *keyword search* for each firm-year observation is performed to identify blockholder-director relationships. Accordingly, a wide array of sources (i.e., biographies, newspaper articles, corporate filings, or family histories) is screened for evidence and references to match blockholders to board members. The process of establishing these links is tedious and involves some personal judgment. As a result, a set of identification rules is defined to ensure consistency in establishing a blockholder-director relationship across firms and over time.

As such, the thesis defines board members as *blockholder-directors* if they ...

1. are explicitly stated as a nominee or representative of a blockholder in the company filings (Bebchuk et al., 2020; Gow et al., 2014) or in the financial press.
2. and the blockholder are the same person (Edmans and Holderness, 2017).
3. share beneficial ownership with the blockholder or is a current (former) employee (Agrawal and Nasser, 2019; Bebchuk et al., 2020).
4. are family members or have personal relationship with the blockholder (Hope, 2013).
5. are founders of the company and remain a significant blockholder (Marquardt, 2020).

Provided that the relevant directors continue to serve on the company's board and the associated blockholders retain a block position of 3% or more of the firm's outstanding shares, the previously identified blockholder-director relationship remains valid consistent with (Marquardt, 2020). Coles et al. (2014, p. 1780) review the effects of co-opted boards with the CEO being involved in director selection and reiterates the findings of Shivdasani and Yermack (1999) that directors tend to remain loyal to the CEO who appointed them. Marquardt (2020, p. 10) applies the same concept to blockholder directors who are loyal to the blockholders with whom they are associated throughout their directorship on the board. Additionally, Adams and Ferreira (2008) conclude that salaries and meeting fees are typically sufficient to incentivize directors to attend board meetings. The two findings propose that blockholder-directors engage in monitoring through board representation as long as blockholders remain invested in the firm.

4.3 Channels of blockholder intervention

As established in the literature, blockholders assume a critical role in governing a firm. Due to their substantial block ownership, blockholders typically have both the willingness and capability to monitor management and, if necessary, to intervene in the management process (Shleifer and Vishny, 1986, p. 461). Subsequently, adverse effects of agency issues are reduced by mitigating asymmetric information and aligning interests with that of shareholders. Thereby, all shareholders profit from the increased monitoring activity of the controlling shareholder (i.e., security benefits of control), while the latter additionally benefits from private benefits of control (Grossman and Hart, 1988, p. 177), due to exclusive access to private information. The larger the block ownership of the controlling shareholder, the stronger the incentives to control the firm's management (Holderness, 2003, p. 54). Given that investor objectives and skills diverge among the different investor groups, blockholder heterogeneity is important whether certain blockholders show tendencies toward specific channels of activism (Edmans and Holderness, 2017, p. 553). Blockholder intervention is probably to occur when corporate performance is not meeting shareholder expectations (Gillan and Starks, 1998, p. 2) or agency problems emerge which hinder the firm from operating at its full potential (Jensen and Meckling, 1976). Following Hirschman (1970, p. 1), blockholders have multiple strategies to intervene in the management process in reference to *(i)* exit, *(ii)* loyalty or *(iii)* voice. These strategies are not mutually exclusive and are employed in concert (Edmans, 2009, p. 2). For example, a shareholder who engages in monitoring may also threaten to exit the firm. The strategies are summarized as follows:

Exit. Exit is predominantly used by shareholders who trade on short-term information (Edmans and Holderness, 2017). In accordance, Edmans and Manso (2011) posit that trading (financial) with high liquidity needs are more likely (but not exclusively) to exert governance through (threat of) exit. However, exit is also about (dissatisfied) blockholders who trade on long-term information, either through selling (or in the least threatening to sell) their block of shares if managers do not take their demands seriously (Gow et al., 2014, p. 23). This follows the rationale that exit allows the respective blockholder to discipline the management by placing pressure on the company's share price (Dou et al., 2018, p.1). In accordance, the literature suggests that the simple threat of exit is typically sufficient to be taken seriously by incumbent management (Edmans and Holderness, 2017, p. 543). The (threat of) exit is potentially more effective when blockholders hold formal positions on the board, allowing them exclusive access to private information. In this context, (Gillan and Starks, 1998, p. 9) argue that the (threat of) exit already is an effective mechanism of blockholder intervention enabling blockholders to

hold managers accountable for their actions.

Loyalty. Loyalty is about blockholders sitting out the situation while not taking any action to correct managerial failures. To this end, Edmans and Holderness (2017, p. 575) argue that 'exhibiting loyalty' towards incumbent management may provide a price-sensitive signal to other market participants that the firm's management did not shirk throughout the fiscal year. This is especially relevant when market performance is poor. Arguably, the signaling should be more sensitive if blockholders have representatives on the board since blockholder-directors have access to private information, allowing them to evaluate the manager's efforts. Concerning the underlying context, loyalty is presumably driven by blockholder heterogeneity. For example, insider investors may be more prone to remain loyal than outsider investors, given that insiders are already involved in the company's decision-making process (Mehran, 1995, p. 165).

Voice. Voice is about blockholders engaging in activism to discipline management including *(i)* activist campaigns (Bebchuk et al., 2020, p. 1), *(ii)* 'behind-the-scenes' engagement (Becht et al., 2009; Brav et al., 2008; McCahery et al., 2016), *(iii)* threat of exit (Gillan and Starks, 1998, p. 9), *(iv)* informed voting at the shareholders meeting (Bar-Isaac and Shapiro, 2020, p. 2), *(v)* starting proxy fights (Gantchev, 2013, p. 611) or *(vi)* seeking coalitions to put pressure on management (Brav et al., 2021, p. 2). In line with Agrawal and Nasser (2019); Marquardt and Sanchez (2021), the thesis extends the scope of actions by board representation. Board representation can be an effective monitoring mechanism since blockholders have direct access to the firm's corporate resources. The rationale is that shareholders who analyze information retrospectively cannot effectively assume a monitoring role, so board representation is a necessary prerequisite to getting access to timely information (Bebchuk and Weisbach, 2010, p. 944). Agrawal and Nasser (2019, p. 2) deem board of directors as a '*powerful governance mechanism*', but mainly in the presence of truly independent directors. Consistently, Adams et al. (2010) reason that boards are powerful as boards typically are tasked with designing executive remuneration schemes, dealing with the hiring and firing of executive directors, and providing guidance about the strategic alignment of the firm. Blockholders are less likely to exit when they hold formal corporate positions on the supervisory board (Gow et al., 2014, p. 16). As outlined previously, a blockholder's decision to not exit, however, may strengthen the potential threat of exit and, in turn, improve voice (Dasgupta and Piacentino, 2015, p. 2853).

Collectively, seeking board representation as a form of voice is more plausible to resonate with blockholders that follow a long-term strategy (Gow et al., 2014, p. 16) with more ownership at

risk (Shleifer and Vishny, 1986, p. 461). This argument follows from the consideration that large shareholders are more willing and capable of bearing the costs of acquiring board seats. Marquardt (2020, p. 2) notes that board representation bears substantial legal risks and time commitment. Accordingly, blockholder-directors inevitably become firm insiders, which effectively impedes blockholders from capitalizing on private information (Edmans and Holderness, 2017, p. 555), and requires them to take a long-term position in the firm (Gow et al., 2014). The decision to intervene through board representation might arise due to monitoring needs beyond what the blockholder can achieve through informed voting or behind-the-scenes engagement. As such, the presence of blockholder-directors may signal the blockholder's commitment to govern through voice (i.e., monitoring) rather than exit (i.e., trading). Nonetheless, the decision to take a seat on the firm's board can lead to high indirect costs as it can be associated with negative implications based on the following rationale:

'A (legacy) blockholder acquires private information that a company may not be operating at its full potential due to unobserved agency problems. The blockholder could capitalize on this by selling her block ownership (Edmans and Manso, 2011). However, if this happens, the agency problem is not resolved, leaving the company with untapped potential. The alternative would prompt the blockholder to engage in board seat formation to increase firm value. The announcement to take a board seat should thus be a positive signal, considering the blockholder's involvement in the management process. Contrary to the common belief, under certain circumstances the signaling effect of board representation can be equally be also negative, as it may reveal private information. The announcement could lead to a negative stock market reaction, causing the blockholder to incur a liquidity shock (Maug, 1998), thereby limiting her ability to 'cut and run' (Coffee, 1991). To emphasize, the negative market reaction does not necessarily reflect rent extraction (Edmans et al., 2017). Instead, outside investors might reevaluate expectations about the firm's prospects and conclude that some of the investment distortions are presumably irreversible or very costly to fix (Shleifer and Vishny, 1989). The blockholder ends up in a lock-in situation that prompts her to become an active monitor on the board to resolve the issue. Even without any such liquidity constraints the blockholder should be incentivized to exert effort. According to intuition, the blockholder takes on additional board responsibilities (i.e., serve as chairman) and participate in board committees to increase board monitoring (Klein, 1998). Arguably, a blockholder would improve firm value to all shareholders, the more so in the presence of agency problems. In closing, significant indirect costs may, however, discourage blockholders from taking a seat on the board, even if board representation can be valuable to the company.'

4.4 Blockholder types

The thesis extends the current discussion on the blockholder framework by identifying an appropriate classification scheme to categorize specific shareholders into distinctive but homogeneous groups. While the empirical framework regards board representation in light of blockholder heterogeneity, it is critical to differentiate among different blockholder types. However, the literature lacks a systematic and uniform classification of blockholders into generalized categories (Dlugosz et al., 2006). In addition, shareholders differ in their trading styles, legal and regulatory frameworks, the clientele they target, liquidity preferences, time horizon, and the way they collect and distribute information (Connelly et al., 2010, p. 1333). Consistently, the following overview shall summarize some of the relevant blockholder classifications established in the literature:

'short-term' and 'long-term': The classification primarily distinguishes blockholders based on their investment horizon (i.e., holding period). In this context, hedge funds are often classified as short-term investors, while families, private equity, and other strategic shareholders are classified as long-term shareholders. While existing literature asserts that family ownership resonates with long-term holding periods (Anderson and Reeb, 2003; Andres, 2008), the case is less clear for other shareholders (Edmans and Holderness, 2017). For example, the literature provides mixed results on whether hedge funds are short-term or long-term investors. Mietzner and Schweizer (2014, p. 22) propose that private equity funds are uniquely able to successfully reduce agency problems, in part due to their often longer investment tenures and their ability to adapt to local corporate governance systems. Given the structural differences between private equity funds and hedge funds, Mietzner and Schweizer (2014) conclude that hedge funds tend to trade on short-term information. Similarly, Coffee Jr et al. (2016) documents that hedge funds are linked to shorter campaign horizons and are predominantly interested in short-term profit maximization. These assumptions are contradicted by Brav et al. (2008), who argue that hedge funds can achieve trading gains through active strategies that are not necessarily short-term. While this classification may sound intuitive, Edmans and Holderness (2017) conclude that this classification can be misleading. There is no uniform threshold to distinguish between short-term and long-term investors. For example, a survey from Beyer et al. (2014, p. 1) among firms reveals that 2.8 years is the appropriate cutoff level to deem an investor to be long-term oriented. In contrast, short-term investors are associated with periods of less than seven months. In line with this, Gow et al. (2014, p. 16) demonstrate that activist investors remain invested in the firm for three years when being associated with board representation. So, even activist shareholders who are assumed to trade primarily on short-term information can be classified as long-term

investors, thereby revealing the limited applicability of the 'short-term' and 'long-term' within the underlying context.

'passive' and 'active': According to the classification, shareholders are distinguished on their *ability* and *willingness* to engage in shareholder activism (Appel et al., 2016; Edmans and Manso, 2011). Greenwood and Schor (2009, p. 374) comment '*[w]hile activist investors do not take controlling stakes in firms, we show that – ironically, from the perspective of value creation – activists are most successful at creating value when they can affect a change in control.*' Albeit some institutional investors face legal constraints from owning large blocks; active investors can influence corporate governance and corporate decision-making by engaging in blockholder intervention as outlined previously. The ultimate goal of active strategies is to increase shareholder value. Active strategies can be implemented either short-term or long-term, depending on the traded time horizon. Greenwood and Schor (2009) find that activism by hedge funds typically ends in the undervalued target being acquired and generating more value-enhancing synergies. Other than hedge fund activism, blockholders that seek board representation are expected to be driven by different motives than pressing for takeovers. Edmans and Holderness (2017) criticizes that this classification can be flawed and misleading, clarifying that a passively managed index fund is not necessarily passive in influencing a company's corporate governance. Consistently, 'informed voting' is in itself part of voice (Yermack, 2010). The classification is too theoretical, so a precise identification proves questionable, revealing the equally limited applicability of the 'passive' and 'active' within the empirical framework.

'insider' and 'outsider': Following Franks and Mayer (2001); Gillette et al. (2008), blockholders can be distinguished between insiders and outsiders. Insider investors are often tied with their personal wealth to the company over the years (Konijn et al., 2011, p. 1333). In general, insider shareholders either hold formal positions in the company or have family ties to the founder or founding family (Marquardt, 2020), so these shareholders could be less vigilant in monitoring the manager's activities. The situation raises important questions to what extent representatives of insider-blockholders can be considered to be independent. In contrast, outsider blockholders generally lack personal ties with members of the firm, so they should be less influenced by incumbent management and have a greater need for information acquisition (Marquardt, 2020). The greater distance from established management may turn them into more vigilant monitors (Masulis and Zhang, 2019). As such Marquardt (2020) and Agrawal and Nasser (2019) limit their analysis primarily on board representation of outsider blockholders. Although the classification scheme proves to be very promising, it remains questionable whether the classification

can be applied to the empirical framework. The reason is that the outsider classification would subsume a wide range of very different types of shareholders, including banks, insurance firms, companies, holding firms, hedge funds, individuals, private equity, or the state.

'financial' and 'non-financial': In a similar vein, another way of categorizing shareholders is to distinguish between non-financial and financial investors. According to the classification scheme, financial shareholders mainly focus on the firm's financial performance. Edmans and Manso (2011) suggest that financial investors trade on short-term information and are more susceptible to liquidity needs. Conversely, non-financial shareholders are more *strategically* aligned and so more concerned with implementing change and engaging in monitoring (J Hadlock and Schwartz-Ziv, 2019). Correspondingly, Beck (2016, p. 90) argues that the classification is difficult to apply as their objectives are not easily distinguishable (e.g., individual investors may be intuitively classified as non-financial investors but typically behave similarly to financial investors). Therefore, it remains questionable whether it is suited for a range of empirical evaluations.

'trading' and 'activist': Given the challenges in formulating a universal classification system, Edmans and Holderness (2017) propose a different approach. The authors distinguish between 'activist' blockholders, 'trading' blockholders, and 'index funds.' Accordingly, activist blockholders can use various mechanisms to govern through voice. Consistent with the relevant literature, the thesis defines blockholder board representation as a specific mechanism of voice (i.e., monitoring). In contrast, 'trading' investors govern mainly through exiting but can also exert voice through voting (Edmans and Manso, 2011). Similarly, index funds can only govern through trading but can also engage through informed voting. Edmans and Holderness (2017, p. 581) outline that whether blockholders prefer short-term or long-term performance depends mainly on the trading style of the blockholder, that is, whether a blockholder's trading decisions depend on short-term or long-term information, regardless of the actual holding period. Consequently, blockholders classified as long-term may trade short-term and vice versa. Subsequently, Edmans and Holderness (2017) note that a shareholder's investment period is an endogenous choice, determined by managerial performance.

There are various classification schemes in the literature to classify shareholders into meaningful groups. However, it is important to choose an appropriate classification scheme suitable to the data to draw proper empirical inferences. With this in mind, the classifications of the most relevant studies are presented before introducing an alternative set of investor categories:

Table 9: Overview of shareholder classifications in the literature (*Source: Own illustration*)

	Third level	Second level	First level
Marquardt (2020)	Insiders		Current (former) management Family Founder
	Outsiders		Activist institution Corporation Hedge fund Other financial institution Unaffiliated individual
J Hadlock and Schwartz-Ziv (2019)	Financial	Generic financial	Bank Broker Insurance Mutual fund Private banking Wealth management
	Non-financial	Strategic investor	Hedge fund Private equity Venture capital
		Company	Private company Public company
		Individual	Affiliated individual Trust Unaffiliated individual
		Other blockholder group	College / University ESOP Foundation / Endowment Government Non profit organization Pension Fund
Cronqvist and Fahlenbrach (2008)			Activist and pension fund Bank Corporate Hedge fund Leverage buyout Individual Insurance Mutual fund Trust University Venture capital
Edmans and Manso (2011)	Active	Prospective	Activist investor Venture capital etc.
	Passive	Retrospective	Insurance Mutual fund etc.
Franks and Mayer (2001)			Bank Domestic company Family Foreign company Insurance Other domestic authority State Trust / Inst. investor

The review of the competing blockholder classifications indicates that literature is becoming increasingly savvy in defining a set of rules to distinguish among different blockholder types (Elston, 2019). Recent studies introduce multiple levels of granularity to determine various types of blockholders. While forming groups that are too narrow can increase variation, it can also lead to sub-optimal inferences and increased model complexity (J Hadlock and Schwartz-Ziv, 2019). Similarly, forming only two groups may not do justice to the underlying heterogeneity of blockholders and may lead to information loss. Defining shareholders at the first level seems straightforward. However, it remains challenging to group the different blockholder types into meaningful categories due to the limited applicability of the various classification schemes.

Edmans and Holderness (2017) suggest to distinguish between 'trading' blockholders and 'activist' blockholders. However, the authors do not assign the individual shareholder types to these two overriding classifications. A potential reason is that blockholder heterogeneity is context-specific. Whereas US-driven studies include a wide range of financial investors (J Hadlock and Schwartz-Ziv, 2019), non-US-driven studies (e.g., Germany) focus on non-financial investors, including family, state, and corporations (Franks and Mayer, 2001). The latter implies that monitoring is primarily exerted by controlling shareholders. In this respect, the German sample comes along with additional challenges, and Franks and Mayer (2017, p. 700) note: *'Ownership of German listed companies is stratified into two parts: a substantial proportion is highly concentrated in the hands of families and other companies, while the other part has largely dispersed ownership just like the US and the UK'.* Therefore, the arguments highlight that defining a set of universally applicable rules is a complex task.

In Table 10 the thesis pre-categorizes the underlying parent entities into one of the following groups: 'founder', 'family', 'managers', 'parent firm', 'corporate', 'foundation/endowment', 'state', 'holding firm', 'individual', 'hedge fund', 'asset management', 'insurance', 'bank', and 'private equity'. Based on this granular pre-categorization, a blockholder is defined as 'insider' when the parent entity is previously classified as either 'founder', 'family member' or 'manager'. A blockholder is defined as 'corporate' when the parent entity is previously classified as either 'parent company', and 'corporate'. Similarly, a blockholder is defined as 'other strategic investor' when the parent entity is previously classified as either 'foundation', 'state', and 'holding firm'. Lastly, a blockholder is defined as 'institutional investor' when the parent entity is classified as either 'individual', 'hedge fund', 'private equity', 'bank', 'insurance company', or 'asset management'.[12] The thesis contrasts the outlined classification scheme to the shareholder definitions of

[12] Assuming that individuals behave in a manner in line with hedge funds.

Edmans and Holderness (2017), J Hadlock and Schwartz-Ziv (2019), and Marquardt (2020).

To sum up, it is shown that different classification schemes lead to varying degrees of blockholder heterogeneity. J Hadlock and Schwartz-Ziv (2019, p. 4201) note that part of the challenge in blockholder research is to define heterogeneity since data can be summarized at different degrees of granularity. Against the background of increasing blockholder groups, interpreting the results and drawing empirical inferences becomes more complex. As such, blockholder classification is likely to influence empirical results. Therefore, it is clear that the chosen blockholder classification must be context-specific to the research framework.

Table 10: Shareholder classification (*Source: Own illustration*)

<table>
<tr><th>Shareholder type</th><th>Shareholder group</th><th>Marquardt (2020)</th><th>Edmans and Holderness (2017)</th><th>J Hadlock Schwartz-Ziv (2019)</th></tr>
<tr><td>Family
Founder
Manager</td><td>Insider</td><td>Insider</td><td rowspan="4">Activist</td><td rowspan="3">Non-financial</td></tr>
<tr><td>Corporate
Parent company</td><td>Corporate</td><td rowspan="4">Outsider</td></tr>
<tr><td>Foundation
Holding firm
State</td><td>Other strategic investor</td></tr>
<tr><td rowspan="2">Individual
Hedge fund
Private equity
Bank
Insurance
Asset management</td><td rowspan="2">Institutional investor</td><td rowspan="2">Trading</td><td rowspan="2">Financial</td></tr>
<tr><td>Index funds</td></tr>
</table>

4.5 Blockholder motivation

Based on the previously defined shareholder classification in Section 4.4, the thesis shall review the motivation of different shareholder types to seek board representation apart from mitigating agency problems in the firm. The review allows to comprehend the investor's identity and potentially provides insights into why certain blockholder types are more likely to be represented on a company's board (Marquardt, 2020). Whether shareholder representation on the board constitutes good corporate governance is an empirical question that needs to be investigated in light of shareholder heterogeneity. As opposed to insiders, outsider attributes may differ significantly. In addition, it is prudent to believe that there are also significant differences among outsiders. Along these lines, Cronqvist and Fahlenbrach (2008) argue that failure to account for shareholder heterogeneity may lead to a lack of substantial outcomes when attempting to link governance attributes to firm performance. In this respect, J Hadlock and Schwartz-Ziv (2019, p. 4218) outline that different firm attributes are likely to attract different types of shareholders.

Inside investors

Consistent with Franks and Mayer (2001), the thesis acknowledges the crucial role of inside investors, as they typically have invested most of their private wealth in the company:

Family. Families (including founders) hold significant non-diversified stakes in the company over multiple generations (Anderson and Reeb, 2003, p. 1304). The lack of diversification typically increases incentives to engage in extensive monitoring (Hope, 2013, p. 7). As a result, families are classified as credible as well as reputable investors with extensive company- and market-specific expertise (Anderson and Reeb, 2003, p. 433). In particular, the presence of founders and families as major shareholders mitigate the adverse effects of the free-rider problem (Andres, 2008, p. 433). In this regard, Faccio and Lang (2002, p. 379) present results indicating that families control about 64% of listed companies in Germany. As a comparison, in the US, the proportionate share of family firms is at around 37% (Villalonga and Amit, 2006, p. 394). A typical feature of family firms is that the managing family retains control rights that exceed its cash flow rights (i.e., family owners tend to exploit control-enhancing mechanisms (Bennedsen and Nielsen, 2010; Bianchi et al., 2001; Masulis et al., 2009)). In corollary, family shareholders are in a unique position to monitor management (Masulis et al., 2011), but also to engage in value-destroying decisions.[13] For example, due to nepotism, executive positions could be passed

[13]For example, the Henkel family holds 61.02% of Henkel AG & Co. KGaA, while Simone Bagel-Trah acts as chairwoman of the supervisory board and thus retains control over key corporate decisions. Other prime examples of entrenchment through family ownership include Volkswagen AG, Eventim CTS Eventim AG & Co. KGaA, Ströer SE & Co KGaA, Fresenius SE & Co KGaA, Drägerwerk AG & Co

on within the family, which may prevent a value-maximizing choice of hiring external managers (Anderson and Reeb, 2003, p. 1302). Collectively, families are actively involved in the management process and acquire board seats to concentrate control (Kim and CHO, 2020, p. 31). Given that other shareholders are typically absent (Anderson and Reeb, 2003; Fama and Jensen, 1983; Shleifer and Vishny, 1997), families can reap private benefits of control, which could exacerbate conflicts of interests with shareholders and stakeholders (Marquardt, 2020, p. 2).

Founder. In this respect, founders specifically exhibit unique characteristics that differ from family ownership. For example, founders are significantly more committed to the company and have a deeper understanding of the firm's day-to-day operations (Pérez-González, 2006; Villalonga and Amit, 2006). Existing literature documents that companies with managing founders serving on the executive or supervisory board are linked to higher firm value and profitability (Andres, 2008). Moreover, founders usually have strong company and technical knowledge, further reducing information asymmetries. Accordingly, founders have incentives to seek board representation due to a relatively more robust control orientation but also a higher willingness to take entrepreneurial risks (Miller et al., 2011). In summary, families remain invested in the firm over generations, so the time horizon for families (including founders) seems to exceed that of other long-term investors. Because non-family members often run companies, families and founders have strong incentives to reduce potential information asymmetries.

Manager. The insider classification also includes managers who are often described in the literature as risk-averse since both human capital and financial resources are tied up in the company (i.e., full-time employees). For that reason, managers are often said to have low diversification (Klein and Zur, 2009, p. 191). Because their interests are closely linked to the company's performance (Adams et al., 2010, p. 80), managers may have incentives to appoint directors to the board. Since managers are already involved in the company's decision-making process, they have considerable insider knowledge. They are not required to be activists as opposed to individuals from outside (Mehran, 1995, p. 165).

Other strategic investor

Subsequently, the thesis assigns foundations, the state (domestic and foreign), and holding companies to the 'Other strategic shareholders' group:

KGaA or Bayerische Motoren Werke AG. Some family-owned companies are characterized by either dual-structured shares, deviations from the legal structure of the 'AG' or 'SE', or family members in key formal positions in the company. In combination, these mechanisms allow families to concentrate on control.

Foundation. Other strategic shareholders, such as foundations, describe shareholders who have a strategic interest in the company, albeit financial objectives appear secondary. For example, founding families often transfer (part of) their wealth into a family foundation that holds significant block ownership in the firm to pursue charitable goals. Their importance is similar to family ownership in subsequent generations, so family attributes are applicable with foundations (Achleitner et al., 2020).[14] Their claim to control is seemingly to be less pronounced, as foundations are not necessarily managed by their sponsors. The lack of residual claim-holders may result in increased agency issues (Achleitner et al., 2020; Børsting and Thomsen, 2017; Franke and Draheim, 2015). Against legal constraints, foundations may be required to retain a significant stake in the company. Therefore, foundations are interested in capital preservation and modest growth to fund charitable activities, which is not necessarily in alignment with the preferences of other blockholders. A foundation's risk-averse orientation is presumably in the interest of other stakeholders (i.e., employees). For this reason, foundations are treated as a distinct blockholder type in alignment with Achleitner et al. (2020, p. 3), that have a vested interest in the long-term preservation of their investments for funding charitable activities.

State. The state as a major stakeholder is not primarily financially oriented but seeks to protect key industries from hostile takeovers by foreign companies (and consequently preserve jobs in Germany). The state is more likely incentivized to protect the state's interests and that of other stakeholders (e.g., employees).[15] State intervention through board representation also occurs in the event of rescuing distressed firms that 'are too big to fail'.[16] The state's goals are essentially politically motivated, such as job security, regional development, or infrastructure expansion. Since the state operates with taxpayers' money, the bailout of companies is often tied to restrictive conditions that the state expects to be met. However, there is a difference between domestic and foreign government involvement, as the motives of foreign sovereign investors may differ from those of domestic state investors. Foreign state investors may seek strategic partnerships with domestic companies to facilitate the technological transfer of expertise for building a

[14]For example, the Alfred von Bohlen und Halbach Foundation continues the family involvement in ThyssenKrupp AG and holds two seats on the supervisory board. Other foundations with large blocks of shareholdings include Software AG and Fielman AG.

[15]Prominent examples of state intervention are formerly state-owned companies such as Deutsche Telekom AG or Deutsche Post AG or the car manufacturer Volkswagen AG. Lower Saxony holds an 11.8% stake in Volkswagen AG and has two permanent seats on the supervisory board. The economic and financial performance is secondary and primarily serves the positive effects for the State of Lower Saxony, such as preserving jobs.

[16]As a result of the financial crisis, Commerzbank AG was bailed out by the federal government. Deutsche Lufthansa AG received government funding at the height of the global COVID-19 pandemic. These companies were strikingly eager to repay the financial aid in a relatively short period, indicating the state's 'hard line' in monitoring these companies.

domestic industry. Accordingly, foreign state intervention may occur predominantly due to non-financial motives.[17] In addition, foreign state investors can benefit from involvement in large foreign companies, as they can achieve reputational gains due to the high market value of the target company. (Raheja, 2005, p. 287).

Holding company. In addition, holding companies are considered within the category of 'other strategic shareholders' because large holding companies have a strategic interest in their investee companies (Rommens et al., 2004). As a result, holding companies can be defined '*as financial institutions that manage a stock portfolio to control the companies [...] The important term in this definition is the concept of control'.* (Daems, 2012, p. 2). The main objective is to combine several companies to achieve economies of scale and possibly weaken competition by gaining a near-monopoly in the market. Holding companies may combine the activities of two or more separate companies under a common entity, with all subsidiaries retaining their identities and business activities. Typically each subsidiary is responsible for its day-to-day operations, with the holding firm being not involved explicitly. As a consequence, holdings companies are incentivized to concentrate control and employ board representation as a governance mechanism to increase monitoring over the firm's management (Rommens et al., 2004).

Corporate investor

Corporate investors are also strategic investors. However, corporate investors appear to have different claims on the companies they are invested in:

Corporate and parent companies. Goergen et al. (2008b, p. 182) note that block ownership by industrial companies is a salient attribute of the German corporate governance system. Consistent with Franks and Mayer (2001); J Hadlock and Schwartz-Ziv (2019), the thesis considers corporate investors as a distinct investor group that is distinguished between 'companies' and 'parent companies.' Corporate shareholders are classified as 'parent companies' if they hold at least 30% of a company's outstanding shares. In analogy with holding firms, parent companies primarily use board representation to retain control over the subsidiary.[18] Board seats provide a forum for integrating the subsidiary into the parent company's business structure in line with

[17] An example of a foreign state shareholding is Qatar Holding LLC.'s stake in Volkswagen AG. Nearly two-thirds of the country's gross domestic product is based on oil and gas. To diversify its state investments and gradually establish a domestic industry, the state invests in renowned industrial companies worldwide.

[18] Volkswagen initially purchased a block of shares of less than 30% in Man SE and gradually increased its stake before fully acquiring MAN SE. Volkswagen AG had complete control over the management of MAN SE through the implementation of a domination agreement.

the company's overall strategy. Because they are often companies in the same industry, corporate blockholders have sufficient expertise to provide sound advice to the management board. Whereas productivity of the subsidiary firms is positively associated with block ownership of (industrial) companies, Goergen et al. (2008b, p. 182) comment on contemporary literature that such companies have incentives to engage in rent extraction at the detriment of other stakeholders. Compared to parent company investors, corporate investors have a weaker claim to seek board representation given their significantly lower ownership stakes below 30%.

Institutional investor

The thesis introduces *institutional investors* as the last shareholder group (including asset management, bank, hedge fund, individuals, insurance, and private equity):

Bank and insurance. In the past, banks and insurance companies held significant equity stakes and were intertwined in the governing bodies of the underlying sample firms. Banks can be characterized as risk-averse shareholders who simultaneously act as providers of debt capital to the firms they are invested in. Despite their historical influence, the influence of banks and insurance companies gradually decreases as the 'German Inc.' continues to *dissolve* or instead to evolve (Andres et al., 2011; Franks and Mayer, 2001). Despite the continuing decline, representatives of banks and insurance companies are still to be found on the boards of the sample firms. Goergen et al. (2008b, p. 183) find that a company's cost of debt decreases when bank representatives are represented on the board, given that banks are usually more risk-averse than financial shareholders. Marquardt (2020) provides evidence suggesting that blockholder directors affiliated with outside shareholders can serve as a substitute for bank supervision. Overall, the bank's primary motivation for seeking board representation derives from risk considerations.

Hedge fund. Shareholders classified as hedge funds are best described as activist investors, while there is no generally accepted definition of what constitutes a hedge fund. Instead, it includes a wide range of institutional investors that operate using different investment strategies and outside of any securities regulation and registration requirements (Partnoy and Thomas, 2007, p. 23). In general, hedge funds are unregistered, private investment partnerships that are accessible primarily to wealthy and sophisticated investors (Achleitner et al., 2010, p. 808). While these passive partners provide the bulk of the fund's financial resources, the hedge fund managers have a high degree of independence to identify profitable investment opportunities (i.e., event-driven or long-short hedge strategies, or tactical trading (Gibson and Gyger, 2007, p. 304).) In this regard, these investors mainly target undervalued companies where the potential

for value increases comparatively high over a short period.(Kahan et al., 2015, p. 1069) Thereby, hedge funds primarily aim at maximizing absolute returns irrespective of any benchmark given their performance-based compensation structure. Typically, hedge fund managers pursue ex-ante strategies. Hedge fund managers evaluate whether activist actions can add value, acquire an appropriate equity position, and take action. Depending on the strategy pursued, this could involve the participation on the board (Kahan et al., 2015, p. 1069) as hedge fund managers have incentives to push for strategic changes (Partnoy and Thomas, 2007, p. 25). Based on Refintiv's activist campaign database, the most frequently pursued objectives of activist shareholders in Germany are: *(i)* strategy changes, *(ii)* composition of the management and supervisory board, *(iii)* claims for damages, *(iv)* share increases resulting from takeover bids, *(v)* restructuring measures, and *(vi)* short sales attacks.[19] In sum, hedge funds may have incentives to take board seats to capitalize on their strategies and meet their financial goals (Bebchuk et al., 2020).

Private equity. In analogy to hedge funds, private equity firms operate outside of regulations and registration requirements (Bratton, 2007, p. 1382). Private equity funds pool funds from other institutional investors and wealthy individuals (Watt, 2008, p. 549). Nevertheless, there are substantial differences between hedge funds in terms of the investment style (Mietzner and Schweizer, 2014, p. 185). Private equity funds have a finite life. During this period, investors cannot redeem their shares, which allows fund managers to focus on a long-term investment strategy and consequently engage in voice. In this context, fund managers usually have a high level of business knowledge and a diverse set of skills to restructure the firm and capitalize on these changes afterward (Mietzner and Schweizer, 2014, p. 157). Private equity funds typically hold significant stakes in a relatively small number of private (but also listed) companies and remain invested with a long-term horizon. Additionally, private equity funds utilize a high degree of leverage. Therefore private equity firms are less dependent on the stock liquidity of their investee firms (Maug, 1998, p. 65) or collaborating with other shareholders to seek control (Brav et al., 2021). The goal of maximizing returns includes ensuring constant cash flows to service interest payments to debtholders (Watt, 2008, p. 555). Due to performance-based compensation, most private equity funds are motivated to exert voice (Kaplan and Stromberg, 2009, p. 124). Private equity funds, in particular, can successfully reduce agency problems, partly because of their adaptability to local corporate governance systems (Mietzner and Schweizer, 2014, p. 3). Due to their expertise, private equity firms utilize board representation to appoint highly skilled experts to an investee firm's supervisory board. Hence, private equity firms are mainly driven

[19] 'Cevian Capital AB' engaged in block-building and simultaneously demanding publicly a seat on the supervisory board, as in the case of ThyssenKrupp AG and Bilfinger SE.

by 'monitoring' and 'advisory' role.

Individual. Shareholders classified as 'Individuals' are shareholders with no personal ties to the company (Becker et al., 2011, p. 1). Also, since individual investors are not investment or pension funds, they are not subject to securities regulations or registration requirements. With that being said, activist investors such as 'Carl Icahn' or 'Guy Wyser-Pratte' and other wealthy investors, for that matter, would be included in this category.[20] Because of the close link of activist investors to hedge funds, the thesis classifies individuals as institutional investors. Individuals may face substantial constraints in their ability (i.e., lack of financial or human resources) to hold large, diversified portfolios (Mehran, 1995, p. 165). Accordingly, their influence is typically limited to a selected number of target companies, with a significant portion of their wealth being tied to the investment. Therefore, individuals may have a vested and strategic interest in seeking board representation, so the primary motive for these shareholders is to ensure that their demands are taken seriously.

Asset management. The thesis summarizes all shareholders that do not fall into any of the described subgroups of institutional investors under the term 'asset management.' In general, asset management refers primarily to funds in which investors' money is pooled and subsequently invested over a certain period to earn an appropriate return (Dasgupta et al., 2021, p. 1) while there are many financial institutions and intermediaries (including index funds, mutual or pension funds, investment advisors, or research firms). As such, the benefits of these funds are essential to earn capital gains and dividends (Franks, 2020, p. 261). Compared to hedge funds or individual investors, asset management companies are subject to extensive regulatory guidelines and disclosure requirements (Bratton, 2007, p. 1382). Moreover, actions to diversify the fund must be in place, and that often renders it difficult or even impossible to maintain significant block positions (Kahan et al., 2015, p. 1049). It is important to distinguish between actively managed funds and passively managed funds. Both funds are generally precluded from holding any board seats while considering long-term investment strategies. However, the funds generally differ in the level of activism. A passive fund is an index fund that tracks the performance of an

[20] In an interview, the activist investor Guy Wyser-Pratte reveals to use aggressive tactics to get the attention of a firm's management. The activist investor acquires shares in undervalued companies, quietly engages in stock-building, and directs his demands to the firm's management to push for large-scale strategic and structural changes. The activist investor increases pressure and engages in different formal and informal strategies, amongst others attaining approaching the press to acquire board seats, forming coalitions, and convening extraordinary shareholders' meetings to vote against the firm's management. If the firm's management still does not implement the demands, the activist investor increases his block and the pressure on management until his objective is complete. *Source: Spiegel (2004) - Ich orientiere mich an der Gefechtstaktik der Marines, accessed 22.09.2021.*

existing index. By design, index funds operate more cost-efficiently than active funds (Fichtner et al., 2017, p. 298). These funds cannot engage in the activism of exit, given that they are required to track the benchmark index. In the underlying context, funds are distinguished by the type of governance (i.e., active or passive) (Deeg and Hardie, 2016, p. 639) rather than the degree of activism (i.e., activist or trading) (Edmans and Holderness, 2017, p. 543). Overall, the general claim of shareholders classified as 'asset management' to seek board representation is the weakest relative to the other shareholder types outlined in this section.

4.6 Critical assessment

The discussion on the blockholder framework highlights the critical role of blockholder-directors in the governance of firms and the need to conduct blockholder research from the lens of blockholder heterogeneity. The overview of the various studies indicates that there is no standardized framework to classify blockholders into homogeneous groups. The proper categorization of shareholders is essential to draw correct empirical inferences when reasoning about the potential implications of blockholder board representation (Cronqvist and Fahlenbrach, 2008; J Hadlock and Schwartz-Ziv, 2019; Schwartz-Ziv and Volkova, 2020). Correspondingly, the classification of shareholders must account for the corporate governance regime and the different motives and intentions of a diverse set of blockholders to seek board representation. The primary motive for various shareholders is to exert control and increase monitoring. Other reasons include *(i)* accessing private information and *(ii)* using the board to communicate with other stakeholders.

The thesis identifies 14 distinct investor types, categorized into four investor groups: insider, institutional investor, other strategic investor, and corporate. Given that German ownership remains substantially concentrated and insider-driven, insider blockholders should have a vital role in the governance of firms. Summary statistics on ownership reveal that foreign institutional investors gradually dominate the governance regime in Germany so that financial investors are likely to gain importance in the future. Next to financial shareholders (i.e., institutional investors), the thesis also considers non-financial investors common in Germany, including corporations and other strategic investors. The thesis notes that seeking board representation as a form of voice is more likely to resonate with blockholders pursuing a long-term strategy and associated with larger block ownership. Since large shareholders are said to be linked with attributes that promote monitoring (due to superior capabilities and willingness), it raises questions about why blockholder seeks board representation if not for monitoring purposes to mitigate prevailing agency issues. The question should not be whether there are any implications of board seat formation but to what extent blockholder-directors can affect firm governance and performance and how inferences can be drawn empirically.

A side note shall be dedicated to the independence of blockholder-directors. The discussion reveals that the classification of blockholder-directors is not as straightforward as it may appear. On the one hand, blockholder-directors could be associated with rent extraction if the primary intention to obtain board seats is to collude with the firm's management or critical stakeholders to the detriment of shareholder value. Similarly, shareholders with a greater need for information

dissemination may over-monitor to the point of creating a hostile environment where a trusted environment is compromised (J Hadlock and Schwartz-Ziv, 2019; Marquardt, 2020). On the other hand, blockholder-directors could improve firm value through increased monitoring and due to immediate access to private information (Edmans and Holderness, 2017). Correspondingly, the presence of blockholder-directors can lead to a more trustworthy environment facilitating communication and information dissemination with and within boards (i.e., communication between *(i)* the management board and supervisory board, *(ii)* shareholder representatives and employee representatives, and *(ii)* the different committees). Apart from mitigating agency issues, seeking and having representatives on the board of an investee company might differ by shareholder type. In summary, insider blockholders are arguably more closely aligned with the firm's management (Coles et al., 2014), so one aspect of their decision to seek board representation is to concentrate control. In contrast, outsider blockholders are presumably more inclined to get access to private information (Marquardt, 2020) and presumably other strategic (non-financial) goals.

5 Literature review and hypothesis specification

The section outlines the current state of research on the determinants and implications of board seat formation. In this regard, the thesis considers the most relevant studies in blockholder research. It concludes with eight specific hypotheses designed to address the empirical question as to why so few blockholders take board seats in the company. The set of hypotheses is based on the rationale outlined in the opening of the thesis.

5.1 Literature review

There is a vast body of research on boards and blockholders and their implications for corporate policy and performance. As a result, this thesis discusses only a few selected research papers relevant to the underlying research question.[21] It contributes to the literature by extending the discussion on blockholder intervention through the means of board representation.[22] The thesis joins a growing body of literature on blockholder research. Although shareholders are the ultimate owners of the firm, control effectively resides with the firm's management, who could pursue self-serving goals and engage in investment distortions (Core et al., 1999; Jensen, 1986; Renjie and Verwijmeren, 2019). Having blockholders transfer a significant part of their control rights to corporate managers who run the firm's day-to-day operations on their behalf, it stands to reason that blockholders will step in when things are not going the way shareholders expect. Since the board is widely perceived as the ultimate governing body of the company, blockholders are presumably incentivized to engage in board seat formation, allowing them to reclaim some of their abandoned property rights and increase monitoring over the firm's management.

[21] A large number of contemporaneous studies deal with ownership structure in general (Cronqvist and Fahlenbrach, 2008; Edmans and Manso, 2011; Goergen et al., 2008a,b; Lehmann and Weigand, 2000). More specifically, Baker and Gompers (2003); Denis and Sarin (1999); Edmans and Holderness (2017); Klein (1998) study the particular relationship between board structure and ownership structure.

[22] Despite the structural differences between the one-tier and two-tier boards, the thesis subsumes under the term 'board' *(i)* the board of directors and *(ii)* the board, respectively. The incentive to seek board representation is expected to be homogeneous.

Ownership structure

Dlugosz et al. (2006, p. 594) note that large blockholders represent an important variable to study. J Hadlock and Schwartz-Ziv (2019, p. 4196) extend the notion and advocate that it is meaningful to understand the *block-building process*. Denis and Sarin (1999, pp. 213) examine structural changes in block ownership and board composition over time and conclude that both are weakly correlated. Baker and Gompers (2003, p. 571) report a significant link between board structure and ownership among US firms and argue that board composition may depend on the outcome of negotiations between the CEO and the firm's shareholders. Arguably, blockholders may act as a counterweight to balance a strong CEO on US boards.[23] Both Denis and Sarin (1999), and Baker and Gompers (2003) examine the interaction between ownership and board composition in a US setting, but they do not explicitly account for board representation as an intervention mechanism. The scholars neither review how block ownership is linked to the decision-making process to seek board representation nor consider blockholder heterogeneity, whether certain shareholders have stronger incentives to take board seats than others.

Multiple scholars, amongst others Franks and Mayer (2001); Goergen et al. (2008a,b); Lehmann and Weigand (2000) study the implications of block ownership on corporate policy and performance in light of the German two-tier board system. Goergen et al. (2008b, p. 182) highlight the importance of recognizing the type of the controlling blockholder since each type of blockholder is likely associated with different sets of expertise and objectives in monitoring a firm. Lehmann and Weigand (2000, pp. 162) account for the ownership concentration in German firms and assert that the identity of the shareholder is essential. Further, shareholders associated with significant block ownership have incentives to pursue monitoring duties and discipline the firm's management. The significance of the relationship increases in magnitude for blockholders with personal attachments to the firm and decreases with concentrated ownership. In addition, the authors conclude that 'governed' firms are associated with better performance when the largest investor is classified as 'family' or 'financial institution'.

Franks and Mayer (2001) study the influence of large shareholders on a firm's supervisory board composition. The authors conclude that large shareholders are usually represented on the firm's boards. Moreover, the authors note that the supervisory board's chairman is predominantly reserved for bank representatives or former executives (e.g., CEO) of the firm (Franks and Mayer, 2001, p. 954). Consistently the authors elaborate that in nearly 50% of the cases, an

[23]The German dual-tier system is less susceptible to CEO power since the supervisory board must be independent of the firm's management. In corollary, the director-election process is less likely influenced by powerful CEOs in Germany than in the US.

insider controls the supervisory board's chairman. The paper has some limitations concerning the underlying research question. The scholars only consider firms listed on the leading German DAX index from 1988 to 1997. To begin with, the DAX index, historically comprising the largest 30 blue-chip companies, may not be the most appropriate benchmark to assess German corporate governance in its entirety, and second, the German corporate governance system has evolved considerably since 1998 (see Figure 2). Further, the authors do not account for board seats as an active controlling mechanism to discipline management and consequently do not study the implications of board representation explicitly.

Edmans and Manso (2011) formalize a theory on the interaction of multiple blockholders in which most firms have various blockholders who can govern either through trading (i.e., exit) or intervention (i.e., voice). The presence of numerous blockholders causes coordination problems among the different shareholders resulting in weaker governance relative to the presence of a single blockholder (Edmans and Holderness, 2017). Edmans and Manso (2011) argue that blockholders inadvertently impound more information into stock prices than required. Since multiple blockholders are effectively restricted in their ability to corroborate on trading strategies, to maximize trading gains, each blockholder ends up trading competitively to capitalize on private information, increasing the efficacy of trading as a disciplinary mechanism. In sum, Edmans and Manso (2011, p. 25)'s theory suggests that a large (low) number of blockholders is optimal when the competing blockholders are passive (active). As the number of blockholders grows competing for trading profits, they trade more competitively to capitalize on private information. In contrast, a blockholder without competition is likely to limit her trading activity and engage in activities to conceal her private information. There is a trade-off between governance through intervention and governance through blockholder trading.

Board composition

Literature on board composition is likewise manifold (Anderson et al., 2011; Bernile et al., 2018). Studies show that diversity in board composition is associated with a higher firm value (Anderson et al., 2011, p. 6) and facilitates innovation and persistent corporate performance (Bernile et al., 2018, p. 1). Gillette et al. (2008) study the effect of varying board structures on firm performance across different corporate governance systems to provide regulators with a framework to improve best practices in corporate governance. Gillette et al. (2008, p. 127) find that one-tier boards are linked to increased board efficiency as the fraction of independent, outside directors grows larger. The authors advocate that those outside directors are associated with increased board monitoring. In analogy, the authors explain that a two-tiered board is only

efficient when the management board is controlled by a supervisory board that independent outsider directors dominate. By definition, unlike the US one-tier board system, there are no insider directors actively serving on German supervisory boards, as the two governing bodies are legally separate entities within the company (i.e., Figure 3). In this respect, the thesis raises the question of whether blockholder-directors can be considered independent in the meaning of the term, as suggested by Agrawal and Nasser (2019). If so, companies can be expected to benefit from having a larger number of (independent) blockholder-directors on the board.

Raheja (2005) and Adams et al. (2010) empirically deal with the question of the optimal board size and board composition. Both examine the optimal relationship between insider and outsider directors. According to Raheja (2005, p. 283), the optimal level of outsiders is contingent on two determinants: *(i)* incentivizing insider directors on the board to disclose superior information to outsider directors for reducing coordination costs and *(ii)* facilitating outsider director's ability to block value-destroying investment decisions. Outsiders are key to optimal board composition, and as such, outsider representation is an established proxy to gauge board independence (Adams et al., 2010, p. 73). The authors note that outsider directors are generally less informed than insider directors, so the incremental increase in the number of outside directors improves firm value when information acquisition costs are low. Although these studies provide insightful findings on the implications for firm performance, they do not explicitly consider board representation as a means of blockholder intervention.

Whereas, Bebchuk (2007, p. 102) advocates that a shareholders' capacity to make amendments to a firm's board composition is a myth, Gow et al. (2014, p. 102) suggest that activist investors can join the board of a firm through private negotiations with incumbent management. Similarly, Gordon and Pound (1993, p. 715) report that blockholders acquire board seats when they are strategically aligned with incumbent management. Carleton et al. (1998, p. 1342) assert that the outcome of private negotiations with incumbent management primarily depends on the level of insider ownership. Lastly, Klein (1998, p. 275) examines the interrelationship between a company's ownership structure, board composition, and performance. Specifically, Klein (1998, p. 300) examines the composition and structure of board committees in US firms and accounts for the allocation of roles assumed by the various directors within the board. The author coins the term '*relationship investing*', which describes the process of granting large shareholders board seats and offering them specific roles within the board (i.e., chairman or member of committees). The paper finds a significant link between firm performance and board structure.

Blockholder heterogeneity

Edmans and Holderness (2017) find that nearly every firm around the world has a blockholder.[24] Accordingly, they call for greater consideration of heterogeneity in blockholder research. Consistently, J Hadlock and Schwartz-Ziv (2019) reflect on a diverse set of blockholder types and comprehend the factors that drive their behavior and governance roles. Their results show that blockholders are heterogeneous investors who exhibit systematic differences in investment period, target company characteristics, and block size. The thesis shall reflect on board representation in light of blockholder heterogeneity since a blockholder's traits and preferences influence the decision to engage in board seat formation. According to Cronqvist and Fahlenbrach (2008, p. 3972), the primary source of heterogeneity is grounded in the ability to monitor a firm's management (i.e., the size block ownership, board representation, and management involvement). The ability to monitor is influenced by determinants such as investor horizon (Gaspar et al., 2005; McCahery et al., 2016) or governance style. Gaspar et al. (2005) study the implications of the investor's trading horizon in regards to the market for corporate control. The authors examine the level of short-term takeover premiums, the probability of takeovers, and the target firms' long-term performance. Whereas investors with long-term horizons have stronger incentives to monitor the management to prevent expropriation (Gaspar et al., 2005, p. 145), investors with a short-term horizon increase the takeover probability and lower the associated costs in the target company. McCahery et al. (2016, p. 12) conduct a qualitative analysis based on a questionnaire and conclude that long-term investors have larger incentives to use different channels of voice (i.e., monitoring). Thus, investors trading on long-term information is more likely to intervene in the management process than investors trading on short-term information.

J Hadlock and Schwartz-Ziv (2019) examine what implications can be inferred from blockholder heterogeneity concerning the decision to engage in block formation. The authors advocate that the identity of a blockholder is equally important as the presence of legacy blockholders. In line with Zwiebel (1995), the authors find that large blockholders tend to engage in crowding-out others. Also, the degree of activism depends mainly on the different motives to engage in '*block-building*'. Although the paper does not focus on board representation itself, it provides some critical insights into how blockholders behave. In particular, weaker corporate governance structures, poor corporate strategy, and excessive management compensation trigger activism. In this context, activism is explained by longer-term objectives as opposed to short-term (primarily monetary) goals (McCahery et al., 2016, p. 20). The discussion reveals that a longer

[24] In untabulated results, the underlying thesis notes that 96% (99.6%) of firms in the German sample are associated with one blockholder owning about 5% (3%).

investment horizon complements a higher degree of intervention.

Similarly, Hsieh and King (2019, p. 117) distinguish among activists (i.e., hedge funds and individuals), financial blockholders (i.e., pension funds, banks, asset managers, and other financial firms), and non-financial firms (i.e., corporations). The activist and non-financial investors have significant excess returns and increases in firm value. On the other hand, financial investors show neither significant excess returns nor any improvement in firm value arising from block-building efforts. J Hadlock and Schwartz-Ziv (2019, p. 4197) group investors into '*affiliated individual, unaffiliated individual, public companies, private companies, strategic investors (i.e., hedge funds and private equity investors), generic financial blocks, and others*'. The authors argue that block-building is driven by firm performance, stock liquidity, and company attributes (i.e., firm age, business risk). That is, the likelihood of strategic or financial investors entering a firm increases when liquidity is high since lower entry-exit costs are essential for their trading strategies (J Hadlock and Schwartz-Ziv, 2019, p. 4205). Moreover, non-financial blockholders tend to trade less frequently, hold investments for longer periods and maintain larger block sizes in smaller and less liquid firms. These findings suggest that non-financial blockholders tend to govern through '*monitoring/voice*', while financial blockholders typically govern through '*trading/exit*', which is in coherence with Edmans and Manso (2011).

Cronqvist and Fahlenbrach (2008, p. 3950) distinguish among *'activists and pension funds, corporations, individuals, mutual funds, insurance companies, money managers, hedge funds, leveraged buyout firms, venture capital firms as well as banks, trusts, and universities'*. The authors present evidence suggesting that *'activists, pension funds, individuals, corporations, mutual funds, and private equity firms'* are linked to strong fixed effects on firm policy (Cronqvist and Fahlenbrach, 2008, p. 3941). The authors conclude that some investor types are more adapt to pursue value-added strategies than others. Subsequently, board representation as a governance mechanism should be perceived as valuable differently for various investor types. The authors review the monitoring role of large blockholders in the context of the '*influence*' interpretation or the '*selection*' interpretation. The influence interpretation advocates that large blockholders engage in block building and monitoring. In doing so, large blockholders take an active role in influencing corporate policy to maximize shareholder value. In contrast, the selection interpretation assumes that large blockholders engage in block-building in selected firms in which corporate policies are already aligned with the preferences of large blockholders. This way, large blockholders act passively and do not push for change. The results suggest that mutual fund managers' engagements are consistent with the selection interpretation. In contrast, blockhold-

ers categorized as activists, individuals, and other financial blockholders are consistent with the 'influence' interpretation. Large blockholders pursue their individual beliefs that a specific set of corporate policies is likely to maximize firm value. Thus, firm-related policies are significantly correlated to the type of blockholder of the firm. Cronqvist and Fahlenbrach (2008) justify the underlying research paper as the authors pose the empirical question of to what extent their findings compare to other institutional environments and corporate governance systems. In contrast, Clifford (2008) classifies investors into the following groups: '*mutual and pension funds, investment advisors, banks and other financial institutions, industrial corporations, individual investors, venture capital, private equity, and hedge funds*'. Clifford (2008, p. 1492) finds that activist shareholders (i.e., hedge funds, corporations, private equity funds, venture capitalists, and professionals) are associated with a larger propensity to announce activist intentions. More so, activism occurs particularly when firm performance is poor so that it is associated with significant positive abnormal returns, while engagement of passive investors is statistically indifferent.

Blockholder board representation

Several papers address blockholder board representation to some degree as a governance mechanism. Holderness (2009, p. 1397) raises the concern that a blockholder who appears to the public to be passive may be actively involved in behind-the-scenes activities. In contrast, a blockholder associated with boards seats may in secret be 'asleep at the switch.' With that being said, the implications have not been fully understood in the literature. One reason may be that shareholders engage in private negotiations to attain board seats, so it is empirically challenging to link large shareholders to specific directors of the firm (Holderness, 2009, p. 1385). According to Holderness and Sheehan (1988, p. 324), this is a crucial aspect to study since board representation confers nearly all management rights to controlling shareholders when assuming formal corporate positions in the firm. The authors examine the role of blockholders owning a majority control in the firm and conclude that they nearly always have representatives on the board. The fact that many firms with majority shareholders (i.e., individuals and companies) associated with board seats survive in the market implies that controlling shareholders do not appear to engage in rent extraction (i.e., consumption of corporate resources) (Holderness and Sheehan, 1988, p. 344). As a result, the motivation to hold formal corporate positions in the firm is not not only to monitor management but to get actively involved in the management process and thereby to lead the company (Holderness and Sheehan, 1988, p. 319).

Consistently, Edmans and Holderness (2017, p. 548) argue that the 50% threshold has limited meaning in stock ownership since blockholders, irrespective of their block ownership, are

constrained by similar factors. It is reasonable to believe that minority shareholders should be driven by similar motives to acquire board seats as shareholders associated with majority control. Accordingly, some earlier studies in this strand of literature study the implications of 5% blockholders being on the board (Berger et al., 1997; Holderness, 2003). Edmans and Holderness (2017) repeat the analysis of (Holderness, 2009) and reevaluate a random sample of 375 US firms based on proxy statements from 1995. The authors find a positive linear relation between blockholder ownership and board representation. The higher the proportionate block size (i.e., voting rights) attributable to a blockholder, the greater the likelihood of blockholder-directors being seated on the board consistent with their larger incentives to be active monitors.

Edmans and Holderness (2017) distinguish among '*individuals, institutional investors (i.e., mutual funds, hedge funds, venture capitals, pension funds), and corporations*'. The authors elaborate that individuals, corporations, and venture capitalists tend to obtain board seats (Edmans and Holderness, 2017, p. 554). In contrast, the remaining groups are less likely to be associated with board representation as they are categorized as 'trading' blockholders with numerous block positions and highly diversified portfolios. They have fewer incentives to seek board representation. The finding is consistent with Holderness and Sheehan (1988, p. 344) who conclude that blockholder identity is essential to understanding blockholder board representation. Moreover, Edmans and Holderness (2017, p. 554) conclude that decision to take board seats is negatively linked to firm age and firm value and positively linked to the firm's block ownership. Consistent with Agrawal and Nasser (2019), it can be assumed that there is a greater demand for board representation for (i) younger companies being under the management of founders and typically subject to significant uncertainties and risks, and (ii) lower than expected firm value, possibly due to the prevalence of agency issues in the company.

Against this background blockholder board representation may have positive implications for correcting costly entrenchment by management (Marquardt, 2020, p. 30). In the absence of institutional ownership, blockholder-directors may reduce agency costs as a board seat provides blockholders a forum to monitor management and interact with other board members (Agrawal and Nasser, 2019, p. 3). That being so, board representation may have considerable advantages for effective communication inside boardrooms (Malenko, 2014, p. 2). This is of particular importance to German two-tier boards in which co-determination leads to a shared governance environment (Jäger et al., 2019, p. 1). In addition, representation on the supervisory board grants blockholders close access to corporate management so that blockholders are likely to be exposed to timely information (Marquardt, 2020, p. 9), leading to lower information acquisition

costs (Lesmeister et al., 2018, p. 2). In this regard, access to private information may have implications on how blockholders vote at the shareholder's meeting (Bar-Isaac and Shapiro, 2020; Iliev and Lowry, 2015; Pound, 1988), thereby influencing other mechanisms of voice available to blockholders. In addition, a board seat puts blockholders in a position to influence corporate policy and engage in activities that facilitate the alignment of interests between managers and shareholders (Agrawal and Nasser, 2019). As a corollary, Bebchuk et al. (2020, p. 5) provide evidence linking the presence of blockholder directors to significant CEO turnover sensitivity when companies are performing poorly.

The direct costs of acquiring a seat on the board are arguably low, considering the blockholder's dollar amount of the underlying investment. However, there are indirect costs that may influence the decision-making process of blockholders to have representatives on the board (Gantchev, 2013, p. 610). Blockholders who intervene through *boardroom activism* face substantial commitment efforts and fiduciary costs (e.g., such as assuming personal liability) since a blockholder dedicates her time and effort to serve on the board (Marquardt, 2020, pp. 2). Moreover, a board seat bears substantial legal risks (relative to other channels of voice, for example, informed voting, behind-the-scenes engagement, or threat of exit) since the blockholder becomes a firm insider, which commits her to take a long-term position in the firm (Gow et al., 2014, p. 23). In addition, blockholders may be restricted to trade on information that is not public as Edmans and Holderness (2017, p. 555) further outline, securities law mandate that any blockholder with significant stock ownership over 10% is classified as an insider and needs to comply with insider trading laws. J Hadlock and Schwartz-Ziv (2019, p. 4199) also speak of '*deadweight costs*' which are incurred by raising funds to build and maintain a significant block in the firm since a significant block is usually required to attain a board seat (Bebchuk et al., 2020, p. 5). J Hadlock and Schwartz-Ziv (2019) also provide an overview of related research on indirect costs such as costs arising from '*over-monitoring*' and opportunistic behavior. With that said, over-monitoring may result in the company's CEO being reluctant to cooperate with the board and share private information that could be used against her. Board representation can lead to conflicts of interests between large shareholders and minority shareholders and equally between other stakeholders (i.e., employees or debtholders) (Marquardt, 2020, p. 2). As such, board representation may harm a firm's behavior for risk-taking when the firm is perceived as not exploiting its full potential (Bebchuk et al., 2020, p. 15).

Given the significant voting power of blockholders, management could be more willing to meet with outsider blockholders and, to some extent, grant access to information. As informed

traders, blockholders can pursue their trading strategies and engage with the firm other than attaining a directorship (Edmans and Manso, 2011, p. 9). However, the fact that blockholders obtain board seats indicates that blockholders intend to seek board representation to become active monitors. One reason is to mitigate prevailing agency problems and improve firm value. Collectively, it becomes apparent that seeking board representation is presumably to resonate with blockholders either following a long-term strategy (i.e., they are less dependent on liquidity (Maug, 1998) or holding more ownership. These blockholders are presumably in a position to bear the substantial indirect costs associated with acquiring board seats (Marquardt, 2020).

Another form of indirect cost that remains largely unaddressed in the literature is the costs arising from an adverse stock market reaction which may lead to a liquidity shock (Maug, 1998). The argument follows the rationale that outsider markets may interpret the blockholders announcement to take a board seat as a negative signal revealing private information about agency problems in the firm. The liquidity shock forces the blockholder to obtain a board seat and become an active monitor. Following this, blockholders are less likely to exit the firm when they hold formal corporate positions on the supervisory board. Hence, what drives the decision to take a board seat is crucial to studying shareholder engagement and its implications for corporate policy. Following, it remains puzzling to what extent blockholder-directors have implications on firm governance.

In this context, Agrawal and Nasser (2019, pp. 12) consider blockholder board representation through the lens of board independence. In particular, the authors examine the implications of independent blockholder-directors who are also blockholders of the firm (i.e., 1% or more of block ownership) and conclude that blockholder directors should have easier access to the boardroom. The engagement of independent blockholder-directors is positively associated with firm value. The effect is larger for cases in which blockholder-directors are present on a firm's committee. Agrawal and Nasser (2019, p. 42) argue that blockholder board representation is particularly prevalent in firms in which *(i)* access to boardrooms is easier (i.e., smaller and younger firms, larger and more independent boards) and *(ii)* the need for blockholder-directors is larger (i.e., poor performance, lack of institutional ownership and untapped potentials). The authors show that blockholder-directors affiliated with hedge funds and individuals effectively reduce excess CEO remuneration. Consistent with Holderness and Sheehan (1988, p. 319) the finding is in favor of the monitoring hypothesis as compared to extracting private benefits. The authors elaborate that as firm value would fall when the market learns about the blockholder's intention to engage in rent extraction, it is questionable why shareholders would want to hold more

shares than necessary to have majority control if not for exerting voice. In this sense, Cronqvist and Fahlenbrach (2008, pp. 3492) report that the link between block ownership and corporate policies (e.g., payout and mergers and acquisitions) is stronger when blockholder-directors are present and when boards play a key role. For that matter, boards are critical for constituting firm policies regarding acquisitions, dividends, and incentive-based management compensation.

Coherently, Gow et al. (2014) report significant abnormal returns of 4-5% as a response to an activist investor's campaign announcement to seek board representation. However, the authors cannot report significant results when joining the board. The authors assert that concerns over short-termism associated with hedge fund activism are less evident when hedge funds acquire board seats (Gow et al., 2014, p. 2). In accordance, hedge funds become '*long-term investors by conventional standards*' for about three years when represented on the board of directors. In line with Holderness and Sheehan (1988), board representation is employed as a mechanism to lead a firm's management even by the most activist shareholder types. The reported determinants of blockholder board representation (i.e., smaller firms, increasing institutional ownership, and poor stock performance) as noted by Gow et al. (2014, p. 2) are consistent with Agrawal and Nasser (2019, p. 42) and Edmans and Holderness (2017, p. 559), although significant differences exist in the empirical settings. Furthermore, Bebchuk et al. (2020, p. 44) examine board representation through the lens of settlement agreements between activist investors and management. The authors highlight that settlements are more likely to be reached when threats are credible to win a proxy fight. Similarly, Klein and Zur (2009, p. 189) contrast the activism of hedge funds and other entrepreneurial activists and note that both successfully *'use the proxy solicitation process'* to acquire board seats to push for strategic changes. The authors document abnormal returns of 12.6% (2.94%) within one year of the announcement date of attaining a board seat for hedge funds (other entrepreneurial activists). The results suggest that hedge funds are presumably perceived to have superior skills in bringing about change in the target firm.

These studies may fuel the perception that taking board seats is a mechanism used by activists to respond to poor performance and highlight that board representation and shareholder activism appear complementary. That is, board representation increases the efficiency of hedge fund activism, in particular in light of mergers and acquisitions or asset sales (Brav et al., 2008; Greenwood and Schor, 2009). Against this background, it cannot be ruled out that the underlying results replicate the announcement effects arising from hedge fund activism. That being the case, it is essential to note that board representation is not exclusively limited to hedge funds or activist investors but may be employed by many blockholder types. As the studies typically

do not attempt to disentangle the announcement effect of shareholder activism from blockholder intervention through board representation, the general implication of blockholder-directors on the firm's stock market performance remains largely unclear when considered for non-activist blockholders. There is reason to believe that some part of the announcement effect could be negative. In the same vein, Agrawal and Chen (2017, p. 1) argue that outsider shareholders may be concerned that the intervention of blockholder-directors may increase tensions on the board, leading to continued poor operating results, proxy fights, or asset disposals.

The few available papers in the relevant literature that examine the implications of blockholder board representation almost always do so in a specific context (i.e., board independence, borrowing costs, activist campaigns). All of these studies relate to the US board system. To the best of the author's knowledge, there is no comparable study attempting to apply the empirical setting to a two-tier board system. In addition, the German setting comes along with some empirically favorable attributes which allow addressing concerns about drawing empirical inferences on board representation (Hermalin and Weisbach, 2003). The notion stems from the assumption that obtaining a board seat represents an endogenous choice. The German director-election process is less susceptible to incumbent CEOs, given that German law requires the two governing bodies to be strictly separated. In contrast, drawing inferences on the announcement and implications of board representation in a US setting is in part driven by powerful CEOs who can influence the director-election process (Bebchuk et al., 2020; Gow et al., 2014). As previously noted, shareholders strategically aligned with the incumbent CEO are more likely to acquire board seats. In this context, Masulis and Zhang (2019) find that executives and affiliated directors are poor monitors the closer they are aligned to the CEO. Moreover, the German setting has another empirical advantage as the announcement of establishing a block position and disclosing the intention to seek board representation typically do not fall together. Again, this is different in the US, requiring any blockholder owning more than 5% of the firm's outstanding shares to disclose a 13D filing requiring a blockholder to announce her intentions on how she plans to exert control and intervene in the management process Edmans and Holderness (2017, p. 598). Finally, another favorable feature of the German setting is the variation in how directors are appointed to the board. Because new directors are announced typically around the date of the shareholder's meeting, which may bias any the announcement effect of blockholder-directors due to confounding events. The thesis exploits the fact that some directors are nominated through court rulings according to Section 104 AtkG. Co-determination rules require firms to have a minimum number of board members depending on firm size. If the supervisory board no longer has a quorum, the court shall appoint a representative at the request of the management. As

the disclosure is somewhat at the acting judge's discretion, the court announcement becomes quasi-random, possibly alleviating concerns about confounding events. Therefore the procedure allows isolating the announcement effect of board seat taking.

As the literature review suggests, blockholders have arguable strong incentives to seek representation on the company's board because it provides blockholders with a forum to monitor corporate management (Agrawal and Nasser, 2019, p. 3). The literature discussion also reveals that only a fraction of blockholders takes a board seat. Accordingly, Cronqvist and Fahlenbrach (2008, p. 3971) find that only about 10.9% of blockholders have board representatives. Agrawal and Nasser (2019, p. 46) report that 15.50% of firm-years in the S&P 1500 are linked to board representation of independent directors between 1998 to 2006. Likewise, Marquardt and Sanchez (2021, p. 3) present results indicating that only about 20% of S&P 1500 firms are associated with an outside blockholder-director during the sample period of 2005 and 2015. The contributions made in this strand of literature are broadly consistent. While the above studies suggest that blockholder board representation may affect governance and firm outcomes, they provide no evidence on how blockholders manage to influence firms and their corporate governance. The findings link blockholder board representation with improved governance and firm value. Nonetheless, important empirical questions can be raised: why do few blockholders seek board representation? What are the implications of the presence of blockholder-directors for board monitoring and board (committee) composition? How does blockholder heterogeneity drive the underlying relation of blockholder intervention? In general, little is known about the decision-making process to take board seats and how the mechanism works with which blockholders exert control on the board (Edmans and Holderness, 2017).

5.2 Hypothesis specification

The thesis formulates a set of hypotheses to address the determinants of board seat formation. Specifically, the hypotheses focus on why so few blockholders seek board representation? The section follows the relevant studies in the literature while extending research on blockholder board representation by applying a novel institutional setting, thereby providing new insights into obtaining board seats. The following hypotheses are part of the empirical evaluation:

H1: *The presence of blockholder-directors is a non-linear function of block ownership.*

To answer H1, the thesis follows Edmans and Holderness (2017) and addresses the empirical question of how the underlying relation between block ownership and board representation is established. As the literature review concludes, increasing block ownership commits blockholders to discipline poorly performing managers, given their role as active monitors. Therefore, it is reasonable to believe that blockholders should be incentivized differently to take a board seat for varying ownership levels. Specifically, it is critical to understand what determinants drive a blockholder's decision to take a board seat in the first place. The contributions made in this strand of literature are broadly consistent. However, literature remains largely silent about the functional form of the relationship between block ownership and the presence of blockholder-directors on the board. In this regard, a controlling shareholder owning a block position above 50.1% should have other possibilities to exert voice than blockholders without majority control (Holderness and Sheehan, 1988). Collectively, this may indicate that the relation between block size and board representation is nonlinear.

H2: *A (legacy) blockholder taking a board seat is associated with a negative stock price reaction.*

To answer H2, the thesis employs two different empirical methodologies, namely an event study and a fixed-effects regression. A blockholder may acquire private information about prevailing agency problems in the firm. The blockholder could reap trading gains and capitalize on her information by exiting. The situation, however, would not resolve the agency issue and leave the firm with untapped potentials (Bebchuk et al., 2020). In turn, resolving the agency issue requires taking a board seat and allowing her to increase monitoring. The announcement of taking a board seat may be a negative signal for outsider shareholders impounding new information into share prices, revealing agency issues. According to this rationale, the announcement of taking a board seat could lead to an adverse stock market reaction, which *(i)* leads to the

blockholder incurring a liquidity shock (Maug, 1998) and *(ii)* discourages her from cutting and running (Coffee, 1991). In line with the literature, blockholder-directors are not associated with rent extraction. In place of that, shareholders may be concerned that conflicts of interest may exacerbate when blockholder-directors join the board, leading to continued poor operating results due to *(i)* CEO turnover, *(ii)* asset disposals, or *(iii)* delistings (Agrawal and Chen, 2017). Also, shareholders could conclude that some investment distortions are irreversible or costly to resolve (Shleifer and Vishny, 1989). In line with US literature comprising Brav et al. (2021, 2008); Gow et al. (2014); Greenwood and Schor (2009); Klein and Zur (2009) the classic case shareholder activism is intuitively associated with positive firm performance; in particular, when shareholder activism is linked to takeovers. The underlying thesis extends the research framework by distinguishing between legacy blockholders and new blockholders, consistent with Opp (2019). It can be assumed that the presence of blockholders on the board may have different implications on firm performance depending on whether a legacy or an outside blockholder takes a seat on the board. Following the rationale, the negative association may be prevalent for the former as they should be better positioned to acquire private information.

H3: *Long-term investors with fewer liquidity needs have a higher likelihood of taking a board seat.*

To answer H3, the thesis accounts for blockholder heterogeneity and distinguishes between several blockholder types following Cronqvist and Fahlenbrach (2008); J Hadlock and Schwartz-Ziv (2019). Consistent with this, Goergen et al. (2008a,b) recognize that the type of shareholder plays a vital role given that different shareholders have different liquidity needs and capabilities. As outlined, the announcement of taking a board seat could lead to significant indirect costs arising from a liquidity shock. Following the rationale, it is reasonable to believe that long-term-oriented investors with fewer liquidity needs are more likely to obtain a board seat to mitigate the agency problem. In this context, another factor that may have implications for a blockholder's decision to take a board seat is conditional on other blockholders already present on the board. Consistent with Zwiebel (1995), J Hadlock and Schwartz-Ziv (2019) show that the decision to participate in 'block-building' depends mainly on the presence of large blockholders resulting in a 'crowding-out' effect. The present thesis hypothesizes that the presence of a legacy blockholder on the board discourages others from following suit.

H4: *A blockholder taking a board seat is less likely to exit and, thus, becomes an active monitor.*

To answer H4, the thesis considers a blockholder's decision to exit in the context of the un-

derlying research question. According to the rationale, the announcement of taking a board seat commits a blockholder to take a long-term position and become an active monitor in the firm. The thesis tests how board representation is associated with the blockholder's decision to exit within the next three years. Consistent with Edmans and Manso (2011), trading shareholders tend to condition their trading decisions on liquidity needs and primarily exercise governance through the trading/exit. In contrast, shareholders who hold formal positions on the company's board are expected to govern through voice instead of exit. Arguably, the value-added comes in part from the increasing monitoring capabilities of blockholder-directors over a long-term investment horizon (Gow et al., 2014). It is intuitive to assume a negative link between board representation and blockholder exit.

H5: *A blockholder-director is likely to assume additional board roles, and hold committee seats.*

To answer H5, the thesis assumes that blockholders have incentives to influence the board's composition and hold additional formal positions in the company, such as the board chairman. The argument would allow the blockholder to become an active monitor, attempting to mitigate potential agency issues. For example, the role of chairman comes with considerable competencies to control the board's activities (i.e., setting the agenda of the board meetings and leading important committees). The DCKG states that the chair of the supervisory board '*maintains regular contact with the chair of the management board [...] and consults with her/him on issues relating to the strategy, planning, business development, risk situation, risk management, and compliance of the company*' (Standard 5 DCGK). Consequently, blockholders should have a greater incentive to serve as board chairman. Furthermore, the DCKG recommends that boards establish committees to increase the efficiency of the supervisory board in fulfilling its oversight mandate. The provision allows boards to delegate certain monitoring tasks to specific committees and provide them with greater discretion over the board's activities, thereby creating incentives for blockholders to serve on board committees.[25] Following a similar line of reasoning, blockholder-directors should also be more likely to serve on the committees.

[25] An audit committee seat allows a blockholder to meet informational needs as the audit committee regularly meets with the firm's management and the external auditor. Likewise, a nomination committee seat enables a blockholder to meet control needs, as the nomination committee is tasked with selecting suitable candidates for the supervisory board. A personnel committee seat allows a blockholder to meet incentive needs. The personnel committee is responsible for designing and implementing adequate remuneration packages for the management board and hiring or firing executives. A presiding committee seat may help a blockholder meet coordination needs. The presiding committee is accountable for setting up the agenda, convening shareholder meetings, and coordinating the supervisory board's work. A strategy committee seat may enable a blockholder to provide better advice to the firm's management.

H6: *Blockholders select representatives with superior financial/negotiation skills.*

To answer H6, the thesis considers individual board members' skills and traits in light of blockholder representation. Cronqvist and Fahlenbrach (2008) find that the ability to monitor a firm's management is the primary source of blockholder heterogeneity. Following the rationale, blockholders assume additional roles on the board and engage on board committees. The idea is extended to the director-level to understand how blockholders select their board representatives. The thesis contributes to the literature by providing empirical evidence on whether blockholders strategically screen for specific director attributes. According to the DCGK, supervisory boards must be composed so that the supervisory board possesses the necessary skills and knowledge to provide adequate due diligence and supervision of the management board. Against the background of blockholder-heterogeneity, the thesis assumes that director heterogeneity is equally important to study. The implication is that different shareholders may prefer directors with other skills and professional and cultural backgrounds.

H7: *A blockholder taking a board seat becomes an active monitor and increases board meetings.*

To answer H7, the thesis tests whether blockholder-directors have potential implications for board monitoring (i.e., proxied by board meetings and committee meetings). The notion follows the rationale that blockholder-directors have larger discretion to influence a board's activities. With that being said, the representation of blockholders on the board is expected to be positively related to the number of board (committee) meetings. Whereas German law, according to Section 110 (3) AktG stipulates that the supervisory board should meet at least four times a year, there are no restrictions concerning committees. In this context, committee meetings could be more informative about a firm's monitoring activities than board meetings. In this respect, the literature on board implies that large boards can hinder efficient communication and coordination among their members (Coles et al., 2008; Yermack, 1996). German supervisory boards are typically larger than US boards of directors (Hansch et al., 2021, p. 213) which may hamper making quick decisions and reacting to short-term changes. Hence, a substantial part of a board's monitoring conducted by shareholder representatives is likely to occur at the committee level (OECD, 2012, p. 21). It is reasonable to assume that the blockholder-director is associated with more frequent board (committee) meetings.

H8: *A blockholder taking a board seat improves firm value measured by Tobin's Q.*

To answer H8, the thesis interacts the firm's current cash holdings with blockholder board representation. The cash-to-Q-sensitivity measure shall test whether firm value proxied by Tobin's Q increases in firms with cash holdings. Since cash holdings could signal agency issues arising from too much financial slack at the disposal of self-serving managers (i.e., managers potentially engage in investment distortions), blockholders could increase monitoring to bring cash levels to an optimal level and mitigate agency issues. Further, Cronqvist and Fahlenbrach (2008) question why existing literature cannot link the presence of a significant shareholder to important company and policy measures. The authors argue that the lack of evidence found by most papers is due to the failure to account for blockholder heterogeneity. As such, the thesis additionally tests the relation between blockholder board representation and Tobin's Q by controlling for different types of blockholders on the supervisory boards of the sample firms. Insider blockholders with close ties to the firm's management may be less vigilant to exert control and thus less likely to discipline management when firm performance is poor. In contrast, outside blockholders, particularly institutional shareholders, are often associated with high disciplinary actions. The reasoning presumably suggests that certain shareholders on the supervisory board can lead to positive corporate outcomes.

6 Data and methodology

This section discusses the different data sources used to establish the empirical framework. Furthermore, the sample selection process is briefly described, as a significant part of the data is collected by hand. Since the work is based on intuition, the analysis is conducted using standardized, easy-to-follow procedures that are well established in the literature. Therefore, the specific derivations of the underlying models are not discussed.

6.1 Sample selection

The empirical evaluation is conducted using a hand-collected panel of German firms that comprises data on ownership, director, and firm-related characteristics. The primary dataset consists of companies listed in the 'Prime Standard' for the period from 2004 to 2018, covering the four largest German stock market indices – 'DAX', 'MDAX', 'SDAX' and 'TDAX' – with a total of 160 companies. The index constituents are updated annually on the last trading day of the previous calendar year$_{t-1}$. The 'Stoxx Ltd.' publication is tracked manually to identify the historical index compositions within this framework. Given that 88% of the sample companies report at the fiscal year-end on December 31$^{\text{st}}$, the cut-off date is set at the end of a calendar year.[26] Collectively, the dataset yields an unbalanced panel with 2,410 observations of unique 312 firms at the firm-year level. 242 observations for 32 firms are excluded that are not incorporated as 'AG' or 'SE' under German law requiring a two-tier board system (e.g., 'Air Berlin PLC', or 'Qiagen NV'). The exclusion filter also applies to German companies with a hybrid organizational form (e.g., 'DWS Group GmbH & Co. KGaA' or 'Stroeer SE & Co. KGaA'). This is to maintain a homogeneous sample with firms subject to a comparative corporate governance framework. Additionally, 189 observations for 19 firms are excluded that own dual-class shares.

[26] On some occasions, this may result in index revisions, which have a lag of up to 12 months when index changes occur in January of a given year. However, the distribution of index changes during the sample period shows that this tends to be a rare occurrence. There are 482 index revisions, including 112 in-sample changes. The highest number of index movers occurs in September.

Unlike ordinary shares, preferred shares do not carry any voting rights (e.g., 'BMW AG', 'Henkel AG', and 'Volkswagen AG'). Also, 16 observations for two companies are excluded due to domination and profit and loss transfer agreements. The management is bound to the controlling shareholder (e.g., 'MAN SE' and 'Celesio AG'). Finally, 17 observations for four companies are excluded due to missing data when merging the datasets (e.g., 'Gericom AG'). The exclusions lead to an unbalanced panel of 1,946 observations at the firm-year level for 255 firms.

Next, the companies are matched against the unique identifiers of 'Refinitiv' to link each company to its primary data, including name (changes), ISIN (changes), IPO date, legal form, type(s) of securities, and industry data (NACE). The remaining data gaps are filled manually using company filings (e.g., securities prospectuses or governance reports), company websites, Google's search engine, and the 'Wayback Machine' web tool. Accounting and stock return data are retrieved through Refinitiv and cross-checked against the primary dataset at the firm-year level. The data is extended with historical, non-financial information such as the voter turnout from 'hv-info.de'.[27] Part of the challenge in collecting the necessary turnout data is that company reports are not consistent across all companies, nor are they consistent over time. While some companies report turnout information, others report only the number of votes cast for each item on the general meeting agenda. So, the highest number of votes cast is divided by the total number of ordinary shares outstanding to approximate the voter turnout within a fiscal year.

The thesis obtains ownership data from Refinitiv's ownership database (i.e., 'Shareholder History Report'), which contains information on the investor's full name, block ownership, the fraction of the investor's portfolio, country of residence, type of investor, or date of earliest ownership. A notable empirical concern raised by Dlugosz et al. (2006) is that Refinitiv's ownership data may suffer from 'distorting errors' due to the failure to conduct cross-referencing relevant footnotes in related ownership filings (Marquardt, 2020, p. 10). Thus, a block item may be double-counted if there are common beneficiaries. Accordingly, Cronqvist and Fahlenbrach (2008); Marquardt (2020) follow the approach of Dlugosz et al. (2006) and obtain hand-collected US ownership data from proxy statements for all blockholders who own more than 5% of a firm's ordinary shares. Nevertheless, the use of Refinitiv's ownership is justified for several reasons. First, ownership data are less standardized in Germany than in the US. Although the quality

[27]The database is useful since, under German law, companies must retain accounting data records for ten years (Section 147 AO). Data beyond the retention period is typically not available on a company's website but 'hv-info.de'. Alternatively, using 'Wayback Machine', it is possible to view an archived copy of the corporate website to access historical data. The process is time-consuming and, therefore, more appropriate on a case-by-case basis for filling gaps.

of reporting has greatly improved in recent years, it is impossible to obtain ownership data consistently from 'dgap.de' by web-scraping the relevant ad-hoc disclosures (e.g., Sections 40, and 41 WpHG). Second, Refinitiv's ownership data is cross-checked randomly with hand-collect ownership data drawn from 'Hoppenstedt Aktienführer'. Third, extensive data quality checks are conducted to correct erroneous data entries.

The following steps link the ownership data to the panel data. First, each investor is assigned a unique identifier. Relevant text modules containing the investor's full name are cleaned and standardized by removing all special characters from non-English alphabets, periods, semicolons, and spaces and standardizing notations and abbreviations. Subsequently, Refinitiv's record matching service 'PermID' is used to determine Refinitiv's permanent identifier for each investor. In addition, 'PermID' allows retrieving the identifier of the investor's parent organization which is required to aggregate investor data at the parent level. This way, it is checked that are no duplicate entries that may occur due to different spellings or Refinitiv's data collection process. Finally, suspicious ownership data is cross-checked with corporate filings (i.e., annual reports). Similarly, each parent entity receives a unique identifier to enable identification at the parent level. The matching allows us to trace the chain of control and determine ultimate control at the parent entity level for each investor. Multiple cross-checks are performed to reduce the risk of inconsistent or erroneous matching results. Cross-checking the ownership data is tedious and involves manually checking the chain of control of each investor via Google's web search, the 'Hoppenstedt Aktienführer' or 'Munzinger Biographien.' For simplicity, shareholders with a block of less than 0.01% are excluded from the sample. Thus, an unbalanced panel of 57,426 (7,007) observations is drawn at the shareholder-firm-year level(blockholder-firm-year level) for 1,770 (634) unique shareholders (blockholders) from 2004 to 2018.

Edmans and Holderness (2017, p. 553) highlight that literature needs to account for blockholder heterogeneity in governance research. Previous studies mainly examine the presence of blockholders generically without considering blockholder heterogeneity on a more granular level. Consistent with the underlying shareholder classification scheme as discussed in 4.4, blockholders are assigned to one of the following categories: 'insiders' (including founders, family members, or managers), institutional investors (including asset management firms, banks, hedge funds, insurance firms, private equity or single investor), other strategic investors (including holding firms, foundation/endowments or state) and corporate (including corporate and parent firms). In this context, some level of judgment is required to assign blockholders to distinctive shareholder categories that most closely match their characteristics compared to their 'peers.' This is

in line with prior research such as Anderson and Reeb (2003); Armstrong et al. (2010); Hartzell and Starks (2003); Marquardt (2020). In this context, Schwartz-Ziv and Volkova (2020, p. 4201) elaborate that increasing granularity to distinguish different blockholder types complicates the interpretation of empirical results. In the same vein, too few blockholder groups lead to information loss. Lastly, the underlying sample is extended by additional variables relating to the firm's ownership structure (i.e., the Herfindahl index, the number of blockholders, the relevant entry and exit dates, free-float, or distance).

Following Goergen et al. (2015), director-level data is collected and matched to a firm's board for all listed firms in the relevant sample. For purposes of consistency, the following identification rule is applied. Any director who serves on a company's supervisory board for more than 50% of the time in a fiscal year is treated as having served on the board for the entire year. Furthermore, any director with a term of fewer than six months is excluded. This methodology may not capture board-specific changes within a given fiscal year but allows for consistency at the corporate level. Personal data on board members, such as name (changes), title, year of birth, nationality, gender, education, and work experience, is collected from extensive screenings of annual reports and board documents (e.g., resumes, biographies, and newspapers), and corporate websites. Similarly, 'Wayback Machine' is used to retrieve historical information. Based on the data, each director is assigned a unique identifier.

To avoid errors in data collection, Refinitiv's record matching service 'PermID' is used to retrieve each board director's permanent ID and personal data. The procedure is beneficial when board directors have identical names and surnames but missing birth dates or other relevant information. Next, the hand-collected data is matched to 'Refinitiv's' director-level data to fill out applicable gaps for validation purposes. In addition, the sample is extended by additional director-related variables such as director type (e.g., shareholder representative or employee representative), the director's role on the supervisory board (e.g., chair, deputy chair, or member), any committee affiliations, other active mandates, the director's current job description, as well as academic and professional background, the dates of joining and exiting the supervisory board, and compensation data. Hence, board attributes such as board age, tenure, business, co-determination, or the fraction of independent directors can be derived from the primary director-related data. The sample results in a panel of 20,694 director-firm-year oberservations for 4,040 (2,349) individual directors (shareholder representatives).

6.2 Variable selection

To evaluate the determinants of board representation using a formalized model, it is critical to deal with factors that may bias making empirical inferences. This is because board representation is presumably an endogenous choice (Hermalin and Weisbach, 2003, 2017). Part of the challenge when dealing with endogeneity in governance research is that it is difficult to address empirical questions adequately since ownership is not random. Thus, controlling for a wide array of firm- and blockholder-specific variables in the model may reduce endogeneity issues arising from confounding or omitted variables, thereby reducing the possibility that the outcome variable is correlated to (unobserved) factors not accounted for in the model (Cronqvist and Fahlenbrach, 2008, p. 4212). The following section shall briefly discuss the variables included in the baseline regression. All other variables are defined in Appendix B.

Key variables

The key variable of interest *Blockholder board representation (d)* is an indicator variable in line with the literature (Edmans and Holderness, 2017; Marquardt, 2020). The variable takes the value one if the blockholder is associated with at least one representative (i.e., blockholder-director) on the supervisory board and zero otherwise. Depending on the framework, the variable can be defined at the firm-year, shareholder-firm-year, or director-firm-year level. Overall, two additional measures are considered to study the effect of blockholder-directors. Accordingly, the variable *Blockholder Board seats (#)* counts the number of affiliated directors for each blockholder. The variable *Blockholder board seat (%)* is constructed by using *Blockholder Board seats (#)* divided by the number of shareholder representatives in a firm's board of directors. The relative blockholder-director measure is interesting for two reasons. First, it compares firms with different board sizes and board structures during the sample period. Second, the proportion share of blockholder-directors (i.e., affiliated with insider blockholders) can be used as an alternative measure of the degree of board independence (Struggles, 2011). Accordingly, board independence receives increasing attention in the governance literature and from policymakers around the world (Adams et al., 2010; Graham et al., 2020).[28]

Another critical variable of interest is the shareholder's block ownership which is aggregated

[28]In this context, the German regulator defines director independence in light of the firm's management (Standard 10 DCGK). However, the legal definition abstains from taking the blockholder-director relationship into account. As Marquardt (2020, p. 9) reasons outsider blockholder are more likely to be 'effective monitors' relative to insider blockholders. The notion raises the empirical question of whether regulators should define board independence relative to blockholder affiliations. As such, board independence proxied by blockholder-directors can be an interesting avenue for future research.

at the parent entity level.[29] The underlying setting accounts for different specifications of ownership to account for potential non-linearity in the data, which may explain blockholder board representation. Another explanatory variable is employed in this context, namely defacto ownership. While previous research mainly focuses on the actual ownership, the measure scales ownership by the voter turnout at the preceding shareholders' meeting. The defacto scale is informative since governance research usually assumes 100% voter participation. As the literature suggests, actual turnout is documented to be lower. Lesmeister et al. (2018) report that the presence at the shareholder's meeting averages about 60% across 40 countries which may have real implications for blockholder's decision-making to engage in block building.

Governance variables

The thesis controls for multiple governance variables, most notably board co-determination (Goergen et al., 2015). Trade unions and work councils appoint these directors as employee representatives o that they are not subject to shareholder voting at the shareholder's meeting. As outlined in Section 3 co-determination can range from 0% to 50% depending on the size of the company. An indicator variable is constructed for co-determined boards, equal to one if 50% of the board members are classified as employee representatives and zero otherwise. It is reasonable to predict that co-determined boards are positively correlated to blockholder board representation as there is a greater need to negotiate with key stakeholders on the board. Similarly, it is reasonable to assume that co-determined boards are less 'shareholder oriented' than arguably expected from shareholders, increasing the likelihood of taking board seats.

Further, board size is included as an additional control variable in the model since board size is pivotal for firm valuation. In this sense, Yermack (1996) and Coles et al. (2008) find that there is a negative (positive) relation between board size and Tobin's Q for simple (complex) boards for US-listed firms. Since German firms have co-determined boards, the variable *Board size (shareholder reps)* is computed by considering only those directors who are appointed at the shareholders' meeting. The procedure ensures that inferences drawn from the empirical evaluation are not biased. Despite the restricted interpretation of board size, it is expected that a larger board size facilitates blockholder board representation due to the greater need for advice and facilitating decision-making (Masulis and Zhang, 2019).

Consistent with Edmans and Holderness (2017, pp. 559) and Aldrich and Auster (1986), the

[29] All subsidiary holdings that are attributable to the same parent entity for a given firm and year are totaled at the ultimate parent level.

variables firm age and firm size are added to the model as both attributes are typically linked to increased bargaining power and larger economies of scale. More so, firm age (firm size) is inversely related to ownership concentration.[30] As such, the thesis predicts that both variables are negatively correlated with blockholder board representation.

Ownership variables

Blockholder governance is central to the corporate governance debate regarding the separation of ownership and control. Edmans and Holderness (2017, p. 546) stress that a company would most likely not survive without significant blockholders given that firm governance is contingent on having someone with the *right* incentive. For this reason, it is less surprising that virtually every company in the world has at least one blockholder with significant stock ownership Holderness (2009, p. 1382). In addition, Holderness et al. (2016, p. 66) concludes that ownership concentration remains stable across different countries and periods, which indicates that blockholders have similar preferences across different taxonomies and jurisdictions. Barclay and Holderness (1989, p. 376) find that a block position, once formed, remains unaffected over the long term with real implications for blockholder board representation.

Blockholders typically interact (Schwartz-Ziv and Volkova, 2020, p. 1). Consequently, the model accounts for the number of blockholders in the company (i.e., # *Blockholders*). In analogy, it is reasonable to assume that conflicts among principals may arise with an increasing number of blockholders and, as a result, influence board composition (Donaldson et al., 2020, p. 4). In addition, the model considers a firm's ownership concentration based on the *Herfindahl index* following Goergen et al. (2015). The approach follows the rationale that two identical companies with different ownership will be affected differently depending on whether there is one dominant blockholder or multiple blockholders of equal size. Thus, the model accounts for complex ownership structures in line with Laeven and Levine (2008).

Finally, the model considers the turnout at the shareholder meeting (i.e., *Presence (%)*) to control for the degree of informed voting (Lesmeister et al., 2018) and subsequently the extent of statutory rights being exercised (Bar-Isaac and Shapiro, 2020). The decision to intervene through board representation could arise from information asymmetry and control needs beyond what the blockholder can address through informed voting.

[30] One potential reason grounds on the notion that family ownership (including founders) typically decreases over time as they diversify their concentrated portfolios (Anderson and Reeb, 2003).

Performance variables

Following Bebchuk et al. (2020); J Hadlock and Schwartz-Ziv (2019), the firm's stock price performance (*BHAR*), *ROA*, and *Tobin's Q* are included in the regression model. Thereby the variable *BHAR* is defined as a firm's buy-and-hold stock return during the fiscal year over the corresponding return of the German CDAX index. This is consistent with Bebchuk et al. (2020); Gow et al. (2014); Marquardt (2020), demonstrating that shareholders, demand board seats in response to poor corporate performance. With that being said, the variable *BHAR* may reflect a firm's growth opportunities (in part due to superior governance attributes) in coherence with shareholder expectations (Bebchuk et al., 2009; Gompers et al., 2003). As such, poorly performing managers may face disciplinary action from shareholders (Brav et al., 2008), which may affect the company's stock price performance. As Edmans and Holderness (2017, p. 547) elaborate, activist shareholders typically have the skills necessary to enforce changes in corporate governance but, in most cases, lack the voting power to do so. Consequently, activist blockholders need to rely on controlling (legacy) blockholders (associated with the voting power but possibly lacking the skills) to acquire board seats and intervene in the management process.

In this respect Morck et al. (1988, p. 296) highlight, *Tobin's Q* may serve as an indicator to value a firm's intangible assets (that is, goodwill, reputation, or good managers) on top of its tangible assets. In this regard, it is assumed that blockholders on the supervisory board may be associated with an unobserved value-added due to increased monitoring capabilities that cannot be captured as a physical resource. The authors also note that the variable *Tobin's Q 'is a noisy signal of management performance'*. Therefore, the model also considers the variable *ROA*, as it measures the efficiency with which companies use their assets to generate a return (Goergen et al., 2015). Accordingly, shareholders can initiate changes in corporate governance that lead to cost reductions and improve the company's profitability.

Policy variables

Further, the model accounts for several policy variables that may impact a firm's performance and board composition. Among other things, the variables *Book leverage* and *Cash* are included in the baseline regression, whereas *Book leverage* serves as a governance mechanism to mitigate adverse effects of financial slack by reducing the amount of cash available at the discretion of self-serving managers. Similarly, outsiders may interpret high cash as a signal of untapped potential, causing blockholder to seek board representation (Bebchuk et al., 2020).

Moreover, the model controls for a firm's intangible assets (i.e., *Intangibles*), which is in line

with the discussion on Tobin's Q. That is, asset intangibility (including good managers) may have a substantial impact on a firm's valuation (Morck et al., 1988, p. 196). Finally, the variable *R&D* is added to the baseline regression because R&D-intensive firms are typically associated with a corporate environment of asymmetric information. Hence, blockholders may need to become 'insiders' in being represented on the supervisory board to mitigate information uncertainty.

Blockholder variables

The baseline regression includes further blockholder related-variables to explicitly measure the effect of stock ownership on board representation (Wooldridge, 2015). Against this background, the model controls whether a blockholder is foreign (i.e., *Blockholder is foreign (d)*). The variable is meaningful because seeking board representation presumably involves higher costs and cultural and governance-related barriers for foreign shareholders than for domestic ones. In part, these higher costs accrue due to the greater distance from the company's headquarters.

Next, the model takes into account the variable *Blockholder rank*, which determines the position of a blockholder within a company (Edmans and Holderness, 2017). Intuitively, the line of reasoning postulates that a higher rank order allows measuring blockholder interaction at a more subtle level than would be possible by simply considering the block ownership. More so, the model controls for the length of time blockholders have been invested with the firm (i.e., *Blockholder tenure*) as blockholders with longer investment horizons are more likely to have representatives on the board. Thus, it is distinguished between blockholders pursuing long-term strategies from blockholders focusing on short-term trading.

The model finally controls the proportion of an investor's total portfolio invested in the firm. Consequently, it is assumed that blockholders with concentrated portfolios are more inclined to acquire a board seat than diversified investors who have a higher interest (Anderson and Reeb, 2003). Blockholders holding a portfolio with a large number of investments (i.e., *In-sample investments (#)*) and highly diversified portfolios i.e., *Portfolio weight (%)*) are less likely to seek board seats, especially if financial and human resources are scarce (i.e., families, founders, managers, or individuals). Blockholders with concentrated portfolios may have larger incentives to engage in board seat formation, even if their monitoring capabilities are limited. Intuitively, the variables relating to portfolio concentration and the number of investments are largely driven by blockholder heterogeneity.

6.3 Empirical model

The baseline regression model to explain the determinants of board representation is as follows:[31]

$$y_{i,t} = \alpha + \beta_1 \; x \; ownership_{i,t} + \beta_2 \; x \; firm \; controls_{i,t_{-1}} + \beta_3 \; x \; ownership \; controls_{i,t} + \gamma + \epsilon_{i,t} \quad (1)$$

where i, j, and t stand for firms, shareholder, and years, respectively; γ stands for firm and year fixed effects. Regressions are estimated at the investor-firm-year level if not stated otherwise.

The panel structure allows combining features of cross-sectional and time-series data allowing to address unobserved heterogeneity across individuals and drawing inferences under weaker assumptions (Cameron and Trivedi, 2005, p. 697). Moreover, panel data models allow for extensive hypothesis testing as potential effects that would not be observable with standard approaches can be measured empirically.

Subsequently, a linear fixed-effects model assumes a non-linear relationship between the response variable and the variable of interest. However, the lack of fixed effects estimation to identify actual causality (given the lack of a quasi-experimental setting) makes the model more appropriate for using partial correlation estimates, which is arguably more preferable than having no evidence on the underlying relation. In this sense, the interpretation of the coefficient estimates throughout the empirical evaluation is treated with caution. A fixed-effects estimation of 'Blockholder board seat (d)' on different specifications of 'Ownership' and several firm- and shareholder-specific characteristics is performed. In contrast to Edmans and Holderness (2017) who test the relation in the cross-section, the panel data set allows applying a fixed-effects model. Accordingly, the model includes fixed effects to control for unobserved heterogeneity in the panel data across firms and industries (Wooldridge, 2015, p. 460) and accounts for individual effects unique to each firm or industry. Moreover, year-fixed effects are considered to control unobserved factors that change over time, and the model also accounts for time trends that are assumed to affect all sample firms equally. Adding fixed effects and control variables to the model reduces biases in the estimated coefficients. Against the background of using a fixed-effects framework, the interpretation of the coefficients changes correspondingly (i.e., the variation is interpreted within and not across the selected group unit, namely at the firm level). Therefore, the coefficient represents the average 'within' effect, including all observations.

[31] In an untabulated setting, the 'Breusch-Pagan Lagrange Multiplier' test and the 'Hausman test' confirm that a fixed-effects model is most appropriate for the underlying sample.

The thesis employs the 'dummy variable estimation' method (instead of 'within estimation') to compute fixed effects coefficients. The model adds dummy variables to each regression to account for each firm individually. Although it is computationally more intense than the 'within estimator' method, the estimated coefficients and standard errors remain the same. Consequently, the model allows each firm to be different, which adds to the predictive power. A remedy is to use a within estimator model to calculate the within-group means for each firm and subtract the respective means from all variables included in the model. However, since individual firm dummy variables do not change over time, subtracting the mean will eliminate the dummy variables' effect. The reason is intuitive. Through demeaning the data, all firm-specific dummy variables drop out of the model so that the demeaned dependent and independent variables remain. Further, the thesis is concerned with reducing the effect of omitted variables by adding firm- and shareholder-specific controls and robust standard errors. Thereby standard errors are clustered by the firm to address the issue of correlation that can arise when individual observations are correlated within a given group but not between groups within the sample. Similarly, the thesis addresses the issue of potential serial correlation following (Angrist and Pischke, 2008). This step is necessary because the lack to control for correlation within clusters may result in standard errors that are too small, which leads to spurious interference. In addition, all fundamental variables are lagged by one year and winsorized at the 0.5^{th} and 99.5^{th} percentiles.

Although using a non-linear model may be legitimate, considering the potential non-linearity between blockholder-directors and ownership, it would require the specification of the true non-linear relationship to produce unbiased and consistent coefficient estimates. Consistent with literature (Angrist and Pischke, 2008; Wooldridge, 2015), a linear model is employed, and a non-linear term of ownership is added to ensure unbiased and consistent estimates of 'average' effects. This applies even to binary outcome variables (i.e., which only takes on two possible values (i.e., 0 or 1)). In this case, the model becomes a 'Least squares dummy variable' model (LSDV), i.e., the coefficients are interpreted similarly to a classic 'Linear probability model'. A key feature favoring an LSDV regression is its intuitive and straightforward interpretation. Given that the thesis attempts to understand the general correlation structure first and provide first answers to why blockholders rarely take board seats, the underlying model is suitable. Consequently, all beta coefficients are computed using the dummy variable estimation model with fixed effects. For robustness, selected regression specifications are also calculated using a Logit model.

Based on the literature review in Section 5.1, the thesis summarizes the expected coefficient signs of the variables of the baseline regression in Table 11.

Table 11: Predicted signs of regression coefficients (*Source: Own illustration*)

Variables	**Blockholder board representation**
Ownership	+
Ownership squared	−
B(H)AR	−
Blockholders (#)	−
Blockholder is foreign (d)	−
Blockholder rank (d)	+
Blockholder tenure (d)	+
Board co-determination (d)	+
Board size (shareholder)	+
Book leverage	−
Cash	+
ln(Firm age)	−
Intangibles	+
In-sample investments (d)	−
Ownership concentration	−
Portfolio weight (d)	+
Presence (%)	−
R&D	+
ROA	−
Tobin's Q	−
ln(Total assets)	−

7 Summary statistics

The section provides summary statistics to facilitate the comprehension of the underlying data in light of the research question. Moreover, the descriptive setting seeks to shed light on the determinants of board formation and attempts to offer first answers. While the general structure attempts to follow the outlined hypotheses, the section covers additional grounds for drawing more subtle inferences in the main framework.

7.1 Descriptive statistics on control variables

To begin with, the Section shall discuss the blockholder-director controls, for which summary statistics are computed at the blockholder-firm-year level. Table 12, highlights that around 21% of all blockholders within the sample hold a seat on a company's board.[32] In absolute terms, this translates to a mean of 0.40 board seats on the blockholder-firm-year level.[33] Similarly, in relative terms, blockholder-directors make up about 23% of the company's board, thereby excluding employee representatives. The summary statistics follow contemporary literature that blockholders rarely take board seats, which raises the question of why some blockholders have board seats and others do not.

Concerning ownership controls, Table 12 presents evidence that in the mean (median), firms have about 4.64 (4) blockholders within a given year. This finding is broadly consistent with Schwartz-Ziv and Volkova (2020), who find that multiple blockholders generally coexist and interact within companies. Additionally, the summary statistics reveal that 59% of all blockholders are foreign (i.e., non-German), which is consistent with the finding in Table 8. That is, nowadays, the majority of voting rights is held by foreign investors, which has implications for the German

[32] On firm level, about 65% of all firms-years are linked to blockholder-directors as shown in Table A1.

[33] In addition, Table 19 reports summary statistics of blockholder-firm-year observations conditional to the case that blockholder board representation is given. In conclusion, blockholders acquire on average 1.85 (40%) board seats when the firm is associated with blockholder board representation.

corporate governance framework.[34] Thereby the mean (median) block ownership is about 12% (6%) and blockholders rank in the mean (median) on the 2.83th (2nd) rank. Moreover, the mean (median) investment tenure is about 6.91 (6) years, and in total, blockholders remain invested for about 12.26 (11) years in the company. In this context, the probability of a blockholder exit within the next three years is about 49%.

In addition, the underlying investment makes up 33% (2%) of a blockholder's out-of-sample portfolio. The summary statistic is attributable to blockholder heterogeneity, as institutional investors arguably hold highly diversified portfolios. In contrast, insider shareholders tend to do the opposite, as their wealth is usually tied to the company. The *Portfolio weight (%)* allows for measuring the relative importance of the individual investment for the blockholder in question. As the portfolio becomes increasingly dominated by a few investments, blockholder intervention through board representation is expected to become more valuable for these blockholders. The same intuition resonates with the variable of *In-sample investments*, which is in the mean (median) at about 39.98 (15) in-sample investments. A blockholder with many in-sample investments is less likely to seek board representation, especially with scarce financial resources.

Accounting for additional ownership variables reveals that a company's average (median) free float is around 55% (57%), while it reaches its minimum at 3% and its maximum at 100%. The finding is in line with Franks and Mayer (2017, p. 700), who find that German ownership is stratified in two extremes, with the first group sharing attributes similar to US firms. In contrast, the other group has highly concentrated ownership structures. Furthermore, the mean (median) ownership structure is concentrated at around 0.11 (0.06). In 2% of the cases, two blockholders with a blocking minority of at least 25% coexist in the same firm-year. The low incidence may suggest that companies associated with a controlling shareholder exhibit a particular '*crowding-out*' effect on other blockholders (Schwartz-Ziv and Volkova, 2020).

In regards to company characteristics, Table 12 reports that the 1-year abnormal (i.e., CDAX-adjusted) stock price performance (*BHAR*) is -8%, while the 1-year unadjusted stock price performance is 8%. The companies are associated with a mean (median) *book leverage* of 24% (21%), *Intangible assets* representing 18% (12%) of total assets, *R&D expenses* representing 4% (3%) of total assets, *Cash* representing 14% (10%) of total assets, and *CapEx* representing 4% (3%)

[34] Anecdotal evidence suggests that German supervisory board increasingly clash with foreign institutional investors and foreign regulators in regards to the role of the supervisory board as the ultimate governing body of the firm. *Source: Financial Times (2021) - Deutsche Bank chair warns of clash between foreign regulators and German governance, accessed 28.09.2021.*

of total assets. In addition, the sample companies have a mean (median) *Return on asset* of 11% (11%) and a *Tobin's Q* of 1.71 (1.33). The mean (median) *Total assets* of the company are 28.3 (1.55) billion, and the mean (median) *Age* of the company since IPO is 23.31 (14) years. Regarding the *Presence (%)* at the annual shareholders' meeting, the mean (median) attendance is 61% (62%), although the turnout has increased during the sample period. Accordingly, voter turnout has increased from 56% in 2004 to 69% in 2018, which is potentially driven by the increasing number of institutional shareholders from abroad (as shown in Table 8).

As for the summary statistics relating to the general board structure, the results indicate that 47% of the companies have a co-determined board (i.e., employee representatives take up half of the board seats), and the mean (median) board size is about 6.28 (6) when considering the shareholder representatives exclusively. In contrast, the entire supervisory board is comprised in the mean (median) of 10.22 (10) board members, with the smallest board having three members and the largest board having 21 members. In contrast, the average (median) size of a company's management board comprises 3.89 (4) members, and the size of the board can vary from 1 member to 13 members across the sample firms. Supervisory boards typically have in the mean (median) 3.07 (4) committees. While the board meets 5.91 (5) times per year, the respective board committees meet about 8.37 (8) times. Lastly, the average (median) age of shareholder representatives is 58.90 (59.40) years, which is consistent with the literature (Hansch et al., 2021, p. 172).

Table 12: Descriptive statistics on control variables
This table presents summary statistics of ownership and firm characteristics at the investor-firm-year level concerning the baseline regression using a sample of German listed firms from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. All variables are defined in Appendix B.

Variables	Obs	Mean	Median	Std.	25^{th}	75^{th}	Min	Max
Mapping controls								
Blockholder board seat (d)	6,843	0.21	0.00	0.41	0.00	0.00	0.00	1.00
Blockholder board seats (#)	6,843	0.40	0.00	0.99	0.00	0.00	0.00	9.00
Blockholder board seats (%)	6,843	0.23	0.17	0.23	0.00	0.33	0.00	1.00
Ownership controls								
# Blockholders	6,824	4.64	4.00	2.10	3.00	6.00	1.00	12.00
# Investors below 3%	6,843	27.98	26.00	15.43	17.00	38.00	0.00	183.00
Blockholder exit (d)	6,843	0.49	0.00	0.50	0.00	1.00	0.00	1.00
Blockholder is foreign (d)	6,843	0.59	1.00	0.49	0.00	1.00	0.00	1.00
Blockholder horizon (#)	6,843	12.26	11.00	6.38	7.00	17.00	2.00	25.00
Blockholder rank (#)	6,843	2.83	2.00	1.79	1.00	4.00	1.00	12.00
Blockholder tenure (#)	6,843	6.91	6.00	4.80	3.00	10.00	1.00	22.00
Free float (%)	6,824	0.55	0.57	0.20	0.40	0.70	0.03	1.00
In-sample investments (#)	6,843	39.98	15.00	47.51	1.00	74.00	1.00	152.00
Minority control 2nd (d)	6,824	0.02	0.00	0.13	0.00	0.00	0.00	1.00
Ownership	6,843	0.12	0.06	0.16	0.04	0.11	0.03	0.98
Ownership concentration	6,824	0.11	0.06	0.14	0.02	0.14	0.00	0.97
Ownership squared	6,843	0.04	0.00	0.11	0.00	0.01	0.00	0.97
Portfolio weight (%)	6,833	0.33	0.02	0.44	0.02	0.97	0.00	1.00
Firm controls								
BHR base year	6,780	0.08	0.05	0.41	-0.17	0.32	-0.81	1.43
BHAR base year	6,780	-0.08	-0.09	0.65	-0.38	0.26	-2.58	1.60
Board age	6,827	58.90	59.40	5.15	55.50	62.50	36	73.33
Board co-determination (d)	6,843	0.47	0.00	0.50	0.00	1.00	0.00	1.00
Board meetings	6,840	5.91	5.00	3.41	4.00	7.00	0.00	56.00
Board size bod full (#)	6,843	10.22	10.00	5.25	6.00	12.00	3.00	21.00
Board size shareholder reps (#)	6,843	6.28	6.00	2.06	6.00	8.00	3.00	14.00
Book leverage	6,812	0.24	0.21	0.19	0.08	0.35	0.00	0.78
CapEx	6,765	0.04	0.03	0.04	0.02	0.06	0.00	0.19
Cash	6,812	0.14	0.10	0.14	0.05	0.19	0.00	0.68
Committees (#)	6,313	3.07	3.00	1.79	2.00	4.00	0.00	10.00
Committee meetings	6,313	8.37	8.00	6.85	4.00	11.00	0.00	81.00
Firm age	6,826	23.31	14.00	22.94	8.00	27.00	1.00	131.00
ln(Firm age)	6,826	2.70	2.64	0.96	2.08	3.30	0.00	4.88
Intangibles	6,812	0.18	0.12	0.18	0.03	0.29	0.00	0.68
Management size	6,843	3.89	4.00	1.60	3.00	4.00	1.00	13.00
Payout	6,812	0.02	0.01	0.04	0.00	0.03	0.00	0.25
Presence (%)	6,666	0.61	0.62	0.16	0.48	0.73	0.03	1.00
R&D	3,956	0.04	0.03	0.04	0.01	0.06	0.00	0.18
ROA	6,816	0.11	0.11	0.09	0.06	0.15	-0.20	0.40
Tobin's Q	6,808	1.71	1.33	1.05	1.08	1.90	0.78	6.39
Total assets	6,812	2.84e+07	1.55e+06	1.49e+08	5.39e+05	5.03e+09	1.6e+04	2.19e+09
ln(Total assets)	6,812	14.53	14.25	1.91	13.20	15.43	9.68	21.51
Audit committee (d)	6,843	0.74	1.00	0.44	0.00	1.00	0.00	1.00
Nomination committee (d)	6,843	0.47	0.00	0.50	0.00	1.00	0.00	1.00
Presiding committee (d)	6,843	0.35	0.00	0.48	0.00	1.00	0.00	1.00
Personal committee (d)	6,843	0.45	0.00	0.50	0.00	1.00	0.00	1.00
Strategy committee (d)	6,843	0.10	0.00	0.30	0.00	0.00	0.00	1.00

7.2 Block ownership and blockholder rank

Next, the link between board representation and block ownership is discussed by testing the difference-in-means of *Ownership* and *Blockholder Rank* concerning the indicator variable *Blockholder Board Seat (d)*. In Panel A of Table 13 summary statistics are presented at the blockholder-firm-year level relating to the variable *Ownership*. With this, an investor's block ownership is distinguished among several shareholder categories, as described in 4.4. Consistent with the literature, Table 13 considers categories of 'insider', 'institutional investor', 'other strategic investors', and 'corporate', since blockholder heterogeneity is likely an important factor to comprehend the decision-making process of blockholders to acquire board seats.

Table 13 reports that blockholders who are associated with board representation hold in the mean (median) about 29.76% (25.04%) of a company's outstanding shares. In contrast, a blockholder without such affiliations is associated with a mean (median) holding of about 7.57% (5.01%). The mean difference is significant at the 1% level. The resulting gap in block ownership (of voting rights) suggests that increasing block ownership facilitates the representation of blockholders on the board. The observed ownership gap is consistent for all blockholder types and even applicable to all pre-categories.

On average, insider shareholders (including families, founders, and managers) associated with (without) board representation hold on average a block of 30.43% (16.85%) of the firm's outstanding shares. The difference-in-means test is significant at the 1% level. The underlying relation is determined mainly by families and founders who are among the largest shareholders in Germany following Andres (2008); Franks and Mayer (2001); Goergen et al. (2008a,b). The results also suggest that family ownership exceeds that of founders' when blockholders are associated with board representation which is probably due to founders being more financially constrained as their wealth is typically tied up in the company. In addition, this may also indicate that founders need fewer voting rights (i.e., block ownership) in general to exercise control. Conversely, families might need to engage in block formation more extensively to concentrate control and to seek board representation. Empirical evidence suggests that the mean difference is statistically significant for families, while it is not for founders and managers.

Similarly, institutional shareholders (including asset managers, banks, individuals, insurance companies, hedge funds, and private equity) own about 24.48% (6.24%) of a company's outstanding shares when associated with (without) board representation.[35] The tests for mean differences

[35] Asset managers usually hold a certain fraction of the firm's outstanding shares and do not seek

are statistically significant for all institutional shareholders types (except for asset managers). As shown in Table 13, private equity firms hold on average a block of 26.59% (15.79%) when being associated with (without) board representation. They are among the shareholders that most frequently use board representation as a governance mechanism. In contrast, the ownership gap for hedge funds is between 6.42% and 18.87%. However, considering the number of observations, it becomes evident that hedge funds rarely use board representation as a governance mechanism throughout the sample period. The finding stands in contrast to Gow et al. (2014) who argue that hedge fund activism in the US systematically targets board seats. In addition, the significant representation of banks and insurance companies in German ownership is still prevalent. Although the motifs to seek board representation may differ among institutional shareholders, they are all incentivized to pursue financial objectives.

On average, other strategic shareholders (including foundations, government, and holding companies) are associated with block ownership of 30.86% (2.11%) when (not) holding board seats. The difference-in-means test is significant at the 1% level. Other strategic investors may have a vested interest in the company, but unlike insider blockholders, they do not have direct personal relationships. So other strategic shareholders are potentially incentivized by other supplementary motives to seek board representation than insider shareholders. Hence, board representation allows monitoring the firm's management more closely to ensure that their demands are met. For example, the state as a blockholder may have a vested interest in the company for reasons of stakeholder protection (i.e., ensuring job security for the company's employees in the domestic market) or, in the case of foreign state ownership, for alternative motives (i.e., knowledge transfer or seeking prestige in high-value investments). As reported in 13, all shareholder types within the category have minority control in the respective company when representatives sit on the board. As a result, blockholders classified as state hold in the mean a block of 30.80% (6.43%) when associated with (without) board seats.

On average, corporate blockholders own 35.89% (14.52%) of a company's outstanding shares if they are associated with (without) a seat on the board. The difference-in-means test is significant at the 1% level. That is, shareholders primarily seem to make investments in line with their respective corporate strategies. Therefore, corporate blockholders have strategic motives to integrate target firms into their corporate structures. In this context, corporate blockholders seek representation on the board to exercise control similar to insider blockholders and 'man-

board representation. This is because asset managers (including mutual funds, investment boutiques, index funds, or pension funds) act mainly as 'trading' investors (Edmans and Holderness, 2017), who are typically restricted from holding any formal corporate positions.

age' their corporate investments as a subsidiary. Moreover, corporate blockholders are likely to have significantly more financial resources than insider shareholders. Consistent with contemporary literature, corporate blockholders usually pursue non-financial goals and remain among the largest blockholder types in Germany.

Panel B of Table 13 provides summary statistics at the blockholder-firm-year level concerning an investor's position in terms of rank. Following Edmans and Holderness (2017) an investor's rank within the firm is considered. The rationale is intuitive and follows the reasoning that a 5% block in company A is not equal to another 5% block of shares in company B if the ranking within the respective companies is not equal. If the 5% block in company A is ranked 1^{st}, and the 5% block in Company B is ranked 2^{nd} or 3^{rd}, it is intuitively easy to postulate that the 1^{st}-ranked block has more 'defacto' control than the lower-ranked blockholders. The rank of a shareholder thus determines his relative importance at the negotiating table compared to other shareholders. A blockholder's rank allows measuring blockholder interaction at a more subtle level than would be possible by simply considering the block ownership.

Blockholders are ranked higher when being associated with board representation. In the mean, a blockholder with board representation is ranked at the 1.5^{th} level, while blockholders without board representation are ranked at the 3.2^{nd} level. By analogy, institutional shareholders appear to be ranked lowest among the different blockholder types, although some variation exists among the various pre-categories. The outcome is consistent with the results in Panel A in that institutional shareholders hold smaller blocks relative to non-financial investors. Following, insider shareholders are higher-ranked relative to foundations, and parent companies are among the shareholder groups that still rank ahead of insider shareholders. This is possibly the case because these blockholders are less financially constrained than insider shareholders. In summary, board representation is positively related to block ownership and higher ranking for all shareholder categories.

Table 13: Difference-in-means test for block ownership and blockholder rank
This table presents the difference-in-means test for the variable 'blockholder board seat (d)' at the investor-firm-year level. The difference-in-means test is based on a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. The indicator variable 'blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board and zero otherwise. Panel A (B) shows statistics for the variable 'ownership' ('blockholder rank') aggregated by blockholder type and expressed in %. Both variables are computed at the parent company level. The variable 'blockholder rank' is derived as the natural rank of 'ownership'. Shareholders are classified into several categories: ' insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10%, levels, respectively.

	Blockholder board seat (d) = 0			**Blockholder board seat (d) = 1**			**Difference in means**
Investor type	**Obs**	**Mean**	**Median**	**Obs**	**Mean**	**Median**	**t-value**
			Panel A: Block ownership				
Sample (d)	5,374	7.57	5.01	1,469	29.76	25.04	-56.66***
Insider (d)	345	16.85	9.96	628	30.43	26.45	-10.55***
-Family	188	16.85	9.91	483	33.51	29.41	-9.70***
-Founder	114	19.98	10.99	122	22.04	13.38	-0.98
-Manager	43	8.55	6.00	23	10.17	7.81	-0.83
Inst. investor (d)	4,405	6.24	4.97	383	24.48	18.00	-38.91***
-Asset management	2,397	5.73	4.98	0			
-Bank	1,015	5.49	4.64	93	29.17	12.50	-21.88***
-Insurance	399	6.39	4.89	74	23.10	11.48	-10.26***
-Hedge fund	178	6.42	5.01	17	24.03	18.87	-11.46***
-Private equity	115	15.79	9.26	100	26.10	19.50	-4.05***
-Single investor	301	8.89	5.83	97	32.02	27.97	-7.95***
Other strat. investor (d)	339	10.52	5.07	241	30.86	26.59	-14.34***
-Holding firm	77	21.03	7.00	46	34.80	33.91	-3.24***
-Foundation	38	13.39	8.52	47	27.18	25.10	-4.43***
-State	224	6.42	4.64	148	30.80	26.48	-16.74***
Corporate (d)	285	14.52	12.94	217	35.89	29.01	-10.60***
-Company	259	10.49	8.60	123	17.12	17.77	-8.03***
-Parent company	26	54.67	56.15	94	60.46	59.88	-0.20
			Panel B: Blockholder rank				
Sample (d)	5,374	3.2	3.00	1,469	1.5	1.00	34.50***
Insider (d)	345	2.3	2.00	628	1.4	1.00	10.80***
-Family	188	2.3	2.00	483	1.4	1.00	9.19***
-Founder	114	2.2	2.00	122	1.4	1.00	5.01***
-Manager	43	2.9	2.00	23.00	2.2	2.00	1.35
Inst. investor (d)	4,405	3.3	3.00	383	1.8	1.00	15.82***
-Asset management	2,397	3.2	3.00	0			
-Bank	1,015	3.6	3.00	93	2.0	2.00	8.32***
-Insurance	399	3.7	3.00	74	1.9	1.00	8.01***
-Hedge fund	178	3.5	3.00	17	1.6	1.00	3.89***
-Private equity	115	2.7	2.00	100	1.6	1.00	4.84***
-Single investor	301	3.0	3.00	99	1.9	2.00	5.71***
Other strat. investor (d)	339	3.0	3.00				14.02***
-Holding firm	77	2.5	2.00	46	1.2	1.00	4.88***
-Foundation	38	2.5	2.00	47	1.0	1.00	7.17***
-State	224	3.3	3.00	148	1.4	1.00	11.68***
Corporate (d)	285	2.4	2.00	217	1.4	1.00	9.98***
-Company	259	2.6	2.00	123	1.6	1.00	6.81***
-Parent company	26	1.00	1	94	1.0	1.00	-0.92

The relation between board representation and rank ordering

Table 14 provides summary statistics for the variable *Blockholder board representation (d)* at the blockholder-firm-year level. The sample is grouped into five different categories sorted by size and the different blockholder groups. In that, Panel A, groups shareholders by the size of the underlying block ownership, '3% to < 10%', '10% to < 25%', '25% to <50%', '50% to <75%', and '75% to <100%'.[36] Panel B groups shareholders by the natural rank-ordering including, '1st', '2nd', '3rd', '4th', and '5th'.

Panel A shows that blockholders within the size bracket of '3% to < 10%' are associated with board seats in 7% of the cases. In contrast, the respective statistics increase to 37%, 72% and and 85% across the size brackets of '10% to <25%', '25% to <50%' and '50% to <75%' prior to dropping to 68% in the last size bracket '75% to <100%'. Whilst Table 13 indicates a positive link between board representation and block size, Table 14 provides evidence which may suggest that the positive link is non-linear. As block size increases, the likelihood of board representation increases significantly before decreasing again. The intuition might be that voting rights are sufficient to control the company because blockholders hold a super-majority control. The results are consistent with Holderness and Sheehan (1988, p. 345), who states that the majority shareholder not only intends to monitor the company but also to direct its management.

The summary statistics suggest that different shareholders appear to have different incentives to seek board representation. The results are presumably driven by differences in the ability and willingness to monitor corporate governance, so blockholders may face different barriers to entry on a company's board. The finding becomes particularly evident when considering the lowest size bracket of '3% to < 10%'. Accordingly, insider shareholders obtain a seat on the board in 41% of the cases, while institutional investors only obtain a board seat in 3% of the time. In 14% (22%), other strategic shareholders (corporate shareholders) hold a board seat. Insider shareholders seem to have 'easier' access to boardrooms than outsider shareholders (i.e., different liquidity needs, investment horizons, block ownership, or personal ties to the firm). Subsequently, they have to engage in less 'block-building' and maintain smaller equity blocks to claim a seat on the board. In contrast, institutional investors seem to be less incentivized to take board seats due to legal restrictions, smaller ownership stakes (i.e., lower rank order), or higher liquidity needs. Arguably, the potentially weaker claim of institutional shareholders could also reflect greater skepticism on the part of companies toward (predominantly foreign) institutional blockholders

[36] By definition, blockholders own at least 3% of a company's stock, so the '0% to < 3%' size category is excluded from the empirical analysis.

who are presumably not strategically aligned with the company. The two remaining shareholder groups fall somewhere between insider shareholders and institutional shareholders. Analogous to the overall results, shareholders are more likely to obtain a board seat as the shareholder's block ownership increases.

Panel B reports consistent results regarding a blockholder's rank within the company. Accordingly, blockholders who are ranked 1st are linked to board seats in 53% of the cases.[37] However, it Panel B also provides results indicating that blockholders ranked 2nd hold a seat on the board about 17% of the time. This is surprising, but intuitive, given that the average ownership gap between the largest blockholders ranked 1st and 2nd is about 25% (as shown in Table 8).The 3rd, 4th, and 5th highest-ranking blockholders follow with 8%, 5%, and 4% probability, respectively. The results suggest that the underlying relationship between board representation and the rank order is similarly driven by blockholder heterogeneity. In corollary, blockholders who are ranked 1st and who happen to be insider shareholders appear to be represented on the board in about 76% of the cases. Even if insider shareholders are ranked 5th the probability of holding board seats does not drop below 35% over the sample period. In contrast, blockholders who are ranked 1st and who happen to be institutional shareholders appear to be represented on the board in about 26% of the cases. Also, when ranked 2nd, institutional shareholders appear to be represented on the board in about 8% of the observations. The incentive hurdle of acquiring board seats appear to be substantially higher for institutional shareholders.[38] The results for other strategic investors and blockholders are again somewhere between that of insiders and institutional shareholders. Table 14 highlights that blockholders should acquire a stake of at least 10% or rank 2nd to have a legitimate claim to a seat on the board.

[37]For robustness, when excluding 'asset managers' blockholders who are ranked 1st are associated with board representation in 65% of the cases. This is consistent with Edmans and Holderness (2017, p. 552) who find that the 1st ranked blockholder typically holds a board seat in 66% of the cases.

[38]For robustness, when excluding 'asset managers' institutional shareholders who are ranked 1st, 2nd or 3rd are associated with a board seat in 45%, 18%, or 8% of the cases.

Table 14: Board representation by block ownership and blockholder rank

This table presents summary statistics for the variables 'ownership' and 'blockholder rank' at the investor-firm-year level using a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. In addition, individual t-test statistics are reported for each category. The indicator variable 'blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board, and zero otherwise. Panel A (B) provide summary statistics for the variable 'Ownership' ('Blockholder rank') aggregated by blockholder type. Both variables are computed at the parent company level. The variable 'blockholder rank' is derived as the natural rank of 'ownership'. Panel A classifies 'investor ownership' into one of the following groups: '3% to < 10%', '10% to < 25%', '25% to < 50%', '50% to < 75%', and '75% to < 100%'. Panel B restricts observations to one of the following ranks, including '1', '2', '3', '4', and '5'. Following Section 4.4, shareholders are grouped into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10%, levels, respectively.

	Blockholder board seat (d)								
	Panel A: By block ownership				**Panel B: By blockholder rank**				
Ownership range	**Obs**	**Mean**	**Median**	**t-stat**	**Rank**	**Obs**	**Mean**	**Median**	**t-stat**
Sample (d)	6,843	0.21	0.00	43.25***		6,843	0.21	0.00	43.25***
3– < 10	4,853	0.07	0.00	18.97***	1	1,906	0.53	1.00	46.49***
10– < 25	994	0.37	0.00	24.37***	2	1,651	0.17	0.00	18.55***
25– < 50	550	0.72	1.00	37.57***	3	1,269	0.08	0.00	10.24***
50– < 75	364	0.85	1.00	45.65***	4	864	0.05	0.00	6.56***
75– < 100	82	0.68	1.00	13.21***	5	552	0.04	0.00	4.78***
Insider (d)	973	0.65	1.00	42.06***		973	0.65	1.00	42.06***
3– < 10	299	0.41	0.00	14.53***	1	595	0.76	1.00	42.94***
10– < 25	241	0.68	1.00	22.40***	2	199	0.59	1.00	16.98***
25– < 50	244	0.70	1.00	23.63***	3	88	0.36	0.00	7.05***
50– < 75	181	0.91	1.00	41.67***	4	44	0.41	0.00	5.46***
75– < 100	8	0.88	1.00	7.00***	5	23	0.35	0.00	3.43***
Inst. investor (d)	4,788	0.08	0.00	20.40***		4,788	0.08	0.00	20.40***
3 – < 10	4,067	0.03	0.00	11.54***	1	786	0.26	0.00	16.42***
10 – < 25	521	0.21	0.00	11.93***	2	1,216	0.08	0.00	10.44***
25 – < 50	109	0.63	1.00	13.65***	3	1,040	0.05	0.00	7.17***
50 – < 75	50	0.94	1.00	27.71***	4	741	0.02	0.00	3.91***
75 – < 100	41	0.63	1.00	8.33***	5	469	0.02	0.00	3.19***
Other strat. investor (d)	580	0.42	0.00	20.29***		580	0.42	0.00	20.29***
3 – < 10	297	0.14	0.00	6.89***	1	290	0.71	1.00	26.40***
10 – < 25	102	0.54	1.00	10.87***	2	81	0.22	0.00	4.78***
25 – < 50	111	0.86	1.00	26.53***	3	91	0.10	0.00	3.14***
50 – < 75	64	0.69	1.00	11.77***	4	42	0.12	1.00	2.35**
75 – < 100	6	0.83	1.00	5.00***	5	43	0.05	0.00	1.43
Corporate (d)	502	0.43	0.00	20.29***		502	0.43	0.00	20.29***
3 – < 10	190	0.22	0.00	7.21***	1	235	0.67	1.00	21.70***
10 – < 25	130	0.32	0.00	7.85***	2	155	0.31	0.00	2.82***
25 – < 50	86	0.71	1.00	14.40***	3	50	0.14	0.00	2.82***
50 – < 75	69	0.80	1.00	16.34***	4	37	0.08	0.00	1.78*
75 – < 100	27	0.67	1.00	7.21***	5	17	0.12	0.00	1.46

7.3 Entry and exit of blockholder-directors

By analogy, systematic differences in blockholder attributes and incentives to take board seats should be reflected in the average length of time (i.e., proxied in years) it takes for blockholder-directors *(i)* to gain board representation, as shown in Panel A and *(ii)* to leave the board after the blockholder has exited the firm. Table 14 provides novel insights into the decision-making process and timing of obtaining board seats. In that, the decision to engage in block-building and the decision to engage in seat-building do not necessarily coincide, consistent with the established rationale in the opening of the underlying thesis. Against the background of the dollar investments held in the firm, the direct costs of attaining a board seat should be arguably low. Intuition suggests that boardroom access may be more feasible in Germany than in the United States. Due to the two-tier board system prevailing in Germany, the composition of the board of directors must be independent of the company's management (unlike in the US). Therefore, it is prudent to assume that board composition in Germany is less likely influenced by powerful CEOs (i.e., CEO duality) and board entrenchment (i.e., staggered boards), thereby making this form of voice particularly costly for outsider shareholders in the US as blockholders presumably engage in costly proxy fights and activist campaigns to gain direct access to a company's board (Bebchuk et al., 2020; Gow et al., 2014).

In total, 1,419 out-of-sample entry events are reported in which a blockholder joins the board for the first time. In the mean (median), blockholders take 1.3 (0) years to obtain a board seat. As block size increases, the average blockholder can shorten the period from 1.9 years within the '3% to $<$ 10%' size bracket to 0.4 years within the '75% to $<$ 100%' bracket, as illustrated in Table 15. Further, 822 exit events are reported where a blockholder exits the block position. In the mean (median), the respective blockholder-directors cease their directorships on the board 2.6 (1) years after the blockholder has exited the company. In contrast, the summary statistics indicate a positive association between blockholder-director exits and block size. As block size increases, the (former) blockholder-directors tend to remain on the board for another 2.2 years to 3.9 years within the '3% to $<$ 10%' and '75% to $<$ 100%' size brackets, respectively. The results may come as a surprise, as it would be intuitive to assume that blockholder-directors terminate their respective board mandates once the respective blockholder exits the company. The results suggest that the opposite is as block ownership increases. One possible explanation is that former blockholder-directors remain on the board to provide stability during a period of transition. The notion would also suggest that the longer blockholder-directors remain on the board, the more entrenched these directors appear to be (and possibly strategically aligned with the firm

overall). With that being said, blockholder board representation has implications that are much more pervasive than previously assumed in the literature, as former blockholder-directors can influence the composition of a company's board and, conversely, the degree of monitoring in subsequent years. Even after the blockholder has exited the firm, former blockholder-directors could pose barriers to entry to other blockholders who seek board representation.

Table 15: Summary statistics on entry and exit of blockholder-directors

This table presents summary statistics for the variable 'time lag (in years)' at the investor-firm-year level using a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. In addition, individual t-test statistics are reported for each category. The indicator variable 'blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board, and zero otherwise. Panel A (B) shows statistics for the length of time it requires for blockholder-directors to join (leave) the board once the respective blockholder has entered (exited) the sample firm. Both variables are computed at the parent company level. Panel A (B) classify 'investor ownership' into one of the following groups: '3% to < 10%', '10% to < 25%', '25% to < 50%', '50% to < 75%', and '75% to < 100%'. The entry and exit dates of board directors are hand-collected. The entry dates of blockholders are retrieved from 'Refinitiv's' shareholder history report. The time lag is computed as the difference between the director's year of entry (exit) minus the year of the blockholder's entry (exit) using an 'out-of-sample' setting. Following the Section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Time lag (in years)							
	Panel A: Blockholder-director entry				**Panel B: Blockholder-director exit**			
Investor type	**Obs**	**Mean**	**Median**	**t-stat**	**Obs**	**Mean**	**Median**	**t-stat**
Sample (d)	1,419	1.3	0.00	21.58***	822	2.6	1.00	27.53***
3– < 10	315	1.9	1.00	12.87***	207	2.2	1.00	12.02***
10 – < 25	357	1.7	1.00	12.15***	249	2.1	1.00	12.68***
25 – < 50	387	1.3	0.00	10.99***	202	2.7	2.00	14.10***
50 – < 75	306	0.6	0.00	6.95***	116	3.6	3.00	14.68***
75 – < 100	54	0.4	0.00	3.04***	48	3.9	4.50	11.52***
Insider (d)	603	1.2	0.00	12.98***	312	2.6	1.00	17.51***
3 – < 10	120	1.3	0.00	5.72***	63	3.3	2.00	9.44***
10 – < 25	154	1.9	0.00	7.18***	116	2.0	1.00	7.39***
25 – < 50	162	1.1	0.00	8.02***	72	2.6	1.50	9.48***
50 – < 75	160	0.8	0.00	6.51***	58	3.1	3.00	11.53***
75 – < 100	7.00	0.0	0.00	.	3	8.0	8.00	.
Inst. investor (d)	374	1.4	0.00	12.91***	298	2.6	2.00	17.65***
3 – < 10	122	2.0	1.00	9.04***	105	1.8	1.00	7.23***
10 – < 25	111	1.8	1.00	7.93***	95	2.2	1.00	9.54***
25 – < 50	68	1.3	0.00	6.41***	55	3.5	4.00	10.45***
50 – < 75	46	0.2	0.00	1.36	16	4.3	4.00	7.06***
75 – < 100	27	0.1	0.00	1.44	27	4.5	5.00	11.95***
Other strat. investor (d)	234	1.6	0.00	9.51***	81	3.0	2.00	10.89***
3 – < 10	33	3.6	4.00	8.97***	14	1.6	1.00	4.10***
10 – < 25	55	1.3	1.00	6.81***	14	1.9	1.00	4.40***
25 – < 50	96	1.8	0.00	5.28***	35	2.6	3.00	9.88***
50 – < 75	45	0.4	0.00	1.58	13	7.1	8.00	11.32***
75 – < 100	5	1.2	1.00	2.45*	5	2.2	1.00	2.27*
Corporate (d)	208	1.2	0.00	9.51***	131	2.1	1.00	10.89***
3 – < 10	40	1.8	1.00	3.90***	25	1.4	0.00	3.04***
10 – < 25	37	1.2	1.00	4.35***	24	2.2	1.00	3.71***
25 – < 50	61	1.3	0.00	3.59***	40	2.2	0.00	3.26***
50 – < 75	55	0.6	0.00	2.64***	29	2.6	1.00	5.22***
75 – < 100	15	0.7	0.00	2.22**	13	2.3	3.00	5.20***

7.4 Investment horizon and blockholder exit

Table 16 extends the empirical analysis by investigating the link between board representation and a blockholder's *(i)* investment horizon and *(ii)* decision to exit. The setting follows the previous setting and reports summary statistics of the respective difference-in-means test. Accordingly, in the mean (median), blockholders remain invested in companies for about 15.19 (15) years if they are part of the supervisory board and respectively about 11.46 (11) years if they are not. The difference in the mean values is significant at the 1% level.[39] As the summary statistics suggest, acquiring a board seat commits blockholders (indifferent of the type) to pursue a long-term voice strategy. Consistent with Edmans and Holderness (2017, p. 547), the results contradict Alchian and Demsetz (1972)'s notion that shareholders dynamically enter and exit companies whenever there is demand for blockholder intervention. Following the rationale, blockholders would engage in block-building, institute value-enhancing changes, and eventually exit once the issue is resolved. However, the underlying results are consistent with Barclay and Holderness (1989, p. 376)'s finding that blockholders engage in block formation and board seat taking to assume a leadership role in the company.

The summary statistics in Table 16 support the notion that blockholders have different attributes and preferences (i.e., liquidity needs). While the effect is particularly significant for insiders and other strategic shareholders, it is less pronounced for institutional and corporate shareholders. As follows, insiders increase their respective investment horizons from a mean (median) of 12.26 (11) years to 16.63 (18) years. Insiders are thus among the shareholders remaining invested in a company the longest, which is intuitive given their personal ties to the firm. Similarly, other strategic shareholders are associated in the mean (median) with longer investment horizons of 17 (16) years instead of 11.94 (11) years when being on the board.

In comparison, the investment horizon of institutional shareholders is in the mean (median) of about 13.57 (13) years when being associated with board seats and 11.46 (11) years if not. However, there is some variation among institutional shareholders as hedge funds are associated with the shortest investment horizon. Although some caution is warranted in drawing empirical inferences given the low number of observations, the result is consistent with the literature regarding the investment behavior of hedge funds. Contrary to hedge funds, private equity firms show a different investment pattern as they are more likely to trade on 'long-term' information and, coherently, have longer investment periods. Surprisingly, the investment horizon of private

[39] The out-of-sample variable of investment horizon spans from the year of the earliest holdings date to the last year remaining in the panel.

equity firms appears to increase only slightly when holding board seats. The finding suggests that private equity firms may also use alternative voice channels to intervene in the management process. Similarly, corporate blockholders show, on average lower investment horizons. In the mean (median), corporate shareholders stay invested in the company for about 11.9 (11) years if they have representatives on the board and 9.94 (10) years otherwise. Strategic considerations potentially drive the results, as corporate blockholders either *(i)* acquire and integrate a firm into its corporate structure (and typically take the target firm private) or *(i)* sell the block position if it does not fit the long-term strategy of the parent firm.

Panel B of Table 16 reports summary statistics on the decision of shareholders to exit. As the results indicate, blockholders engage in exit within the next three years with a probability of 58% if they have no direct links to the board. The exit probability drops to 17% if the blockholders hold board seats. The difference in the mean test is significant at the 1% level. The results indicate that acquiring a board seat is most likely linked to a long-term 'voice' strategy, thereby committing the blockholder to become an active monitor.[40] By extending the framework on blockholder exits, the thesis gains more insights into the decision-making process of blockholders in maintaining their block position in the long term. It also allows assessing which type of investors are more inclined to trade on short-term (long-term) information and consequently seek board representation.

Insider blockholders appear to have the lowest exit rates on average, regardless of whether they are represented on the company's board. On average, the probability of exiting the company drops from 35% to 11% when insider blockholders gain a seat on the board. The corresponding mean test is significant at the 1% level. However, the effect is only significant for managers, as the difference-in-means test does not yield significant results for families and founders. A possible reason for this is that insider blockholders are closely linked to the company over generations, as these equity blocks offer significant voting and cash-flow rights. Other than emotional reasons, families also remain invested for financial reasons, even if the family is not involved in overseeing the company's management.[41]

[40] In addition it is prudent to assume that the threat of exit becomes a more credible mechanism for disciplining management. Since board representation provides access to private information, the decision to exit may be interpreted as a signal that management is shirking, which would induce others to exit as well (Edmans and Holderness, 2017).

[41] The Siemens family holds a 6% block position in Siemens AG and is one of the company's largest blockholders. Due to their long-standing commitment to Siemens, the family has a permanent seat on the supervisory board. In 2015, Nathalie von Siemens, the great-granddaughter of company founder Werner von Siemens, replaced the then family representative Gerd von Brandenstein on the supervisory board.

For institutional shareholders, the exit probability significantly drops from 61% to 27%. Nevertheless, institutional shareholders are associated with the highest exit rates compared to other shareholder types, which is driven by higher liquidity needs (Edmans and Manso, 2011). An exit also becomes less likely for the remaining blockholder types (i.e., other strategic investors and corporate blockholders), underlining their general strategic orientation. For corporate blockholders, the probability of an exit within the next five years is generally low in both constellations, while the probability of an exit drops from 39% to 20%.[42] The difference is even larger for other strategic investors, where the probability of an exit from the company drops from 53% to 11%. The differences are statistically significant. Most importantly, a foundation's exit probability converges to zero, consistent with its long-term investment orientation. To make a long story short, Table 16 allows taking a different perspective on the underlying issue and makes it apparent that the decision to exit and the decision to acquire board seats are in part explained by blockholder heterogeneity.

[42]Parent companies typically acquire their subsidiaries fully and take them private for purposes of integration (e.g., Volkswagen AG acquiring MAN SE).

Table 16: Difference-in-means test for investment horizon and blockholder exit

This table presents the difference-in-means test for the variable 'blockholder board seat (d)' at the investor-firm-year level. The difference-in-means test is based on a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. The indicator variable 'blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board, and zero otherwise. Panel A (B) shows statistics for the variable 'investment horizon' ('blockholder exit') aggregated by blockholder type. Both variables are computed at the parent company level. The variable 'investment horizon' is computed as the year of exit minus the year of the earliest holdings date. The entry dates of blockholders are retrieved from 'Refinitiv's' shareholder history report using an 'out-of-sample' setting. The indicator variable 'blockholder exit' equals one if a blockholder exits the firm within the next three years, and zero otherwise. A blockholder exit is effective if the block holding decreases below the threshold of 3% (alternatively 0%). Following the Section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d) = 0			**Blockholder board seat (d) = 1**			**Difference in means**
Investor type	**Obs**	**Mean**	**Median**	**Obs**	**Mean**	**Median**	**t-value**
Panel A: Investment horizon							
Sample (d)	5,374	11.46	11.00	1,469	15.19	15.00	-20.47***
Insider (d)	345	12.26	11.00	628	16.63	18.00	-10.42***
-Family	188	12.97	11.50	483	16.61	16.00	-6.76***
-Founder	114	12.19	12.00	122	16.62	18.00	-5.53***
-Manager	43	9.35	7.00	23.00	17.00	22.00	-4.87***
Inst. investor (d)	4,405	11.46	11.00	383	13.57	13.00	-6.46***
-Asset management	2,397	11.81	11.00	0.00			
-Bank	1,015	12.73	12.00	93	14.12	14.00	-1.99**
-Insurance	399	11.47	11.00	74	18.15	21.00	-10.37***
-Hedge fund	178	5.68	5.00	17	8.53	9.00	-3.35***
-Private equity	115	10.29	9.00	100	11.97	10.00	-1.83*
-Single investor	301	8.22	7.00	99	12.11	12.00	-6.97***
Other strat. investor (d)	339	11.94	11.00	241	17.00	16.00	-9.27***
-Holding firm	77	12.16	12.00	46	11.22	13.00	0.90
-Foundation	38	8.21	6.50	47	16.79	23.00	-5.75***
-State	224	12.50	13.00	148	18.86	21.00	-9.78***
Corporate (d)	285	9.94	10.00	217	11.90	11.00	-4.15***
-Company	259	10.00	10.00	123	11.75	11.00	-3.12***
-Parent company	26	9.38	5.50	94	12.11	11.00	-2.18**
Panel B: Blockholder exit t_1-t_3 (d)							
Sample (d)	5,374	0.58	1.00	1,469	0.17	0.00	29.34***
Insider (d)	345	0.35	0.00	628	0.11	0.00	9.10***
-Family	188	0.32	0.00	483	0.11	0.00	6.62***
-Founder	114	0.33	0.00	122	0.14	0.00	3.60***
-Manager	43	0.51	1.00	23.00	0.04	0.00	4.24***
Inst. investor (d)	4,405	0.61	1.00	383	0.27	0.00	12.95***
-Asset management	2,397	0.57	1.00	0.00			
-Bank	1,015	0.75	1.00	93	0.29	0.00	9.84***
-Insurance	399	0.62	1.00	74	0.34	0.00	4.54***
-Hedge fund	178	0.69	1.00	17	0.06	0.00	5.54***
-Private equity	115	0.42	0.00	100	0.30	0.00	1.79*
-Single investor	301	0.48	0.00	99	0.22	0.00	4.54***
Other strat. investor (d)	339	0.53	1.00	241	0.11	0.00	11.55***
-Holding firm	77	0.36	0.00	46	0.24	0.00	1.44
-Foundation	38	0.47	0.00	47	0.06	0.00	4.88***
-State	224	0.59	1.00	148	0.08	0.00	11.54***
Corporate (d)	285	0.39	0.00	217	0.20	0.00	4.57***
-Company	259	0.38	0.00	123	0.24	0.00	2.62**
-Parent company	26	0.50	0.50	94	0.15	0.00	4.01***

7.5 Blockholder portfolio concentration

Extending the previous setting, Table 17 examines the link between board representation and the blockholder's portfolio concentration. While Panel A presents summary statistics on the proportionate share of the underlying investment of the blockholder's out-of-sample total portfolio, panel B shows the average number of in-sample investments. Although portfolio theory advocates that investors should hold highly diversified portfolios, this is not always the case, even among blockholders (i.e., personal ties or limited financial resources). Consequently, it is reasonable to assume that blockholders with concentrated portfolios will be more inclined to acquire a seat on the board than blockholders with highly diversified portfolios. From a blockholder's perspective, the relative importance of a particular block investment decreases as the blockholder's portfolio contains an increasing number of investments. Following the previous settings, portfolio concentration is likely driven by blockholder heterogeneity.

According to Panel A, the mean weight of a blockholder's investment is about 24% of the blockholder's respective out-of-sample portfolio. The mean portfolio weight increases to 65% if the blockholder has representatives on the board. The corresponding mean test is significant at the 1% level. As the summary statistics indicate, insider shareholders have the highest portfolio concentration among all shareholders and have more incentives to seek board representation. The finding is intuitive since more wealth relative to the overall portfolio is tied to the company. An insider shareholder's block investment makes up 74% (and 58%) of the shareholder's portfolio wealth if (not) being represented on the board. In contrast, institutional investors are associated with the lowest portfolio concentration, consistent with the previously discussed settings. Because of the smaller proportion of their investments in the overall portfolio, institutional shareholders are linked to a higher probability of exit and greater diversification which makes it more likely that institutional investors govern through trading (Edmans and Manso, 2011) and engage in alternative channels of voice rather than seeking representation on the board (i.e., voting or behind-the-scenes-engagement). The summary statistics of corporate and other institutional shareholders align somewhere between insider and institutional shareholders, suggesting that these shareholders tend to hold more concentrated portfolios.

In turn, Panel B presents results indicating that blockholders hold on average 11.8 investments when being represented on the board and 47.7 investments otherwise. The test for mean differences is significant at the 1% level. The results are consistent with Panel A in that there is a clear tendency for blockholders with a seat on the board to have more concentrated portfolios.

Thus, blockholders benefit from monitoring the firm's management when their block ownership becomes relatively more important. The in-sample investments establish that blockholders are stratified into two groups. In general, financial investors hold, on average more investments than non-financial investors, which is in line with the literature (Cronqvist and Fahlenbrach, 2008; J Hadlock and Schwartz-Ziv, 2019). The finding also indicates that board representation generally comes at the expense of portfolio diversification. That is, blockholders tend to hold more concentrated portfolios when associated with board seats. Collectively, the incentive to seek board representation increases with a larger block size and a higher rank order, and more so when a specific block investment has a larger weight in a blockholder's portfolio. Arguably, the latter allows drawing inferences about a blockholder's financial capacities, which has implications for her decision to diversify her portfolio.

Table 17: Difference-in-means test for blockholder portfolio concentration

This table presents the difference-in-means test for the variable 'blockholder board seat (d)' at the investor-firm-year level. The difference-in-means test is based on a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. The indicator variable 'blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board, and zero otherwise. Panel A (B) presents statistics for the variable 'portfolio weight (%)' ('in-sample investments') aggregated by blockholder type. Both variables are computed at the parent company level. The variable 'portfolio weight (%)' is retrieved from 'Refinitiv's' shareholder history report and shows the share of the investment relative to the blockholder's overall portfolio in an out-of-sample setting. The variable 'in-sample investments' computes the total number of investments of a blockholder in a given year within the sample. A blockholder exit is effective if the block holding decreases below the threshold of 3% (alternatively 0%). Following the Section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d) = 0			**Blockholder board seat (d) = 1**			**Difference in means**
Investor type	**Obs**	**Mean**	**Median**	**Obs**	**Mean**	**Median**	**t-value**
			Panel A: Portfolio weight (%)				
Sample (d)	5,367	0.24	0.01	1,466	0.65	0.98	-34.03***
Insider (d)	341	0.58	0.97	628	0.74	0.99	-5.44***
-Family	186	0.61	0.97	483	0.72	0.99	-2.92***
-Founder	113	0.62	0.97	122	0.82	0.99	-3.60***
-Manager	42	0.38	0.02	23.00	0.92	1.00	-4.85***
Inst. investor (d)	4,404	0.19	0.01	383	0.50	0.37	-15.35***
-Asset management	2,397	0.15	0.01	0			
-Bank	1,015	0.13	0.01	93	0.43	0.30	-9.07***
-Insurance	399	0.14	0.00	74	0.43	0.30	-6.73***
-Hedge fund	178	0.39	0.05	17	0.37	0.05	0.20
-Private equity	114	0.58	0.97	100	0.53	0.71	0.81
-Single investor	301	0.54	0.89	99	0.59	0.99	-0.91
Other strat. investor (d)	339	0.29	0.01	241	0.63	0.91	-9.19***
-Holding firm	77	0.48	0.14	46	0.61	0.98	-1.36
-Foundation	38	0.53	0.98	47	0.82	1.00	-3.07***
-State	224	0.19	0.00	148	0.57	0.59	-9.55***
Corporate (d)	283	0.49	0.40	214	0.67	0.99	-4.25***
-Company	257	0.46	0.10	123	0.56	0.96	-1.94**
-Parent company	26	0.79	1.00	91	0.81	0.99	-0.28
			Panel B: In-sample investments				
Sample (d)	5,374	47.70	31.00	1,469	11.80	1.00	26.96***
Insider (d)	345	2.30	1.00	628	1.30	1.00	5.67***
-Family	188	2.30	1.00	483	1.40	1.00	4.31***
-Founder	114	2.70	1.00	122	1.10	1.00	4.36***
-Manager	43	1.00	1.00	23.00	1.00	1.00	0.00
Inst. investor (d)	4,405	53.60	38.00	383	23.10	1.00	12.11***
-Asset management	2,397	55.20	38.00	0			
-Bank	1,015	74.60	82.00	93	47.70	25.00	6.25***
-Insurance	399	68.00	83.00	74	56.30	41.00	2.11**
-Hedge fund	178	2.60	1.00	17	1.60	2.00	1.27
-Private equity	115	1.70	1.00	100	1.10	1.00	2.77***
-Single investor	301	1.30	1.00	99	1.00	1.00	1.79*
Other strat. investor (d)	339	55.80	19.00	241	30.80	5.00	5.77***
-Holding firm	77	7.29	1.00	46	1.00	1.00	5.44***
-Foundation	38	1.37	1.00	47	1.70	1.00	-1.39
-State	224	81.70	93.50	148	49.30	42.00	6.04***
Corporate (d)	285	1.50	1.00	217	1.24	1.00	1.83
-Company	259	1.50	1.00	123	1.36	1.00	0.91
-Parent company	26	1.00	1.00	94	1.09	1.00	-1.54

7.6 Blockholder heterogeneity

Table 18 extends the notion of Schwartz-Ziv and Volkova (2020) in that blockholders tend to condition their decision to engage in block formation on the presence of other blockholders. Accordingly, the thesis proposes that blockholders are likely to condition their decision to acquire board seats (i.e., engage in board seat formation) on the presence of legacy blockholders. As presented in Table 12, the sample firms have in the mean (median) 4.64 (4) blockholders. However, to what extent different blockholders seek coalitions on the board remains an empirical question. On the one hand, blockholders may corroborate in boardrooms through their respective blockholder-directors, thereby decreasing agency problems in the firms. On the other hand, blockholders may compete for board seats leading to a crowding-out effect and increasing conflicts of interest.

Panel A of 18 reports the frequency of board representation for different blockholder types at the firm-year level. The thesis differentiates between boards controlled by a single blockholder and those shared by multiple blockholders. The setting accounts for various pair combinations of different blockholder types being present on the board.[43] Overall, 1,259 firm-year observations (nearly 65% of total firm-year observations) are associated with board representation. Of these, 944 firm-years (more than 75%) are related to a single blockholder on the board and 315 firm-years with multiple blockholders, respectively. The results unambiguously highlight that blockholders shun the interaction with other blockholders on the board. Accordingly, in 33% of the cases, insider shareholders have exclusive access to the firm's board, which is consistent with literature that families represent the most common blockholder type in the German ownership (Franks and Mayer, 2009). In 15% of the cases, a single institutional investor or other strategic investor has blockholder-directors on the board. Lastly, in 12% of the cases, corporate blockholders represent the only blockholder to have board representation. Considering the paired combinations, in about 11% and 14% of the cases, multiple blockholders of the same or different types are present on the board. In the latter case, institutional shareholders appear to drive the underlying relation, indicating that institutional investors potentially act as mediators who are relatively more likely to seek coalitions on the board. Panel B presents the corresponding correlation matrix comprising the different blockholder combinations seated on the board. Following this, the evidence suggests a negative correlation between the representations of the different blockholder types. This result is broadly consistent with the assumption that blockholders engage in some level of crowding out others (Edmans and Holderness, 2017, p. 584).

[43] In 0.95% of the cases, there are pairs of three different blockholder types represented on the board. These observations were allocated to institutional investors.

Collectively, blockholders prefer to govern on their own consistent with (J Hadlock and Schwartz-Ziv, 2019; Zwiebel, 1995). A legacy blockholder on the board appears to be a barrier to entry for other blockholders. One possible reason is that multiple blockholders on the board may impede board communication, as the blockholders may prefer different mechanisms to increase monitoring. Also, conflicting objectives may prevent the board from fulfilling its responsibilities adequately, for example, providing advice to the firm's management. Subsequently, multiple blockholders could increase conflicts of interest on the board and impede the blockholder-directors from resolving the agency problem. Another potential reason is that boards, in general, are selective about whom they are willing to accept as blockholder-directors, given that it is in the company's best interest to have long-term blockholders sit on the board.

Table 18: Summary statistics on multiple blockholders on the board
This table presents summary statistics for aggregated blockholder presence at the firm-year level using a sample of German-listed firms from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. The indicator variable 'blockholder board seat (d)' equals one if the firm has at least one blockholder-representative on the board, and zero otherwise. Panel A distinguishes between firm-years in which only a single blockholder sits on the board and firm-years in which certain pairs of blockholders 'coexist' on the board of the same firm. In this context, the distribution of each possible blockholder pair is reported. Additionally, the combined distribution for each investor type is included. Panel B reports a correlation matrix of the different blockholder types to ensure robustness. Following the Section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Coexistence of multiple blockholders on boards			
Investor type	**Insider (d)**	**Inst. investor (d)**	**Other strat. investor (d)**	**Corporate (d)**
Panel A: Distribution of board representation				
	Single blockholder on board			
Individual	33%	15%	15%	12%
	Multiple blockholders on board			
Insider (d)	6%			
Inst. investor (d)	5%	3%		
Other strat. investor (d)	0.3%	4%	0.3%	
Corporate (d)	1.5%	1.6%	1.3%	1.0%
Panel B: Correlation matrix				
Insider (d)	1.00			
Inst. investor (d)	-0.069***	1.00		
Other strat. investor (d)	-0.187***	0.013	1.00	
Corporate (d)	-0.146***	-0.079***	-0.040*	1.00

7.7 Board and committee structure

While the previous settings provide insights into the decision-making of taking board seats, they are not concerned with the mechanisms with which blockholder exert control once they have blockholder-directors on the board. Table 19 reports summary statistics on different proxy variables of blockholder board representation, allowing for a better understanding of how blockholders influence a firm's board composition. Whereas Panel A presents results at the board level, Panel B reports the results at the committee level. As outlined in the opening of the thesis, overall, only 21% of all blockholder-firm-years are associated with board seats.[44] Further, blockholders who seek representation on the board hold in the mean (median) 1.85 (1) seat(s), which is about 40% (33%) relative to all shareholder representatives. As the literature suggests, it is reasonable to differentiate among the various blockholder groups.

Following this, insider shareholders are particularly prone to taking board seats, as these shareholders are associated with board representatives in 65% of cases. While institutional investors do so 16% of the time, the remaining blockholder types, namely other strategic and corporate investors, are represented on the board in 42% (43%). Although insider shareholders appear to have the 'strongest' link to board representation, possibly given their ties and longer investment periods, they hold in the mean (median) only 1.42 (1) board seats, which is the lowest in comparative terms. The low number of board seats may indicate that they systematically 'limit' their presence on the board, either *(i)* to avoid criticism of nepotism or potentially *(ii)* because they require fewer board seats to exert the same level of control. In contrast, other strategic investors hold in the mean (median) about 2.57 (2) board seats, corporate investors about 2.18 (2), and institutional investors 1.93 (1), respectively. Whereas founders, managers, and individuals are among the shareholders with the lowest numbers of blockholder-directors in absolute terms, the state, parent companies, and holding firms are among the shareholders with the highest numbers of board representatives, probably due to the limited capacities and resources of the former groups to hold more board seats. The finding also underscores the strong position of non-financial shareholders in German ownership. As for institutional shareholders, it is notable that banks and private equity firms have, on average, the highest number of delegates, with 2.47 and 2.27 board seats. Similarly, the summary statistics regarding institutional shareholders are consistent with the German bank-based system and indicate that banks still play an important role in governing a firm.

[44] Untabulated results show that only 14% of blockholder-firm-years (excluding insider shareholders) are associated with board seats. The result is consistent with Marquardt and Sanchez (2021).

Panel B results suggest that blockholders become active monitors by systematically seeking representation on board committees. The finding follows the rationale that a substantial part of decision-making probably occurs at the committee level.[45] In addition, the identification of blockholder-directors on board committees is informative in that it provides insights into how blockholders interact with and within boards. Accordingly, blockholders are seated on the audit committee 60% of the time and hold in the mean (median) 1.25 (1) seats, conditional upon the company having established a committee. In contrast, 74% of the time, the average blockholder is associated with a seat on the nomination committee and holds in the mean (median) 1.32 (1) seats. The remaining committees are targeted 70% of the time. The high representation of blockholders on the nomination committee and the personnel committee are likely driven by the blockholders' intention to better align interests with the firm's management. Hence, disciplining management through market-based mechanisms (i.e., remuneration) would arguably allow blockholders to improve board monitoring. The comparatively low representation on the audit committee may be surprising but intuitive, considering that the audit committee should generally be independent of the controlling owners of the company (DCGK).

Concerning the remaining summary statistics, non-financial investors (primarily corporate and other strategic investors) are more frequently represented on the audit committee than financial shareholders. This may follow the rationale that financial blockholders are better apt to process financial information and coherently need fewer resources on the audit committee. The empirical evidence may also suggest that financial blockholders use alternative channels to gather information other than relying on the audit committee. In addition, the summary statistics suggest that non-financial blockholders appear to target the presiding and strategy committees, presumably to set the company's strategic outlay and provide advice to the management. Concluding, blockholder heterogeneity appears to be a primary source of explaining variations in board structure of the underlying sample firm's.

Table 19: Summary statistics on alternative proxies of board representation
This table presents summary statistics for various proxy variables related to blockholder board representation (blockholder committee representation) at the investor-firm-year level using a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. The indicator variable 'blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board, and zero otherwise. The variable 'blockholder board seats (#)' ('blockholder board seats (%)') computes the absolute (relative) number of blockholder-directors on the board of the underlying sample firms. Panel A (B) shows the board (committee) level statistics. Following the Section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B.

[45] Since large boards predominantly establish committees to increase the efficacy of the board overall, the sub-sample is restricted to observations in which a relevant committee is established in the company.

Investor type	Committee/ board seat (d)			Committee/ board seats (#)			Committee/ board seats (%)		
	Obs	Mean	Median	Obs	Mean	Median	Obs	Mean	Median
Panel A: Blockholder board representation									
Sample (d)	6,843	0.21	0.00	1,469	1.85	1.00	1,469	0.40	0.33
Insider (d)	973	0.65	1.00	628	1.42	1.00	628	0.36	0.33
-Family	671	0.72	1.00	483	1.53	1.00	483	0.36	0.33
-Founder	236	0.52	1.00	122	1.05	1.00	122	0.34	0.33
-Manager	66	0.35	0.00	23	1.04	1.00	23	0.56	0.60
Inst. investor (d)	2,391	0.16	0.00	383	1.93	1.00	383	0.44	0.38
-Asset management	2,397	0.00	0.00	0			0		
-Bank	1,108	0.08	0.00	93	2.47	1.00	93	0.56	0.60
-Insurance	473	0.16	0.00	74	1.88	1.00	74	0.34	0.33
-Hedge fund	195	0.09	0.00	17	1.53	1.00	17	0.33	0.33
-Private equity	215	0.47	0.00	100	2.27	2.00	100	0.48	0.42
-Single investor	400	0.25	0.00	99	1.18	1.00	99	0.40	0.33
Other strat. investor (d)	580	0.42	0.00	241	2.57	2.00	241	0.38	0.33
-Foundation	85	0.55	1.00	47	1.98	2.00	47	0.29	0.30
-Holding firm	123	0.37	0.00	46	2.52	3.00	46	0.44	0.38
-State	372	0.40	0.00	148	2.78	2.00	148	0.40	0.33
Corporate (d)	502	0.43	0.00	217	2.18	2.00	217	0.46	0.50
-Company	382	0.32	0.00	123	1.59	1.00	123	0.46	0.38
-Parent company	120	0.78	1.00	94	2.94	2.00	94	0.47	0.50
Panel B: Blockholder committee representation									
Sample (d)									
Audit committee (d)	1,130	0.60	1.00	679	1.25	1.00	679	0.32	0.25
Nomination committee (d)	652	0.74	1.00	480	1.32	1.00	480	0.42	0.33
Personnel committee (d)	702	0.70	1.00	492	1.28	1.00	492	0.35	0.33
Presiding committee (d)	538	0.69	1.00	373	1.31	1.00	373	0.33	0.25
Strategy committee (d)	152	0.71	1.00	108	1.43	1.00	108	0.30	0.25
Insider (d)									
Audit committee (d)	446	0.59	1.00	261	1.06	1.00	261	0.28	0.29
Nomination committee (d)	246	0.80	1.00	196	1.24	1.00	196	0.39	0.33
Personnel committee (d)	278	0.80	1.00	222	1.10	1.00	222	0.32	0.33
Presiding committee (d)	182	0.70	1.00	128	1.09	1.00	128	0.30	0.33
Strategy committee (d)	75	0.84	1.00	63	1.02	1.00	63	0.23	0.20
Inst. investor (d)									
Audit committee (d)	323	0.52	1.00	169	1.47	1.00	169	0.39	0.33
Nomination committee (d)	168	0.70	1.00	118	1.32	1.00	118	0.44	0.33
Personnel committee (d)	190	0.68	1.00	129	1.36	1.00	129	0.41	0.33
Presiding committee (d)	160	0.59	1.00	95	1.56	1.00	95	0.36	0.25
Strategy committee (d)	38	0.50	0.50	19	2.26	2.00	19	0.48	0.50
Other strat. investor (d)									
Audit committee (d)	198	0.66	1.00	131	1.27	1.00	131	0.29	0.25
Nomination committee (d)	138	0.71	1.00	98	1.33	1.00	98	0.44	0.42
Personnel committee (d)	123	0.67	1.00	82	1.59	1.00	82	0.32	0.33
Presiding committee (d)	119	0.73	1.00	87	1.28	1.00	87	0.28	0.25
Strategy committee (d)	24	0.50	0.50	12	1.83	2.00	12	0.33	0.33
Corporate (d)									
Audit committee (d)	163	0.72	1.00	118	1.35	1.00	118	0.32	0.25
Nomination committee (d)	100	0.68	1.00	68	1.50	1.00	68	0.47	0.33
Personnel committee (d)	111	0.53	1.00	59	1.34	1.00	59	0.34	0.33
Presiding committee (d)	77	0.82	1.00	63	1.43	1.00	63	0.40	0.33
Strategy committee (d)	15	0.93	1.00	14	1.79	1.00	14	0.34	0.25

7.8 Board member attributes

Table 20 builds upon the idea of the previous setting and extends the empirical review on blockholder-directors. Hence, the summary statistics present the difference-in-mean results for board members on the director-firm-year level. Since German supervisory boards can comprise shareholder representatives and employee representatives, the underlying setting is limited to shareholder representatives exclusively to ensure comparability. In terms of board roles, blockholder-directors tend to be the chair or vice-chair of the board. In addition, the chairman of the board is significantly more likely to be a former executive of the company.[46] The link is presumably driven by insiders who initially served on the management board before assuming the position of chairman. Moreover, consistent with the regulatory constraints, blockholder-directors are less likely to chair the audit committee since the audit committee shall remain independent of the controlling shareholder, according to the DCGK.

Further, the summary statistics indicate that blockholder-directors are 2.82 years younger than conventional board members and are 57.31 years old. In addition, blockholder-directors hold 0.24 more directorships but are not necessarily classified as busier, as the corresponding mean difference for the latter variable is not statistically significant. Nevertheless, it appears that blockholder-directors have a larger network. Moreover, blockholder-directors are generally associated with longer tenures for serving on the board. In addition, blockholder-directors are significantly less likely to be female but significantly more likely to be foreign nationals (i.e., non-German). Interestingly, blockholder-directors tend to have a financial or political background. As it appears, blockholder-directors are bankers or politicians. The same applies to the category 'Other (d)', which includes directors with a 'corporate management' career and other career profiles that do not fall under the predefined classifications. In contrast, they are significantly less likely to be academics, auditors, consultants, engineers, or lawyers. The results suggest a systematic selection of blockholders favoring well-connected professionals with specific financial backgrounds and strong negotiation skills. In this context, blockholders appear to select directors with a proven track-record to contingent on their ability to monitor management and arguably negotiate with other stakeholders.

This finding may indicate that blockholder-directors do not engage in activities associated with rent extraction to the detriment of other shareholders. In line with the literature, the contrary seems to be the rule. It is evident that blockholder-directors tend to serve on the audit,

[46] Anecdotal evidence suggests that foreign investors typically scrutinize the practice of former managers taking up positions on the board.

nominate, personnel, presiding, or strategy committees. Overall, the summary statistics indicate that board representation commits blockholders to become active monitors with far-reaching implications for board composition and arguably board monitoring. However, to draw inferences about whether blockholder-directors are linked to increased monitoring, a promising venue in research is to additionally examine the actual participation rate blockholder-directors at the board and committee level.

Table 20: Difference-in-means test for board member attributes
This table presents the difference-in-means test for the variable 'blockholder board seat (d)' at the director-firm-year level. The difference-in-means test is based on a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d) = 0		**Blockholder board seat (d) = 1**		**Difference in means**
Variables	**Obs**	**Mean**	**Obs**	**Mean**	**diff**
Chair (d)	9,526	0.15	2,921	0.19	-5.85***
Deputy (d)y	9,526	0.09	2,921	0.12	-4.28***
Ordinary (d)	9,526	0.77	2,921	0.69	7.90***
Audit chair (d)	9,519	0.14	2,921	0.10	5.26***
Age	9,198	60.13	2,778	57.31	14.42***
Busy (d)	9,526	0.61	2,921	0.60	0.67
Chair age at inception	1,267	59.40	609	55.89	9.09***
Chair is former executive (d)	1,315	0.18	623	0.36	-9.04***
Chair tenure	1,226	5.78	591	5.82	-0.16
Committees (#)	7,569	1.39	2,356	1.66	-8.28***
Committee meetings	8,488	3.29	3,121	3.60	-3.26***
Female (d)	9,525	0.12	2,921	0.08	5.83***
Foreign (d)	9,518	0.16	2,921	0.20	-4.78***
Former executive (d)	9,520	0.06	2,919	0.17	-19.33***
Mandates (#)	6,404	2.70	2,236	2.94	-3.27**
Member horizon	9,155	8.35	3,292	9.01	-6.33***
Salary (fix)	8,089	60,188	2,284	44,412	11.52***
Salary (var)	8,071	17,976	2,280	16,963	1.14
Salary (total)	8,758	74,899	2,431	59,369	9.17***
Tenure	9,526	5.78	2,921	5.83	-0.59
Academic (d)	9,479	0.04	2,898	0.01	8.94***
Audit (d)	9,487	0.06	2,891	0.03	5.98***
Banker (d)	9,493	0.25	2,898	0.33	-9.07***
Consultant (d)	9,493	0.12	2,898	0.07	8.54***
Engineer (d)	9,491	0.21	2,898	0.14	8.00***
Lawyer (d)	9,494	0.12	2,898	0.11	1.83*
Politician (d)	9,485	0.04	2,898	0.11	-15.85***
Other (d)	9,473	0.31	2,900	0.35	-3.54***
Audit seat (d)	7,372	0.40	2,245	0.42	-1.69*
Nomination seat (d)	4,624	0.43	1,274	0.53	-6.67***
Personal seat (d)	4,055	0.31	1,196	0.45	-9.59***
Presiding seat (d)	4,560	0.34	1,395	0.47	-9.23***
Strategy seat (d)	1,026	0.42	264	0.58	-4.71***
Econ degree	9,498	0.53	2,908	0.50	2.51**
Law degree	9,495	0.21	2,908	0.19	2.67**
Other salary	9,497	0.16	2,908	0.11	7.19***
Tech degree	9,482	0.18	2,908	0.17	1.02
PhD (d)	9,513	0.47	2,914	0.32	15.26***
Professor (d)	9,509	0.15	2,914	0.06	12.31***
No degree salary	9,496	0.04	2,906	0.06	-5.78***

The discussion is expanded on blockholder preferences in regards to specific director attributes. Thus, the thesis examines whether there is any evidence suggesting systematic differences in selecting specific director attributes for specific blockholders. As follows, the sample in Table 21 includes about 923 insider directors, of whom about 25% serve as chairman. Similarly, 15% of 932 institutional directors, 20% of 472 corporate directors, and 13% of 663 strategic directors respectively act as the chairman of the board over the sample period. Overall, the results confirm the initial finding that insider blockholders have closer access to the company and tend to take a leading role (i.e., chairman) on the board.

Moreover, insider directors (institutional directors) are generally older (younger) than their peers at 58.84 (56.47) years and have the lowest (highest) number of directorships at 2.09 (3.42). While higher age may be beneficial for monitoring purposes, younger directors are more valuable for advice (Goergen et al., 2015). Similarly, in 51% (33%) of the cases, institutional directors (insider directors) are classified as busy, which is the highest (lowest) among the different blockholders-directors. Director business may indicate that directors are more apt to monitor and advise the firm's management, as they have valuable experience from other directorships. In contrast, director business may reflect over-committed directors failing to provide advice when it is most needed (Ferris et al., 2003; Fich and Shivdasani, 2012). The summary statistics also reveal that insider directors have around 0.76 fellow directors on the board affiliated with the same blockholder, institutional directors 1.93, other strategic directors 2.43, and corporate directors 2.23, respectively. The evidence supports the notion outlined previously. Insider blockholders typically restrict the directorships, whereas other strategic directors have the highest number of directors. Lastly, insider directors appear to have the longest average tenure and remain the longest on the board, serving for about 11.18 years. In comparison, corporate directors stay on the board for about 6.01 years. The long-term commitment may explain why insider blockholders have easier access to the firm's board.

Further, 23% of institutional directors are foreigners, while only 9% of insider directors are foreign. Among corporate blockholders, the number of foreign blockholders appears to be the highest at around 42%. This is probably because foreign companies acquire domestic companies and subsequently appoint their own directors to the board. Collectively, the presented summary statistics are consistent with the outlined blockholder attributes in Section 4.5 and intuitively fit the underlying rationale. As such, blockholder heterogeneity is detrimental to board diversity and director skills. In terms of professional background, directors affiliated with institutional and other strategic shareholders are more concentrated on bankers and politicians than insider and

corporate directors. The latter groups select blockholder-directors classified as bankers, engineers, or corporate managers. This is also reflected in the educational background of the various blockholder-directors associated with a particular blockholder. Collectively, the results confirm that the different blockholders have different preferences in selecting directors. While engineers may provide more profound knowledge about products and processes, bankers and politicians are arguably associated with increased financial and negotiation skills.

Table 21: Summary statistics on board member attributes by investor type
This table presents summary statistics for blockholder-director attributes at the director-firm-year level using a sample of German listed firms from 2004 to 2018. The exclusion criteria outlined in Section 6.1 apply. Individual attributes of board members are reported whether they are associated with a particular blockholder type. Consequently, the setting explicitly considers blockholder-directors. Following Section 4.4, the thesis classifies shareholders into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B.

	Insider			**Inst. investor**			**Other strat. investor**			**Corporate**		
Variable	**Obs**	**Mean**	**Median**	**Obs**	**Mean**	**Median**	**Obs**	**Mean**	**Median**	**Obs**	**Mean**	**Median**
Board chair (d)	923	0.25	0.00	932	0.15	0.00	663	0.13	0.00	472	0.20	0.00
Board deputy (d)	923	0.17	0.00	932	0.10	0.00	663	0.07	0.00	472	0.07	0.00
Board ordinary director (d)	923	0.58	1.00	932	0.74	1.00	663	0.79	1.00	472	0.72	1.00
Audit chair (d)	923	0.09	0.00	932	0.13	0.00	663	0.09	0.00	472	0.09	0.00
Busy (d)	595	0.33	0.00	610	0.51	1.00	504	0.45	0.00	345	0.41	0.00
Chair age at inception	227	56.45	57.00	139	53.40	52.00	87	56.92	58.00	94	55.35	56.00
Chair tenure	220	6.35	5.00	138	5.59	4.00	85	5.65	5.00	90	5.32	4.00
Chair is former CEO (d)	232	0.66	1.00	144	0.13	0.00	89	0.13	0.00	96	0.33	0.00
Committees (#)	923	1.34	1.00	932	1.46	1.00	663	1.29	1.00	472	1.22	1.00
Committee meeting	871	3.22	2.00	897	3.74	3.00	628	3.97	2.00	441	3.36	3.00
Director Age	871	58.54	58.00	890	56.47	56.00	650	58.14	59.00	436	56.77	57.00
Director is female (d)	923	0.13	0.00	932	0.04	0.00	663	0.08	0.00	472	0.10	0.00
Director is foreign (d)	923	0.09	0.00	932	0.23	0.00	663	0.10	0.00	472	0.42	0.00
Director mandates	595	2.09	1.00	610	3.42	3.00	504	3.40	2.00	345	3.17	2.00
Director tenure	923	7.26	7.00	932	5.92	5.00	663	5.37	5.00	472	4.15	3.00
Directorship horizon	923	11.18	11.00	932	8.93	9.00	663	8.43	7.00	472	6.01	4.50
Fellows on board	923	0.76	1.00	932	1.93	1.00	665	2.43	2.00	472	2.23	2.00
Former CEO (d)	921	0.34	0.00	932	0.05	0.00	663	0.05	0.00	472	0.18	0.00
Salary (fix)	729	50,523	36,000	667	58,495	38,000	586	41,375	30,175	400	41,323	28,239
Salary (var)	727	21,769	0.00	667	19,294	0.00	586	9,749	0.00	398	14,907	0.00
Salary (total)	779	69,218	45,000	702	75,624	50,000	621	50,916	35,700	429	54,370	34,800
Academic (d)	913	0.01	0.00	923	0.00	0.00	659	0.02	0.00	472	0.01	0.00
Audit (d)	906	0.03	0.00	923	0.05	0.00	659	0.02	0.00	472	0.03	0.00
Banker (d)	913	0.20	0.00	923	0.65	1.00	659	0.38	0.00	472	0.15	0.00
Consultant (d)	913	0.03	0.00	923	0.12	0.00	659	0.04	0.00	472	0.09	0.00
Engineer (d)	913	0.23	0.00	923	0.02	0.00	659	0.07	0.00	472	0.24	0.00
Lawyer (d)	913	0.09	0.00	923	0.09	0.00	659	0.16	0.00	472	0.07	0.00
Manager (d)	913	0.49	0.00	925	0.28	0.00	659	0.14	0.00	472	0.42	0.00
Politician (d)	913	0.00	0.00	923	0.02	0.00	659	0.43	0.00	472	0.06	0.00
Audit committee (d)	680	0.43	0.00	767	0.41	0.00	510	0.35	0.00	369	0.43	0.00
Nomination committee (d)	379	0.68	1.00	413	0.55	1.00	358	0.38	0.00	229	0.45	0.00
Personal committee (d)	277	0.50	1.00	469	0.42	0.00	305	0.38	0.00	188	0.48	0.00
Presiding committee (d)	434	0.59	1.00	468	0.47	0.00	343	0.40	0.00	231	0.34	0.00
Strategy committee (d)	84	0.76	1.00	124	0.49	0.00	53	0.43	0.00	39	0.64	1.00
Econ degree (d)	920	0.49	0.00	928	0.59	1.00	659	0.41	0.00	471	0.54	1.00
Law degree (d)	920	0.10	0.00	928	0.24	0.00	659	0.32	0.00	471	0.15	0.00
Other degree (d)	920	0.15	0.00	928	0.15	0.00	659	0.13	0.00	471	0.04	0.00
Tech degree (d)	920	0.20	0.00	928	0.12	0.00	659	0.07	0.00	471	0.30	0.00
PhD (d)	921	0.28	0.00	931	0.37	0.00	660	0.39	0.00	472	0.29	0.00
Professor (d)	921	0.06	0.00	929	0.02	0.00	660	0.07	0.00	472	0.10	0.00
No degree (d)	920	0.03	0.00	926	0.04	0.00	659	0.14	0.00	471	0.05	0.00

7.9 Critical assessment

The discussion of the summary statistics provides some first answers regarding determinants influencing the decision-making of blockholders to seek board representation. Consistent with the literature, the decision to take board seats is in part driven by a blockholder's '*ability*' and '*willingness*' to monitor a firm's management (Cronqvist and Fahlenbrach, 2008). Different blockholders appear to have varying skills and preferences to seek board representation depending on the shareholder type. This finding is important since non-financial shareholders play a significant role in German ownership. Although the literature suggests that blockholder-directors can mitigate agency problems (Agrawal and Nasser, 2019; Holderness and Sheehan, 1988; Marquardt, 2020), evidence suggests that blockholders rarely take board seats. Accordingly, only 21% of blockholders are associated with board representation. Thus, the following subsume the main findings of the summary statistics:

The summary statistics provide evidence suggesting that shareholders with more significant block ownership are more likely to be associated with taking board seats consistent with Edmans and Holderness (2017). While blockholders in the size bracket of '$3- < 10$' are associated with board representation in 7% of the time, blockholders in the size bracket of '$10- < 25$' already hold board seats in 37% of the cases, as shown in Table 14. Subsequently, due to having '*more skin in the game*', blockholders are more incentivized to exert control and increase monitoring (Dasgupta and Piacentino, 2015, p. 2853). Likewise, the blockholder's rank is detrimental to explaining a blockholder's ability to get access to the firm's boardroom as the probability of acquiring a board seat decreases substantially when the blockholder is not ranked 1st. While blockholders ranked 1st are associated with board representation in 53% of the time, blockholders ranked 2nd only hold board seats in 17% of the cases. Following Table 18 indicates that legacy blockholders '*create their own space*' (Zwiebel, 1995, p. 161). In 75% of the cases, blockholders have exclusive access to a firm's board and pose a barrier to entry for others. One possible reason is that blockholders do not want to share private benefits of control as multiple blockholders may increase board complexity, thereby hampering the resolution of the agency problem.

Additional findings supplement the notion. First, blockholders tend to hold more concentrated portfolios with fewer in-sample investments. By intuition, blockholders have larger incentives to increase monitoring since more wealth is at risk. The notion is particularly evident when agency problems prevent the company from operating at its full potential. It follows that board representation may resonate with blockholders who have lower liquidity needs and are less

dependent on trading gains (Edmans and Manso, 2011). Similarly, empirical evidence suggests that blockholders tend to remain longer invested when being represented on the board since voice tends to be a long-term strategy. Based on the results presented, it is reasonable to believe that the underlying relationship between ownership and blockholder board representation could be non-linear. As a result, seeking and attaining board representation may be more valuable to blockholders for incremental changes of ownership at lower levels than at higher levels of ownership (i.e., when owning majority control) as shown in Table 12. The discussed results facilitate the comprehension of the hypotheses H1, H3, and H4.

The summary statistics appear to contradict the notion of Alchian and Demsetz (1972) assuming that blockholders form and dissolve block positions as required by the company (i.e., in the presence of agency problems). With that being said, there seems to be considerable variation stemming from *(i)* blockholder-directors joining or leaving the board, *(ii)* varying block ownership, and *(iii)* blockholder heterogeneity. The thesis contributes to the literature by examining the time it takes for blockholders to obtain a board seat. Evidence suggests that there is substantial variation in the time it takes to acquire board seats, implying that blockholders either face *(i)* different levels of entry barriers or *(ii)* they require varying amounts of time to acquire private information prior to deciding to take board seats. To a large part, the framework allows for segregating the announcement of block building from the announcement of taking a board seat. In this regard, block building is not necessarily linked to the decision-making process of board seat formation. This is important because blockholders who make the appearance of being passive in public may actively engage in behind-the-scenes activities, and in turn, a blockholder associated with boards seats may in secret be 'asleep at the switch' (Edmans, 2009, p. 1397). As of this, blockholders may establish or increase an initial block position in order to engage in 'behind-the-scenes' engagement (i.e., amongst others engaging in voting or private negotiations) either *(i)* for information dissemination or *(ii)* to make sure that their demands are taken seriously (Gow et al., 2014). Consistent with the underlying rationale, blockholders may be incentivized to take board seats once they acquire information about prevailing agency problems in the firm. Collectively, this may provide somewhat empirical support in regards to H2.

The evidence facilitates the notion that blockholder-directors join the board more quickly than leaving it within this framework.[47] On average, blockholder-directors continue to serve on the board for another 2.6 years after the blockholder has exited the company. The appointment of blockholder-directors seems to have far-reaching implications on board composition beyond the

[47] Arguably, the direct costs of board seats are considered to be low relative to the dollar investments.

actual blockholder intervention. The decision on block formation does not coincide with the inception and completion of the blockholder director's service on the board. Similarly, the presented summary statistics indicate that *(i)* larger blockholders require less time to take board seats and *(ii)* insider blockholders (institutional investors) are associated with the shortest (longest) periods to acquire board seats. Both results are likely driven by considerations such as liquidity needs or having better access to information. Although insider blockholders appear to have the highest *accessibility* to a firm's board (Marquardt, 2020), evidence implies that they seem to limit their presence on the board in terms of the absolute (relative) number of affiliated blockholder-directors. The finding may indicate that insider blockholders shun the appearance of conflicting interests arising from nepotism or empire building. Whereas the remaining blockholder types appear to have lower levels of accessibility, they do seem to push for more blockholder-directors than insider blockholders.

The empirical evidence also suggests that seeking representation on the board is typically not the '*end goal*' of blockholders (Gow et al., 2014, p. 23). Instead, blockholders become active monitors by having their blockholder-directors take on additional board roles that grant them extended monitoring capabilities. That is, blockholder-directors show greater tendencies to chair the board or be members of various board committees (including audit, nomination, personnel, presiding, and strategy committee). Empirical evidence also implies that blockholder-directors are associated with more frequent committee meetings. These findings contradict the assumption that blockholders could seek board representation to consume corporate wealth. More so, blockholders seem to systematically select representatives associated with superior negotiation skills, financial literacy, and political connections because blockholder-directors are more likely to be bankers or politicians. Collectively, the findings allow drawing first inferences about H5 and H6. The factors do not account for the substantial indirect costs likely to be incurred at the announcement of taking board seats. Therefore, the next section is closely aligned with the formulated board representation hypothesis.

8 Results

The section discusses the main findings of the empirical framework in light of the sketched hypotheses. In the process, the inferences drawn expand on the summary statistics presented in the previous section. Most notably, the empirical framework of the main setting offers a novel perspective on the decision-making process of board seat formation. It contributes to the literature by reviewing the rationale outlined in the opening of the thesis.

8.1 Determinants of board representation

Consistent with the literature, this thesis attempts to facilitate the understanding of the determinants of blockholder board representation. First, the link between block ownership and the probability of board representation is discussed. In a subsequent step, the thesis seeks to identify additional aspects that prompt blockholders to take board seats.

To this end, the thesis performs fixed-effects regressions of *Blockholder board seat (d)* on different specifications of *Ownership*, *BHAR (base year)*, and firm characteristics on investor-firm-year-level. The results from the fixed effects regression are presented in Table 22. Columns (1) through (6) include year and firm-fixed effects, while Columns (7) and (8) contain the year and industry fixed effects. Using an LSDV model, the coefficients are interpreted in terms of probabilities. For robustness, logistic regressions are computed to complement the baseline regression results, which account for the marginal effects at the means.[48] While Column (2) excludes the squared term of ownership to confirm the results of Edmans and Holderness (2017) concerning the linear component of ownership, Column (3) excludes both specifications of ownership. Column (4) forms the baseline regression but excludes all observations associated with insider blockholders to ensure that insiders do not drive the underlying results. Column (5) takes a different perspective on the baseline regression results using defacto ownership (i.e., ownership scaled by the turnout at the shareholder meeting). As reported in Column (1), it is expected that the probability of acquiring a board seat in a given year increases by 2.956% if a shareholder's block ownership increases by 1%. The reported coefficient is significant at the 1% level.[49] Following the rationale, a 10% change in ownership increases the likelihood of attaining a board seat by 29.56%. The results confirm the findings of similar studies in that the

[48] A methodological property of logistic regression is that the probabilities are between 0 and 1, which allows drawing more accurate inferences.

[49] In unreported settings, the baseline regression remains economically and statistically significant when ownership is trimmed between $3\% \leq x \leq 50\%$ to ensure robustness.

probability of taking a board seat increases with a shareholder's block ownership. The finding is intuitive since blockholders with larger block ownership have more incentives to monitor the firm.

As the summary statistics indicate, the underlying relationship appears to be non-linear. The present thesis contributes to the literature by investigating the linearity of the link between block ownership and board representation. Hence, the squared term of ownership is included in the regression specification in addition to ownership. To further elaborate on a potential non-linear structure of the data, Lind and Mehlum (2010)'s 'u-test' is employed in which both specifications of *Ownership* and *Ownership squared* are included. The general idea behind the 'u-test' is to determine a potential turning point, which might signal a potential trade-off between ownership and blockholder board seats. By accounting for the location of the turning point in the data, the 'u-test' provides a more robust framework than the standard approach. More specifically, Lind and Mehlum (2010, p. 110) argue that the relationship should increase at low values and decrease at high values.[50] According to Table 22, the formal requirements are met, and the 'u-test' yields statistically significant results, supporting the notion of a humped-shaped non-linear relationship, with the turning point being at around 54.6%. The incremental change in the probability of taking a board seat can be relatively large (low) when a shareholder's block size is small (large).[51] With that being said, blockholders owning more than 50.1% of the firm's outstanding shares have presumably lower incentives to seek board representation since they have majority control to monitor the firm's management. As it cannot be ruled out that the concave relationship is affected by a skewed data distribution (i.e., more data points are observed at lower levels of the interval than at higher levels), it is prudent to assume a non-linear relationship, as demonstrated in Panel B. The thesis suggests that the relationship (i.e., blockholder representation on the board and block ownership) of interest is non-linear.

[50] The authors elaborate that the standard approach is misleading as the literature checks whether *(i)* both coefficients are statistically significant, *(ii)* the coefficient signs are of the opposite direction and *(iii)* the extreme point is within the required interval of interest (i.e., 0% to 100% of ownership). However, the literature fails to account for the exact location of the extreme point. While the standard approach may identify a turning point, the true relationship could be monotone, given that the extreme point is located at the far end of the respective interval.

[51] For robustness, a non-parametric lowess plot is employed based on locally weighted regressions of board representation on block ownership (see Table A8). The lowess plot employs a smoothing procedure to assign lower weights to observations further away from the central point. The procedure does not assume any specific assumptions about the data distribution. In both panels 6.843 blockholder-firm-year observations are plotted with ownership between $3\% \leq x \leq 100\%$. Whereas Panel A employs a smoothing factor of 0.25, Panel B uses a smoothing factor of 0.75. Panel A indicates a non-linear curve with an inflection point between 55% to 60% of ownership dropping at the right end of the interval. Accordingly, evidence suggests a concave relationship in that the incremental change seeking board representation decreases for very large ownership blocks. In contrast, Panel B indicates that the curve structure remains concave but retains its upward trending slope above the inflection point of about 50%. Following the rationale, blockholders appear to be less incentivized to hold formal corporate positions on the board as they have sufficient control to monitor the firm through alternative mechanisms.

Further complimentary tests are performed in Table A10 of the Appendix A. The setting accounts for alternative, dependent variables, namely *Board seats (#)* and *Board seat (%)*, which respectively measure a blockholder's absolute (relative) number of supervisory board seats. While the indicator variable *Blockholder board seat (d)* controls for the overall presence of blockholder-directors on the board, the alternative measures additionally capture the variation of the actual number of board representatives. Consistently, it is expected that a 1% increase in block ownership leads to an absolute increase of 0.055 seats on a company's board (see Column (1)). Similarly, an increase in block ownership by 1% is expected to lead to a relative increase in seats on the board by 0.89% (see Column (2)).[52] The results imply that the absolute (relative) number of board seats is linearly increasing with a shareholder's block ownership which stands in contrast to the previous findings. The linear relationship indicates that blockholders may increase board seats well beyond what is required to have effective control over the firm. The finding implies that blockholders do not simply intend to be represented on the board, but they intend to '*lead the firm*' as suggested by Holderness and Sheehan (1988, p. 319). The thesis contributes to the literature by extending the empirical evaluation to alternative measures of board representation. Depending on the specific proxy for blockholder board representation, the thesis finds mixed results concerning the linearity of the relationship.

However, as the regression results indicate, block ownership is not the only determinant of blockholder board representation. Following Agrawal and Nasser (2019), some firms have greater demand for board representation than others. As Table 22 suggests, blockholders are more likely to take a board seat in poorly performing firms proxied by the 1yr-adjusted buy and hold return.[53] This finding aligns with the rationale that potential agency problems cause the share price to drop. The negative link is detrimental to justifying the presence of blockholder-directors. Otherwise, it would be unclear why blockholders should take board seats, as questioned by Edmans and Holderness (2017). Subsequently, a blockholder may acquire private information about the prevailing agency problem, which hinders the firm from using its full potential, and conclude that she needs a seat on the board to resolve the prevailing agency problem. Thus, if the 1-year-adjusted stock price performance drops significantly by 1%, the likelihood of taking a board seat increases by 1.5%. The negative correlation between stock price performance and board representation is robust for the larger part of the alternative test specifications.

[52] In untabulated results, Lind and Mehlum (2010)'s 'u-test' yields insignificant results for the presence of a turning point when considering the absolute/relative number of board seats. More specifically, the extreme points are outside the range of 3% to 100%, so the results are not presented in Table A10.

[53] In unreported regressions, the variable *BHAR (base year)* is replaced by *BHAR (lagged year)*. The results are economically and statistically consistent with the reported results.

Other factors that determine board representation include *Board size (shareholder representatives)* (i.e., board complexity leading to higher communication and coordination costs) and *Presence (%)* at shareholder meetings (i.e., stronger shareholder rights allowing shareholders to exert larger scrutiny), with the odds of holding board seats increasing when there is generally greater demand for board monitoring on the part of firms (Agrawal and Nasser, 2019). Following this, blockholder-directors may assume a mediating role among shareholders, directors, and stakeholders. As such, the interaction of blockholder-directors represents an interesting avenue to study for future research. Finally, the results in Table 22 are congruent with the summary statistics and indicate that board representation becomes more likely when a blockholder is tied to longer investment horizons, higher portfolio concentration, or a domestic shareholder. Arguably, blockholders have an incentive to take a seat on a company's board if they are more closely aligned with the underlying investment. Furthermore, the results highlight that is consistent with the home bias puzzle as suggested by French and Poterba (1991), that is, blockholders appear to engage in intervention in primarily domestic firms. The latter may imply that unobserved barriers hinder foreign blockholders from acquiring board seats (including opportunity costs, cultural barriers, or time).

In conclusion, the thesis presents findings supporting the notion of a non-linear relationship between block ownership and blockholder board representation (proxied by the indicator variable *Blockholder board seat (d)*). The thesis establishes mixed results and partly fails to reject H1 in that *the presence of blockholder-directors is a linear function of block ownership.* Empirical evidence suggests the existence of a non-linear relationship with a potential inflection point being located at around 50%. The incremental increase in the probability of acquiring a board seat is lower (higher) for a one-unit change in ownership when the ownership stake is high (low), thereby indicating a trade-off between board representation and block size for large ownership stakes. Consequently, the thesis contributes to the literature by providing novel insights into block ownership's (non)-linearity to board representation. Moreover, the setting implies that blockholders tend to have a higher probability of taking a board seat when the firm's performance is poor. Otherwise, it is questionable why blockholders should be represented on the board.

Table 22: The determinants of board representation

This table reports results from fixed-effects regressions of 'Blockholder board seat (d)' on different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. Specifications (1) to (6) include year and firm fixed effects, and specifications (7) and (8) include year and industry fixed effects. Specifications (2) and (3) consider different specifications of 'Ownership' to account for non-linearity in the data. Specification (4) is based on specification (1) but excludes insider blockholders. Specification (5) accounts for 'defacto' ownership whereby the voter turnout scales ownership at the preceding shareholder's meeting. Specifications (6) and (8) report marginal effects at the mean from logistic regressions. Fundamental variables are lagged by one year. The variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). Columns (7) and (8) account for the unadjusted buy and hold return. All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d)							
	Baseline	**Ex sqr**	**Ex holding**	**Ex insider**	**defacto**	**Logit**	**Baseline**	**Logit**
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ownership	2.956***	1.253***		3.133***		2.299***	2.630***	1.187***
	(0.000)	(0.000)		(0.000)		(0.000)	(0.000)	(0.000)
Ownership squared	-2.707***			-2.832***		-1.908***	-2.223***	-0.962***
	(0.000)			(0.000)		(0.000)	(0.000)	(0.000)
Ownership defacto					1.926***			
					(0.000)			
Ownership squared defacto					-1.228***			
					(0.000)			
BHAR 1-yr (base year)	-0.015**	-0.014**	-0.013**	-0.016***	-0.013**	-0.012	-0.030***	-0.029***
	(0.011)	(0.021)	(0.040)	(0.007)	(0.027)	(0.150)	(0.007)	(0.008)
# Blockholders	-0.005	-0.006	-0.014***	-0.003	-0.004	-0.009*	-0.010***	-0.009**
	(0.150)	(0.115)	(0.002)	(0.362)	(0.290)	(0.070)	(0.008)	(0.012)
Blockholder is foreign (d)	-0.113***	-0.129***	-0.212***	-0.088***	-0.118***	-0.140***	-0.132***	-0.115***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Blockholder rank (d)	-0.006	-0.061***	-0.153***	0.025*	0.000	-0.042**	-0.015	-0.064***
	(0.667)	(0.000)	(0.000)	(0.053)	(0.992)	(0.015)	(0.312)	(0.000)
Blockholder tenure (d)	0.051***	0.061***	0.084***	0.037**	0.053***	0.071***	0.051***	0.050***
	(0.002)	(0.000)	(0.000)	(0.018)	(0.001)	(0.002)	(0.002)	(0.005)
Board co-determination (d)	0.034	0.039	0.023	0.046*	0.031	0.054	0.020	0.034
	(0.486)	(0.419)	(0.686)	(0.071)	(0.502)	(0.465)	(0.383)	(0.155)
Board size (shareholder)	0.022***	0.022**	0.018**	0.015**	0.024***	0.031***	0.018***	0.019***
	(0.006)	(0.014)	(0.049)	(0.040)	(0.004)	(0.001)	(0.001)	(0.001)
Book leverage	-0.095	-0.085	-0.080	-0.082	-0.090	-0.066	-0.077	-0.083
	(0.136)	(0.159)	(0.189)	(0.256)	(0.152)	(0.369)	(0.236)	(0.235)
Cash	-0.075*	-0.074	-0.053	-0.058	-0.069	-0.053	-0.005	-0.008
	(0.098)	(0.109)	(0.300)	(0.147)	(0.135)	(0.484)	(0.942)	(0.911)
ln(Firm age)	0.033	0.018	0.002	0.047*	0.032	0.058	0.006	0.006
	(0.192)	(0.506)	(0.954)	(0.052)	(0.221)	(0.160)	(0.554)	(0.570)
In-sample investments (d)	-0.099***	-0.123***	-0.177***	-0.065***	-0.104***	-0.165***	-0.109***	-0.124***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Intangibles	0.110	0.092	0.116	0.195**	0.101	0.190	0.083	0.089
	(0.217)	(0.328)	(0.240)	(0.022)	(0.273)	(0.102)	(0.184)	(0.214)
Ownership concentration	-0.075	-0.602***	0.229**	-0.160	-0.224*	-0.230	-0.165	-0.180
	(0.517)	(0.000)	(0.010)	(0.146)	(0.058)	(0.129)	(0.135)	(0.178)
Portfolio weight (d)	0.002	0.010	0.064***	0.005	0.002	-0.003	0.021	0.016
	(0.880)	(0.475)	(0.000)	(0.692)	(0.872)	(0.849)	(0.151)	(0.246)
Presence (%)	0.120**	0.234***	0.239***	0.106**	0.518***	0.221***	0.135**	0.123*
	(0.014)	(0.000)	(0.000)	(0.021)	(0.000)	(0.003)	(0.044)	(0.083)
R&D	-0.149	-0.030	-0.123	-0.257	-0.169	-0.199	-0.118	-0.384
	(0.607)	(0.929)	(0.704)	(0.458)	(0.602)	(0.675)	(0.576)	(0.112)
ROA	0.073	0.039	0.051	0.027	0.061	0.077	-0.058	-0.089
	(0.187)	(0.495)	(0.382)	(0.655)	(0.287)	(0.228)	(0.478)	(0.243)
Tobin's Q	0.008	0.007	0.011	0.001	0.008	0.005	0.008	0.007
	(0.450)	(0.498)	(0.310)	(0.874)	(0.469)	(0.718)	(0.534)	(0.618)
ln(Total assets)	0.006	0.002	0.007	-0.004	0.006	0.004	-0.002	-0.006
	(0.689)	(0.872)	(0.653)	(0.799)	(0.681)	(0.865)	(0.795)	(0.487)
Observations	6,595	6,595	6,595	5,655	6,595	4,953	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Ind.	Year, Ind.
Adj. (Pseudo) R-squared	0.547	0.523	0.431	0.527	0.542	0.614	0.460	0.465
Turning point (pct)	0.546***			0.553***	0.784**	0.603***	0.592***	0.615**

8.2 Stock price reaction

A key finding of the preceding empirical setting is that blockholders are more likely to intervene in the management process (through board representation) when a firm's stock performance is poor. Based on the overriding rationale of the thesis, poor market performance could be attributed to agency problems in the firm. Thus, a blockholder in possession of private information might infer that the company is currently unable to operate at its full potential. The blockholder could trade on her private information by exiting the firm. In this case, the agency problem would remain unresolved. She may conclude that she cannot mitigate the prevailing agency problem without seeking representation on the firm's board. This follows the rationale that a board seat would allow her to increase monitoring, liaise with other stakeholders, and restructure the firm's operations. In this respect, relevant literature finds positive market price reactions to activist blockholders targeting a firm's board as part of their intervention strategies (Gow et al., 2014; Klein and Zur, 2009). These studies, however, do not disentangle the implications of blockholder-directors joining the board from the classical hedge fund activism. While Brav et al. (2008); Greenwood and Schor (2009) show that shareholder activism is most valuable when it is linked to takeovers, other forms of blockholder intervention may have negative implications on the firm's stock performance. The presence of (legacy) blockholders on the board may be a negative signal, revealing private information about prevailing agency problems and thereby inducing outsider shareholders to impound new information into share prices respectively (Edmans and Manso, 2011).[54]

The empirical framework tests the implications of board representation on the firm's adjusted stock performance using two different methodologies: an event study and a fixed-effects regression. First, Table 23 presents the results of an event study that measures the short-term market response of blockholders-directors joining the board during the sample period. Since blockholder-directors remain on the board for multiple years, and as some blockholders have multiple representatives, only those cases are considered in which blockholders join the boards for the first time during the sample period. To that effect, the event study excludes cases in which a) blockholders take additional seats when being already present on the board, b) when managers move from the management board to the supervisory board, c) when multiple blockholder-directors or multiple blockholders join the board on the same day, d) observations that are potentially affected by confounding events, and e) share price information is not sufficiently available.[55]

[54]This does not necessarily represent rent extraction on the part of blockholders. The literature finds that blockholders on the board can successfully reduce agency problems and improve security benefits of control (Agrawal and Nasser, 2019; Cronqvist and Fahlenbrach, 2008; Marquardt, 2020).

[55]For the identified events a keyword search is conducted via 'DGAP', 'Bundesanzeiger', and 'Google'.

Since the ordinary course of action is to nominate the prospective shareholder representative around the shareholders' meeting, The event study can be construed around the earliest announcement date of the candidate's nomination (including press releases, corporate disclosures, or invitation letters to the shareholder's meeting), thereby several confounding events could interfere with these announcements. Contrary to the general belief, the hand-collected research reveals that blockholder-directors can also be appointed to the board outside the shareholder's meeting. The underlying setting takes advantage of the fact that some directors are appointed by court rulings (Section 104 AtkG). Co-determination rules require firms to have a minimum number of board members depending on firm size. If the supervisory board no longer has a quorum, the court appoints a representative at the request of the management. Since the announcement is at the discretion of the acting judge, arguably, the announcement by the court becomes quasi-random, which possibly mitigates concerns about confounding events. That being so, the event study includes cases where a new director is appointed and announced at the request of the management board via court ruling. Subsequently, the event study allows to address concerns about drawing inferences on endogenous board representation (Hermalin and Weisbach, 2003).[56] There are 495 cases in the sample in which a blockholder-director is appointed to the supervisory board. After accounting for the screening criteria, 84 cases remain to conduct the event study. Further, the events are screened for confounding events. As a result, the event study in Table 25 comprises clean events which are not affected by confounding news (i.e., earnings and dividend announcements, corporate actions, capital restructuring, and other appointments). The final dataset comprises 29 events, of which 17 events represent court rulings. The event study produces a negative and statistically significant *cumulative average abnormal return (CAR)* of -1.04% for the event window of $[0; 1]$, which translates into an average decline in market capitalization of about 64.2 million Euros. The adverse price reaction predicts that taking a board seat entails a negative signal to outsider shareholders.

In a similar vein, it is reasonable to believe that board representation is associated with a continued negative stock price performance in the year of taking a board seat, consistent with Agrawal and Chen (2017)'s reasoning that poor stock price performance may persist over an extended period in anticipation of increased conflicts of interest when blockholder-directors join the board. Outsider shareholders could realize that some investment distortions are costly to reverse or even irreversible, thereby the firm's long-term stock price performance. To account for

[56] In addition, German law requires the two governing bodies of the firm to be legally separated. Against this background, corporate management is typically not involved in the election process of the supervisory board. Second, in Germany, the announcement of *(i)* establishing a block position and *(ii)* the intention to seek board representation do not necessarily coincide.

the negative stock price performance, a fixed-effects regression of $BHAR_t$ on *Blockholder board seat (d)*, different specifications of *Ownership*, and firm characteristics on investor-firm-year-level is conducted. The results from the fixed-effects regression are shown in Table 24. Columns (1) to (6) in Panel A include year and firm-fixed effects, whereas Column (7) includes year and industry-fixed effects.[57] Specification (4) computes a PSM using the nearest neighbor matching approach without replacement which assigns each blockholder in the treatment group to a comparable peer in the control group. Evidence suggests that the firm's adjusted stock price performance in the base year drops significantly by 4.8% (Column (1)) when a blockholder acquires a board seat. Table 24 indicates that the indicator variable *Blockholder board seat (d)* is significantly negative across all specifications. The results support the notion of a negative association between blockholder-directors joining the board and the firm's adjusted stock price performance, thereby preventing blockholders from cutting and running (Coffee, 1991).

Panel B extends the empirical setting by distinguishing between legacy blockholders and new outsider blockholders following Opp (2019). Coherently, it is reasonable to believe that blockholders on the board may have different implications on firm performance depending on whether a legacy or an outside blockholder takes a seat on the board. The thesis introduces the idea that the implications of shareholder activism on the firm's stock performance may differ depending on the initiator of the respective intervention. By intuition, the stock price reaction of activist blockholders taking board seats within the underlying sample should be similar to activists seeking board representation in the US. In contrast, the implications of legacy blockholders should resonate with the outlined rationale as legacy blockholders should be in a legit position to acquire private information about the firm. While legacy blockholders have established their block position prior to acquiring board seats, new blockholders engage in block-building and seat-building in the same year. Following the US literature, the test specification additionally considers activist directors to provide a more nuanced understanding of the underlying data. Therefore, new blockholders are distinguished between activist blockholders (including hedge funds and single investors consistent with Klein and Zur (2009)) and non-activist blockholders. The empirical evidence suggests that legacy blockholders primarily drive the negative price performance associated with taking a board seat. Accordingly, the firm's *BHAR (base year)* significantly drops by -3.4% (Column (10)) when legacy blockholders take a board seat. While the finding is statistically insignificant for new blockholders in general, evidence suggests that activist investors joining the board are linked to a significant increase in the firm's *BHAR (base year)* by 18.9% (Column (11)). The findings draw inferences consistent with US activists seeking board representation to

[57] Column (7) accounts for the buy and hold return without adjusting for the benchmark returns.

push for value-enhancing changes while contributing to the literature with novel insights about blockholder intervention.

In conclusion, the thesis produces mixed results and partly fails to reject H2 in that *a blockholder taking a board seat is associated with a negative stock price reaction.* Table 23 provides weak evidence supporting the notion of an adverse share price reaction as a response to announcing the appointment of blockholder-directors to the board. Legitimately, the announcement appears to be a negative signal to outside shareholders, reflecting agency problems within the company. Whereas literature associates US activists' campaigns targeting a firm's board composition with positive abnormal returns, these studies typically do not isolate the announcement effect of these campaigns from blockholder-directors joining the board to increase board monitoring. The underlying thesis attempts to distinguish between legacy blockholders and activist blockholders. Table 24 documents a negative (positive) and statistically significant link between board representation and the 1-year adjusted stock price performance in the year of attaining a board seat for legacy (activist) blockholders. The thesis contributes to the literature by suggesting that blockholder intervention is likely to emanate different signals depending on the blockholder in question. Against the background of the overriding rationale, the finding does not necessarily indicate that blockholder-directors consume corporate wealth to other shareholders' detriment. As noted by Edmans and Holderness (2017, p. 583), it would be otherwise unclear why blockholders seek board representation if not for exerting effort (amongst others, increasing monitoring) and improving firm value. Accordingly, blockholder board representation can be associated with substantial indirect costs as blockholders are effectively locked in. Thus, only a few blockholders appear to seek representation on the firm's board in equilibrium.

Table 23: Announcement effect of blockholder-directors joining the board for the first time
This table presents results of an event study based on 'blockholder-directors' joining the board of a sample firm for the first time. Events are excluded in which a) blockholders take subsequent seats when being already present on the board, b) when managers move from the management board to the supervisory board, c) when multiple blockholders join the board on the same day, and d) observations that are potentially affected by confounding events, and e) share price information is sufficiently available. The cumulative average abnormal returns (CAR) are computed using the software tool 'Event Study Metrics' based on the market and adjusted market return models. The benchmark return index is the German CDAX index. Price index data is retrieved from Refinitiv. The event study comprises 29 (out of 84) clean events, of which 17 represent court rulings. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Event window	CAR (market model)	Mean Δ market cap (in mil. Eur)	Patell Z	Boehmer et al.	Corrado rank	CAR (market return)	Corrado rank
(0...0)	-0.48%	-29.6	-2.69***	-2.09**	-1.75*	-0.53%	-2.00**
			(0.00)	(0.03)	(0.08)		(0.045)
(0...1)	-1.04%	-64.2	-2.54**	-1.83*	-2.45**	-1.18%	-2.83***
			(0.01)	(0.07)	(0.01)		(0.00)

Table 24: The implications of board representation on stock price performance

This table reports results from fixed-effects regressions of 'BH(A)R (base year)' on 'Blockholder board seat (d)', different specifications of 'Ownership', and a series of firm characteristics on the investor-firm-year level. The dependent variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). Column (7) accounts for the unadjusted buy and hold return. The indicator variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. Specifications (1) to (6) include year and firm fixed effects, and specification (7) includes year and industry fixed effects. Specifications (2) and (3) include different specifications of 'Ownership' to account for non-linearity in the data. Specification (4) computes a PSM by the nearest neighbor matching without replacement. Specification (5) is based on specification (1) but excludes insider blockholders. Specification (6) accounts for 'defacto' ownership, whereby the voter turnout scales ownership at the preceding shareholder's meeting. Fundamental variables are lagged by one year. Specifications (8) to (13) account for legacy blockholders and new blockholders in line with Opp (2019). The indicator variable 'Legacy blockholder' equals one if the blockholder takes a board seat in the base year while accumulating her block position in earlier years and zero otherwise. Similarly, the indicator variable 'Non-legacy blockholder' equals one if the blockholder takes a board seat in the base year while also establishing her block position in the same year, and zero otherwise. The shareholders classified as 'Non-legacy blockholder (d)' are split between two indicator variables: activist blockholders and other blockholders. 'Activist blockholder (d)' includes hedge funds and single investors, while the remaining blockholder types are subsumed under 'Non-activist blockholder (d)'. All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Panel A: $BHAR_t$							**Panel B: $BHAR_t$**					
	Baseline	**Ex sqr**	**Ex holding**	**PSM**	**Ex insider**	**defacto**	**Baseline**	**Legacy blockholder and new blockholder**					
Dep. variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Blockholder board seat (d)	-0.048**	-0.043**	-0.034**	-0.045*	-0.063***	-0.041**	-0.042***						
	(0.011)	(0.021)	(0.039)	(0.071)	(0.006)	(0.027)	(0.008)						
Legacy blockholder (d)								-0.034*	-0.034*	-0.034*			
								(0.093)	(0.092)	(0.089)			
Non-legacy blockholder (d)								0.028			0.041		
								(0.785)			(0.680)		
- Activist blockholder (d)									0.189*			0.196*	
									(0.098)			(0.083)	
- Non-activist blockholder (d)									0.004				0.018
									(0.974)				(0.870)
Ownership	0.236	0.074		0.164	0.296		0.062	0.153	0.152	0.156	0.091	0.090	0.093
	(0.320)	(0.122)		(0.669)	(0.291)		(0.638)	(0.512)	(0.516)	(0.505)	(0.690)	(0.694)	(0.684)
Ownership squared	-0.248			-0.220	-0.322		0.074	-0.184	-0.182	-0.187	-0.115	-0.113	-0.117
	(0.504)			(0.713)	(0.457)		(0.714)	(0.619)	(0.624)	(0.614)	(0.755)	(0.759)	(0.750)
Ownership defacto						-0.117							
						(0.507)							
Ownership squared defacto						0.213							
						(0.327)							
Firm controls as before	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,595	6,595	6,595	2,760	5,655	6,595	6,595	6,595	6,595	6,595	6,595	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Industry	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.441	0.441	0.441	0.468	0.444	0.441	0.315	0.441	0.441	0.441	0.441	0.441	0.441

8.3 Blockholder heterogeneity

In light of the substantial indirect costs that incur to blockholders when announcing to take board seats, a legitimate question is whether board representation resonates with blockholder types associated with specific attributes. The summary statistics indicate that some shareholders are more incentivized to engage in blockholder intervention through board representation (i.e., larger block ownership, higher rank order, more concentrated portfolios, and longer investment horizon). Consequently, it is a reasonable assumption that only long-term investors with lower liquidity requirements are willing to acquire board seats.

Table 25 tests whether blockholder heterogeneity has a predictive power to explain blockholder board representation. Because different blockholders are expected to have varying coefficient signs and magnitudes. For this purpose, a fixed-effects regression of *Blockholder board seat (d)* on different specifications of *Ownership*, *BHAR (base year)*, and firm characteristics on investor-firm-year-level is performed. The regression specifications include indicator variables to distinguish among the different blockholder groups. Accordingly, the indicator variable takes the value of one if the blockholder is classified as an insider (including founders, family members, or managers), an institutional investor (including asset managers, banks, insurance firms, hedge funds, private equity firms, or single investors), an other strategic investor (including holdings firms, foundations, or states), or a corporate investor (including firms and parent companies) respective, and zero otherwise. Thereby, Columns (1) to (5) include year and firm-fixed effects for the single indicator variables. Column (5) uses institutional investors as the reference group for the other blockholder types.

The provided evidence confirms the prediction that board representation is likely driven by blockholder heterogeneity. As reported in Table 25, the probability of acquiring a board seat increases significantly by 16.3% (Column (1)) or 7% (Column (3)) when the shareholder of interest is an insider blockholder or other strategic blockholder. In contrast, the probability of acquiring a board seat decreases significantly by 14.2% (Column (2)) when the shareholder of interest is an institutional investor.[58] Lastly, corporate blockholders are associated with positive but statistically insignificant results. Column (5) changes the perspective and contemplates the relation between board representation and blockholder heterogeneity relative to institutional investors. The setting is associated with larger magnitudes in statistical significance for all blockholder types. Collectively, the results are consistent with the descriptive statistics in Table 19 high-

[58] In unreported results, asset managers are excluded from the sample. The coefficients remain negative and significant for insiders and institutional investors but not for the remaining blockholder types.

lighting the fact that insider blockholders (institutional investors) have the strongest (weakest) claim to acquire seats on the firm's board, arguably arising from liquidity needs.

Against the backdrop of shareholder heterogeneity, another question arises: To what extent does a blockholder on the board influence other blockholders from taking a board seat? The summary statistics in Table 18 provide evidence suggesting that blockholders seem to compete for board seats. The finding is consistent with J Hadlock and Schwartz-Ziv (2019) in that outside blockholder tend to condition their decision to engage in block-building on the presence of legacy blockholders. The thesis contributes to the literature and applies the idea regarding the decision-making of board seat formation. Table A9 in the Appendix A, presents fixed-effects regressions of *Blockholder board seat (d)* on the lagged presence of other blockholders, different specifications of *Ownership*, *BHAR (base year)*, and firm characteristics on investor-firm-year-level are performed. Evidence suggests that legacy blockholders on the board effectively pose a barrier to entry for other outside blockholders seeking access to boardrooms. The probability of outside blockholders taking a board seat decreases by 19.9% when a legacy blockholder is already present on the board.[59] Similarly, the coefficients remain negative and statistically significant when accounting for the number of blockholders on the board or the number of blockholder-directors in absolute (relative) terms, respectively. Thus, there is evidence that legacy blockholders tend to discourage others from seeking board seats.

In summary, the thesis fails to reject H3 in that *long-term investors with fewer liquidity needs have a higher likelihood of taking a board seat.* The previous section highlights that blockholders may suffer a liquidity shock at the announcement of taking a board seat, thereby hampering the blockholder's ability to cut and run. In line with the rationale outlined in the thesis's opening, it is arguably prudent to assume that blockholders with certain attributes are incentivized to incur the substantial indirect costs of taking a board seat (amongst others, lower liquidity needs). In part, this is relevant because there is evidence that blockholders appear to condition their decision to acquire a board seat on the presence of other blockholders. The results are in agreement with Zwiebel (1995, p. 161), suggesting that '*large investors will create their own space*'. Similarly, J Hadlock and Schwartz-Ziv (2019, p. 4196) provide evidence suggesting that legacy blockholders have a '*crowding out*' effect on other blockholders who intend to follow suit.

[59] In untabulated analysis, the thesis repeats the regression specification using the contemporary presence of other blockholders. The results remain statistically significant.

Table 25: The implications of blockholder heterogeneity on board representation
This table reports results from fixed-effects regressions of 'Blockholder board seat (d)' on different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. To account for heterogeneity blockholders are grouped as 'Insider (d)', 'Institutional investors (d)', 'Other strategic investors (d)', or 'Corporate (d)'. The indicator variables equal one if the underlying blockholder belongs to a respective investor group, and zero otherwise. Specifications (1) to (5) include year and firm fixed effects. Fundamental variables are lagged by one year. The variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d)				
Dep. Variable	(1)	(2)	(3)	(4)	(5)
Insider (d)	0.163***				0.206***
	(0.001)				(0.000)
Inst. investor (d)		-0.142***			
		(0.000)			
Other strat. investor (d)			0.070*		0.120***
			(0.057)		(0.001)
Corporate (d)				0.016	0.091*
				(0.768)	(0.090)
Ownership	2.739***	2.632***	2.912***	2.951***	2.577***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ownership squared	-2.495***	-2.408***	-2.668***	-2.703***	-2.350***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BHAR 1-yr (base year)	-0.015***	-0.016***	-0.015***	-0.015**	-0.016***
	(0.009)	(0.008)	(0.009)	(0.011)	(0.007)
# Blockholders	-0.005	-0.004	-0.005	-0.005	-0.005
	(0.152)	(0.261)	(0.158)	(0.164)	(0.225)
Blockholder is foreign (d)	-0.086***	-0.083***	-0.110***	-0.113***	-0.073***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.003)
Blockholder rank (d)	-0.005	-0.006	-0.007	-0.006	-0.006
	(0.739)	(0.662)	(0.629)	(0.669)	(0.698)
Blockholder tenure (d)	0.044***	0.047***	0.050***	0.051***	0.043***
	(0.005)	(0.003)	(0.002)	(0.002)	(0.005)
Board co-determination (d)	0.041	0.039	0.033	0.034	0.042
	(0.399)	(0.407)	(0.502)	(0.483)	(0.379)
Board size (shareholder)	0.023***	0.023***	0.022***	0.022***	0.023***
	(0.002)	(0.003)	(0.006)	(0.006)	(0.002)
Book leverage	-0.112*	-0.093	-0.091	-0.094	-0.104
	(0.094)	(0.154)	(0.158)	(0.138)	(0.122)
Cash	-0.065	-0.075	-0.076*	-0.076*	-0.068
	(0.153)	(0.101)	(0.098)	(0.095)	(0.137)
ln(Firm age)	0.038	0.036	0.033	0.032	0.039
	(0.117)	(0.142)	(0.193)	(0.193)	(0.111)
In-sample investments (d)	-0.075***	-0.068***	-0.100***	-0.098***	-0.063***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Intangibles	0.135	0.094	0.102	0.107	0.114
	(0.121)	(0.284)	(0.249)	(0.224)	(0.187)
Ownership concentration	-0.046	-0.076	-0.070	-0.079	-0.053
	(0.677)	(0.499)	(0.541)	(0.499)	(0.628)
Portfolio weight (d)	0.001	0.001	0.001	0.002	0.000
	(0.943)	(0.958)	(0.912)	(0.875)	(0.988)
Presence (%)	0.119**	0.121**	0.121**	0.119**	0.120**
	(0.013)	(0.011)	(0.013)	(0.014)	(0.012)
R&D	-0.222	-0.190	-0.161	-0.144	-0.231
	(0.437)	(0.489)	(0.576)	(0.617)	(0.402)
ROA	0.068	0.071	0.067	0.075	0.066
	(0.212)	(0.180)	(0.221)	(0.179)	(0.217)
Tobin's Q	0.008	0.008	0.008	0.008	0.009
	(0.420)	(0.410)	(0.418)	(0.456)	(0.391)
ln(Total assets)	0.008	0.007	0.005	0.006	0.008
	(0.589)	(0.606)	(0.715)	(0.684)	(0.575)
Observations	6,595	6,595	6,595	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.556	0.559	0.548	0.547	0.562
Turning point (pct)	0.549***	0.546***	0.546***	0.546***	0.548***

8.4 Blockholder exit

Literature establishes the link that blockholder intervention occurs when corporate performance is not meeting shareholder expectations (Gillan and Starks, 1998, p. 2). Typically, shareholders can exploit several strategies to discipline management, namely exit or voice in line with Hirschman (1970). While exit involves disciplining management by selling off the block ownership, exerting voice assumes an active monitoring role. Given that the announcement of taking a board seat can negatively signal agency problems leading to a liquidity shock, the blockholder incurs substantial indirect costs. Subsequently, evidence suggests that only a few blockholders with arguably lower liquidity needs are likely to seek representation on the board. Since blockholders cannot cut and run, it is prudent to assume that they inadvertently become active monitors. Hence, the underlying thesis establishes that blockholders intervening through board representation are more likely to engage in a long-term voice strategy to discipline management rather than exit the firm. Empirical evidence in Table 16 indicates that blockholders who are associated with board representatives tend to have longer investment horizons.

Table 26 tests the implications of board representation on a blockholder's decision to exit. A fixed-effects regression of *Blockholder exit (d)* for different periods on *Blockholder board seat (d)*, different specifications of *Ownership*, and firm characteristics on investor-firm-year-level is conducted. In this regard, a blockholder exits the firm when her block ownership drops below the threshold of 3%.[60] Columns (1) to (3) include year and firm-fixed effects, whereas Columns (4) to (6) have year- and industry-fixed effects. In line with the prediction, the thesis presents results suggesting that board representation is negatively associated with *Blockholder exit (d)*. That is, the probability of the blockholder exiting the firm in year_{t1} or (year_{t3}) decreases significantly by 9.3% (10.2%) if a blockholder-director acquires a board seat which is consistent with Gow et al. (2014), showing that even activist investors can be said to trade on long-term information for about three years when holding board seats.

For robustness, Table 26 interacts the variable *Blockholder board representation (d)* additionally with the 1-year adjusted stock price performance *BHAR*. The coefficient estimate of the interaction term *BHAR X Blockholder board seat (d)* is positive and statistically significant, whereas the base variables are statistically significant but are associated with negative coefficient signs. Both coefficients are expected to be attributable to blockholder heterogeneity. That is, shareholders who act on short-term information (and arguably have high liquidity needs) are

[60] In unreported analysis, the respective threshold is set to 1% or 0%. The respective coefficients remain economically and statistically similar to the results in Table 26.

more likely to exit in $year_{t1}$ when performance is poor (Edmans and Manso, 2011), but this is not necessarily true for blockholders with board seats. Evidence suggests that blockholders seem to condition their exit on the stock's market performance as they are 4.5% more likely to exit in the next year if the firm's adjusted stock market performance increases by 1%. The positive and statistically significant coefficient of the interaction term *BHAR X Blockholder board seat (d)* provides empirical support in favor of the rationale outlined in the opening of the thesis. Blockholders acquiring board seats cannot cut and run unless the firm's stock market performance is positive. As a result, they have a higher likelihood to exit in $year_{t1}$ only when the firm's stock performance increases. Accordingly, blockholder exit becomes more likely when blockholders do not incur substantial indirect costs from the adverse market reaction of taking board seats. Collectively, blockholders are incentivized to exert effort and become active monitors on the board to increase firm value for all shareholders, however, more so when blockholders are locked-in.

In conclusion, the thesis fails to reject H4 in that *a blockholder taking a board seat is less likely to exit and, thus, becomes an active monitor.* Coherently, blockholders associated with board representation are more likely to govern through voice (i.e., monitoring and advice), thereby blockholders acquiring board seats are less likely to govern through exit. The finding is, in particular, true when the firm's stock performance is poor. As board seats appear to strengthen blockholder intervention through voice, it is also expected to increase the efficacy of governing through the threat of exit (Dasgupta et al., 2016). This follows the rationale that blockholders exiting the firm may signal that the management has shirked.

Table 26: The implications of board representation on blockholder exit

This table reports results from fixed-effects regressions of 'Blockholder exit (d)' on 'Blockholder board seat (d)', different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The independent variable 'Blockholder exit (d)' is an indicator variable which equals one if a blockholder exits the firm in year t_1, t_3 or t_5, and zero otherwise (Hirschman, 1970). An exit is given when an investor's block ownership in the respective firm decreases below 3%. The independent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. Specifications (1) to (4) include year and firm fixed effects, and specifications (5) to (8) include year and industry fixed effects. Specifications (2) and (6) additionally account for the interaction term 'BHAR X Blockholder board seat (d)'. Fundamental variables are lagged by one year. The variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). Columns (5) and (8) account for the unadjusted buy and hold return. All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder exit (d)					
	t_1		**t_3**	**t_1**		**t_3**
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)
Blockholder board seat (d)	-0.093***	-0.088***	-0.102***	-0.115***	-0.120***	-0.136***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BHAR X Board seat (d)		0.045***			0.064***	
		(0.001)			(0.002)	
BHAR 1-yr (base year)	-0.018*	-0.030**	0.001	-0.034**	-0.047***	-0.014
	(0.085)	(0.022)	(0.928)	(0.024)	(0.008)	(0.438)
Ownership	-1.170***	-1.176***	-1.791***	-1.023***	-1.028***	-1.689***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ownership squared	1.116***	1.116***	1.491***	0.954***	0.956***	1.463***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
# Blockholders	0.013***	0.013***	0.015**	-0.001	-0.001	0.005
	(0.007)	(0.006)	(0.021)	(0.788)	(0.799)	(0.341)
Blockholder is foreign (d)	0.013	0.013	0.033	0.031**	0.031**	0.057**
	(0.424)	(0.439)	(0.150)	(0.048)	(0.048)	(0.013)
Blockholder rank (d)	0.111***	0.111***	0.106***	0.103***	0.102***	0.094***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Blockholder tenure (d)	0.027**	0.027**	0.024	0.007	0.008	-0.006
	(0.034)	(0.033)	(0.218)	(0.545)	(0.520)	(0.774)
Board co-determination (d)	0.020	0.021	0.140**	-0.014	-0.013	-0.002
	(0.742)	(0.719)	(0.039)	(0.474)	(0.501)	(0.947)
Board size (shareholder)	-0.006	-0.006	0.013	0.001	0.001	0.008
	(0.464)	(0.440)	(0.390)	(0.832)	(0.831)	(0.200)
Book leverage	0.147**	0.146**	0.273***	0.073	0.073	0.128*
	(0.023)	(0.023)	(0.001)	(0.137)	(0.134)	(0.053)
Cash	-0.021	-0.019	-0.045	-0.013	-0.011	0.017
	(0.769)	(0.791)	(0.547)	(0.820)	(0.847)	(0.831)
ln(Firm age)	-0.001	0.001	-0.055	-0.022**	-0.022**	-0.032**
	(0.984)	(0.983)	(0.259)	(0.011)	(0.010)	(0.021)
In-sample investments (d)	-0.023*	-0.023*	-0.031*	-0.007	-0.007	-0.009
	(0.091)	(0.096)	(0.095)	(0.615)	(0.603)	(0.636)
Intangibles	0.017	0.016	-0.009	0.049	0.050	0.120*
	(0.873)	(0.881)	(0.946)	(0.279)	(0.271)	(0.093)
Ownership concentration	0.006	0.017	0.179	0.248***	0.252***	0.454***
	(0.958)	(0.886)	(0.168)	(0.004)	(0.003)	(0.000)
Portfolio weight (d)	-0.020*	-0.021*	-0.036**	-0.014	-0.015	-0.026*
	(0.096)	(0.082)	(0.017)	(0.214)	(0.194)	(0.095)
Presence (%)	-0.034	-0.034	-0.034	-0.172***	-0.176***	-0.269***
	(0.628)	(0.623)	(0.664)	(0.001)	(0.001)	(0.000)
R&D	-0.373	-0.360	0.097	-0.180	-0.187	-0.193
	(0.501)	(0.520)	(0.869)	(0.398)	(0.382)	(0.556)
ROA	0.113	0.112	0.119	0.089	0.090	-0.038
	(0.238)	(0.245)	(0.255)	(0.255)	(0.248)	(0.701)
Tobin's Q	0.011	0.011	0.004	0.005	0.004	-0.006
	(0.420)	(0.412)	(0.742)	(0.590)	(0.596)	(0.586)
ln(Total assets)	-0.016	-0.016	0.004	-0.003	-0.003	-0.016*
	(0.357)	(0.357)	(0.904)	(0.655)	(0.647)	(0.068)
Observations	6,595	6,595	6,595	6,595	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year; Ind.	Year; Ind.	Year; Ind.
Adj. R-squared	0.162	0.162	0.262	0.131	0.131	0.194
Turning point (pct)	0.524***	0.527***	0.600***	0.536***	0.538***	0.577***

8.5 Board role and blockholder-director attributes

Extant literature suggests that blockholders significantly impact a firm's board structure. The finding is most notably true when blockholders retain direct access to the company's assets to monitor management (Baker and Gompers, 2003; Franks and Mayer, 2001). In this context, Gow et al. (2014, p. 23) note that board representation is typically not the 'end goal'. As outlined in the preceding section, as blockholders cannot cut and run, blockholders seem to condition their exit on the firm's positive market performance. Hence, blockholders are incentivized to exert effort and become active monitors on the board. The notion follows the rationale that blockholder-directors can be more effective monitors when associated with additional board roles (i.e., acting as chairman or seated on the board's sub-committees). For example, the position of chairman is equipped with a significant range of competencies to influence the board's composition and monitoring activities over the firm's management. Further, a seat on one of the board's committees provides additional competencies since boards may delegate certain monitoring tasks to specific committees to increase the board's efficiency (Klein, 1998). As a result, the most frequently used committees in the sample are the audit, nomination, personnel, presiding, and strategy committee. In doing so, boards transfer specific tasks to committees and consequently provide their members with greater discretion over the board's activities.[61]

To test the implications of blockholder-directors on a firm's board composition and a firm's board structure, Table 27 presents results on the director-firm-year level and controls for specific director attributes. The underlying analysis is restricted to shareholder representatives exclusively since employee representatives are not at the discretion of the shareholder's meeting. Subsequently, shareholder-related controls are excluded from the empirical setting (i.e., different specifications of ownership, blockholder is foreign (d), blockholder rank (d), in-sample investments (d), portfolio weight (%) (d)). Columns (1) to (6) include year and firm-fixed effects, and Columns (2) to (6) are restricted to firms in which the firm has established sub-committees. Whereas Column (1) accounts for the position of the chairman, the remaining columns address the participation of the individual shareholder representatives (i.e., including

[61] By intuition, a seat on the audit committee can enable a blockholder to address its information needs, as the audit committee meets regularly with the company's management. Similarly, a seat on the nomination committee may facilitate a blockholder's ability to meet control needs, as the nomination committee is tasked to find suitable candidates for the board. A seat on the personnel committee allows a blockholder to meet incentive needs. The personnel committee is concerned with designing and implementing adequate remuneration packages for the management board and hiring or firing executives. A seat on the presiding committee facilitates coordination needs. The presiding committee is responsible for setting up the agenda, convening shareholder meetings, and coordinating the board's work. Finally, a seat on the strategy committee may allow a blockholder to provide better advice to the firm's management on strategic considerations.

blockholder-directors) in one of the most frequently used committees of the board.

Panel A of Table 27 presents evidence suggesting that blockholders become active monitors. Specifically, the probability of a director chairing the board increases by 5.6% when the director of interest is affiliated with a blockholder (Column (1)). In addition, the chairman's position is positively and significantly correlated with a board member's *Age* (i.e., professional experience), the number of *Mandates* (i.e., network), and a board member's *Tenure* (i.e., board experience). These findings suggest that the board chairman is expected to be a more seasoned director with a proven track record, potentially reflecting better monitoring and communication skills. In contrast, the board member's cultural background is insignificant to explain the variation in chairing the board. However, gender seems to matter since the probability of chairing the board decreases by 5.4% when the board member is female. The latter is expected to change with the German legislator facilitating board diversity and strengthening gender equality.

Similarly, a board member is 11.4%, 13.2%, 16.7%, and 23.2% more likely to be on the nominating, personnel, presiding, or strategy committee, respectively, if classified as a blockholder-director. The audit committee constitutes an exception to the underlying relation. This can be explained by the fact that the DCGK stipulates that the audit chairman must be independent of the majority shareholder. The results suggest that blockholders shift a substantial part of a board's 'decision-making' activities from the plenum to the committee level. One reason is that blockholder-directors can effectively reduce communication and coordination costs to intervene in the management process. Although co-determination is crucial, blockholders-directors might evade or limit the dialogue with employee representatives within the large plenum, consistent with OECD (2012). In addition, the participation in board committees allows blockholders greater influence in governing the firm.

Panel B of Table 27 provides further evidence in regards to the individual attributes of directors. This framework allows evaluating whether a specific skill set is attributable to blockholder-directors that is preferred by blockholders in an attempt to increase board monitoring. Since blockholder-directors are tasked with acting on behalf of their blockholders, blockholder-directors are required to be financial experts, come along with superior negotiation skills, and have relevant work experience. To account for this, similar regressions are run by regressing *Blockholder board representation (d)* on different attributes of directors and firm controls on director-firm-year-year. Whereas Column (7) accounts for blockholder-directors in general, Columns (8) to Columns (11) consider blockholder-directors who are affiliated with specific blockholder types

(including insider, institutional investors, other strategic investors, and corporate investors).

Panel B of Table 27 highlights that blockholder-directors tend to be male, younger of age, associated with longer tenures, and most notably, former executives of the company. The latter is primarily driven by insider blockholders and accordingly not observable for the remaining blockholder types. In analogy to Panel A, a more extensive network proxied by the number of mandates is positively correlated with an affiliated directorship when being affiliated with an institutional investor. The thesis contributes to the literature by illustrating that director heterogeneity similarly drives board representation. As such, directors are 12.2%, 23.9%, and 24.4% more likely to be blockholder-directors when they are bankers, politicians, or former executives of the firm, as reported in Column (7). Thus, blockholders seem to prefer director attributes associated with superior financial and negotiation skills required for board monitoring over the firm's management and board communication with other stakeholders.[62]

In summary, the thesis fails to reject H5 and H6 in that *a blockholder-director is likely to assume additional board roles and hold committee seats* and *blockholders select representatives with superior financial/negotiation skills.* Blockholder-directors are perceived to have better oversight skills and seek to chair the board or serve on the most important board committees. The thesis contributes to the literature by extending the empirical setting to the director level and linking blockholder-director attributes with specific skill-sets that facilitate board monitoring and improve board communication.

[62]The reference group is composed of board members with professional backgrounds in (industrial) firms (i.e., classic career path in corporate management).

Table 27: The implications of board representation on board structure

This table reports results from fixed-effects regressions of 'Board chair (d)' and different committee seats on different specifications of other blockholders present on the board, different specifications of 'Ownership', and a series of firm characteristics on director-firm-year-level. The dependent variable 'Board chairman (d)' is equal to one if the board member is the board's chair and zero otherwise. Similarly, the dependent variables 'Audit committee seat (d)', 'Nomination committee seat (d)', 'Personnel committee seat (d)', 'Presiding committee Seat (d)', and 'Strategy committee seat (d)' equal one if the board member has a seat on the respective committee, and zero otherwise. The independent variables in Columns (7) to (11) are indicator variables equal one if the respective director is classified as a 'blockholder-director' of the respective blockholder type and zero otherwise. Specifications (1) to (11) include year and firm fixed effects. Fundamental variables are lagged by one year. The variable BHAR measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. Except for all blockholder controls, all firm controls are included but not reported. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Panel A: Blockholder-director is/has a ...						**Panel B: Blockholder-director is affiliated to ...**				
Dep. variable	**Board chairman (d)** (1)	**Audit committee seat (d)** (2)	**Nomination committee seat (d)** (3)	**Personnel committee seat (d)** (4)	**Presiding committee seat (d)** (5)	**Strategy committee seat (d)** (6)	**Full sample (d)** (7)	**Insider investor (d)** (8)	**Institutional investor (d)** (9)	**Other strat. investor (d)** (10)	**Corporate investor (d)** (11)
Blockholder board seat (d)	0.056**	-0.029	0.114***	0.132***	0.167***	0.232***					
	(0.029)	(0.395)	(0.001)	(0.000)	(0.000)	(0.003)					
Member is female (d)	-0.054***	-0.041	-0.004	0.005	-0.117***	-0.048	-0.112***	0.017	-0.057***	-0.041**	-0.019*
	(0.001)	(0.280)	(0.923)	(0.928)	(0.002)	(0.546)	(0.001)	(0.493)	(0.002)	(0.013)	(0.069)
Member is foreign (d)	-0.022	-0.103***	-0.010	-0.098**	-0.049	0.069	0.016	-0.019	-0.006	-0.013	0.054**
	(0.453)	(0.007)	(0.804)	(0.017)	(0.187)	(0.413)	(0.703)	(0.317)	(0.763)	(0.511)	(0.046)
Member is former executive (d)							0.244***	0.212***	-0.006	0.010	0.018
							(0.000)	(0.000)	(0.785)	(0.460)	(0.418)
ln(Member age)	0.501***	0.244**	0.227*	0.372**	0.486***	0.505**	-0.475***	-0.140*	-0.210***	-0.084**	-0.029
	(0.000)	(0.025)	(0.091)	(0.016)	(0.001)	(0.023)	(0.000)	(0.052)	(0.000)	(0.010)	(0.335)
ln(Member mandates)	0.030**	0.003	0.061***	0.059***	0.060**	0.012	0.020	-0.008	0.016**	0.001	0.007
	(0.038)	(0.858)	(0.001)	(0.008)	(0.011)	(0.684)	(0.172)	(0.488)	(0.034)	(0.892)	(0.158)
ln(Member tenure)	0.033***	0.060***	0.137***	0.098***	0.092***	-0.021	0.057***	0.045***	0.013**	-0.002	-0.007*
	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.540)	(0.000)	(0.000)	(0.028)	(0.762)	(0.057)
Member is academic (d)	-0.078***	-0.134**	-0.167**	-0.022	-0.174***	0.246	-0.132***	-0.046*	-0.033**	-0.062**	0.004
	(0.002)	(0.015)	(0.011)	(0.768)	(0.000)	(0.129)	(0.003)	(0.060)	(0.020)	(0.037)	(0.814)
Member is auditor (d)	0.011	0.262***	0.017	-0.005	0.054	-0.168	-0.058	-0.018	-0.034	-0.013	0.000
	(0.835)	(0.000)	(0.823)	(0.954)	(0.564)	(0.151)	(0.166)	(0.321)	(0.203)	(0.363)	(0.985)
Member is banker (d)	0.003	0.092**	-0.064	0.045	0.034	-0.010	0.122***	-0.028	0.115***	0.031***	-0.009
	(0.924)	(0.028)	(0.145)	(0.303)	(0.448)	(0.880)	(0.000)	(0.123)	(0.000)	(0.008)	(0.336)
Member is consultant (d)	0.050	0.059	0.023	0.047	0.073*	0.090	-0.060**	-0.033**	0.006	-0.001	-0.022**
	(0.161)	(0.145)	(0.639)	(0.367)	(0.092)	(0.372)	(0.039)	(0.047)	(0.748)	(0.946)	(0.014)
Member is engineer (d)	0.020	0.002	-0.070	-0.054	0.082	0.081	-0.106***	-0.045**	-0.047***	-0.034**	0.020
	(0.528)	(0.965)	(0.177)	(0.315)	(0.104)	(0.233)	(0.002)	(0.045)	(0.001)	(0.029)	(0.176)
Member is lawyer (d)	0.036	0.036	0.005	0.019	0.043	-0.140	-0.039	-0.040	-0.010	-0.007	0.007
	(0.349)	(0.471)	(0.922)	(0.727)	(0.438)	(0.235)	(0.307)	(0.142)	(0.590)	(0.679)	(0.466)
Member is politician (d)	-0.042	-0.088	-0.056	0.056	0.016	-0.073	0.239***	-0.026**	-0.036*	0.307***	-0.002
	(0.189)	(0.149)	(0.444)	(0.322)	(0.827)	(0.552)	(0.004)	(0.048)	(0.065)	(0.000)	(0.938)
Firm controls as before	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,936	7,046	4,697	4,217	4,226	1,056	7,935	7,935	7,935	7,935	7,935
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.0794	0.116	0.196	0.139	0.196	0.189	0.295	0.283	0.345	0.387	0.384

8.6 Board and committee meetings

Against the background of blockholders becoming active monitors by assuming additional roles on the board, it remains an empirical question as to what extent blockholder-directors have implications on board monitoring. To resolve the question of whether blockholder-directors can increase monitoring the thesis proxies for monitoring by using the natural logarithm of the board and committee meetings in year_t of joining the board.[63] As such, Table 29 presents results of fixed-effects regression of *ln(1 + # Board meetings)* and *ln(1 + # Committee meetings)* on blockholder committee seats of the different committees on the firm-year level. Respective indicator variables are added to the model to control blockholder-directors on the committees (including the audit, nomination, personnel, and presiding committee). The assumption follows the rationale that firms with poor performance have greater demand for blockholder intervention. Thus, board and committee meetings are expected to increase when the blockholder-director participates in the respective committees. In this regard, the thesis contributes to the literature by linking blockholder-directors to board and committee meetings. The literature has not extensively addressed the implications of blockholder intervention through board representation to the author's best knowledge. The underlying research setting is informative, given that blockholder-directors are likely to influence board-related factors (i.e., board and committee compositions and their respective meetings). Additionally, participation in the different committees reveals insights into a blockholder's motivation to be represented on the board. In corollary, the study of a blockholder's committee memberships allows drawing more accurate inferences on the mechanisms employed by blockholders with which they increase board monitoring.

Evidence suggests that board (committee) meetings increase significantly by 4.9% (7.4%) in the year of blockholders taking a board (committee) seat. In particular, the thesis finds that blockholder-directors as members of the audit committee are associated with a significant 5.8% increase in committee meetings in year_t. In a similar vein, blockholder-directors are linked to an increase of 18.4% in the meetings of the presiding committee. The results are conclusive, as the audit committee maintains regular meetings with management and is thus able to obtain private information on the company's future profitability. The presiding committee represents the central body of the German supervisory board since it is tasked with coordinating the board's plenary meetings and setting up the agenda. Hence, the presiding committee can influence the board's overall activities. Although statistically insignificant by a small margin,

[63] A meeting is defined if the respective committee meets up either in person or by phone conference. Committees can also adopt resolutions in writing using written circulations. Per definition, written resolutions are not counted as a meeting.

the coefficient of the personnel committee is positive at 9.4%. In contrast, the coefficients of the nomination committee and strategy committee are negative but insignificant. While the latter two are conclusive, the lack of significance of the personal committee comes as a surprise. The personnel committee is concerned with the remuneration of the firm's management and other related matters. Arguably blockholder-directors increase the respective meetings. The nomination committee is tasked with selecting and appointing adequate blockholder-directors to the board. Accordingly, the number of committee meetings is generally low. The strategy committee is less frequently implemented than the other committees. The negative coefficient (although) statistically insignificant may imply that blockholders focus on monitoring rather than providing advise.

The thesis finds statistically weak but positive evidence that blockholder-directors increase the board's (committee's) meetings. With that being said, the results contradict Holderness (2009, p. 1397)'s notion that '*a blockholder who sits on the board may be asleep at the switch*'. Hence, the thesis fails to reject H7 in that *a blockholder taking a board seat becomes an active monitor and increases board meetings.*

Table 28: The implications of board representation on board meetings

This table reports results from fixed-effects regressions of '$ln(1 + \#\ \text{Meeting})_t$' and different committee meetings on different specifications of other blockholders being present on the board, different specifications of 'Ownership', and a series of firm characteristics on firm-year-level. The dependent variable is the natural logarithm of one plus the number of meetings in the year of taking a board seat, respectively. The dependent variable 'ln(1+ # Meetings)' for the board and following committees: audit, nomination, personnel, and presiding. The indicator variables 'Blockholder board seat (d)', 'Audit committee seat (d)', 'Nomination committee seat (d)', 'Personnel committee seat (d)', and 'Presiding committee seat (d)' equal one if the board or respective committee consist of at least one 'blockholder-director', and zero otherwise. The personnel committee also includes the compensation committee. Specifications (1) to (7) include year and firm fixed effects. Fundamental variables are lagged by one year. The variable BHAR measures a firm's 1-year adjusted stock return in the lagged year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	$ln(1 + \#\ \text{Meetings})_t$						
	Full Board	**Full Committee**	**Presiding Committee**	**Audit Committee**	**Nomination Committee**	**Personnel Committee**	**Strategy Committee**
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Blockholder board seat (d)	0.049*						
	(0.096)						
Blockholder committee seat (d)		0.074*					
		(0.086)					
Blockholder audit committee seat (d)			0.058*				
			(0.083)				
Blockholder nomination committee seat (d)				-0.054			
				(0.410)			
Blockholder personnel committee seat (d)					0.094		
					(0.117)		
Blockholder presiding committee seat (d)						0.184*	
						(0.066)	
Blockholder strategy committee seat (d)							-0.128
							(0.423)
BHAR 1-yr (lagged year)	-0.014*	-0.007	0.008	0.017	-0.017	-0.055**	-0.010
	(0.085)	(0.642)	(0.554)	(0.675)	(0.472)	(0.026)	(0.870)
# Blockholders	-0.004	0.011	0.009	-0.001	-0.010	-0.006	0.025
	(0.516)	(0.316)	(0.282)	(0.958)	(0.601)	(0.673)	(0.359)
Board co-determination (d)	0.045	-0.051	0.002	-0.257*	-0.315	0.050	-0.182
	(0.437)	(0.810)	(0.976)	(0.070)	(0.141)	(0.888)	(0.398)
Board size (shareholder)	-0.005	0.051***	0.049***	-0.016	0.007	-0.001	0.079
	(0.656)	(0.003)	(0.004)	(0.679)	(0.720)	(0.965)	(0.385)
Book leverage	-0.139	-0.137	-0.073	-0.307	-0.297	0.621*	-0.113
	(0.246)	(0.590)	(0.669)	(0.343)	(0.166)	(0.082)	(0.875)
Cash	-0.012	0.179	0.059	-0.169	0.054	0.356	0.140
	(0.896)	(0.178)	(0.535)	(0.525)	(0.823)	(0.301)	(0.508)
ln(Firm age)	0.007	-0.106	-0.075	-0.183	0.015	-0.053	-0.301
	(0.900)	(0.235)	(0.286)	(0.222)	(0.911)	(0.688)	(0.388)
Intangibles	-0.182	0.077	0.276	-0.035	0.193	-0.660	0.723
	(0.120)	(0.734)	(0.144)	(0.922)	(0.492)	(0.126)	(0.406)
Ownership concentration	0.194**	0.042	0.001	-0.213	-0.142	0.088	-0.055
	(0.020)	(0.771)	(0.996)	(0.261)	(0.359)	(0.715)	(0.934)
R&D	0.292	2.240**	2.102**	0.717	0.143	-3.714	2.841
	(0.642)	(0.037)	(0.012)	(0.582)	(0.917)	(0.574)	(0.315)
Presence (%)	0.013	-0.143	-0.161	0.225	0.048	0.069	-0.666*
	(0.907)	(0.333)	(0.176)	(0.390)	(0.801)	(0.852)	(0.085)
ROA	-0.574***	0.036	0.059	0.007	0.248	-0.599	1.533
	(0.000)	(0.866)	(0.713)	(0.984)	(0.512)	(0.164)	(0.300)
Tobin's Q	0.011	-0.035	-0.007	-0.019	-0.017	-0.006	0.143
	(0.494)	(0.170)	(0.739)	(0.761)	(0.690)	(0.931)	(0.107)
ln(Total assets)	0.018	0.047	0.082*	-0.023	0.024	0.041	-0.020
	(0.522)	(0.406)	(0.075)	(0.794)	(0.702)	(0.684)	(0.880)
Observations	1,818	1,598	1,515	916	1,006	719	209
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.489	0.698	0.637	0.316	0.444	0.636	0.612

8.7 Tobin's Q

A blockholder's motivation to intervene in the company's management process is primarily to increase monitoring and mitigate agency problems (Edmans and Holderness, 2017). Against this background, it remains puzzling how blockholder board representation is linked to a firm's performance. Literature on blockholders does not find any evidence of rent extraction by legacy blockholders who sit on a firm's board. Since blockholder-directors appear to increase a board's monitoring activities through increased committee meetings, the thesis studies whether blockholder intervention has implications on firm performance proxied by *Tobin's Q*, in particular in the presence of potential agency problems. For this purpose, the thesis considers a firm's cash levels. The notion follows the assumption that as agency problems persist in a company, high cash holdings could signal too much financial slack at the disposal of self-serving managers (Shleifer and Vishny, 1989). It is reasonable to assume that managers could engage in investment distortions to the detriment of shareholders. Thus, blockholders could increase monitoring to bring cash levels to an optimal level. The thesis contributes to the literature by interacting blockholder board representation with a company's cash holdings. Consistent with the literature, the thesis predicts that blockholder board representation should have a higher firm value.

In this context, Cronqvist and Fahlenbrach (2008) question why extant literature is unable to link the presence of large shareholders to firm performance. The authors reason that most papers do not consider blockholder heterogeneity in explaining the variation in firm policy (e.g., investment, financial, and executive compensation). The authors find that the link between blockholder intervention and policy outcome becomes more significant for blockholders with board representation. The underlying thesis expands the empirical evaluation and tests the relation between blockholder board representation and *Tobin's Q* by controlling for different types of blockholders on the board. Blockholders with close ties to the firm's management (i.e., families, founders, managers) may be less vigilant in exerting control and less inclined to discipline poor-performing management. Then again, insider blockholders may have better access to sensitive information, which allows them to build a mutual trust relationship with the company's managers and facilitates the dissemination of information. In contrast, outside blockholders, particularly institutional shareholders (i.e., private equity firms, hedge funds), are typically associated with high levels of disciplinary action in poorly performing firms. They usually have superior skills to monitor management and acquire forward-looking information (Edmans and Manso, 2011). However, given their outsider status, they should be less connected with key personnel, affecting how these shareholders interact with the firm's management board, subsequently facilitating an

environment of mistrust. Collectively, it seems as if different blockholders are linked to varying coefficient signs and magnitudes in explaining the variation in a firm's *Tobin's Q*.

Table 29 runs fixed-effects regression of 'Tobin's $Q_{t1\text{-}t3}$' on different interactions terms, different specifications of *Ownership*, *BHAR (lagged year)*, and firm characteristics on investor-firm-year-level. The model specifications in Columns (1) to (7) include year and firm-fixed effects. Column (1) considers the variable *Blockholder board seat (d)* in isolation without any interaction terms. Whereas Column (2) includes *cash-to-Q-sensitivity* measure, namely *Board seat (d) X Cash*, the remaining Columns (2) to (6) interact board representation with the different blockholder types, respectively. Column (7) uses institutional investors as the base group to compute the coefficients of the remaining blockholder types. In doing so, the blockholder classification follows the empirical setting in Table 25.

Empirical evidence seems to suggest that board representation in isolation is not significantly associated with the firm's *Tobin's* $Q_{t1\text{-}t3}$ (Column (2)). Subsequently, it is crucial to include interaction terms to study the implications of blockholder board representation on firm value. Column (1) finds a weak but statistically significant link that the *Cash-to-Q-sensitivity* measure is positively associated with the firm's *Tobin's Q*. A one-unit increase in the *Cash-to-Q-sensitivity* measure is expected to increase a firm's *Tobin's Q* by 0.535 units respectively, with a statistical significance of 10%. The coefficient *Blockholder board seat (d)* is negatively related to *Tobin's Q* with a statistical significance of 5%. Accordingly, a firm's *Tobin's Q* is sensitive to blockholder board representation in firm years, which are associated with high cash holdings (i.e., financial slack). Similarly, blockholders can interpret high cash holdings as a signal of untapped potential and poor management of the firm's resources, causing blockholders to intervene (Bebchuk et al., 2020). Therefore, the value of blockholder board representation increases with the firm's cash levels, as blockholder-directors can reduce prevailing agency problems.

The negative coefficient of board representation may indicate the presence of entrenched boards as blockholder-directors potentially become less vigilant monitors over time. This finding may highlight that blockholder board representation on its own may not necessarily be a predictor for improved firm valuation. In the spirit of Alchian and Demsetz (1972)'s notion, this would imply that blockholders should take board seats when agency problems prevail in a firm and exit the board once the potential agency problem has been resolved. Hence, there could be a potential trade-off between board representation and firm value conditional on the prevalence of agency problems. This would assume a more dynamic approach to taking a board

seat. However, as the findings reveal, the larger the shareholder's block ownership, the longer the respective blockholder-directors tend to remain on the board (see Table 15), which may facilitate board entrenchment. Furthermore, Dhillon and Rossetto (2015) argue that blockholders with concentrated ownership may induce the firm's management to pursue less risky projects to reduce the firm's overall idiosyncratic risk. Similarly, Edmans et al. (2017, p. 583) associate ex-post intervention with desirable outcomes, but ex-ante intervention could be considered a threat to managers since the latter cannot pursue their self-serving projects. Thus blockholder intervention can lead to over-monitoring (Schwartz-Ziv and Wermers, 2017). Future research may study the optimal investment horizon of blockholders associated with board seats.

The remaining regression specifications of Table 29 indicate that board representation is valuable when employed by long-term shareholders. *Tobin's Q* is expected to increase by 0.115 units when insider blockholders take a board seat (Column (3)). Thereby, the interaction effect is significant at the 1% level. The finding assumes that insider blockholders act as long-term investors with low liquidity needs, facilitating mutual trust between the two governing bodies in times of poor market performance. Generally, literature on family ownership indicates that family ownership is attributable to increased firm value (Anderson and Reeb, 2003; Andres, 2008). In contrast, the interaction terms concerning institutional blockholders (Column (4)) and other strategic blockholders (Column (5)) are associated with significant, negative coefficients of -0.118 and -0.063, respectively. Although the rationale can explain the negative association of board representation with other strategic shareholders, which may induce management to forgo overly risky projects, the findings for institutional investors are somewhat puzzling. Because institutional shareholders are typically associated with superior monitoring skills and financial resources (Marquardt, 2020). The negative coefficient may indicate that institutional investors aggravate potential conflicts of interest. Moreover, anecdotal evidence highlights that expectations of foreign regulators and institutional investors about monitoring a firm's management conflict with the prevailing laws in Germany. As the board is the controlling body of the firm, it must refrain from giving orders to the management board, which is tasked with running the firm's day-to-day business.[64] Hence, the risks of over-monitoring the firm's management board may be particularly prevalent when blockholder-directors are affiliated with (foreign) institutional investors leading

[64]Paul Achleitner, Chairman of Deutsche Bank AG, provided insights into the challenges facing German supervisory boards. In it, Mr. Achleitner complains that Anglo-Saxon regulators and institutional investors often overestimate the competencies of the German supervisory boards. Nowadays, the chairman is expected to be accountable for issues that the firm's management is accountable for (e.g., matters relating to corporate strategy). Although the German supervisory board has evolved from a passive controlling body to one actively providing advice, these changes still do not meet today's shareholder expectations of foreign regulators institutional investors. *Source: Financial Times (2021) - Deutsche Bank chair warns of clash between foreign regulators and German governance, accessed 28.09.2021.*

to conflicts of interest. Finally, Column (7) reports positive coefficients for the interacted terms for insider and corporate shareholders relative to institutional shareholders. The base coefficient of board representation remains negative, indicating that blockholder representation as an intervention mechanism is no guarantee for improved firm value. The finding suggests that the value-added form board representation derives from blockholder heterogeneity.

In summary, the thesis presents findings that blockholder board representation is particularly valuable in the presence of high cash levels (i.e., financial slack) at managers' discretion. Accordingly, the *cash-to-Q* sensitivity measure is positively linked to a firm's *Tobin's Q*, thereby indicating that blockholder board representation can increase firm value in the presence of prevailing agency problems. The finding is consistent with Agrawal and Nasser (2019), who find that board representation is valuable when the demand for blockholder-directors is high. Similarly, blockholder board representation appears valuable when employed by long-term shareholders, who may facilitate communication and information dissemination. The finding is consistent with Agrawal and Nasser (2019); Marquardt (2020) who conclude that blockholder intervention through board representation can result in higher firm value. As a result, it is an interesting avenue to investigate how blockholder-directors increase board monitoring. Accordingly, the thesis produces mixed results and partly fails to reject H8 in that *a blockholder taking a board seat improves firm value measured by Tobin's Q*. The thesis contributes to the literature and shows that H8 is conditional on two factors: *(i)*, there must be an agency problem in the firm, and *(ii)*, taking board seats resonates with long-term blockholders.

Table 29: The implications of board representation on firm performance
This table reports results from fixed-effects regressions of 'Tobin's Q $_{t_1-t_3}$' on 'Blockholder board seat (d)', on different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Tobin's Q t_1-t_3' is computed as the 3-year average value of the market value of equity plus its book value of total assets minus its book value of equity, all divided by its book value of total assets. The dependent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. To account for heterogeneity blockholders are grouped as 'Insider (d)', 'Institutional investors (d)', 'Other strategic investors (d)', or 'Corporate (d)'. The indicator variables equal one if the underlying blockholder belongs to a respective investor group, and zero otherwise. The table also includes the interaction terms of the different investor types and 'Blockholder board seat (d)'. Specifications (1) to (7) include year and firm fixed effects. The variable BHAR measures a firm's 1-year adjusted stock return in the lagged year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Tobin's Q $_{t_1-t_3}$						
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Blockholder board seat (d)	-0.083**	-0.012	-0.052***	0.040	-0.004	-0.026	-0.084***
	(0.042)	(0.546)	(0.009)	(0.202)	(0.841)	(0.304)	(0.010)
Board seat (d) X Cash$_t$	0.535*						
	(0.094)						
Cash$_t$	0.075						
	(0.806)						
Board seat (d) X Insider (d)			0.115***				0.145***
			(0.007)				(0.003)
Insider (d)			-0.033				-0.054
			(0.314)				(0.130)
Board seat (d) X Inst. investor (d)				-0.118**			
				(0.014)			
Inst. investor(d)				0.057			
				(0.159)			
Board seat (d) X Other strat. inv. (d)					-0.063*		0.007
					(0.057)		(0.860)
Other strat. investor (d)					0.018		0.004
					(0.351)		(0.862)
Board seat (d) X Corporate (d)						0.116	0.175*
						(0.246)	(0.092)
Corporate (d)						-0.134	-0.141
						(0.157)	(0.148)
Ownership	0.357	0.350	0.377*	0.429*	0.352	0.413*	0.460*
	(0.115)	(0.112)	(0.094)	(0.067)	(0.112)	(0.068)	(0.052)
Ownership squared	-0.533	-0.546	-0.596*	-0.669*	-0.543	-0.645*	-0.725**
	(0.146)	(0.124)	(0.100)	(0.063)	(0.128)	(0.072)	(0.047)
BHAR 1-yr (lagged year)	0.015	0.021	0.020	0.021	0.021	0.021	0.021
	(0.381)	(0.222)	(0.233)	(0.219)	(0.225)	(0.208)	(0.220)
# Blockholders	-0.011	-0.013	-0.013	-0.014	-0.013	-0.014	-0.014
	(0.540)	(0.440)	(0.444)	(0.421)	(0.440)	(0.403)	(0.401)
Blockholder is foreign (d)	-0.013	-0.010	-0.011	-0.019	-0.011	-0.015	-0.019
	(0.250)	(0.336)	(0.377)	(0.134)	(0.331)	(0.142)	(0.130)
Blockholder rank (d)	0.011	0.010	0.010	0.010	0.010	0.010	0.010
	(0.354)	(0.387)	(0.397)	(0.387)	(0.388)	(0.371)	(0.386)
Blockholder tenure (d)	-0.024	-0.022	-0.023	-0.021	-0.022	-0.023	-0.023
	(0.217)	(0.255)	(0.240)	(0.262)	(0.251)	(0.230)	(0.228)
Board co-determination (d)	-0.612***	-0.474***	-0.470***	-0.476***	-0.471***	-0.476***	-0.471***
	(0.000)	(0.007)	(0.008)	(0.007)	(0.008)	(0.007)	(0.008)
Board size (shareholder)	0.081**	0.078*	0.077*	0.077*	0.078*	0.077*	0.077*
	(0.045)	(0.056)	(0.056)	(0.058)	(0.056)	(0.057)	(0.058)
Book leverage	-0.196	-0.216	-0.219	-0.221	-0.215	-0.221	-0.223
	(0.382)	(0.330)	(0.323)	(0.317)	(0.332)	(0.316)	(0.311)
Cash		-0.090	-0.091	-0.092	-0.090	-0.085	-0.087
		(0.784)	(0.783)	(0.778)	(0.785)	(0.794)	(0.788)
ln(Firm age)	0.179*	0.167	0.171	0.166	0.168	0.166	0.169
	(0.086)	(0.114)	(0.105)	(0.115)	(0.112)	(0.118)	(0.110)
In-sample investments (d)	0.024**	0.022**	0.023*	0.013	0.024**	0.011	0.010
	(0.037)	(0.043)	(0.057)	(0.167)	(0.032)	(0.248)	(0.368)
Intangibles	-0.744*	-0.828*	-0.820*	-0.819*	-0.827*	-0.811*	-0.805*
	(0.096)	(0.096)	(0.096)	(0.096)	(0.096)	(0.096)	(0.096)
Ownership concentration	0.124	0.127	0.131	0.139	0.122	0.146	0.150
	(0.661)	(0.660)	(0.647)	(0.626)	(0.670)	(0.607)	(0.598)
Portfolio weight (d)	0.011	0.011	0.011	0.010	0.012	0.011	0.011
	(0.169)	(0.156)	(0.135)	(0.193)	(0.125)	(0.181)	(0.158)
Presence (%)	0.393**	0.386**	0.392**	0.394**	0.386**	0.388**	0.396**
	(0.036)	(0.041)	(0.038)	(0.038)	(0.041)	(0.041)	(0.038)
R&D	0.048	0.113	0.094	0.116	0.109	0.091	0.075
	(0.979)	(0.950)	(0.958)	(0.949)	(0.952)	(0.959)	(0.966)
ROA	0.041	0.082	0.073	0.071	0.083	0.076	0.066
	(0.891)	(0.783)	(0.804)	(0.809)	(0.779)	(0.797)	(0.822)
ln(Total assets)	-0.168**	-0.175**	-0.177**	-0.177**	-0.175**	-0.176**	-0.178**
	(0.039)	(0.032)	(0.030)	(0.029)	(0.032)	(0.029)	(0.027)
Observations	5,317	5,315	5,315	5,315	5,315	5,315	5,315
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.904	0.903	0.903	0.903	0.903	0.903	0.904

8.8 Critical assessment

The main empirical framework is designed to study the rationale outlined in the opening of the thesis. By intuition, blockholders are expected to have strong incentives to seek board representation to increase private benefits of control. However, related work implies that, generally, few board seats are taken. The underlying thesis suggests that only 21% (14% without insiders) of all blockholder-firm-years engage in board seat formation. Since direct costs of this intervention type are arguably low, blockholders may refrain from having representatives on the board due to substantial indirect costs. The thesis contributes to the literature by introducing a novel approach to shed light on this particular decision-making process. Thus, the following subsumes the critical findings of the main regression specifications: The determinants of blockholder board representation are manifold but primarily driven by *(i)* the shareholder's block ownership and *(ii)* poor market performance, as shown in Table 22. Following this, a 10% increase in block ownership raises the likelihood of a board seat by 29.56% since shareholders are more incentivized to exert control. Although the findings are consistent with relevant studies, the thesis contributes to the literature by employing a different institutional setting. Within this framework, the thesis shows that the relationship between board representation and block ownership seems to be non-linear. The finding supports the notion of a hump-shaped curve with an inflection point at 50-55%. Empirical evidence also shows that the probability of taking a board seat increases by 1.5% if the firm's adjusted stock performance decreases by 1%. The underlying thesis establishes that blockholders are likely to engage in intervention (through board representation) when firm performance is poor. So, some part of the value-added of voice is expected to come from increased monitoring; otherwise, it would be questionable why blockholders want to be represented on the board in the first place (Edmans and Holderness, 2017).

Furthermore, relevant literature finds positive announcement effects of activists seeking board representation. However, these papers usually do not disentangle the announcement of board representation from shareholder activism (including firm restructuring, asset sales, or takeovers) which is generally linked to increasing firm outcomes and stock performance. In this regard, the thesis contributes to the literature twofold: *(i)* On the one hand, the empirical evidence supports the notion that board seat formation is positively linked to the firm's stock performance when the blockholder is classified as activists (including hedge funds and single investors). With that being said, the firm's stock performance increases by 18.9% in the year an activist takes a board seat. *(ii)* On the other hand, the thesis finds that the decision to seek board representation can equally have negative implications on the firm's adjusted stock performance as

the announcement may signal agency problems preventing the firm from operating at its full potential. Legacy blockholders seem to drive the relationship as they are arguably in a superior position to acquire private information about the firm.[65] Since the decisions to *(i)* participate in block formation and *(ii)* acquire board seats do not necessarily coincide, the latter may all the more give the appearance of prevailing agency problems, which induces the blockholder to take action. Consistently, the event study shows that the market reacts negatively in the event window of $[0; 1]$ by about 1.04% (64.2 million euros of market capitalization) upon the announcement of a blockholder seeking representation on the board. Evidence additionally suggests that the firm's stock performance drops by 4.8% in the year of taking a board seat, indicating that outsider shareholders may revalue the firm's prospects in anticipation of increased conflicts on the board, leading to continued poor operating results (Agrawal and Chen, 2017).

Consequently, the blockholder may suffer a liquidity shock that impedes her from reaping trading gains. Regardless of whether the blockholder faces a lock-in situation, she is committed to exerting effort to improve firm value. Several implications can be drawn from the rationale: *(i)* Evidence infers that board representation more likely resonates with long-term blockholders (arguably with low liquidity needs). In this respect, the thesis presents results that insider (other strategic) shareholders are 16.3% (7%) more likely to seek board representation, whereas institutional shareholders are 14.2% less likely to take board seats. In addition, the thesis contributes to the literature finding that blockholders are 19.9% less likely to take seats on boards in which a legacy blockholder is present. Hence, blockholders tend to compete for board seats as legacy blockholders pose a barrier to entry for others to follow suit.[66] *(ii)* Evidence also indicates that the likelihood of exiting the firm decreases by 9.3% (10.2%) in year_{t1} (year_{t3}) when blockholders are associated with board representation. While stock performance is negatively associated with the decision to exit, the interaction term 'BHAR X board seat (d)' is associated with a positive coefficient sign. The results support the notion that blockholders condition their decision to exit on the company's positive stock performance. A blockholder on the board is 4.5% more likely to exit the firm in year_{t1}, when the firm's stock performance increases by 1%. The finding provides empirical support for the reasoning that blockholders cannot simply cut and run (Coffee, 1991) as a response to a firm's poor stock market performance once they are vested on the board.

[65] Consistent with this reasoning, Table 15 and Table A5 highlight that shareholders with larger blocks of shares and those classified as insiders tend to take board seats in shorter periods than other shareholders. Presumably, these findings are due to the shareholder's ability to gather private information.

[66] Unreported results indicate that boards with multiple blockholder-directors of different (similar) blockholder types are negatively (positively) associated with the firm value (proxied by Tobin's Q). That is, the presence of different blockholder types on the board potentially leads to increased conflicts of interest at the detriment of firm value.

Since blockholders are unable to exit, they are incentivized to become active monitors: *(i)* they take additional board roles and *(ii)* seats on the most important committees. Blockholder-directors are 5.6% more likely to be the board chairman. Similarly, blockholder-directors are 11.4%, 13.2%, 16.7%, and 23.2% more likely to be members of the nomination, personnel, presiding, and strategy committee. Thereby, blockholders seem to select directors that are 12.2%, 23.9%, and 24.4% more likely to have a banking or political background or be a former executive of the firm. The findings support the notion that blockholder-directors have superior financial and negotiation skills, arguably required to interact with and within boards. Evidence indicates that board and committee meetings increase by 4.9%, 7.4% in the year blockholders join the board. In a similar vein, audit and presiding committee meetings seem to increase by 5.8% and 18.4%, respectively. While the coefficient is positive, the 9.4% increase in the firm's personnel committee meetings is statistically insignificant by a small margin. The findings show that the presence of blockholder-directors comes with substantial implications on board composition and board monitoring.

Lastly, the thesis finds that blockholder board representation can be linked to higher firm value, particularly when a firm is associated with high cash holdings. The finding infers the existence of prevailing agency problems since excessive cash may imply higher financial slack being at the disposal of self-serving managers. While blockholder board representation on its own is negatively associated with the firm's *Tobin's Q*, the interaction term *Board seat (d) X Tobin's Q* is positively linked to firm value. Accordingly, *Tobin's* $Q_{t1\text{-}t3}$ increases by 0.535 units, for a 1% increase in cash holdings when blockholder-directors are represented on the board. Further, evidence illustrates that board representation is only valuable for specific blockholders. While the interaction term for insiders is positive, the coefficient signs are negative for institutional and other strategic investors. The finding indicates that blockholder board representation is not necessarily a persistent predictor for increased firm value. More specifically, blockholder board representation improves firm value when there is generally more demand for board monitoring.

9 Robustness

The section tests the generalizability and robustness of the findings presented in the main empirical framework outlined in the previous section. To this end, a selected set of test specifications is replicated using US activist campaigns seeking representation on the board of directors of target companies in accordance with Bebchuk et al. (2020); Gow et al. (2014). For brevity, robustness tests are limited to the test specifications in Table 22, Table 23, Table 24, Table 25, and Table 29.

9.1 Sample selection

The US dataset is retrieved from Refintiv Eikon's 'Activist campaign history', providing a complete set of campaign information (including activist proposals and proxy fights, public letters to management, press releases, and media articles as well as selected 13D filings and other SEC Filings (DEF 14A) tracing back to the late 1980s. The campaign-based approach allows differentiating the activist campaigns by *(i)* target nation, *(ii)* year, *(iii)* activist investor's objectives,*(iv)* status, or *(v)* outcome of the campaign launched. The activist objectives include, amongst others, amendment of bylaws, seeking board control and board representation, favoring/opposing acquisitions, liquidations, and reorganizations, having a say on pay, seeking shareholder rights, and corporate strategy. The list is far from complete but shall highlight the variety of activist campaigns. Thus, the empirical evaluation is limited to activist campaigns that seek board representation (and potentially combined with alternative objectives). The basic activist campaigns framework is manually extended by additional data, amongst others *(i)* the initial ownership of the activist investor, *(ii)* the activist campaign length, *(iii)* the number of nominees to be elected, and *(iv)* the names of candidates.

About 3,317 individual campaigns are retrieved from 2004 to 2018, in which activist investors launched a campaign against a US company.[67] The activist campaign data is matched with fun-

[67]Following intentions are reported other than seeking board representation, including amending by-

damental data and ownership data from Refinitiv. The unique identifier is retrieved for each firm by matching the name of the target firm to Refinitiv's firm-specific permanent ID using Refinitiv's record matching service 'permid.org'. The assigned identifiers are hand-checked for consistency. As a result, it is possible to link the campaign data to firm-level data. For 726 companies, the campaign data cannot be matched; these observations are excluded from the empirical evaluation. In addition, the sample is restricted to campaigns in which activist investors demand board seats. The final dataset comprises 982 unique activist campaigns regarding board representation. All campaigns classified as 'dissident victory' are hand-checked by screening through corporate filings whether the activist investor's nominated candidates are appointed to the board in the year succeeding the activist campaign. In analogy with the main empirical framework, the same identification rules apply to determine a blockholder-director relationship to provide consistency across the two samples.

For this purpose, ownership data is retrieved for each target firm on the date the activist investor announces the campaign. Henceforth, the corresponding information is downloaded from Refinitiv's shareholder history report. Subsequently, each investor's parent entity data is manually identified, and ownership is aggregated at the parent level. For this purpose, the same classification scheme applies to assign the investors into the different shareholder groups (including *(i)* insiders, *(ii)* institutional investors, *(iii)* other strategic investors, and *(iv)* corporate investors). Although US-centric research uses the threshold of 5% as the cut-off level, the underlying thesis includes all blockholder observations with ownership of at least 3% for consistency with the main sample. Finally, the main model specification is employed, which includes most of the previously identified control variables and year, firm, and industry fixed effects. Two exceptions follow the rule. For one, the variables *Board co-determination* and *Presence (%)* are not included in the US sample. Second, two US-specific variables are added to the model, including *(i) CEO duality (d)* and *(ii) Board staggered (d)*. As a result, the total number of observations amounts to 6,868 investor-firm-year observations.

It is essential to highlight that the US sample comprises activist campaigns, which differs substantially from the German panel. Consequently, it is not expected to draw the same inferences with the US sample within the underlying US setting. Instead, it is intended to show that blockholder board representation applies to various settings and governance systems. Accordingly, ownership, poor performance, and blockholder heterogeneity should remain the primary

laws, board control, force sale, hostile acquisition, proposing reorganization, propose liquidation, seeking alternatives, seeking a target, shareholder rights, spin-off, or strategic direction.

drivers for board representation. Whereas the German sample covers many blockholder types, the US setting is primarily limited to active investors that do not necessarily seek outright control but intend to induce change in the firm. Further, it is assumed that the director election process is more inflicted by endogenous concerns than the German setting since powerful CEOs in the US have substantial discretion over director elections. Shareholders that are strategically aligned with the incumbent CEO are more likely to acquire board seats.

Bebchuk et al. (2020); Gow et al. (2014) provide evidence that activist investors use a wide range of intervention mechanisms to achieve favorable corporate outcomes. It is important to note that the US setting is more aligned to the classic hedge fund activism in the US, whereas the German blockholder intervention is not.[68] In the underlying context, seeking representation on the board is arguably linked to additional objectives of the activist shareholders, including potential restructuring of the target firm (due to a well-established market for corporate control). Consequently, it appears more challenging to disentangle hedge fund activism from shareholder intervention through board representation using the US setting. Given that activist investors (i.e., hedge funds) are assumed to trade on short-term information, it provides an interesting but not ideal framework for a robustness test. Although the implications are not necessarily comparable, assuming that similar conclusions could be drawn from a niche sample, the sample of US activist campaigns illustrates the versatility of blockholder board representation.

[68]In the main section, the thesis distinguishes among legacy blockholders and activist blockholders, thereby presenting evidence that board representation is differently valued depending on the blockholder in question. Collectively, blockholder intervention through activists (legacy blockholders) is associated with a positive (negative) adjusted stock market performance in the year of acquiring board seats. The finding is important as it allows for consistency between the two samples.

9.2 Discussion of the supplementary findings

For robustness, the following section briefly discusses the main findings based on the US dataset comprising activist campaigns. Bebchuk et al. (2020); Gow et al. (2014) provide substantial empirical evaluation on this rich dataset.

Determinants of board representation (US)

Table 30 investigates the relation between a shareholder's block ownership and board representation through the lens of activist campaigns in the US. Thus, the thesis performs a fixed-effects regression of 'Blockholder board seat (d)' on different specifications of *Ownership*, *BHAR (lagged year)*, and firm characteristics on investor-firm-year-level. The reported results are robust to various test specifications and establish a positive and significant association between block ownership and board representation.

Column (1), presents results that the probability of acquiring a board seat increases significantly by 1.427% if an activist investor's block ownership rises by 1%. Following the rationale, a 10% change in ownership increases the likelihood of attaining a board seat by 14.27%. Although the squared term of ownership produces a negative and statistically significant coefficient sign, Lind and Mehlum (2010)'s 'u-test' yields statistically insignificant results. As presented in Column (1) the u-test supports the notion that the link between block ownership and board representation is linear consistent with contemporaneous literature Edmans and Holderness (2017); Marquardt (2020).[69] The difference in the two samples may result from the structural differences between the two contemplated governance regimes. In accordance, the literature suggests that relative to the US system, the German governance system is predominantly marked by an insider system with concentrated ownership (Franks and Mayer, 2001). Similarly, Section 3.2 highlights that German ownership remains concentrated, although there are signs of gradually becoming more dispersed. In addition, insider blockholders (including founders and families) remain a beacon of German corporate governance.[70]

The thesis finds a negative relationship between a firm's adjusted stock price performance and seeking board representation. Contrary to the regression results in Table 22, the adjusted stock price performance is replaced by the lagged market performance of the Russel 3000. Table 30 finds a significantly negative association of board representation with the lagged 1-year ad-

[69] The unreported lowess plot confirms that the functional form of board representation and block ownership is a linearly upward trending slope.

[70] However, it cannot be excluded that the difference is attributable to differences in the two data sets.

justed market performance. The lack of significant results with the adjusted return in the base year is potentially due to capital markets already anticipating shareholder activism as a response to poor market performance and prevailing agency problems.[71] Accordingly, activist investors are more likely to succeed with their demands to appoint board directors in the target firm for poorly performing firms. If the 1-year adjusted stock price performance drops by one unit, the likelihood of taking a board seat significantly increases by 0.020%.

Other controls that are significantly linked to board representation are the variables *Blockholder is foreign (d)*, *Blockholder tenure (d)*, *Ownership concentration*, *R&D expense* and *Tobin's Q*. The coefficient of *Blockholder is foreign (d)* is negative and statistically significant across all model specifications. In analogy to the German setting, domestic blockholders are more likely to obtain board seats than foreign blockholders. It can be concluded that there are unobserved (social) costs arising due to cultural barriers or due to distance.[72] Consistent with Agrawal and Nasser (2019) distance is a crucial factor to explain board representation even within the US.

While the negative link of ownership concentration to board representation is driven by large shareholders crowding-out others, the positive link of R&D expenses to board representation is likely due to asymmetric information since R&D typically requires extensive insider knowledge. As such, board representation is more likely to occur when firms are linked to lower (higher) ownership concentration (R&D expenses). Further, the thesis finds a negative correlation between firm value and taking a board seat which is in line with Edmans and Holderness (2017, p. 559). Collectively, activist blockholders are motivated to seek board representation for similar reasons as presented in the main analysis.

[71] Likewise, director elections through proxy fights are contingent on powerful CEOs. As Bebchuk et al. (2020) outline, blockholders are more likely to take a board seat when their threats are credible. Hence, it is assumed that activist investors first engage with incumbent management using other voice channels. Also, it is more likely that activist investors seek to form coalitions with other blockholders or, at the least, gain their approval before launching an activist campaign to seek board representation.

[72] A method to capture these unobserved costs is to study the distance from the blockholder's headquarters to firm headquarters. Hereby, distance is computed using the 'Haversine equation' following Kifana and Abdurohman (2012, pp. 656). The headquarter coordinates of each blockholder and firm are hand-collected using the decimal degrees for the latitude and longitude, and the distance is computed, respectively. The (natural log of) distance is significantly and negatively correlated to board seats.

Table 30: The determinants of board representation (US)
This table reports results from fixed-effects regressions of 'Blockholder board seat (d)' on different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Blockholder board seat (d)' is equal to one if at least one board member is classified as a 'blockholder-director', and zero otherwise. Specifications (1) to (5) include year and firm fixed effects, and specifications (6) and (7) include year and industry fixed effects. Specifications (2) and (3) include different specifications of 'Ownership' to account for non-linearity in the data. Specification (4) is based on specification (1) but excludes insider blockholders. Specifications (5) and (7) report marginal effects at the mean from logistic regressions. Fundamental variables are lagged by one year. The variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over the US Russell 3000 index as the benchmark). Columns (6) and (7) account for the unadjusted buy and hold return. All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d)						
	Baseline	**Ex sqr**	**Ex holding**	**Ex insider**	**Logit**	**Baseline**	**Logit**
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ownership	1.427***	0.913***		1.635***	0.670***	1.208***	0.512***
	(0.000)	(0.000)		(0.000)	(0.193)	(0.000)	(0.000)
Ownership squared	-1.152**			-0.990	0.117	-0.800*	-0.297**
	(0.024)			(0.152)	(0.508)	(0.065)	(0.040)
BHAR 1-yr (lagged year)	-0.020**	-0.019**	-0.017*	-0.022*	-0.021*	-0.001	-0.000
	(0.029)	(0.033)	(0.055)	(0.053)	(0.012)	(0.757)	(0.954)
Blockholders (#)	0.001	0.000	-0.002	-0.001	0.004	-0.005***	-0.002**
	(0.871)	(0.937)	(0.636)	(0.778)	(0.005)	(0.000)	(0.030)
Blockholder is foreign (d)	-0.054***	-0.053***	-0.048***	-0.057***	-0.059***	-0.060***	-0.041***
	(0.002)	(0.002)	(0.006)	(0.002)	(0.018)	(0.000)	(0.003)
Blockholder rank (d)	0.012	0.004	-0.011	0.016	0.001	0.004	-0.003
	(0.213)	(0.682)	(0.237)	(0.129)	(0.008)	(0.615)	(0.655)
Blockholder tenure (d)	-0.130***	-0.130***	-0.131***	-0.134***	-0.107***	-0.101***	-0.073***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)	(0.000)	(0.000)
Board duality (d)	-0.019	-0.019	-0.019	-0.021	-0.017	0.010*	0.007*
	(0.214)	(0.202)	(0.216)	(0.219)	(0.013)	(0.088)	(0.051)
Board size (#)	-0.007	-0.008	-0.008	-0.006	-0.016***	-0.000	-0.000
	(0.122)	(0.113)	(0.112)	(0.283)	(0.006)	(0.798)	(0.772)
Board staggered (d)	0.020	0.019	0.016	0.029	0.018	0.002	0.002
	(0.264)	(0.280)	(0.367)	(0.167)	(0.014)	(0.760)	(0.655)
Book leverage	0.053	0.060	0.079	0.058	0.084	-0.019	-0.015*
	(0.300)	(0.235)	(0.127)	(0.321)	(0.058)	(0.110)	(0.068)
Cash	-0.041	-0.043	-0.040	-0.057	0.000	-0.028	-0.019*
	(0.690)	(0.676)	(0.687)	(0.648)	(0.091)	(0.132)	(0.098)
ln(Firm age)	0.043	0.041	0.071	0.081	-0.065	0.022***	0.012***
	(0.744)	(0.757)	(0.608)	(0.601)	(0.128)	(0.000)	(0.000)
In-sample investments (d)	0.029*	0.030*	0.035**	0.032*	0.027*	0.011	0.007*
	(0.062)	(0.051)	(0.020)	(0.071)	(0.014)	(0.133)	(0.080)
Intangibles	-0.045	-0.037	-0.018	0.005	0.039	0.017	0.008
	(0.710)	(0.763)	(0.885)	(0.971)	(0.126)	(0.228)	(0.299)
Ownership concentration	-0.459**	-0.433**	-0.107	-0.472**	-1.084***	-0.318***	-0.329***
	(0.023)	(0.028)	(0.552)	(0.037)	(0.235)	(0.000)	(0.000)
Portfolio weight (d)	0.010	0.019*	0.067***	0.007	0.013	0.011	0.013**
	(0.369)	(0.066)	(0.000)	(0.589)	(0.009)	(0.217)	(0.036)
R&D expense	0.690***	0.695***	0.693***	0.923***	0.571**	0.066*	0.027
	(0.002)	(0.002)	(0.005)	(0.001)	(0.270)	(0.078)	(0.213)
ROA	0.034	0.030	0.027	0.049	-0.034	0.013	0.004
	(0.183)	(0.246)	(0.316)	(0.115)	(0.054)	(0.368)	(0.596)
Tobin's Q	-0.022***	-0.022***	-0.023***	-0.037***	-0.037	0.002	0.001
	(0.004)	(0.004)	(0.004)	(0.000)	(0.027)	(0.346)	(0.341)
ln(Total assets)	0.016	0.016	0.018	0.006	-0.008	0.005**	0.003**
	(0.557)	(0.548)	(0.526)	(0.849)	(0.027)	(0.022)	(0.021)
Observations	5,744	5,744	5,744	5,259	3,407	5,744	5,744
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.0645	0.0627	0.0359	0.0796		0.0824	
Turning point (pct)	0.620			0.826		0.755	

Board representation and market performance (US)

The thesis directs the discussion to the relationship between board representation and market performance. As previously discussed, relevant literature suggests that the announcement effect of activist campaigns in the US is associated with positive returns (Gow et al., 2014; Klein and Zur, 2009). Furthermore, the market for corporate control, which is most active in the US, facilitates board representation through mergers and acquisitions, asset sales, or takeovers (Brav et al., 2008; Greenwood and Schor, 2009; Jensen and Ruback, 1983).[73]

Table 31 is similarly structured as Table 23. Whereas Column (1) accounts for the baseline regression, the remaining columns include different specifications of *Ownership*. The empirical evidence suggests that the acquisition of board seats by activist blockholders has positive and significant implications on the firm's adjusted stock price performance *BHAR* of 0.9%. The corresponding regression specifications yield robust findings. The empirical results contrast (correspond) to the main sample's legacy (activist) blockholders. Within this framework, the thesis provides evidence that is partly consistent with Table 23. Accordingly, the announcement of an activist taking a board seat can induce a favorable signal to outsider shareholders as the activist's decision to intervene is presumably linked to other goals. Intuition suggests that activists are linked to superior monitoring abilities, allowing them to push for value-enhancing changes to restructure the firm.[74]

In summary, board representation can have a signaling effect that can run both ways depending on the type of intervention (i.e., whether it resonates with shareholder activism or blockholder intervention). On the one hand, the implication of board seat formation on the firm's stock market performance can be negative if it is associated with legacy blockholders, thereby revealing private information about prevailing agency problems in the firm. On the other hand, the implication can be positive if it is linked to the prospects of the activists seeking to engage in restructuring or engaging in a takeover. The finding is informative and meaningful, as it highlights that the empirical evidence is generalizable across different settings and governance systems. The finding also indicates that the decision to take board seats has real implications for firm governance.

[73] Unreported results of an event study are associated with a positive and highly significant share price reaction around the announcement date of the activist campaign. The positive price reaction supports the notion that taking a board seat is a positive signal for outside shareholders.

[74] As previously noted, the underlying activist campaigns come along with additional goals, amongst others, force sale, hostile acquisition, propose reorganization, seek target, or spin-offs.

Table 31: The implications of board representation on stock market performance (US)
This table reports results from fixed-effects regressions of 'BH(A)R (base year)' on 'Blockholder board seat (d)', different specifications of 'Ownership', and a series of firm characteristics on the investor-firm-year level. The dependent variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over US Russell 3000 index as the benchmark). Column (5) accounts for the unadjusted buy and hold return. The independent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. Specifications (1) to (4) include year and firm fixed effects, and specification (5) includes year and industry fixed effects. Specifications (2) and (3) include different specifications of 'Ownership' to account for non-linearity in the data. Specification (4) is based on specification (1) but excludes insider blockholders. Fundamental variables are lagged by one year. All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	$\mathbf{BHAR_t}$				
	Baseline	**Ex sqr**	**Ex holding**	**Ex insider**	**Baseline**
Dep. Variable	(1)	(2)	(3)	(4)	(5)
Blockholder board seat (d)	0.009**	0.009**	0.009**	0.013***	0.006
	(0.033)	(0.033)	(0.027)	(0.009)	(0.737)
Ownership	-0.062	0.004			
	(0.485)	(0.907)			
Ownership squared	0.146				
	(0.336)				
Blockholders (#)	-0.033	-0.033	-0.033	-0.027	-0.017**
	(0.126)	(0.126)	(0.126)	(0.207)	(0.031)
Blockholder is foreign (d)	-0.005	-0.006	-0.006	-0.005	-0.013
	(0.244)	(0.234)	(0.237)	(0.318)	(0.706)
Blockholder rank (d)	0.005	0.006	0.006	0.008	0.011
	(0.571)	(0.508)	(0.530)	(0.403)	(0.535)
Blockholder tenure (d)	-0.010*	-0.010*	-0.010*	-0.008	0.012
	(0.060)	(0.060)	(0.060)	(0.184)	(0.674)
Board duality (d)	0.008	0.008	0.008	0.010	0.021
	(0.824)	(0.824)	(0.824)	(0.769)	(0.357)
Board size (#)	0.036	0.036	0.036	0.031	0.009
	(0.102)	(0.102)	(0.102)	(0.174)	(0.428)
Board staggered (d)	0.103**	0.103**	0.103**	0.106**	0.026
	(0.048)	(0.047)	(0.047)	(0.029)	(0.511)
Book leverage	-0.477*	-0.478*	-0.478*	-0.472*	0.043
	(0.084)	(0.083)	(0.083)	(0.069)	(0.445)
Cash	0.839*	0.840*	0.840*	0.927*	-0.126**
	(0.060)	(0.060)	(0.060)	(0.055)	(0.045)
ln(Firm age)	0.795**	0.795**	0.795**	0.643*	0.070***
	(0.038)	(0.038)	(0.038)	(0.098)	(0.002)
In-sample investments (d)	0.093**	0.093**	0.093**	0.076*	-0.016
	(0.025)	(0.025)	(0.025)	(0.066)	(0.706)
Intangibles	0.822	0.821	0.821	0.768	-0.002
	(0.118)	(0.118)	(0.118)	(0.118)	(0.982)
Ownership concentration	-1.663***	-1.666***	-1.665***	-1.809***	0.111
	(0.004)	(0.004)	(0.004)	(0.003)	(0.701)
Portfolio weight (d)	0.007	0.005	0.006	0.008	0.009
	(0.607)	(0.661)	(0.607)	(0.441)	(0.641)
R&D expense	-1.840	-1.841	-1.841	-1.868	-0.033
	(0.113)	(0.113)	(0.113)	(0.136)	(0.901)
ROA	-0.061	-0.061	-0.061	-0.073	0.259**
	(0.768)	(0.770)	(0.770)	(0.732)	(0.023)
Tobin's Q	0.132***	0.132***	0.132***	0.142***	0.032**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.024)
ln(Total assets)	-0.107	-0.107	-0.107	-0.096	-0.022
	(0.266)	(0.266)	(0.266)	(0.307)	(0.218)
Observations	5,842	5,842	5,842	5,347	5,842
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year; Ind.
Adj. R-squared	0.854	0.854	0.854	0.843	0.245

Board representation and blockholder heterogeneity (US)

Table 32 tests the implications of blockholder heterogeneity in accordance with Table 25. Thereby, blockholders are grouped into four categories: *(i)* insiders, *(ii)* institutional investors, *(iii)* other strategic investors, and *(iv)* corporate investors. The selected categorization may appear suboptimal for the underlying US activist campaign sample but is applied for consistency reasons. This follows the assumption that the sample is based on activist campaigns; thus, board representation is more likely to be used by activist investors to pursue alternative goals. Nevertheless, it is expected that different blockholder types should be associated with different coefficient signs and varying magnitudes in board representation.

Table 32 reports results which are consistent with the prediction. Although blockholder heterogeneity continues to matter, the direction of the respective coefficients differs substantially in comparison to the main sample. As reported in Column (1), the probability of acquiring a board seat decreases by 6.7% if a shareholder is classified as an insider blockholder. The reported coefficient is significant at the 1% level. In contrast, the probability of seeking board representation significantly increases by 4.8% when the respective blockholder is an institutional investor. Also, other strategic investors are linked to a 12.8% increase in the probability of acquiring a board seat with a significance level of 10%. Corporate blockholders show a positive link to seeking board representation; however, the result is statistically insignificant (Column (4)). Overall the results highlight that institutional investors are most likely to acquire board seats among US activist campaigns. The results do not necessarily contradict the results from the German sample but rather confirm that context matters in the investigation of blockholder board representation. The difference is likely due to the empirical design setting. Insider shareholders are more likely to acquire board seats within the insider system. Equivalently outsider blockholders appear to be the dominant shareholder in seeking board representation in the outsider system in which the market for corporate control is deemed a legitimate market mechanism of control to resolve agency problems (Brav et al., 2021, 2008).

The robustness test collectively confirms that blockholder heterogeneity is crucial to understanding the decision-making process of seeking board representation. Accordingly, in the US, activist investors employ board representation to pursue other objectives (i.e., mergers and acquisitions), consistent with Bebchuk et al. (2020).

Table 32: The implications of blockholder heterogeneity on board representation (US)
This table reports results from fixed-effects regressions of 'Blockholder board seat (d)' on different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a blockholder-director, and zero otherwise. To account for heterogeneity blockholders are grouped as 'Insider (d)', 'Institutional investors (d)', 'Other strategic investors (d)', or 'Corporate (d)'. The indicator variables equal one if the underlying blockholder belongs to a respective investor group and zero otherwise. Specifications (1) to (5) include year and firm fixed effects. In Column (5), all investor type controls are added except for 'Institutional investors (d)'. Fundamental variables are lagged by one year. The variable 'BH(A)R' measures a firm's 1-year adjusted stock return in the base year (over the US Russell 3000 index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d)				
Dep. Variable	(1)	(2)	(3)	(4)	(5)
Insider (d)	-0.067***				-0.069***
	(0.000)				(0.000)
Inst. investor(d)		0.048***			
		(0.000)			
Other strat. investor (d)			0.128*		0.114*
			(0.059)		(0.097)
Corporate (d)				-0.035	-0.042*
				(0.113)	(0.060)
Ownership	1.435***	1.465***	1.399***	1.442***	1.429***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ownership squared	-1.162**	-1.166**	-1.122**	-1.148**	-1.131**
	(0.023)	(0.023)	(0.028)	(0.025)	(0.027)
BHAR 1-yr (lagged year)	-0.021**	-0.021**	-0.019**	-0.020**	-0.021**
	(0.025)	(0.028)	(0.030)	(0.030)	(0.027)
Blockholders (#)	0.000	0.000	0.000	0.001	-0.000
	(0.967)	(0.937)	(0.910)	(0.880)	(0.985)
Blockholder is foreign (d)	-0.054***	-0.044***	-0.061***	-0.049***	-0.054***
	(0.002)	(0.010)	(0.001)	(0.005)	(0.003)
Blockholder rank (d)	0.012	0.011	0.012	0.012	0.011
	(0.231)	(0.252)	(0.211)	(0.230)	(0.251)
Blockholder tenure (d)	-0.126***	-0.128***	-0.128***	-0.130***	-0.125***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board duality (d)	-0.019	-0.020	-0.019	-0.020	-0.019
	(0.220)	(0.201)	(0.220)	(0.202)	(0.211)
Board size (#)	-0.007	-0.007	-0.007	-0.007	-0.007
	(0.141)	(0.138)	(0.132)	(0.127)	(0.157)
Board staggered (d)	0.022	0.020	0.020	0.019	0.022
	(0.206)	(0.247)	(0.250)	(0.282)	(0.211)
Book leverage	0.059	0.057	0.052	0.053	0.057
	(0.248)	(0.260)	(0.310)	(0.302)	(0.255)
Cash	-0.030	-0.034	-0.043	-0.043	-0.032
	(0.772)	(0.740)	(0.680)	(0.682)	(0.754)
ln(Firm age)	0.032	0.042	0.037	0.046	0.029
	(0.809)	(0.748)	(0.784)	(0.724)	(0.825)
In-sample investments (d)	0.028*	0.028*	0.029*	0.029*	0.028*
	(0.067)	(0.071)	(0.061)	(0.066)	(0.070)
Intangibles	-0.045	-0.033	-0.047	-0.037	-0.037
	(0.706)	(0.780)	(0.699)	(0.759)	(0.756)
Ownership concentration	-0.447**	-0.450**	-0.460**	-0.459**	-0.448**
	(0.024)	(0.024)	(0.023)	(0.023)	(0.024)
Portfolio weight (d)	0.009	0.009	0.010	0.009	0.009
	(0.396)	(0.424)	(0.354)	(0.390)	(0.408)
R&D expense	0.691***	0.675***	0.704***	0.683***	0.696***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
ROA	0.039	0.034	0.038	0.032	0.039
	(0.138)	(0.184)	(0.149)	(0.209)	(0.131)
Tobin's Q	-0.021**	-0.021***	-0.024***	-0.022***	-0.024***
	(0.011)	(0.008)	(0.001)	(0.003)	(0.003)
ln(Total assets)	0.015	0.015	0.016	0.016	0.015
	(0.585)	(0.579)	(0.561)	(0.560)	(0.592)
Observations	5,744	5,744	5,744	5,744	5,744
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.0688	0.0675	0.0665	0.0649	0.0712
Turning point (pct)	0.618	0.628	0.624	0.628	0.631

Board representation and firm performance (US)

Finally, the last empirical setting in this section addresses the link between board representation and firm valuation proxied by *Tobin's Q*. A legitimate reason for a blockholder seeking board representation is to target firms with untapped potential to increase monitoring and improve firm value. The main analysis suggests that board representation is valuable when cash levels are high, which would indicate the presence of agency problems in the firm. Additionally, blockholders with strict oversight over management exert more influence on a firm's management than blockholders without direct access to the board. Consequently, it is informative to evaluate to what extent activist investors using blockholder board representation may have implications on firm valuation. Additionally, different blockholder types are likely associated with different coefficient signs in explaining the variation in *Tobin's Q*. Table 33, runs fixed-effects regression of *Blockholder board seat (d)* on different specifications of *Ownership*, *BHAR (lagged year)*, and firm characteristics on investor-firm-year-level. Table 33 accounts for similar interaction terms to examine board representation in different settings.

The results in Table 33 indicate that the interaction term *Blockholder board seat (d) X Cash* is statistically significant and positively associated with the target firm's *Tobin's Q* for the $\text{years}_{\text{t1-t3}}$. The finding in Column (1) is in line with the results from Table 29 and supports the notion that board representation improves firm value by increasing levels of cash holdings. Accordingly, *Tobin's Q* is expected to increase by 0.112 units when a firm's cash holding increases by 1% in the presence of blockholder-directors. Columns (2) to (8) account for various model specifications and the interaction terms relating to the different investor types. Surprisingly, the interaction terms of the different investor types remain statistically insignificant, whereas the base variable of *Blockholder board representation (d)* is positive and significant across the different regression specifications. This may have multiple reasons. First, the selected blockholder classification may not adequately reflect the ownership structure of US firms. Another reason may be that the US one-tier board system allows outsider blockholders to a greater extent to exert direct influence on the firm's management when being represented on the board. In this sense, the implication of board representation on firm governance and firm performance remains an empirical question and needs to be investigated in an alternative firm, governance, and county framework. The results confirm that board representation can be a substitute for monitoring when in light of financial slack, which may facilitate investment distortions. Thus, improved firm value is expected to come from increased monitoring.

Table 33: The implications of board representation and firm performance (US)
This table reports results from fixed-effects regressions of 'Tobin's Q t_1-t_3' on 'Blockholder board seat (d)', on different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Tobin's Q t_1-t_3' is computed as the 3-yr average value of the market value of equity plus its book value of total assets minus its book value of equity, all divided by its book value of total assets. The dependent variable 'Blockholder board seat (d)' is equal to one if at least one board member is classified as a 'blockholder-director', and zero otherwise. To account for heterogeneity blockholders are grouped as 'Insider (d)', 'Institutional investors (d)', 'Other strategic investors (d)', or 'Corporate (d)'. The indicator variables equal one if the blockholder is assigned to one of the available investor categories and zero otherwise. The thesis includes interaction terms between different investor types and the variable 'Blockholder board seat (d)'. Specifications (1) to (8) include year and firm fixed effects. The variable BHAR measures a firm's 1-year adjusted stock return in the base year (over the US Russell 3000 index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Tobin's Q t_1-t_3							
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Blockholder board seat (d)	-0.010	0.022*	0.014	0.016*	-0.049	0.016*	0.015*	0.019**
	(0.283)	(0.065)	(0.105)	(0.074)	(0.380)	(0.087)	(0.077)	(0.049)
Board seat (d) X $Cash_t$	0.112**							
	(0.046)							
$Cash_t$	1.919***							
	(0.003)							
Board seat (d) X Insider (d)				-0.159				-0.161
				(0.223)				(0.220)
Insider (d)				0.005				0.007
				(0.454)				(0.346)
Board seat (d) X Institutional (d)					0.068			
					(0.258)			
Institutional (d)					-0.011			
					(0.102)			
Board seat (d) X Other strategic (d)						-0.082		-0.087
						(0.366)		(0.348)
Other strategic (d)						0.025		0.029
						(0.432)		(0.377)
Board seat (d) X Corporate (d)							-0.020	-0.025
							(0.774)	(0.723)
Corporate (d)							0.019	0.020*
							(0.109)	(0.095)
Ownership	-0.027	0.002	-0.012	-0.014	-0.026	-0.010	-0.022	-0.025
	(0.798)	(0.986)	(0.916)	(0.900)	(0.818)	(0.929)	(0.844)	(0.829)
Ownership squared	0.014	0.007	0.020	0.027	0.061	0.023	0.024	0.040
	(0.935)	(0.973)	(0.911)	(0.877)	(0.744)	(0.895)	(0.898)	(0.836)
BHAR 1-yr (lagged year)	0.035	-0.085	-0.008	-0.008	-0.008	-0.009	-0.008	-0.009
	(0.751)	(0.520)	(0.936)	(0.936)	(0.935)	(0.933)	(0.935)	(0.932)
Blockholders (#)	-0.064	-0.055	-0.062	-0.062	-0.061	-0.062	-0.062	-0.062
	(0.210)	(0.356)	(0.217)	(0.216)	(0.218)	(0.216)	(0.217)	(0.217)
Blockholder is foreign (d)	0.000	-0.000	-0.003	-0.002	-0.004	-0.004	-0.005	-0.005
	(0.977)	(0.952)	(0.750)	(0.834)	(0.654)	(0.688)	(0.602)	(0.606)
Blockholder rank (d)	0.006	-0.002	0.001	0.000	0.001	0.001	0.001	0.001
	(0.416)	(0.885)	(0.940)	(0.955)	(0.927)	(0.929)	(0.921)	(0.926)
Blockholder tenure (d)	0.009	0.010	0.010	0.010	0.010	0.010	0.011	0.010
	(0.263)	(0.309)	(0.266)	(0.278)	(0.273)	(0.262)	(0.244)	(0.250)
Board duality (d)	-0.515***		-0.699***	-0.699***	-0.699***	-0.700***	-0.699***	-0.699***
	(0.006)		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Board size (#)	0.007	-0.033	-0.047	-0.047	-0.047	-0.047	-0.047	-0.048
	(0.865)	(0.318)	(0.222)	(0.217)	(0.220)	(0.223)	(0.222)	(0.217)
Board staggered (d)	0.491**		0.320*	0.320*	0.321*	0.320*	0.321*	0.320*
	(0.016)		(0.090)	(0.091)	(0.090)	(0.090)	(0.090)	(0.091)
Book leverage	0.853	-0.209	0.589	0.591	0.590	0.591	0.589	0.593
	(0.139)	(0.840)	(0.518)	(0.516)	(0.517)	(0.517)	(0.518)	(0.515)
Cash		0.360	1.595	1.607	1.599	1.598	1.596	1.610
		(0.808)	(0.212)	(0.210)	(0.211)	(0.212)	(0.213)	(0.210)
ln(Firm age)	1.286	1.731	0.964	0.960	0.959	0.961	0.961	0.954
	(0.405)	(0.310)	(0.464)	(0.465)	(0.466)	(0.465)	(0.465)	(0.468)
In-sample investments (d)	-0.114	-0.119	-0.103	-0.103	-0.104	-0.103	-0.103	-0.103
	(0.363)	(0.419)	(0.357)	(0.357)	(0.356)	(0.358)	(0.358)	(0.358)
Intangibles	-3.223**	-2.950	-2.801*	-2.804*	-2.805*	-2.799*	-2.805*	-2.806*
	(0.040)	(0.122)	(0.068)	(0.068)	(0.068)	(0.068)	(0.067)	(0.068)
Ownership concentration	-0.877	1.666	-1.077	-1.081	-1.084	-1.082	-1.072	-1.082
	(0.747)	(0.586)	(0.662)	(0.661)	(0.660)	(0.660)	(0.663)	(0.661)
Portfolio weight (d)	0.013	-0.001	0.004	0.004	0.004	0.004	0.004	0.004
	(0.154)	(0.944)	(0.766)	(0.776)	(0.761)	(0.772)	(0.751)	(0.764)
R&D expense	8.298***	5.742*	7.547**	7.543**	7.541**	7.546**	7.552**	7.546**
	(0.005)	(0.084)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
ROA	0.466	-0.255	0.040	0.037	0.041	0.042	0.041	0.041
	(0.289)	(0.670)	(0.945)	(0.949)	(0.944)	(0.941)	(0.943)	(0.943)
Tobin's Q	-0.140	0.033	-0.010	-0.010	-0.010	-0.011	-0.010	-0.010
	(0.219)	(0.790)	(0.934)	(0.937)	(0.939)	(0.932)	(0.934)	(0.935)
ln(Total assets)	-0.637**	-0.800**	-0.700***	-0.699***	-0.700***	-0.700***	-0.699***	-0.699***
	(0.012)	(0.024)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Observations	3,546	3,546	3,546	3,546	3,546	3,546	3,546	3,546
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.998	0.967	0.973	0.973	0.973	0.973	0.973	0.973

9.3 Critical assessment

Part of the challenge of the robustness tests is that the US activist sample deviates from the German panel dataset as the former comprises activist campaigns. Nevertheless, the supplementary analysis provides empirical support on multiple grounds. Accordingly, evidence suggests that *(i)* blockholder intervention is more likely to occur in firms that are associated with poor firm stock price performance, as the lagged 1-year-adjusted stock price performance drops by 1%, the probability of taking a board seat increases by 2.0%. In corollary, *(ii)* blockholders are more likely to seek board representation for increasing block ownership; with that being said, a 10% change in ownership increases the likelihood of attaining a board seat by 14.27%.

The robustness tests further outline that *(iii)* board representation is associated with a positive increase in the 1-year-adjusted stock price performance of about 0.9% when taking a board seat.[75] The market reaction supports the notion that taking a board seat by an activist induces a positive signal to outsider shareholders as it is associated with shareholder activism (including other objectives such as the liquidation, sale, takeover of the firm, or part of the firm, strategic considerations, strengthening shareholder rights). While the finding is consistent with the results of activist blockholders attaining board seats in German firms, they contradict the same results applicable to legacy blockholders. The US results are generally consistent with the findings of the main empirical framework and illustrate that having a blockholder taking a board seat can be both a positive and a negative signal to outsider shareholders. The fact that the thesis finds consistent evidence for activist blockholders across the two samples infers the generalizability of the empirical results. It remains an interesting avenue for future research to study the stock price reaction of blockholders taking a board seat in different settings and jurisdictions.

Furthermore, the empirical framework of the US activist campaigns shows that *(iv)* blockholder board representation is equally driven by blockholder heterogeneity. Contrary to the German setting, the coefficient signs are reversed for the different blockholders. So, institutional (other strategic) investors are 4.8% (12.8%) more likely to seek board representation, whereas insider investors are 6.7% less likely to seek board representation. As it seems, blockholder board representation is positively linked to insiders in an insider system and equivalently to outsiders in an outsider system. Again, the finding does not necessarily contradict the main analysis but presumably reflects differences between the two samples. Collectively, the results highlight the

[75] In accordance with an unreported event study based on the activist campaigns, the findings suggest that the announcement of taking a board seat is associated with a positive and highly significant share price reaction. The evidence is in line with Gow et al. (2014); Klein and Zur (2009).

importance of context to understand blockholder board representation.

Finally, the robustness tests indicate that *(v)* blockholder representation on the board is generally linked to higher firm value. The firm's Tobin's Q increases by 0.022 units when blockholders take a board seat. The presence of blockholders on the board improves firm value irrespective of the blockholder type, as there is presumably a higher demand for blockholder monitoring. In analogy to the main analysis, blockholder board representation improves firm value for high cash levels (i.e., financial slack being at the disposal of self-serving managers). While blockholder board representation is negatively but insignificantly associated with Tobin's Q, the interaction term 'Board seat (d) X Tobin's Q' is positively linked to firm value. The empirical evidence suggests that blockholder board representation improves firm value predominantly in the presence of prevailing agency problems. Thus, *Tobin's* $Q_{t1\text{-}t3}$ increases by 0.112 units, for a 1% increase in cash holdings when blockholder-directors are represented on the board. In conclusion, the discussed findings are generalizable to other institutional settings.

10 Hypothesis review and conclusion

This section revisits the inferences drawn from the empirical framework as the thesis attempts to convey simple reasoning based on intuition. In doing so, the section summarizes the main findings in accordance with the outlined hypotheses and concludes with a novel rationale for future research on blockholder intervention.

10.1 Hypothesis review

The section summarizes the key findings of the empirical framework in Section 7, 8, and 9 based on the tested hypotheses:

H1: *The presence of blockholder-directors is a non-linear function of block ownership.*

The thesis comes to mixed results and partly fails to reject H1. In line with the literature, block ownership is a critical determinant of blockholder board representation. Empirical evidence derived from the summary statistics and the regression specifications implies that board seat formation is positively linked to higher block ownership (and conversely rank order) as it allows blockholders to increase monitoring and influence corporate decision-making (Edmans and Holderness, 2017). The thesis contributes to the literature by providing novel insights into the potential non-linear relationship between block ownership and board representation. Empirical evidence based on Lind and Mehlum (2010)'s 'u-test' and a non-parametric lowess plot suggests the existence of an inflection point at around 50-55% of a firm's outstanding shares. By intuition, blockholders have additional powers to engage in voice other than board representation.[76] Thus, the incremental increase in the probability of acquiring a board seat is lower (higher) for a one-unit change in ownership when the ownership stake is high (low). The non-linear rela-

[76] Although it cannot be ruled out, that the finding is driven by the low number of observations of majority blockholders within the sample firms.

tionship suggests blockholders presumably face different incentives to seek board representation contingent on their block ownership. The link, however, becomes linear when accounting for alternative dimensions of board representation, namely, the absolute (relative) number of board seats taken. Similarly, the respective robustness test using US activist campaigns indicates a linear relationship, so future research shall expand on the functional form. Additional empirical evidence infers that shareholders with larger block ownership and those classified as insiders tend to take board seats in shorter periods, presumably, due to the shareholder's ability to gather private information about the firm. Furthermore, a firm's stock performance is another important determinant to explain the decision of blockholders to engage in board seat formation (Aggarwal et al., 2019; Marquardt and Sanchez, 2021).

H2: *A blockholder taking a board seat is associated with a negative stock price reaction.*

The thesis produces mixed results and partly fails to reject H2. The thesis contributes to the literature by providing new insights into the implications of blockholder board representation on a firm's adjusted stock performance. Thereby the thesis attempts to disentangle the effect of blockholder intervention through board representation from the classic case of shareholder activism. Contemporaneous literature shows that blockholder board representation can successfully reduce agency problems. Furthermore, board seat formation in the US is linked to positive announcements effects for activist shareholders (Bebchuk et al., 2020; Gow et al., 2014; Klein and Zur, 2009). Although the thesis does not find any indication, neither theoretically nor empirically, that blockholder-directors are associated with *(i)* shirking (i.e., less monitoring) or *(ii)* incentives to engage in rent extraction (i.e., collude with the firm's management), the thesis advocates that the announcement effect could run both ways. The argument infers that board seat formation can induce either a positive or a negative signal for outside shareholders depending on the blockholder in question. Evidence indicates that the 1-year adjusted stock price performance is negative (positive) in the year in which a(n) legacy (activist) blockholder attains a board seat. Legacy blockholders are assumed to be in a more favorable position to acquire private information about the company.[77] As a matter of fact, the evidence for activist blockholders is consistent with the US-centric literature on activists seeking board representation. The finding is fundamental as the thesis is able to link the German with the US setting and provide empirical support that underlying results are presumably generalizable. The thesis contributes to the literature and presents novel insights that the decision to take a board seat can

[77] As such, the ability to acquire information is likely driven by block ownership and blockholder heterogeneity, as indicated in Table 15 and Table A5.

lead to substantial indirect costs for legacy blockholders. The finding follows the rationale that engaging in board formation reveals private information about prevailing agency problems preventing the firm from operating at its full potential. If the market believes that the blockholder cannot fully resolve the issue immediately, board representation can reduce outsiders' expectations about firm value, thereby reducing the firm's share price (Shleifer and Vishny, 1986, 1989, 1997). The finding resonates with Agrawal and Chen (2017)'s notion of increased concerns of conflicting interests and disputes once blockholders are present on the board. Consequently, the blockholder is presumably exposed to a liquidity shock eliminating her ability to cut and run (Coffee, 1991). The argument provides empirical support for the addressed research question and establishes that only a few blockholders appear to take board seats in equilibrium.

H3: *Long-term investors with fewer liquidity needs have a higher likelihood of taking a board seat.*

The thesis fails to reject H3. As outlined previously, taking a board seat can negatively signal the existence of agency problems, particularly for legacy blockholders. Due to the adverse stock price reaction, the blockholder faces a lock-in situation committing her to trade on long-term information and subsequently engage in voice. The finding is consistent with McCahery et al. (2016) showing that investor horizon (liquidity) increases (reduces) the incentive to engage in blockholder intervention. If blockholders can anticipate the adverse market reaction, only investors with specific attributes will probably take a board seat. This follows the rationale that different shareholders have different liquidity needs, control preferences, and monitoring capabilities. Therefore, blockholder heterogeneity is likely to contribute to why some blockholders are more apt to take seats on the board (Cronqvist and Fahlenbrach, 2008). The thesis suggests that long-term investors with fewer liquidity needs are more likely to obtain board seats. As the summary statistics imply, shareholders seeking board representation are also associated with more concentrated portfolios and lower investments, so these shareholders are more incentivized to increase monitoring in case agency problems prevail and poor firm performance. This is informative, particularly in light of a blockholder's decision-making process to engage in intervention, as evidence suggests that blockholders appear to condition their decision to acquire a board seat on the presence of other (legacy) blockholders. While J Hadlock and Schwartz-Ziv (2019); Zwiebel (1995) support the notion concerning the decision to engage in block-building, the thesis applies the idea analogously to board seat formation. The findings indicate that large investors compete for the 'scarce' board seats and effectively pose a barrier to entry for other blockholders to join them in the board room. So, blockholders seem to shun other blockholders to reap private benefits of control accruing from board representation.

H4: *A blockholder taking a board seat is less likely to exit and, thus, becomes an active monitor.*

The thesis fails to reject H4. As a blockholder becomes an active monitor of the company by instituting blockholder-directors on the board, she is less likely to exit her block position (Gow et al., 2014). Consequently, she has larger incentives to increase monitoring through board representation and is more likely to intervene in the management process (McCahery et al., 2016). Consequently, the blockholder engages in long-term voice strategies to institutionalize changes in the firm and potentially mitigate the prevailing agency problem. Continuing this line of reasoning, only long-term investors with low liquidity needs are presumably incentivized to take board seats. The thesis suggests that a blockholder's decision to exit is less likely to occur when the respective blockholder holds board seats. Collectively, the findings emphasize that board representation comes along with a long-term commitment from blockholders, as they face significant legal and financial risks. However, contingent on the firm's stock market performance, the empirical framework also yields evidence suggesting that blockholders with board representatives seem to condition the decision to exit on the firm's *BHAR*. As such, the interaction term of blockholder board seat and the firm's stock market performance is positive, as presented in Table 26. This provides additional support that blockholders face a lock-in situation, preventing them from cutting and running. Overall, the results suggest that shareholders who hold formal corporate positions on the board tend to pursue a long-term strategy to exert effort rather than exit the firm. Although an exit becomes less likely, this potentially increases the effectiveness of the 'threat of exit' consistent with McCahery et al. (2016). The argument is based on the rationale that the exit of a controlling shareholder with close access to the firm's management may be perceived as a signal that the firm's mangers have engaged in shirking, especially if the stock price performance is poor.

H5: *A blockholder-director is likely to assume additional board roles, and hold committee seats.*

The thesis fails to reject H5. Accordingly, the thesis presents evidence indicating that board representation is not the 'end goal' as suggested by Gow et al. (2014), but instead provides blockholders a forum to hold additional formal positions (Agrawal and Nasser, 2019): blockholder-directors are more likely to hold the position of chairman and acquire seats on the most important committees. This follows the rationale that blockholder-directors acquire additional control rights to increase monitoring over the firm's management board. The position of the chair comes along with substantial competencies (amongst others, to be in regular meetings with the CEO of the firm or be in charge of setting the agenda and engaging in discussions with significant share-

holders of the firm). Collectively, blockholders seek representation on the board and actively engage in activities to influence the firm's board and committee structure. This is consistent with literature that reports that blockholders are incentivized to influence board composition and hold additional formal corporate positions (Bebchuk et al., 2020; Franks and Mayer, 2001; Klein, 1998). The thesis contributes to the literature by providing further insights into blockholder motivation and intervention at the director level. The results suggest that blockholders are more prone to concentrate decision-making regarding specific supervisory tasks in different sub-committees to increase monitoring efficacy and potentially limit the 'dialogue' with employee representatives within the plenum. The research setting allows comprehending a blockholder's identity and how blockholders influence board composition. Future research shall outline how blockholder-directors interact with and within boards. Similarly, future research shall examine whether blockholder-directors can be classified as truly independent (Aggarwal et al., 2019).

H6: *Blockholders select representatives with superior financial/negotiation skills.*

The thesis fails to reject H6. Blockholders tend to strategically screen for director attributes associated with skills that facilitate monitoring. This setting at the director-year level allows getting a better understanding of a blockholder's selection process in nominating board representatives. Evidence suggests that blockholders value directors from the banking and political sectors, given that they are associated with strong financial and superior negotiation skills. These skills are required to monitor the management and negotiate with other key stakeholders. In addition, blockholder-directors are positively associated with the director's age, tenure, and the number of mandates when chairing the board, indicating that the blockholder-directors professional experience is critical. Against the background of blockholder-heterogeneity, the thesis presents results showing that other sources of heterogeneity are also important, namely director heterogeneity. According to the DCGK, all supervisory board members collectively are required to have the necessary skills to exercise due diligence and appropriately monitor the firm's management. The summary statistics indicate that the different blockholder types primarily select blockholder-directors who have professional experience in the same industry. Whereas institutional investors mainly concentrate on directors from the financial sector, insider directors and corporate blockholders are more broadly positioned, including engineers, bankers, and other fields. Other strategic blockholders prefer to rely on blockholder-directors from the financial or political sectors. In corollary, director preferences of blockholders are reflected in the board's composition, suggesting that different shareholders are associated with directors with other skills and professional and cultural backgrounds.

H7: *A blockholder taking a board seat becomes an active monitor and increases board meetings.*

The thesis fails to reject H7. The findings suggest a significant link between board representation and the number of board (committee) meetings. Within this framework, the thesis finds statistically weak but positive evidence that blockholder-directors immediately increase monitoring once they institute representatives on the board (i.e., the number of board and committee meetings). This finding is important as it provides empirical support for the preceding hypotheses. Following the rationale, blockholders do not only make the appearance of being active monitors, but blockholders indeed become active monitors, presumably to improve firm value and mitigate prevailing agency problems. This contradicts the risk that blockholders could be 'asleep at the switch' as noted by Holderness (2009, p. 1397). More so, the investigation of committee meetings can provide subtle information about the blockholder's efforts to engage in monitoring. The thesis finds positive coefficients for the audit, presiding, and personnel committees, though the latter is statistically insignificant by a small margin. Thus, the thesis contributes to the literature that blockholder-directors are committed to exert effort on the board.

H 8: *A blockholder taking a board seat improves firm value measured by Tobin's Q.*

The thesis produces mixed results and partly fails to reject H8. The thesis reports findings that board representation can lead to higher firm value. However, the finding is conditional on two factors: for one, there is an agency problem prevailing in the firm (proxied by cash), and second, long-term blockholders with lower liquidity needs are represented on the board. The thesis provides evidence indicating that firms associated with high cash levels (i.e., more financial slack at the discretion of self-serving managers) can benefit from the presence of blockholder-directors, resulting in reduced agency problems and consequently in increased *Tobin's Q*. This is consistent with literature arguing that board representation can mitigate agency issues and improve firm value (Agrawal and Nasser, 2019; Cronqvist and Fahlenbrach, 2008; Marquardt and Sanchez, 2021). The US activist campaigns data support the finding that board representation improves firm value, predominantly for firms with increasing cash levels. Similarly, outsider blockholder could interpret the presence of high cash holdings as a signal of untapped potential and poor management of the firm's resources, causing blockholders to seek board representation (Bebchuk et al., 2020).

10.2 Conclusion

Boards constitute the ultimate governing body of the company, and shareholders have incentives to appoint blockholder-directors to them, irrespective of whether one-tier or two-tier boards are in place. The thesis contributes to the literature by providing a novel approach to elaborate on why only a few blockholder seek board representation. Accordingly, the thesis finds that the announcement of taking a board seat can negatively affect the firm's stock price under certain circumstances. As the empirical evidence highlights, the negative association is mainly driven by legacy blockholders who have established a block position in the past prior to seeking board representation. By intuition, legacy blockholders are in a favorable position to acquire private information about the firm. When legacy blockholders publicly announce their decision to engage in board seat formation, it may have the appearance of them being incentivized to do so because prevailing agency problems prevent the company from operating at its full potential. In contrast, the thesis suggests that activist blockholders taking board seats are positively associated with the firm's stock market performance, as this is more consistent with the traditional case for shareholder activism in the US.

The adverse market reaction does not necessarily reflect poor governance due to extracting private benefits. Instead, outsider shareholders may reevaluate expectations about the company's prospects and conclude that some investment distortions are too costly to reverse. As a result, the share price drops in the year of taking a board seat, and the blockholder suffers a liquidity shock. Since the blockholder is locked in, she cannot profit from cutting and running to reap trading gains on her private information. That way, a board seat commits a blockholder to exert effort, and she inadvertently becomes an active monitor. The blockholder assumes additional board roles (i.e., becoming the board chairman) and sits on the most important board committees. This allows the blockholder to increase board monitoring over the firm's management immediately. Empirical evidence implies that board and committee meetings increase in the year a blockholder joins the board. The thesis finds a weak but statistically significant link between board seat formation and increased Tobin's Q. Board representation can improve firm value in firms with high cash levels (i.e., financial slack at the disposal of self-serving managers).

Given the substantial indirect costs of taking board seats (i.e., liquidity shock, legal and compliance risks, or opportunity and reputation loss), in equilibrium, only investors trading on long-term information (and potentially with low liquidity needs) are likely to take a board seat, although firms might benefit from increased monitoring. The underlying thesis provides evidence

that only 21% (14% without insiders) of all blockholder-firm-years are linked to board representation. Since direct costs of taking a board seat are arguably low, blockholders may refrain from taking board seats due to substantial indirect costs. Accordingly, the thesis finds that blockholder heterogeneity is critical to comprehending the decision-making of board representation.

Board representation is an important governance mechanism to study because it provides blockholders with a forum to access private information and increase the ability to exercise control. The findings are useful for future research to examine the implications of blockholder board representation in different institutional settings and empirical frameworks. While not a panacea, a well-functioning board of directors can serve as a mechanism to preserve shareholders' interests and should account for the implications of blockholder-directors. A promising avenue for future research is to study the role of blockholder-directors in communication within boards. Since blockholder-directors are more likely to chair the board or be represented on the committees, how do they influence board composition or corporate policies? The findings are also informative for policymakers to adopt new governance standards and provide more guidance on independence and board composition matters. For example, the independence criteria should be extended to blockholder-directors since they have characteristics that may differ from truly independent directors. Moreover, the results provide guidance to both companies and investors. Shareholders might view board representation as an effective mechanism to intervene in the management process, especially regarding poor firm performance. Companies might view the findings on boardroom activism as equally constructive as blockholder board representation can improve firm value despite prevailing agency problems. In conclusion, companies should be more mindful when blockholders come *knocking on the door* to take a seat on the board.

A Supplementary tables

Table A1: Descriptive statistics on control variables
This table presents summary statistics of ownership and firm characteristics at the firm-year level with respect to the baseline regression using a sample of German listed firms from 2004 to 2018. The exclusion criteria outlined in section 6.1 apply. All variables are defined in Appendix B.

Variables	Obs	Mean	Median	Std	25^{th}	75^{th}	Min	Max
Mapping controls								
Blockholder board seat (d)	1,946	0.65	1.00	0.48	0.00	1.00	0.00	1.00
Blockholder board seats (#)	1,946	1.61	1.00	1.78	0.00	2.00	0.00	10.00
Blockholder board seats (%)	1,946	0.25	0.20	0.25	0.00	0.38	0.00	1.00
Ownership controls								
# Blockholders	1,939	3.55	3.00	1.96	2.00	5.00	0.00	12.00
# Investors below 3%	1,946	26.05	24.00	15.35	16.00	36.00	0.00	183.00
Free float	1,939	0.56	0.57	0.22	0.38	0.73	0.02	1.00
Minority control 2nd (d)	1,939	0.02	0.00	0.15	0.00	0.00	0.00	1.00
Ownership concentration	1,939	0.15	0.07	0.18	0.02	0.24	0.00	0.97
Firm controls								
BHR (base year)	1,925	0.09	0.06	0.41	-0.15	0.32	-0.80	1.46
BHAR (base year)	1,925	-0.09	-0.09	0.70	-0.38	0.28	-2.81	2.11
Board age	1,937	59.14	59.67	5.17	55.83	62.67	36	73.33
Board co-determination (d)	1,946	0.49	0.00	0.50	0.00	1.00	0.00	1.00
Board meetings	1,945	5.94	5.00	3.39	4.00	7.00	0.00	56.00
Board size (full)	1,946	10.64	12.00	5.52	6.00	16.00	3.00	21.00
Board size (shareholder)	1,946	6.40	6.00	2.19	6.00	8.00	3.00	14.00
Book leverage	1,938	0.23	0.20	0.19	0.07	0.34	0.00	0.80
CapEx	1918	0.04	0.03	0.04	0.02	0.06	0.00	0.20
Cash	1,938	0.14	0.09	0.14	0.04	0.18	0.00	0.69
Committees	1,818	3.05	3.00	1.82	2.00	4.00	0.00	10.00
Committee meetings	1,818	8.31	7.00	7.11	3.00	12.00	0.00	81.00
Firm age	1,936	25.46	15.00	24.57	8.00	40.00	1.00	131.00
ln(Firm age)	1,936	2.78	2.71	0.98	2.08	3.69	0.00	4.88
Intangibles	1,938	0.17	0.11	0.17	0.03	0.27	0.00	0.67
Management size	1,946	4.09	4.00	1.80	3.00	5.00	1.00	13.00
Payout	1,938	0.02	0.01	0.04	0.00	0.03	0.00	0.23
Presence (%)	1,883	0.61	0.62	0.18	0.47	0.74	0.03	1.00
R&D	1,133	0.04	0.03	0.04	0.01	0.06	0.00	0.18
ROA	1,940	0.11	0.11	0.09	0.06	0.15	-0.21	0.40
Tobin's Q	1,937	1.66	1.30	1.03	1.05	1.82	0.78	6.47
Total assets	1,938	3.85e+07	1.70e+06	1.71e+08	5.78e+05	7,13e+06	1,60e+04	2,19e+08
ln(Total assets)	1,938	14.73	14.35	2.07	13.27	15.78	9.68	21.51
Audit committee (d)	1,933	0.72	1.00	0.45	0.00	1.00	0.00	1.00
Nomination committee (d)	1,933	0.44	0.00	0.50	0.00	1.00	0.00	1.00
Presiding committee (d)	1,933	0.36	0.00	0.48	0.00	1.00	0.00	1.00
Personal committee (d)	1,933	0.45	0.00	0.50	0.00	1.00	0.00	1.00
Strategy committee (d)	1,933	0.09	0.00	0.29	0.00	0.00	0.00	1.00

Table A2: Correlation matrix of control variables
This table reports results from a correlation matrix of the control variables included the baseline regression.

Dep. variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1) Blockholder board seat (d)	1.000																					
(2) Ownership	0.565	1.000																				
(3) Ownership squared	0.451	0.948	1.000																			
(4) BHAR 1yr (base year)	-0.032	-0.002	0.002	1.000																		
(5) # Blockholders	-0.287	-0.373	-0.346	0.023	1.000																	
(6) Blockholder is foreign (d)	-0.385	-0.334	-0.253	0.006	0.163	1.000																
(7) Blockholder rank (d)	-0.292	-0.405	-0.286	-0.005	0.292	0.139	1.000															
(8) Blockholder tenure (d)	0.153	0.070	0.037	0.015	-0.090	-0.181	-0.094	1.000														
(9) Board co-determination (d)	0.085	-0.018	-0.007	-0.005	-0.093	0.060	-0.006	0.098	1.000													
(10) Board size (shareholder)	0.102	-0.010	-0.005	-0.041	-0.152	0.074	-0.035	0.083	0.486	1.000												
(11) Book leverage	-0.016	-0.029	-0.046	-0.053	0.037	0.019	0.017	-0.008	-0.104	0.110	1.000											
(12) Cash	-0.050	-0.046	-0.040	0.047	0.061	-0.017	0.003	-0.024	-0.180	-0.165	-0.464	1.000										
(13) ln(Firm age)	0.067	-0.021	-0.024	0.010	-0.223	-0.014	-0.037	0.255	0.363	0.278	-0.090	-0.116	1.000									
(14) Intangibles	-0.033	-0.057	-0.045	0.061	0.118	0.057	0.032	-0.046	-0.033	-0.082	0.016	-0.109	-0.128	1.000								
(15) In-sample Investments (d)	-0.285	-0.299	-0.226	0.000	0.083	0.149	0.199	0.222	0.038	0.050	0.013	-0.018	0.015	0.015	1.000							
(16) Ownership concentration	0.262	0.630	0.691	0.008	-0.361	-0.155	-0.126	-0.018	-0.080	-0.069	-0.019	-0.057	-0.062	-0.023	-0.127	1.000						
(17) Portfolio weight (d)	0.263	0.296	0.238	-0.022	-0.115	-0.140	-0.212	0.034	-0.011	-0.013	-0.009	-0.008	0.017	-0.040	-0.273	0.106	1.000					
(18) Presence (%)	0.177	0.307	0.295	0.041	0.004	-0.105	-0.010	-0.012	0.014	-0.018	0.028	-0.056	-0.134	0.092	-0.080	0.554	0.050	1.000				
(19) R&D	-0.041	-0.053	-0.040	0.018	-0.008	-0.014	0.013	0.039	0.028	-0.118	-0.326	0.281	0.049	0.066	0.024	-0.096	-0.041	-0.178	1.000			
(20) ROA	0.023	0.044	0.044	0.031	-0.009	-0.056	-0.012	0.001	0.026	-0.200	-0.241	0.180	-0.038	0.092	-0.019	0.088	0.010	0.132	0.005	1.000		
(21) Tobin's Q	-0.010	0.030	0.039	-0.019	0.123	-0.054	0.006	0.001	-0.203	-0.269	-0.359	0.494	-0.148	0.093	-0.016	0.093	0.008	0.176	0.207	0.445	1.000	
(22) ln(Total assets)	0.052	0.002	0.011	-0.028	-0.231	0.117	-0.062	0.139	0.456	0.664	0.216	-0.329	0.361	-0.072	0.086	-0.060	0.005	0.032	-0.200	-0.271	-0.386	1.000

Table A3: Difference-in-means test for control variables

This table presents the difference-in-means test for the variable 'blockholder board seat (d)' on investor-firm-year level. The the difference-in-mean test is based on a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in section 6.1 apply. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder Board seat (d) = 0		Blockholder Board seat (d) = 1		Difference in means
Variables	**Obs**	**Mean**	**Obs**	**Mean**	**t-value**
Ownership controls					
# Blockholders	5,355	4.94	1,469	3.52	23.93***
# Investors below 3%	5,374	29.46	1,469	22.57	15.42***
Blockholder exit (d)	5,374	0.43	1,469	0.10	24.53***
Blockholder is foreign (d)	5,374	0.69	1,469	0.23	34.53***
Blockholder rank (#)	5,374	3.19	1,469	1.51	34.50***
Blockholder tenure (#)	5,374	6.53	1,469	8.31	-12.81***
Blockholder horizon (#)	5,374	11.46	1,469	15.19	-20.47***
Free float	5,355	0.56	1,469	0.48	14.02***
In-sample investments (#)	5,374	54.57	1,469	42.76	8.15***
Minority control 2nd (d)	5,355	0.01	1,469	0.04	-7.69***
Ownership	5,374	0.08	1,469	0.30	-56.66***
Ownership concentration	5,355	0.09	1,469	0.18	-22.36***
Ownership squared	5,374	0.01	1,469	0.14	-41.84***
Portfolio weight (%)	5,367	0.24	1,466	0.65	-34.0***
Firm controls					
BHR (base year)	5,322	0.08	1,458	0.09	-0.51
BHAR (base year)	5,322	-0.07	1,458	-0.12	2.15**
Board age	5,364	58.85	1,463	59.07	-1.43
Board co-determination (d)	5,374	0.45	1,469	0.55	-6.72***
Board meetings	5,373	5.92	1,467	5.84	0.84
Board size (full)	5,374	9.90	1,469	11.38	-9.68***
Board size (shareholders)	5,374	6.18	1,469	6.65	-7.75***
Book leverage	5,347	0.24	1,465	0.23	2.29**
CapEx	5,311	0.04	1,454	0.04	-3.08***
Cash	5,347	0.15	1,465	0.13	3.70***
Committees (#)	4,928	3.04	1,385	3.19	-2.91***
Committee meetings	4,928	8.29	1,385	8.68	-1.89*
Firm age	5,362	22.88	1,464	24.86	-2.93***
ln(Firm age)	5,362	2.67	1,464	2.82	-5.04***
Intangibles	5,347	0.18	1,465	0.17	2.35**
Management size	5,374	3.84	1,469	4.06	-4.78***
Payout	5,347	0.02	1,465	0.03	-1.69*
Presence (%)	5,247	0.59	1,419	0.66	-14.53***
R&D	3,082	0.04	874	0.01	4.07***
ROA	5,349	0.11	1,467	0.11	-2.36***
Tobin's Q	5,342	1.72	1,466	1.70	0.53
Total assets	5,347	3.02e+07	1,465	2.15e+07	2.01**
ln(Total assets)	5,347	14.48	1,465	14.71	-4.01***
Audit committee (d)	5,374	0.73	1,469	0.77	-2.73**
Nomination committee (d)	5,374	0.47	1,469	0.44	2.00**
Presiding committee (d)	5,374	0.34	1,469	0.37	-1.77*
Personal committee (d)	5,374	0.45	1,469	0.48	-1.90*
Strategy committee (d)	5,374	0.10	1,469	0.10	-0.49

Table A4: Summary statistics of ownership for multiple periods

This table presents summary statistics for the variable 'ownership' for multiple periods at the investor-firm-year level using a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in section 6.1 apply. The sample is split into five subgroups with periods of three years. The indicator variable 'board seat (d)' equals one if a blockholder is associated with a director on a firm's board and zero otherwise. The table shows statistics for ownership aggregated by blockholder type and expressed in %. Following the section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B.

	Ownership									
	2004-2006		**2007-2009**		**2010-2012**		**2013-2015**		**2016-2018**	
Investor type	**Obs**	**Mean**	**Obs**	**Mean**	**Obs**	**Mean**	**Obs**	**Mean**	**Obs**	**Mean**
Sample										
Board seat (d) = 1	317	30.83	279	29.07	321	28.11	279	30.83	273	30.04
Board seat (d) = 0	678	9.37	1,160	7.74	1,114	7.34	1,175	7.09	1,247	7.58
Insider										
Board seat (d) = 1	117	29.38	113	31.96	149	30.74	130	30.69	119	29.33
Board seat (d) = 0	72	20.70	72	14.80	55	19.61	61	16.35	85	13.90
Inst. Investor										
Board seat (d) = 1	102	25.45	90	24.06	79	21.59	60	28.43	52	23.16
Board seat (d) = 0	527	7.04	980	6.47	934	5.73	981	5.97	983	6.33
Other strat. investor										
Board seat (d) = 1	52	33.21	39	29.81	50	29.90	49	32.31	51	28.82
Board seat (d) = 0	27	17.09	41	13.96	59	10.03	83	8.07	129	9.86
Corporate										
Board seat (d) = 1	46	43.78	37	31.67	43	28.91	40	33.09	51	39.93
Board seat (d) = 0	52	13.38	67	14.84	66	17.48	50	16.26	50	15.74

Table A5: Summary statistics on entry and exit of blockholder-directors by investor type
This table presents summary statistics for the variable 'time lag (in years)' at the investor-firm-year level using a sample of German listed companies from 2004 to 2018. The exclusion criteria outlined in section 6.1 apply. In addition, individual t-test statistics are reported for each category. The indicator variable 'Blockholder board seat (d)' equals one if a blockholder is associated with a director on a firm's board and zero otherwise. Panel A (B) shows statistics for the length of time it requires for blockholder-directors to join (leave) the board once the respective blockholder has entered (exited) the sample firm. Both variables are computed at the parent company level. The entry and exit dates of board directors are hand-collected. The entry dates of blockholders are retrieved from 'Refinitiv's' shareholder history report. The time lag is computed as the difference between the director's year of entry (exit) minus the year of the blockholder's entry (exit) using an 'out-of-sample' setting. Following the section 4.4, shareholders are classified into several categories: 'insiders', 'institutional investors', 'other strategic investors', and 'corporate'. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Time lag (in years)							
	Panel A: Blockholder-director entry				**Panel B: Blockholder-director exit**			
Investor type	**Obs**	**Mean**	**Median**	**t-stat**	**Obs**	**Mean**	**Median**	**t-stat**
Sample (d)	1,419	1.3	0.00	21.60***	822	2.6	1.00	27.53***
Insider (d)	603	1.2	0.00	13.00***	312	2.6	1.00	17.51***
-Family	460	0.9	0.00	10.00***	236	2.6	1.00	14.14***
-Founder	120	2.9	2.00	9.60***	68	2.9	4.00	10.80***
-Manager	23	0.2	0.00	1.40	2	2.5	2.50	2.82**
Inst. investor (d)	374	1.4	0.00	12.90***	298	2.6	2.00	17.65***
-Asset management								
-Bank	91	1.5	0.00	5.60***	91	2.9	3.00	10.69***
-Insurance	72	2.1	1.00	6.70***	57	2.4	1.00	6.84***
-Hedge fund	16	1.9	2.00	22.00***	4.0	3.0	3.00	.
-Private equity	94	0.9	0.00	4.70***	71	1.7	1.00	6.96***
-Single investor	101	1.4	1.00	8.30***	75	3.4	3.00	10.51
Other strat. investor (d)	234	1.6	0.00	9.50***	81	3.0	2.00	10.89***
-Ownership firm	42	0.7	0.00	2.70***	30	2.0	1.00	5.28***
-Foundation	47	3.8	3.00	6.80***	7	1.0	1.00	.
-State	145	1.2	0.00	7.50***	44	4.0	4.00	10.63***
Corporate (d)	208	1.2	0.00	7.10***	131	2.1	1.00	7.81***
-Company	117	1.6	1.00	6.20***	71	2.0	0.00	4.91***
-Parent company	91	0.6	0.00	4.00***	60	2.4	1.00	6.38***

Table A6: Summary statistics on board representation by industry
This table presents summary statistics of board representation at the industry-firm-year level using a sample of German listed firms from 2004 to 2018. The exclusion criteria outlined in section 6.1 apply. The fraction of firm-years associated with board representation is reported at the 2-digit (1-digit) NACE level. All variables are defined in Appendix B.

Industry classification	**Nace** (2 digit)	**Obs**	**Fract** (%)	**Nace** (1 digit)	**Obs**	**Fract** (%)
Crop and animal production, hunting ...	1	33	36.4	A	33	36.4
Other mining and quarrying	8	56	28.6	B	77	26.0
Mining support service activities	9	21	19.0			
Manufacture of food products	10	54	55.6	C	3231	23.7
Manufacture of beverages	11	2	100			
Manufacture of wearing apparel	14	77	48.1			
Manufacture of leather and related products	15.00	77	18.2			
Manufacture of wood and of products of wood ...	16	40	32.5			
Printing and reproduction of recorded media	18	10	60.0			
Manufacture of coke and refined petroleum products	19	27	37.0			
Manufacture of chemicals and chemical products	20	312	26.3			
Manufacture of basic pharmaceutical products ...	21	94	10.6			
Manufacture of rubber and plastic products	22	65	23.1			
Manufacture of other non-metallic mineral products	23	110	23.1			
Manufacture of basic metals	24	120	39.2			
Manufacture of fabricated metal products ...	25	136	19.1			
Manufacture of computer, electronic and ...	26	583	19.6			
Manufacture of electrical equipment	27	105	20.0			
Manufacture of machineryand equipment	28	969	27.9			
Manufacture of motor vehicles, trailers ...	29	265	11.7			
Manufacture of other transport equipment	30	79	0			
Manufacture of furniture	31	5	0			
Other manufacturing	32	101	0			
Electricity, gas, steam and air conditioning supply	35	85	41.2	D	85	41.2
Construction of buildings	41	65	18.5	F	172	25.0
Civil engineering	42	72	25			
Specialised construction activities	43	35	37.1			
Wholesale trade, except of motor vehicles and motorcycles	46	242	26.0	G	568	25.0
Retail trade, except of motor vehicles and motorcycles	47	326	24.2			
Water transport	50	14	57.1	H	156	37.2
Air transport	51	44	4.5			
Warehousing and support activities for transportation	52	76	50			
Postal and courier activities	53	22	45.5			
Publishing activities	58	268	25.7	J	816	27.2
Motion picture, video and television programme production ...	59	43	39.5			
Programming and broadcasting activities	60	61	16.4			
Telecommunications	61	272	29.8			
Computer programming, consultancy and related activities	62	104	32.7			
Information service activities	63	68	16.2			
Financial service activities ...	64	424	25.7	K	730	20.1
Insurance, reinsurance and pension funding ...	65	105	21.9			
Activities auxiliary to financial services ...	66	201	7.5			
Real estate activities	68	533	15.9	L	533	15.9
Activities of head offices, management consultancy activities	70	9	11.1	M	241	13.7
Architectural and engineering activities ...	71	43	0			
Scientific research and development	72	113	15.0			
Advertising and market research	73	75	18.7			
Other professional, scientific and technical activities	74	1	100			
Rental and leasing activities	77	90	13.3	N	210	21.4
Employment activities	78	60	6.7			
Travel agency, tour operator reservation service ...	79	60	48.3			
Human health activities	86	80	23.8	Q	114	21.1
Residential care activities	87	34	14.7			
Creative, arts and entertainment activities	90	34	0	R	41	4.9
Gambling and betting activities	92	7	28.6			

Table A7: Summary statistics on board representation by year
This table presents summary statistics of board representation at the index-firm-year level using a sample of German listed firms from 2004 to 2018. The fraction of firm-years associated with board representation is reported at the index level. All variables are defined in Appendix B. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

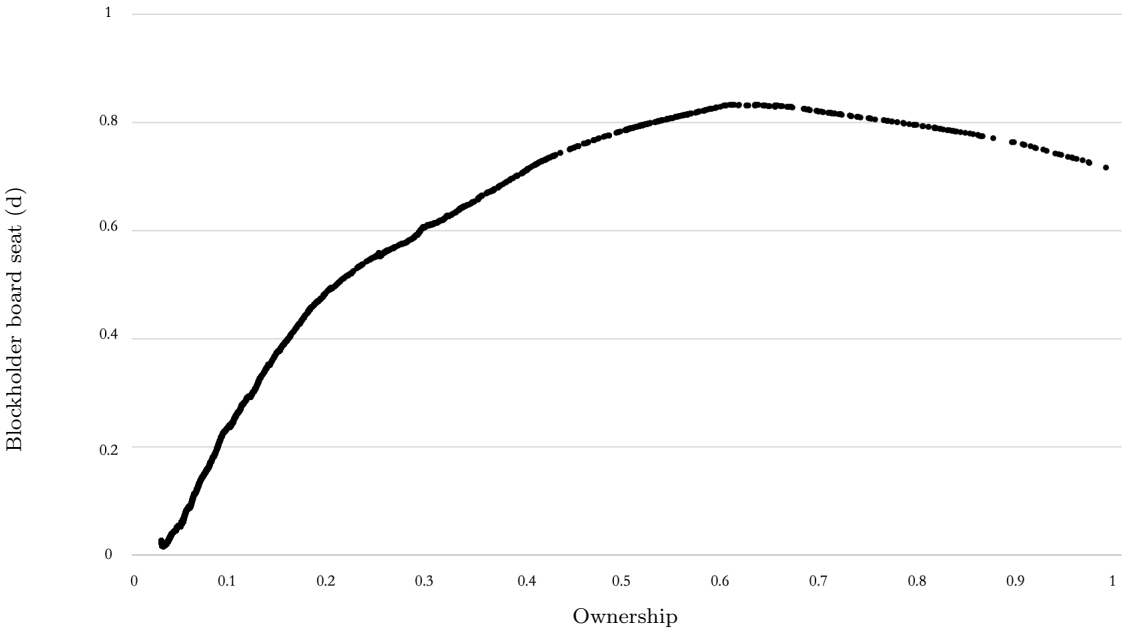
Index	Obs	Mean	t-value	p-value	Year	Obs	Mean	t-value	p-value
DAX	55	0.38	5.78***	0.00	2004	313	0.37	13.46***	0.00
MDAX	104	0.39	8.19***	0.00					
SDAX	101	0.39	7.93***	0.00					
TDAX	53	0.26	4.32***	0.00					
DAX	46	0.43	5.88***	0.00	2005	326	0.33	12.78***	0.00
MDAX	116	0.33	7.49***	0.00					
SDAX	110	0.33	7.28***	0.00					
TDAX	54	0.28	4.51***	0.00					
DAX	51	0.29	4.56***	0.00	2006	356	0.26	11.20***	0.00
MDAX	117	0.28	6.75***	0.00					
SDAX	121	0.22	5.87***	0.00					
TDAX	67	0.27	4.92***	0.00					
DAX	73	0.22	4.50***	0.00	2007	498	0.17	10.04***	0.00
MDAX	167	0.18	6.03***	0.00					
SDAX	163	0.13	5.03***	0.00					
TDAX	95	0.17	4.36***	0.00					
DAX	81	0.17	4.09***	0.00	2008	478	0.20	10.81***	0.00
MDAX	172	0.21	6.73***	0.00					
SDAX	136	0.21	6.05***	0.00					
TDAX	89	0.17	4.22***	0.00					
DAX	62	0.23	4.22***	0.00	2009	463	0.22	11.35***	0.00
MDAX	169	0.20	6.50***	0.00					
SDAX	136	0.26	6.97***	0.00					
TDAX	96	0.18	4.52***	0.00					
DAX	60	0.22	4.04***	0.00	2010	463	0.24	11.93***	0.00
MDAX	166	0.27	7.71***	0.00					
SDAX	136	0.25	6.71***	0.00					
TDAX	101	0.18	4.66***	0.00					
DAX	75	0.17	3.94***	0.00	2011	488	0.22	11.76***	0.00
MDAX	157	0.25	7.30***	0.00					
SDAX	154	0.23	6.83***	0.00					
TDAX	102	0.19	4.81***	0.00					
DAX	60	0.15	3.23***	0.00	2012	484	0.21	11.50***	0.00
MDAX	156	0.28	7.68***	0.00					
SDAX	177	0.16	5.87***	0.00					
TDAX	91	0.25	5.52***	0.00					
DAX	66	0.12	2.99***	0.00	2013	482	0.19	10.72***	0.00
MDAX	147	0.25	7.01***	0.00					
SDAX	172	0.16	5.64***	0.00					
TDAX	97	0.22	5.15***	0.00					
DAX	59	0.14	3.02***	0.00	2014	492	0.19	10.70***	0.00
MDAX	151	0.23	6.73***	0.00					
SDAX	163	0.18	5.92***	0.00					
TDAX	119	0.18	5.03***	0.00					
DAX	63	0.13	3.00***	0.00	2015	480	0.19	10.73***	0.00
MDAX	164	0.19	6.16***	0.00					
SDAX	137	0.26	6.96***	0.00					
TDAX	116	0.16	4.60***	0.00					
DAX	63	0.16	3.42***	0.00	2016	501	0.19	10.75***	0.00
MDAX	168	0.19	6.27***	0.00					
SDAX	161	0.20	6.42***	0.00					
TDAX	109	0.17	4.77***	0.00					
DAX	63	0.19	3.82***	0.00	2017	489	0.19	10.85***	0.00
MDAX	159	0.18	5.81***	0.00					
SDAX	163	0.20	6.41***	0.00					
TDAX	104	0.21	5.26***	0.00					
DAX	64	0.17	3.62***	0.00	2018	530	0.16	9.98***	0.00
MDAX	164	0.14	5.16***	0.00					
SDAX	182	0.16	5.86***	0.00					
TDAX	120	0.17	5.02***	0.00					

Table A8: Lowess plot of board representation by ownership

This table reports results from locally weighted scatter-plot smoothing. Lowess is an empirical non-parametric test for weighting the underlying observations and allows for plotting the observed relationship. The specification runs locally weighted regressions of the dependent variable 'Blockholder board seat (d)' on the independent variable 'Ownership'. The methodology assigns higher weights to the nearest points $(x_i,\ y_i)$ and decreases the weights the farther away the respective points are on the scatter-plot. A separate weighted regression is carried out for every point in the data and plotted accordingly. The bandwidth accounts for the degree of smoothing on a scale from 0 to 1.

$3\% \leq x \leq 100\%$

Panel A: bandwith smoother = 0.25



Panel B: bandwith smoother = 0.75

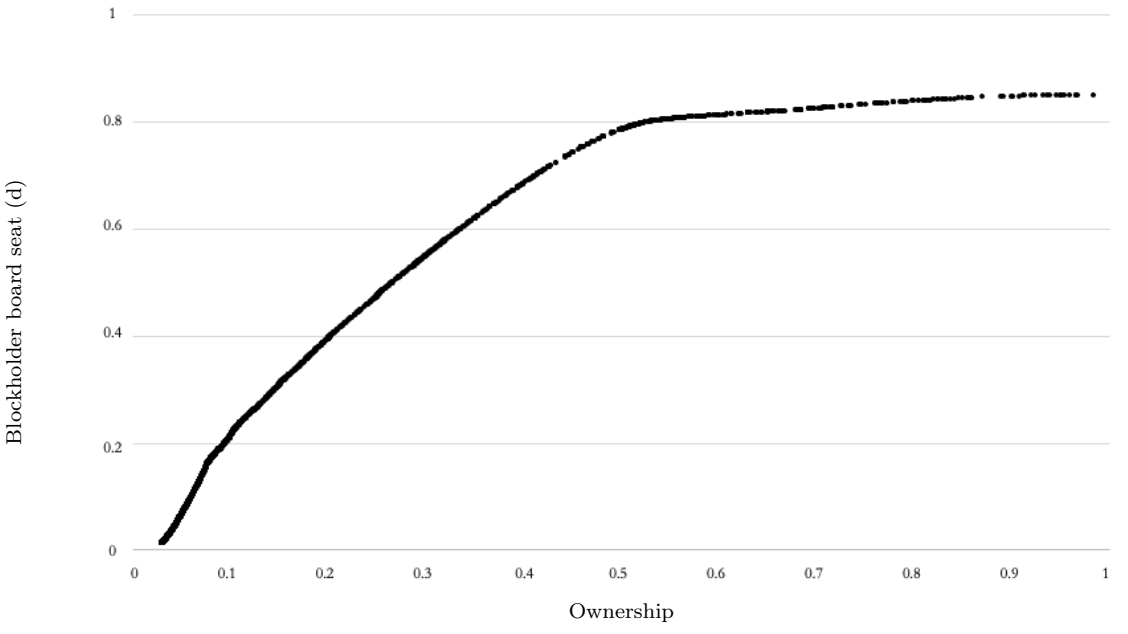


Table A9: The implications of multiple blockholders board representation

This table reports results from fixed-effects regressions of 'Blockholder board seat (d)' on different specifications of other blockholders being present on the board, different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. The dependent variable 'Other blockholder (d)' equals one if at least one 'blockholder-director' is affiliated with another blockholder, and zero otherwise. The dependent variable 'Other blockholder (#)' computes the number of other blockholders present on the board. The two dependent variables 'Other board seats (#)', and 'Other board seats (%)' compute the absolute (relative) number of blockholder-directors on the board affiliated with other blockholders. Specifications (1) to (4) include year and firm fixed effects. Fundamental variables are lagged by one year. The variable BHAR measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Blockholder board seat (d)			
Dep. Variable	(1)	(2)	(3)	(4)
Other blockholder $(d)_{t-1}$	-0.199***			
	(0.000)			
Other blockholder $(\#)_{t-1}$		-0.182***		
		(0.000)		
Other board seats $(\#)_{t-1}$			-0.082***	
			(0.000)	
Other board seats $(\%)_{t-1}$				-0.571***
				(0.000)
Ownership	2.691***	2.698***	2.800***	2.752***
	(0.000)	(0.000)	(0.000)	(0.000)
Ownership squared	-2.618***	-2.617***	-2.890***	-2.853***
	(0.000)	(0.000)	(0.000)	(0.000)
BHAR 1yr (base year)	-0.014**	-0.014*	-0.013**	-0.012*
	(0.044)	(0.061)	(0.045)	(0.064)
# Blockholders	-0.005	-0.003	-0.007	-0.007
	(0.267)	(0.568)	(0.138)	(0.144)
Blockholder is foreign (d)	-0.102***	-0.099***	-0.109***	-0.110***
	(0.000)	(0.000)	(0.000)	(0.000)
Blockholder rank (d)	-0.007	0.000	-0.005	-0.006
	(0.628)	(0.971)	(0.720)	(0.666)
Blockholder tenure (d)	0.045***	0.041***	0.052***	0.050***
	(0.003)	(0.004)	(0.001)	(0.001)
Board co-determination (d)	0.059	0.086	0.032	0.031
	(0.352)	(0.225)	(0.578)	(0.596)
Board size (shareholder)	0.030***	0.031***	0.037***	0.027***
	(0.003)	(0.008)	(0.000)	(0.006)
Book leverage	-0.129*	-0.139*	-0.128*	-0.156**
	(0.070)	(0.088)	(0.078)	(0.037)
Cash	-0.120**	-0.154**	-0.090*	-0.109**
	(0.031)	(0.035)	(0.079)	(0.038)
ln(Firm age)	0.066**	0.080**	0.023	0.028
	(0.039)	(0.041)	(0.430)	(0.335)
In-sample investments (d)	-0.091***	-0.085***	-0.100***	-0.098***
	(0.000)	(0.000)	(0.000)	(0.000)
Intangibles	0.135	0.108	0.111	0.119
	(0.207)	(0.380)	(0.299)	(0.286)
Ownership concentration	0.061	0.076	0.227**	0.232**
	(0.590)	(0.550)	(0.037)	(0.033)
Portfolio weight (d)	0.001	-0.000	0.003	0.001
	(0.934)	(0.981)	(0.801)	(0.950)
Presence (%)	0.187***	0.241***	0.177***	0.176***
	(0.002)	(0.000)	(0.002)	(0.002)
R&D	-0.186	-0.006	-0.337	-0.421
	(0.637)	(0.989)	(0.372)	(0.294)
ROA	0.057	0.044	0.015	0.004
	(0.450)	(0.639)	(0.831)	(0.958)
Tobin's Q	0.014	0.009	0.012	0.013
	(0.266)	(0.552)	(0.336)	(0.292)
ln(Total assets)	0.013	0.016	-0.002	-0.001
	(0.473)	(0.417)	(0.923)	(0.942)
Observations	6,595	6,595	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.570	0.586	0.567	0.569
Turning point (pct)	0.514***	0.515***	0.484***	0.482***

Table A10: The implications of block ownership on different proxies of board representation
This table reports results from fixed-effects regressions of 'Blockholder Board seats (#)' and 'Blockholder board seats (%)' on different specifications of 'Ownership', and firm characteristics on investor-firm-year-level. The independent variable 'Blockholder board seats (#)' accounts for the total number of board seats linked to a blockholder. The independent variable 'Blockholder board seats (%)' accounts for a fraction of board seats linked to a blockholder. Specifications (1) to (4) include year and firm fixed effects, and specifications (5) and (6) include year and industry fixed effects. Specifications (3) and (4) account for 'defacto ownership' whereby the voter turnout scales ownership at the preceding shareholder's meeting. Fundamental variables are lagged by one year. The variable BH(A)R measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Board seats (#)	**Board seat (%)**	**Board seats (#)**	**Board seat (%)**	**Board seats (#)**	**Board seat (%)**
	Baseline		**defacto**		**Industry**	
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)
Ownership	5.589***	0.890***			5.471***	0.818***
	(0.000)	(0.000)			(0.000)	(0.000)
Ownership squared	-2.956**	-0.509***			-2.624**	-0.375*
	(0.032)	(0.003)			(0.041)	(0.067)
Ownership defacto			4.188***	0.611***		
			(0.000)	(0.000)		
Ownership squared defacto			-2.050***	-0.270***		
			(0.000)	(0.001)		
BHAR 1yr (base year)	-0.015	-0.003**	-0.011	-0.003*	-0.010	-0.003
	(0.195)	(0.047)	(0.325)	(0.096)	(0.536)	(0.226)
# Blockholders	-0.003	-0.001	-0.001	-0.000	-0.007	-0.003*
	(0.688)	(0.520)	(0.948)	(0.792)	(0.479)	(0.081)
Blockholder is foreign (d)	-0.120**	-0.013*	-0.141**	-0.016**	-0.092	-0.011
	(0.032)	(0.063)	(0.014)	(0.022)	(0.120)	(0.142)
Blockholder rank (d)	0.018	0.004	0.055*	0.008*	0.015	0.002
	(0.593)	(0.423)	(0.069)	(0.100)	(0.629)	(0.680)
Blockholder tenure (d)	0.017	0.007*	0.020	0.008*	-0.008	0.006
	(0.631)	(0.094)	(0.572)	(0.075)	(0.856)	(0.297)
Board co-determination (d)	0.203**	0.021*	0.181**	0.017	0.076	0.000
	(0.025)	(0.054)	(0.047)	(0.145)	(0.252)	(0.982)
Board size (shareholder)	0.056***	0.000	0.060***	0.001	0.084***	0.002
	(0.001)	(0.852)	(0.000)	(0.635)	(0.000)	(0.384)
Book leverage	-0.119	-0.012	-0.124	-0.013	-0.091	-0.033
	(0.248)	(0.439)	(0.250)	(0.433)	(0.556)	(0.181)
Cash	-0.111	-0.021*	-0.095	-0.018	-0.107	-0.027
	(0.110)	(0.069)	(0.224)	(0.135)	(0.483)	(0.228)
ln(Firm age)	0.004	0.005	0.011	0.005	0.030	0.003
	(0.943)	(0.507)	(0.844)	(0.481)	(0.329)	(0.485)
In-sample Investments (d)	-0.035	-0.012**	-0.038	-0.013**	-0.036	-0.013**
	(0.484)	(0.026)	(0.494)	(0.030)	(0.460)	(0.019)
Intangibles	0.232	0.043*	0.257	0.047*	0.019	-0.002
	(0.147)	(0.085)	(0.145)	(0.089)	(0.886)	(0.932)
Ownership concentration	-0.837	-0.115*	-0.461	-0.083	-0.295	-0.060
	(0.136)	(0.077)	(0.251)	(0.119)	(0.327)	(0.112)
Portfolio weight (d)	-0.013	-0.000	-0.004	0.001	-0.003	0.003
	(0.798)	(0.998)	(0.940)	(0.794)	(0.948)	(0.551)
Presence (%)	0.315**	0.044**	1.218***	0.186***	0.406***	0.060***
	(0.021)	(0.026)	(0.000)	(0.000)	(0.003)	(0.003)
R&D	0.660	0.065	0.474	0.043	-0.361	-0.037
	(0.329)	(0.449)	(0.504)	(0.646)	(0.466)	(0.591)
ROA	0.076	0.020	0.103	0.024	-0.358**	-0.043
	(0.551)	(0.260)	(0.428)	(0.206)	(0.030)	(0.120)
Tobin's Q	0.010	0.001	0.010	0.001	-0.020	-0.001
	(0.492)	(0.716)	(0.504)	(0.742)	(0.322)	(0.771)
ln(Total assets)	0.007	0.001	0.009	0.001	-0.035*	-0.002
	(0.808)	(0.805)	(0.772)	(0.824)	(0.060)	(0.515)
Observations	6,595	6,595	6,595	6,595	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.582	0.616	0.569	0.602	0.445	0.476

Table A11: The implications of board representation on ownership change

This table reports results from fixed-effects regressions of 'Blockholder board seat (d)' on different specifications of other blockholders being present on the board, different specifications of 'Ownership', and a series of firm characteristics on investor-firm-year-level. The dependent variable 'Ownership change' is absolute (relative) change based on Ownership in $year_t$. The independent variable 'Blockholder board seat (d)' equals one if at least one board member is classified as a 'blockholder-director', and zero otherwise. Specifications (1) to (8) include year and firm fixed effects. Fundamental variables are lagged by one year. The variable BHAR measures a firm's 1-year adjusted stock return in the base year (over the German CDAX index as the benchmark). All other variables are defined in Appendix B. The constant is included in all regressions but not reported. Robust p-values clustered by the firm are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

	Ownership change							
	Absolute change				**Relative change**			
	$\mathbf{t_1}$	$\mathbf{t_3}$	$\mathbf{t_1}$	$\mathbf{t_3}$	$\mathbf{t_1}$	$\mathbf{t_3}$	$\mathbf{t_1}$	$\mathbf{t_3}$
Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Blockholder board seat (d)	0.018***	0.023***	0.013***	0.008	0.125***	0.111***	0.136***	0.179***
	(0.000)	(0.002)	(0.000)	(0.229)	(0.000)	(0.006)	(0.000)	(0.000)
Ownership	-0.079*	-0.125			-0.193	0.495*		
	(0.061)	(0.116)			(0.316)	(0.080)		
Ownership squared	0.085	0.011			0.544*	0.073		
	(0.187)	(0.936)			(0.072)	(0.855)		
BHAR 1yr (base year)	0.003*	0.000	0.003*	0.000	0.021	0.025	0.021	0.026*
	(0.074)	(0.834)	(0.089)	(0.942)	(0.149)	(0.103)	(0.146)	(0.085)
# Blockholders	-0.000	0.001	0.000	0.001	-0.013**	-0.019*	-0.014**	-0.021*
	(0.953)	(0.542)	(0.880)	(0.315)	(0.035)	(0.091)	(0.027)	(0.057)
Blockholder is foreign (d)	-0.002	-0.005	-0.001	-0.001	-0.027	-0.065**	-0.031*	-0.086***
	(0.346)	(0.213)	(0.775)	(0.880)	(0.115)	(0.042)	(0.060)	(0.007)
Blockholder rank (d)	0.002	0.007***	0.005***	0.014***	-0.026	-0.025	-0.024	-0.053**
	(0.267)	(0.004)	(0.000)	(0.000)	(0.113)	(0.264)	(0.104)	(0.013)
Blockholder tenure (d)	-0.006***	-0.005	-0.006***	-0.006*	-0.059***	-0.068***	-0.059***	-0.064**
	(0.000)	(0.120)	(0.000)	(0.061)	(0.000)	(0.006)	(0.000)	(0.010)
Board codetermination (d)	-0.002	-0.030	-0.002	-0.028	0.044	-0.077	0.041	-0.085
	(0.837)	(0.103)	(0.862)	(0.111)	(0.556)	(0.470)	(0.580)	(0.433)
Board size (shareholder)	0.000	-0.004**	0.000	-0.003*	0.002	-0.014	0.002	-0.017
	(0.893)	(0.035)	(0.731)	(0.075)	(0.783)	(0.350)	(0.834)	(0.270)
Book Leverage	-0.000	-0.046	-0.001	-0.048*	0.029	-0.256	0.028	-0.249
	(0.991)	(0.104)	(0.937)	(0.096)	(0.770)	(0.132)	(0.776)	(0.141)
Cash	0.007	0.023	0.006	0.020	0.092	0.129	0.095	0.142
	(0.463)	(0.282)	(0.514)	(0.345)	(0.362)	(0.374)	(0.351)	(0.332)
ln(Firm age)	0.003	-0.002	0.004	-0.001	0.007	0.026	0.008	0.019
	(0.385)	(0.798)	(0.268)	(0.952)	(0.848)	(0.680)	(0.826)	(0.759)
In-sample investments (d)	0.001	0.004	0.002	0.007**	0.017	0.029	0.017	0.018
	(0.395)	(0.130)	(0.112)	(0.020)	(0.295)	(0.282)	(0.284)	(0.508)
Intangibles	0.004	0.053*	0.004	0.052*	0.043	0.080	0.048	0.082
	(0.817)	(0.070)	(0.789)	(0.068)	(0.725)	(0.714)	(0.695)	(0.707)
Ownership concentration	-0.095***	-0.206***	-0.095***	-0.279***	-0.619***	-0.879***	-0.416***	-0.522***
	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.003)	(0.002)
Portfolio weight (d)	0.004***	0.010***	0.003**	0.006**	0.035**	0.067***	0.039***	0.086***
	(0.002)	(0.000)	(0.016)	(0.026)	(0.012)	(0.001)	(0.006)	(0.000)
Presence (%)	0.007	-0.010	0.005	-0.008	0.057	0.102	0.032	0.085
	(0.408)	(0.611)	(0.616)	(0.695)	(0.511)	(0.380)	(0.717)	(0.458)
R&D	-0.073	0.107	-0.075	0.113	-0.360	-0.463	-0.394	-0.498
	(0.158)	(0.470)	(0.150)	(0.456)	(0.480)	(0.634)	(0.445)	(0.607)
ROA	-0.029**	-0.034	-0.028**	-0.034	-0.268**	-0.210	-0.260**	-0.207
	(0.023)	(0.216)	(0.031)	(0.224)	(0.042)	(0.334)	(0.048)	(0.336)
Tobin's Q	0.002	0.002	0.002	0.002	0.024*	0.007	0.024*	0.008
	(0.105)	(0.615)	(0.107)	(0.653)	(0.084)	(0.702)	(0.080)	(0.669)
ln(Total assets)	0.003	0.007	0.003	0.006	0.015	0.021	0.016	0.022
	(0.236)	(0.243)	(0.223)	(0.252)	(0.494)	(0.663)	(0.462)	(0.645)
Observations	6,595	6,595	6,595	6,595	6,595	6,595	6,595	6,595
Fixed Effects	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm	Year, Firm
Adj. R-squared	0.0560	0.193	0.0533	0.179	0.0559	0.103	0.0547	0.0981

B Variable definitions

Table B1: Accounting data as well as stock price data is from *Refinitiv Datastream* and *Refinitiv Eikon*. Ownership data is from *Refinitiv Shareholder History Report*. Other non-financial information and director-related data are predominantly hand-collected from annual reports, company filings, company websites, and director-related filings, *Munzinger Biographien* and *Refinitv Eikon*. Data on voter turnouts at the shareholders' meeting is from the *hv-info.de*. Industry classifications are based on the *European industry-standard classification system (NACE)*.

Board variables	
Audit committee seat (d)	Indicator variable, which takes the value of one if the board member serves as a member of the audit committee, and zero otherwise.
Blockholder board seat (d)	Indicator variable, which equals one if at least one director of the supervisory board is classified as 'blockholder-director' in a given fiscal year, and zero otherwise.
Blockholder board seats (#)	Number of directors on the supervisory board classified as 'blockholder-director' for a given fiscal year and company.
Blockholder board seats (%)	Proportionate share of directors on the supervisory board (shareholder representatives only) classified as 'blockholder-director' for a given fiscal year and company.
Board age (#)	Average age of shareholder representatives on the company's board.
Board chairman (d)	Indicator variable, which takes the value of one if the board member serves as chair of the supervisory board, and zero otherwise.
Board co-determination (d)	Indicator variable, which equals one if the degree of co-determination is 50%, and zero otherwise. Co-determination may range between 0 to 50% depending on firm size. Employee representatives are elected by trade unions, work councils, and employee staff.
Board duality (d)	The indicator variable is equal to one if the CEO is simultaneously the board's chairman, and zero otherwise. The variable is only applicable to the US sample.
Board size (#)	The number of directors on the company's supervisory board in a given fiscal year. According to this definition, only shareholder representatives are considered who are elected at the shareholder's meeting.
Blockholder committee seats (d)	Indicator variable, which takes the value of one if at least one blockholder-director serves as a member of the audit, nomination, personnel, presiding, or strategy committee, and zero otherwise.
Committees (#)	Number of committees (i.e., audit, nomination, personnel, presiding, or strategy) in a given year.
Committee meetings (#)	The firm's number of committee meetings. Plenary meetings and conference calls of the supervisory board are recorded as meetings. Written resolution procedures are not included.
Nomination committee seat (d)	Indicator variable, which takes the value of one if the board member serves as a member of the nomination committee, and zero otherwise.
ln(1 + # Meetings)	Logarithm of one plus a company's board and respective committee meetings in a given fiscal year. While plenary meetings and conference calls of the board plenum (committees) count as meetings, written resolution procedures are not included.

Other blockholder board seat (d)	Indicator variable, which equals one if at least one unrelated supervisory board member is classified as a 'blockholder-director' affiliated to another blockholder, and zero otherwise.
Other blockholder board seats (#)	The number of directors on the supervisory board classified as 'blockholder-directors' affiliated to another blockholder.
Other blockholder board seats (%)	The proportionate share of directors on the supervisory board (shareholder representatives only) classified as 'blockholder-directors' affiliated to another blockholder.
Personnel committee seat (d)	Indicator variable, which takes the value of one if the board member serves as a member of the personnel or compensation committee, and zero otherwise.
Presiding committee seat (d)	Indicator variable, which takes the value of one if the board member serves as a member of the presiding committee, and zero otherwise.
Staggered board (d)	The indicator variable is equal to one if the board members are grouped into classes who serve terms of different lengths, and zero otherwise. The variable is only applicable to the US sample.
Strategy committee seat (d)	Indicator variable, which takes the value of one if the board member serves as a member of the strategy committee, and zero otherwise.

Company variables

BHAR	The company's buy and hold abnormal stock return over the CDAX (Russel 3000) index for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles.
Book leverage	The company's book value of debt divided by its book value of total assets for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles.
CapEx	The firm's capital expenditures divided by it's book value of total assets winsorized at the 0.5^{th} and 99.5^{th} percentiles.
Cash	The company's book value of cash and equivalents divided by its book value of total assets for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles.
ln(Firm age)	The natural logarithm of the firm's age since its initial public offering.
Intangibles	The company's book value of intangible assets divided by its book value of total assets for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles.
Payout	The company's dividends plus funds used for share repurchases, all divided by its book value of total assets for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles.
R&D	The company's research and development expenditures divided by its book value of total assets for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles. Missing values are replaced by 0.
ROA	The company's return on assets is defined as earnings before interest, tax, depreciation, and amortization divided by its book value of total assets for a given fiscal year winsorized at the 0.5^{th} and 99.5^{th} percentiles.
Tobin's Q	The company's market value of equity plus its book value of total assets minus its book value of equity, all divided by its book value of total assets for a given fiscal year, winsorized at the 0.5^{th} and 99.5^{th} percentiles.
ln(Total assets)	Logarithm of the company's book value of total assets in a fiscal year.

Director variables	
Board chair (d)	The indicator variable is equal to one if the director is the chair of the board, and zero otherwise.
Chair age at inception	The director's age at the inception of assuming the position as chair.
Chair is former executive (d)	The indicator variable is equal to one if the chair has been the former CEO of the firm, and zero otherwise.
Chair tenure	The number of years the director serves as chair of the board.
Director salary	The salary of the director in a given year differentiating between fix, variable and total compensation.
ln(Member age)	The natural logarithm of the director's age.
Member is auditor (d)	Indicator variable, which equals one if the board member is classified as auditor, and zero otherwise.
Member is banker (d)	Indicator variable, which equals one if the board member is classified as a banker, and zero otherwise.
Member is consultant (d)	Indicator variable, which equals one if the board member is classified as a consultant, and zero otherwise.
Member is engineer (d)	Indicator variable, which equals one if the board member is classified as an engineer, and zero otherwise.
Member is female (d)	Indicator variable, which equals one if the board member is female, and zero otherwise.
Member is foreign (d)	Indicator variable, which equals one if the board member is foreign, and zero otherwise.
Member is former executive (d)	Indicator variable is equal to one if the member has been a former manager of the firm, and zero otherwise.
Member is lawyer (d)	Indicator variable, which equals one if the board member is classified as a lawyer, and zero otherwise.
Member is politician (d)	Indicator variable, which equals one if the board member is classified as a politician, and zero otherwise.
ln(Member tenure)	The natural logarithm of the number of years the director serves on the supervisory board.
ln(Member mandates)	The natural logarithm of the director's number of mandates in addition to the current mandate in a given year.

Ownership variables	
Activist (non-legacy) blockholder (d)	Indicator variable, which equals one if a blockholder (hedge fund or single investor) takes a board seat in the base year while also establishing her block position in the same year, and zero otherwise.
# Blockholders	Number of a company's shareholders with block ownership of at least 3% of the company's outstanding ordinary shares.
# Blockholders below 3%	Number of a company's shareholders with block ownership of less than 3% of the company's outstanding ordinary shares.

Blockholder exit (d)	Indicator variable equals one if the blockholder exits the company in a given year, and zero otherwise. A blockholder exit is effective if the block ownership decreases below the threshold of 3%.
Blockholder horizon (#)	The total number of years a blockholder remains invested in a company.
Blockholder rank (d)	The variable is derived as the natural rank of the variable 'ownership'. The indicator variable is equal to one if the blockholder's rank order is larger than the industry-adjusted median for a given year, and zero otherwise.
Blockholder tenure (d)	The base year minus the year of the earliest holdings date. The entry dates of blockholders are retrieved from 'Refinitiv's' shareholder history report using an 'out-of-sample' setting. The indicator variable is equal to one if the blockholder's investment tenure is larger than the industry-adjusted median for a given year, and zero otherwise.
Blockholder-director entry (exit)	The time lag between the director's year of entry (exit) to board minus the year of the blockholder's entry (exit) to the firm.
Blockholder is foreign (d)	Indicator variable, which takes the value of one if the blockholder is domiciled in a foreign country, and zero otherwise.
Corporate (d)	Indicator variable, which equals one if a blockholder is classified as a corporate entity, and zero otherwise.
Free float (%)	The percentage of the company's ordinary shares not held by blockholders that own at least 3% of the shares.
In-sample investments (d)	The variable computes the total number of in-sample investments of a blockholder for each year. The respective indicator variable is equal to one if the number of the blockholder's in-sample investments is larger than the industry-adjusted median for a given year, and zero otherwise.
Insider (d)	Indicator variable, which equals one if the blockholder is classified as family, founder, or manager, and zero otherwise.
Institutional investor (d)	Indicator variable, which equals one if a blockholder is classified as asset management, hedge fund, insurance, bank, private equity or single investor, and zero otherwise.
Legacy blockholder (d)	Indicator variable, which equals one if a blockholder takes a board seat in the base year while having accumulated her block position in earlier years, and zero otherwise.
Non-activist (non-legacy) blockholder (d)	Indicator variable, which equals one if a blockholder other than a hedge fund or single investor takes a board seat in the base year while also establishing her block position in the same year, and zero otherwise.
Non-legacy blockholder (d)	Indicator variable, which equals one if a blockholder takes a board seat in the base year while also establishing her block position in the same year, and zero otherwise.
Other strategic investor (d)	Indicator variable, which equals one if a blockholder is classified as a foundation, holding firm or state, and zero otherwise.
Ownership	Percent of ordinary shares held by shareholders in a given fiscal year.
Ownership change	The ownership change in absolute (relative) terms based on ownership in year_{t}.
Ownership concentration (%)	The Herfindahl concentration index based on all blockholders that own at least 3% of the company's ordinary shares in a given fiscal year.
Ownership defacto	Percent of ordinary shares held scaled by the lagged voter turnout at the firm's annual general meeting in a given fiscal year.

Ownership squared	The squared term of the variable 'Ownership'.
Ownership squared defacto	The squared term of the variable 'Ownership defacto'.
Portfolio weight (d)	The variable is retrieved from 'Refinitiv's' shareholder history report and shows the investment's share relative to the blockholder's overall portfolio in an out-of-sample setting. The respective indicator variable is equal to one if the investment's portfolio share is larger than the industry-adjusted median for a given year, and zero otherwise.
Presence (%)	The percentage of the firm's ordinary shareholders voting at the annual general meeting.

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