MASTER THESIS

Ownership Concentration & Agency Theory: Investigating the Effect of Large Shareholders on Corporate Payout Policy in Danish Publicly Listed Companies

CAN-LUCA BENKERT
S1850172

FACULTY OF BEHAVIOURAL, MANAGEMENT, AND SOCIAL SCIENCES

MSC IN BUSINESS ADMINISTRATION
TRACK: FINANCIAL MANAGEMENT

EXAMINATION COMMITTEE:
1st SUPERVISOR: DR. H. C. VAN BEUSICHEM
2nd SUPERVISOR: PROF. DR. M. R. KABIR

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Abstract

This study examines the effect of ownership concentration and different types of large shareholders on corporate payout policy in the Danish setting. Corporate payout is composed out of different combinations of dividends and share repurchases. I investigate both the likelihood of payout as well as the intensity. After lagging the independent variables by one year, the sample is comprised of 59 Danish non-financial, non-utility firms from 2014 to 2018. Using both logit and OLS regression, I find that ownership concentration has a robust convex relationship with dividend payout ratios and a robust concave relationship with the repurchase propensity and intensity. In terms of different shareholder types, I find that large financial institutional shareholders press for higher dividend ratios to mitigate agency conflicts due to them being active in monitoring the company. Also, an increase of voting rights held by large financial institutional shareholders results in a decreased likelihood of repurchases. Further, increased voting rights held by large insiders result in higher dividend payout ratios in the presence of other shareholder types, indicating a use of dividends by insiders to lessen agency problems and avoid expropriation of shareholders to strengthen their reputation. Large shareholders that are other companies are associated with less propensity to repurchase. Lastly, having multiple large shareholders increases the general payout ratio; they monitor each other using higher payout ratios to lessen expropriation of minor shareholders and private rent consumption of the other large shareholders, and thereby mitigate agency problems.

Keywords: Agency Theory, Payout Policy, Corporate Governance, Ownership Concentration, Denmark

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1. Introduction

Shareholders expect some sort of financial return on their invested capital in a company. A company can achieve this by either paying out dividends on shares, repurchasing existing shares from shareholders, or a combination thereof. Summarized under an umbrella term, this is called *corporate payout.* However, the definitive drivers and determinants of corporate payout have been an unsolved discussion for decades. Black (1976) proposed that with every insight gained into the factors determining corporate payout policy, it increasingly evolves into a puzzle that only gets more complicated. Even to this day, this "puzzle", as Black (1976) states, is far from solved and thus remains a hot topic of finance research.

In 1961, Miller & Modigliani (hereinafter abbreviated as *MM*) tackled the issue of payout policy and proposed that payout is not relevant under perfect market conditions. According to them, these perfect market conditions such as full information, no taxes, rational investors, and no additional cost (e.g. flotation cost generated when issuing new securities, such as legal fees and underwriting fees) cause this irrelevance. If these conditions were to be true, MM argue that a company's payout policy (and the choice between repurchases and dividends) would be irrelevant to the shareholders because it would not create value beyond the shareholder value and wealth that investment policy generates (DeAngelo, DeAngelo, & Skinner, 2008). If MM's results and implications were assumed to be 100% transferable to the real world, the question arises: Why do firms worry about their payout policy at all? And if they decided to pay out, why would the choice of channel (dividends and/or share repurchases) matter? However, MM's posed assumptions are not applicable to reality because e.g. taxes and additional costs exist. Thus, researchers have tried to acquire knowledge about what really influences payout policy: They try to pinpoint which country-level and firm-level drivers determine the decision to pay out or not, the size of payout, and the choice of channel of payout – i.e. dividends and/or repurchases (e.g. DeAngelo & DeAngelo, 2006). Thusfar, the

puzzle of payout policy has been tackled in multiple different ways, yet remains inconclusive.

Generally, literature regarding corporate payout policy determinants falls into either one of two categories: Studies conducting cross-country research focusing on country-level variables, or single-country studies primarily using firm-level variables. A large body of research so far has focused on cross-country studies. A prime example of this is the cross-country study conducted by La Porta, Lopez-De-Silanes, Shleifer, & Vishny (2000). In their seminal work, their main focus is devoted to the impact of country-level governance, especially shareholder/investor-protection, and the effect on dividend policy. Single-country studies have been most often focusing on economically strong countries such as Germany, France, China, the U.S., or the UK, (see e.g. Gugler, 2003; Gugler & Yurtoglu, 2003; Huang & Zhu, 2015). Interestingly, cross-country studies tend to yield similar results as to what drives and determines corporate payout, while single-country studies yield mixed results (Chang, Dutta, Saadi, & Zhu, 2018). Concluding from that, results from one single-country study cannot be generally applied to other countries, even if they might be economically comparable. This highlights the need to examine countries individually to find out which determinants play a first-order role for a specific country, as they apparently differ per country.

One of the major attempts in trying to solve the *puzzle* is the consideration of agency costs and how they are affecting a corporation's payout policy. The basic agency theorem describes that conflicts of interest exist between two parties in a corporation– the principal (the shareholders) and the agent (the managers) - when ownership and control are seperated (Jensen & Meckling, 1976). According to agency theory, the principal appoints an agent who should act on the principal's behalf; in this case, shareholders appoint managers to run the company the shareholders have equity stake in, hence seperating the actual ownership and daily management of the company. However, a further important proposition of agency theory is that managers may engage in managerial opportunism rather than pursuing the objectively best project that provides the most economic benefit to the company and the shareholders (Jensen & Meckling,

1976; Rozeff, 1982). Alternatively, managers with access to a plethora of corporate resources may have good intentions but be overconfident, and their overconfidence may lead to wasteful decisions (DeAngelo et al., 2008).

To mitigate these conflicts and costs, one stream of the literature suggests that companies can pay out the excess cash to their shareholders in the form of either dividends, share repurchases, or a combination, instead of keeping it inside the company. This would reduce the amount available for potential misuse of managers and force the company and managers to go to the outside market for financing (Jensen, 1986; Jensen & Meckling, 1976).

Another form of agency conflict is theorized to arise *amongst* shareholders, specifically between minor and large shareholders (blockholders) in concentrated ownership structures: Large owners (i.e. owners with substantial voting power), specifically insiders, may be prone to consume private benefits by retaining cash inside the company at the expense of the small shareholders – a concept called *rent extraction* (Gugler & Yurtoglu, 2003). In order to alleviate these conflicts, corporate payout may serve as a viable corporate governance mechanism by returning cash to all shareholders and thereby lessen the possible private rent extraction of the major shareholders (Andres, Betzer, van den Bongard, & Goergen, 2019; Berzins, Bøhren, & Stacescu, 2018, 2019; De Cesari, 2012). With regard to the major-minor shareholder conflict, past research has also shown that the identity of the shareholder has a significant impact on payout policy; different types of shareholders – for example, families or institutional shareholders – have different goals and incentives, and vary in the efficiency of monitoring the management (Chiang & Lai, 2015; Crane, Michenaud, & Weston, 2016; Douma, George, & Kabir, 2006; Gugler, 2003; Gugler & Yurtoglu, 2003; Huang & Zhu, 2015; Le & Le, 2017). In addition to the type of shareholder, the existence of more than one large shareholder does seemingly impact the effect of the largest shareholder on payout policy too. Multiple large shareholders may enhance monitoring and force payout to avoid minority shareholder expropriation (Faccio, Lang, & Young, 2001; Gugler, 2003; Le & Le, 2017).

There is some prior research on what affects corporate payout in Danish companies, as conducted by Raaballe & Hedensted (2011), Alzahrani & Lasfer (2012), Berzins et al., (2018), Denis & Osobov (2008), Truong & Heaney (2007), as well as Khalfan & Wendt (2020). However, what differentiates my study from these is that I go in-depth about detailed ownership characteristics of the large shareholders and how these are related to corporate payouts with the sole focus on Denmark. As established before, single-country studies tend to lead to different results than cross-country studies do. This is why it is important to examine Denmark on its own rather than only in a large sample with other countries such as Alzahrani & Lasfer (2012), Berzins et al., (2018), Denis & Osobov (2008), and Truong & Heaney (2007) do. The agency conflict *among shareholders*, and thereby specific ownership characteristics, is especially relevant in Denmark. This is because Danish companies are often owned by large shareholders (Sinani, Stafsudd, Thomsen, Edling, & Randøy, 2008), which shifts the focus to this set of problems, rather than the principal-agent form of agency problems.

To fill these gaps in the literature and provide novel insides into the intersection of ownership and corporate payout in the Danish setting, this paper will tackle the effect of the large shareholders on the corporate payout decision and level in Danish companies only.

Accordingly, the following research question will be investigated:

What are the effects of large shareholders on corporate payout policy in Danish publicly listed companies?

To examine this question, the study uses a sample of Danish listed, non-financial, non-utility companies from 2014-2018 and tests for the impact of large shareholders on overall payout, as well as dividend and share repurchases separately.

The contributions of this study are multi-folded. First, it extends the existent research and literature by investigating a country on which research is relatively scarce. There

have been some studies that included Denmark in cross-country samples (see e.g. Alzahrani & Lasfer, 2012; Denis & Osobov, 2008; Huang & Zhu, 2015) and some studies specifically targeting Denmark in single-country study setting (see e.g. Bechmann & Raaballe, 2003; Raaballe & Hedensted, 2011); though, no study has gone into the depth of analysis in terms of different types of ownership structures & types and the effects on payout policy. A recent study by Khalfan & Wendt (2020) investigates the effect of ownership concentration on corporate payout in four Nordic countries (Denmark, Sweden, Finland, Norway). However, they only differentiate between two large shareholder types, i.e. governmental shareholders and foreign institutional investors. Also, they use less (control) variables, which results in a higher explanatory power of this study's statistical models compared to their study. Specifically, I include six corporate governance characterstics as control variables which are often not include, although they are theorized to have potentially significant impacts (Chang et al., 2018). The results show that some of them indeed have significant effects on the corporate payout policy, thus validating the choice to include them.

My study therefore builds upon these studies and provides additional, more detailed insights with regard to agency cost, primarily focusing on blockholder - minority shareholder conflicts in the Danish setting.

Moreover, this study adds to the understanding of what effect the existence of multiple major shareholders in companies has on corporate payout policy. Evidence prior to this paper is rather limited (some papers implementing this consideration are e.g. De Cesari, 2012; Gugler & Yurtoglu, 2003; Jiang, Cai, Jiang, & Nofsinger, 2019), specifically concerning Denmark. Furthermore, contrary to some other studies on the topic who only focus on dividends (e.g. Gugler, 2003; Gugler & Yurtoglu, 2003; Truong & Heaney, 2007), this paper considers payout as a whole as well as dividends and repurchases on their own. Thus, it provides a more comprehensive, thorough overview and more detailed insight into the effects on complete payout as well as its subparts. Overall, this paper is hence helping to make more sense of the "puzzle" that is created by payout policy.

Further, this thesis aids practitioner's understanding of which companies to invest in, specifically in light of ownership structures and preferred payout method. Smaller (individual) investors may be especially interested in the results. By knowing which large shareholders and shareholder structure are particularly associated with higher payout, an investor seeking dividends/repurchases is be able to pre-select where to invest in based on the ownership structure while considering other firm characteristics.

The rest of this paper is structured as follows: The second section provides background information, theories, results, and propositions of prior studies and papers concerning agency costs and related theories. Also, the theoretical influences of ownership types and concentration on payout policy – and subsequent empirical results – are pointed out. Section number three describes the methodology of this paper's study, including variables and models used, and elaborates on the sample used and the criteria employed for sample selection. The fourth section provides the results of the statistical analyses while the fifth section elaborates on the conclusions of the overall study, addresses limitations, as well as indications for further research. Following that, references and appendices are presented.

2. Literature Review

In the upcoming subsections, different facets of agency problems, including closely related theories, and their effects on corporate payout policy are going to be explained. These include vertical and horizontal agency conflicts, shareholder types, the rent extraction proposition, and the managerial entrenchment theory. Moreover, other firm-level corporate governance mechanisms are going to be elaborated, and what their respective effects on corporate payout policy are. Furthermore, alternative theories that may explain payout are discussed. The very first section, 2.1, and its subsections, give a brief introduction into what corporate payout is, introduce the concept of ownership, and give information on the Danish setting.

2.1 Background Information

2.1.1 Corporate Payout

Shareholders buy equity of a company and become a "partial owner" of that company, which they may do so for distinct reasons. However, they all expect something in return for their financial contribution. After all, buying into a company via shares is an investment from which the owner of the shares wants to derive economic benefit, as with any investment. One of the most prominent ways a company can provide such return is to pay cash to the shareholders via *corporate payout*. *Corporate payout* is the term commonly used to describe a company's monetary value distribution to its shareholders (Barclay & Smith Jr., 1988; Kalay & Lemmon, 2007). As such, a company's payout behavior can be described along two dimensions: The *propensity* to pay, i.e. how likely a company is to pay out, and the payout *intensity*, i.e. how much to pay out. These two dimensions are both investigated in this study.

Understanding this concept is important because of the large amounts that companies distribute to their shareholders yearly (Kalay & Lemmon, 2007). For example, according to Denmarks National Bank, Danish listed companies distributed 105 billion

Danish Kroner (DKK)[1] to their shareholder via regular cash dividends (63 billion DKK) and share repurchases (43 billion DKK) in 2018 (*Dividends and share buy-backs for kr. 105 billion in 2018*, 2019). This is just shy of 4.48% of the 2018 total market capitalization of the Copenhagen Stock Exchange of 2345 billion DKK ("Statistics - Nasdaq," 2020).

This value distribution can be materialized by the use of dividends, share repurchases, or a combination of the two. Cash dividends are a direct cash payment from the company to the shareholder and are typically denoted as *dividends per share*. The level of dividends (i.e. the amount of cash) distributed to a shareholder is equal across shares of the same class. Most dividends are ordinary dividends, but these are sometimes supplemented with one-off dividends, or *special* dividends (Brealey, Myers, & Allen, 2017). The actual absolute monetary value a shareholder receives is dependent upon the number of shares he/she owns. For example, if a company declares a dividend of 2.00€ per share, an investor holding 100 shares eligible for this dividend will receive 200€ in dividends. These 200€ will then usually be taxed as regular income. Cash dividends in themselves do not change the ownership structure or alter the number of outstanding shares in any way. Alternatively, companies may issue stock dividends. These essentially work the same as so-called stock splits: If a company declares a stock dividend of 10%, each shareholder will receive 10 new shares for every 100 shares owned by him/her (Brealey et al., 2017). This study will, however, only focus on actual monetary, non-special dividends, i.e. ordinary cash dividends.

In contrast to that, a company that decides to repurchase shares does alter its ownership structure. As the name suggests, the company buys shares back from its existing shareholders, which inevitably reduces the number of outstanding shares. A company can repurchase shares primarily in four different ways, as Brealey et al. (2017) describe: The first option, the most common one, is to announce and buy back shares as a regular

[1] For context, this translates to around 14 Billion €

open market transaction. Alternatively, a company may choose to use a tender offer, in which they declare to buy back a certain number of shares at a certain price above the current share price; shareowners can then decide to accept the offer or not. In a *Dutch auction*, the third option, the company announces a series of prices at which it is willing to buy back stock. The current shareholders can then propose how many shares they are willing to sell the company at each offer price. After that, the company evaluates the offers and calculates the cheapest price at which it can repurchase the target number of shares. Lastly, a company wanting to repurchase shares can also get in touch directly with one of its major shareholders and negotiate with him/her about repurchasing part of their stake.

Following a repurchase, the relative holdings of each shareholder that did not sell a part of their shares increase post-repurchase. Moreover, ceteris paribus, the value of all outstanding shares that are left of the company rises because there is less supply on the market. Shareholders profit via the difference between the price they initially paid for the share(s), and the price at which the company is buying them from them. This difference is called *capital gain* and typically receives preferable, lower tax treatment compared to dividends (Andriosopoulos & Hoque, 2013; DeAngelo et al., 2008).

The distribution of money to shareholders usually requires cash to be left after the company has paid all of its expenses and after all investments are made. If this is the case, companies can decide to pay out the residual cash, as described, or keep it in their *retained earnings* account. Being a residual amount, it therefore appears logical that corporate payout and payout policy is linked with other intra-firm decisions that happen before.

Specifically, this involves investment policy and -opportunities. This is because the amount left to distribute to shareholders depends, amongst other things, on the money spend on investments. This interlinkage between investment/financing policy, capital structure, and corporate payout is pointed out and explained by the *pecking order theory*. This theory was popularized by Myers & Majluf (1984) and Myers (1984) and posits that firms have a specific preferred order of which source of financing they want to use

first. The model does not explicitly explain *why* companies pay out, but rather that *if* companies choose to pay out, the pecking order preferences should affect the decision to pay (Fama & French, 2002).

The pecking order model states that companies use internal funds (i.e. profits, retained earnings) first to e.g. finance projects, pay dividends, or repurchase stock. If there are no sufficient internally generated funds available, firms turn to debt financing. As a last resort, equity financing is used, should both internally generated funds and debt financing not be sufficiently available. This order is motivated by the costs associated with each financing instrument, such as issuing-cost of new equity, transaction cost, or making manager's superior information about the company prospects known to the public (Fama & French, 2002).

Another factor that is theorized to be linked to the payout policy is the *life stage* of the company. Companies that face ample growth opportunities are typically in the earlier stage of their life-cycle and not as profitable as large corporations. Thus, they optimally use all available cash to finance their investments and also refrain from paying out (Brealey et al., 2017; Ross, Westerfield, & Jordan, 2013). The older, more established, and profitable a company gets, the fewer growth opportunities it tends to have and the more free cash is likely available for returning directly to shareholders (Brealey et al., 2017; Ross et al., 2013). It follows that payout should only occur if the company already has enough financial slack, low to moderate investment requirements, and is profitable.

Overall, the pecking order theory implies that corporate payout adapts to and is dependent upon the (short- to medium-term) investment decisions and opportunities, the current financial resources, and the ability to raise financing (Myers, 1984). Thus, depending upon the decision on how a company can and wants to invest in projects, co-determines how much cash can be distributed to shareholders.

2.1.2 Ownership

As established in the prior section, shareholders are *owners* of a company by acquiring shares. To understand the possible relationship of ownership and corporate payout, it is important to clarify the dimension amongst which ownership can be classified.

Two main axes are commonly used to identify owners: *Size,* and *identity* (see e.g. Douma, George, & Kabir, 2006). *Size* relates to the holdings of a shareholder in a company; the more shares a single shareholder or a few shareholders have in a company, the more *concentrated* the ownership structure is deemed to be. The more individual, small shareholders a company has, the more *dispersed* is ownership in that company.

Prior literature has also suggested that the type (i.e. the identity) of owner matters with regard to corporate payout policy (see Crane, Michenaud, & Weston, 2016; Gugler, 2003; Huang & Zhu, 2015). The identity of the shareholder describes who the shareholder is e.g. a bank, another company, a manager of the company, or an individual.

2.1.3 Institutional Setting

This study focuses exclusively on Danish listed firms and investigates the intersection of ownership and corporate payout. As such, it is important to briefly elaborate on the institutional setting within Denmark.

Denmark employs a civil law system, which is regarded as somewhat better in terms of investor protection and judicial efficiency compared to the civil law system outside of Scandinavia (Sinani et al., 2008). However, it is still considered to be worse than common law (La Porta et al., 2000). Denmark is also historically characterized by a more concentrated ownership structure (Khalfan & Wendt, 2020; Sinani et al., 2008).

In terms of corporate governance, the Danish corporate governance committee (Danish: "*Komitéen for god Selskabsledelse*") has issued corporate governance recommendations for over a decade. These are primarily aimed at publicly listed companies and published

publicly[2]. These guidelines revolve around best practices and the "comply or explain" principle. This means that if a company does not comply with a certain recommendation fully, they must explain their reasons for doing so. The recommendations encompass topics such as communication between the company and its shareholders, tasks and responsibilities of the board of directors as well as its composition, and the remuneration of the management and the board of directors.

Concerning the board of directors, Danish companies employ either a one-tier or semi-two tier boards; the shareholders appoint the board of directors, which then hires and fires managers and must approve of all major decisions. However, the board is not supposed to be involved in day-to-day management (Thomsen, Rose, & Kronborg, 2016). The *Lov om aktie- og anpartsselskaber (selskabsloven*)[3] prohibits the chairman of the board to have any duties in the executive field, and vice versa; thus, the CEO and chairman of the board are always separated. Further, Danish law also gives the option (right) to employee representation on the board of directors in companies with more than 35 employees; that is, if a majority of employees vote in favor of having employee representatives on the board (Sinani et al., 2008; Thomsen et al., 2016).

If the employees vote in favor of their representation, they are allowed to vote half the number of board directors that the shareholders vote (Thomsen et al., 2016). This is equal to one-third of the whole board, i.e. if there are six shareholder-elected directors, the employees have the right to vote for three representatives. However, there is an additional rule called the *rounding up* rule: This rule states that if the employees have less than 50% of representatives on the board, they have the right to choose a new, additional representative (Thomsen et al., 2016). Thus, if the number of shareholder-elected directors is uneven, the law allows that the employees vote for another representative (Thomsen et al., 2016). This can be exemplified by imagining that if the

[2] See *https://corporategovernance.dk/* for access to these guidelines
[3] English translation: Danish Act on Public and Private Limited Companies

shareholders elect five directors, the employees would theoretically be entitled to 2.5 representatives. This number of directors is not possible in practice, hence why the law allows them to elect three instead of two representatives. A board size that allows for the *rounding up* rule to come into effect, and thus more employee "voice" in the board, can be seen as a higher degree of stakeholder orientation and better corporate governance (Fauver & Fuerst, 2006). Board members elected by the employees have the same obligations and rights as the other board members elected by shareholders (Thomsen et al., 2016). Also, employee-elected representatives are classified as being non-independent (Corporate Governance Committee, 2013; Waddington, Hendrickx, Blanpain, & Conchon, 2018) and are commonly elected for four-year terms following the recommendations from the Danish Corporate Governance Code. The general board members, however, should be elected on an annual basis (Waddington et al., 2018).

Regarding corporate payout, companies are only allowed to pay out to their shareholders if retained earnings are not negative (Raaballe & Hedensted, 2011). Moreover, companies have always been allowed to buy back shares, and no other hindrances, regulatory or institutional, with regard to initiating share repurchases are placed by Danish law (Raaballe & Hedensted, 2011). This has historically not necessarily always been the case for all countries: In Germany, for example, companies were not allowed to buy back stock from their shareholders until May 1st 1998 (Andres et al., 2019). Similar to other countries, share repurchases are taxed favorably compared to dividends in Denmark (Raaballe & Hedensted, 2011).

According to the *Danish Act on Public and Private Limited Companies*, Danish companies are also allowed to have multiple share classes, from which the additional share class often have higher voting power (e.g. 10:1) compared to the ordinary shares. Shareholders having at least 5% of the total share/voting capital have to disclose this to the company, who then has to disclose this to the public in its annual report. 5% is also the threshold at which shareholders in Danish companies gain additional power. After meeting/exceeding this threshold, shareholders are e.g. able to request extraordinary

meetings and thus actively influence agendas on their own, according to Danish law and the *Danish Act on Public and Private Limited Companies*.

2.2 Agency Theory

The previous discussion gives, among other things, an introduction to what corporate payout is, why it is important, and how it relates to other decisions made in the company. However, this does not explain why some companies pay out while some do not. Moreover, these companies that do not pay out might be performing very well, potentially even better than other companies that are paying out. It, therefore, does not tell us anything about the real drivers behind the corporate payout "puzzle", as Black (1976) called it.

In an attempt to solve the *puzzle,* one popular way to explain why corporations pay out is agency conflicts and agency costs. According to the agency theory, as proposed by Jensen & Meckling (1976), agency costs arise when ownership and management of a company are separated. There are two popular versions of agency conflicts: The *horizontal agency conflict* and the *vertical agency conflict* (Roe, 2008).

The *vertical agency conflict* occurs between the management of the company and its shareholders, which is why it is also often called the *principal-agent* conflict (Singh & Davidson, 2003). In companies with shareholders, the shareholders (principals) appoint managers (agents) to run the company on their behalf and in their best interest. Hence, company ownership lies with the shareholders, while (day to day) management lies with the appointed managers.

On the other hand, the *horizontal agency conflict* occurs *among* the shareholders themselves, hence why they are called vertical; more precisely, they are theorized to exist between larger shareholders (blockholders) and small shareholders (Roe, 2008).

In the upcoming subsections, I elaborate in more detail what the basic theory behind these two concepts is and relate them to corporate payout.

2.2.1 Vertical Agency Conflicts

The underlying principle of the management-shareholder conflict is that the managers do not act in the best interest of shareholders but rather try to maximize their wealth. This in turn implies that the interests of shareholders and the management are not aligned. From this misalignment, so-called agency costs arise. According to Jensen & Meckling (1976), these agency costs are comprised of (*i) monitoring expenses of the principal(s), (ii) bonding expenses of the agent(s),* and *(iii) the loss of residual*. Monitoring expenses, such as extra auditing or formal controls, can be the first way to limit the manager's possibility to extract benefits for themselves but are costly to implement (Jensen & Meckling, 1976). Bonding expenses may manifest themselves by the agent (management) offering to enter into a contract which guarantees that they face legal consequences for misbehavior happening at the expense of the shareholders (Jensen & Meckling, 1976). Lastly, the residual loss is the loss in wealth experienced as a result of the agency problems, which may for example be the decline in the market value of shares due to the malfeasance of the manager's diverted interests and actions, Jensen & Meckling (1976) state.

Elaborating on this basic notion of vertical agency conflicts, Jensen (1986) proposes the *free cash flow hypothesis*. This hypothesis predicts that if the company has high levels of free cash flows available, managers may use that money to their own benefit and leisure, such as using company jets to go on holiday, or overinvestments in low-return projects. They may, for example, choose projects which are easier to execute such that they can protect their position, instead of the ones that would benefit the company and the shareholders most

2.2.1.1 Vertical Agency Conflicts and Corporate Payout

To reduce these vertical agency conflicts and costs, corporate payout can be used (Jensen, 1986). The available free cash would be paid out via dividends and/or repurchases, such that it cannot be spent on morally hazardous activities by the managers. Subsequently, managers have to seek additional financing from the outside capital market if they need it. Getting additional financing from outside the company exposes them to market-imposed monitoring by additional parties, such as banks (DeAngelo et al., 2006; Easterbrook, 1984; Jensen, 1986) who examine their financial statements and records before agreeing to lend money to a company. It hence also follows that companies with higher free cash flows should pay out more or should be more likely to pay out because they are likely more prone to agency problems caused by this residual cash.

Due to its popularity, the free cash flow hypothesis and agency theory have attracted many researchers: Fama & French (2001) find that companies exhibiting lower dividend payout are experiencing higher growth opportunities, are less profitable and smaller in size than dividend payers. This implies that dividend payers are more mature, more profitable, and larger. Companies that are larger and have existed for a longer period are typically generating more cash flows than expenses, thus are more profitable than young companies. These results are strengthened by Denis & Osobov (2008), Chang, Dutta, Saadi, & Zhu (2018) and Raaballe & Hedensted (2011), who find that older, larger, more profitable companies have higher propensities to pay dividends.

Some studies also observe a negative relationship between growth opportunities and payout (Mancinelli & Ozkan, 2006). Fama & French (2002) find supporting evidence by showing that more profitable firms, and firms that have few investment opportunities, have higher dividend payout. They also find that more profitable firms have less debt. Thus, more profitable firms generate more internal funds and have to resort less to forms of financing such as equity or debt financing. Truong & Heaney (2007) also find that profitability is positively related to dividends while debt and growth opportunities are negatively related to dividends. Moreover, Andriosopoulos & Hoque (2013) find that

companies enacting share repurchases have more excess cash and are larger, thus indeed use share repurchases as a self-enacted mechanism to reduce agency cost formed by residual free cash flow.

In addition, DeAngelo et al. (2006) find strong evidence that the ratio of earned/contributed capital plays a major role in determining corporate payout policy and subsequently the mitigation of agency cost. They find a significant positive relationship between the amount of earned equity to total common equity and the dividend payment decision. A higher ratio of earned capital (internally-generated via operations) to contributed capital (equity investments or debt financing from outside parties) is a measure of firm maturity and depicts their ability to internally generate sufficient cash flows to reduce reliance on external cash flows (DeAngelo et al., 2006). In turn, their results suggest that agency problems are higher in companies with a higher fraction of the total capital being earned capital from operating activities. This capital is not acquired from the outside capital markets and accordingly is not under the same market scrutiny that outside capital is. This is overall in line with the other results also suggesting that more mature, profitable firms are more likely to pay out. Denis & Osobov (2008) find support for these results and implications for the earned/contributed capital mix by finding the same significant positive relationship with the likelihood of dividend payments.

Overall, these results provide strong support for the prediction of agency theory and the free cashflow hypothesis: Companies that are more likely to have increased agency costs formed by free cash flows - i.e. older, larger, more profitable companies with less debt and few growth opportunities – actively use payout as a means to mitigate agency costs and monitor the managers.

2.2.2 Horizontal Agency Conflicts

As defined previously, shareholder's can be classified using *size* and *identity*. Large shareholders (i.e. large in the *size* of their shareholdings) by definition have more voting power and thus more immediate influence comparatively than minor(ity) shareholders do. Blockholders have great interest and power in monitoring managers due to their large stake in the company. On the other hand, minority shareholders do not have enough economic incentive to actively monitor the managers to offset the costs of monitoring (Grossman & Hart, 1980). Thus, the small shareholders engage in what is called *free-riding*, which is the reliance on other shareholders to carry out monitoring activities while the free-riders would still enjoy the benefits of better-monitored managers (Farinha, 2003). This is particularly pronounced in dispersed ownership structures (Gugler & Yurtoglu, 2003; Mori & Ikeda, 2015). Blockholders, and thus a more concentrated ownership structure, may be able to reduce the free-riding problem because they align interest better between the management and shareholders; therefore, they can be an effective solution to mitigating vertical agency conflicts and issues found in dispersed ownership structures (Mori & Ikeda, 2015) which may possibly substitute for corporate payout as a different mitigation tool (Gugler & Yurtoglu, 2003; Rozeff, 1982).

However, the large shareholders also carry the associated costs of free-riding, and experience less personal portfolio-diversification, thus making also their wealth more dependent on the performance of the firm they are blockholders at (Wright, Ferris, Sarin, & Awasthi, 1996). Hence, these large shareholders have incentives to extract considerable private benefits and can potentially do so due to their strong position within the company. Their influential voting and decision power may lead to expropriation of minority shareholders by e.g. establishing high benefits for just the large shareholders (Gugler & Yurtoglu, 2003) or by keeping money retained within the company and thus under the blockholders' control, or by establishing favourte. This concept is also known as *rent extraction*, as called by Gugler & Yurtoglu (2003).

2.2.2.1 Horizontal Agency Conflicts and Corporate Payout

To combat the rent extraction by blockholders and subsequent increased ownership concentration, corporate payout may again provide an appropriate tool to limit the extraction of rents while also showing that the blockholder is not intending to expropriate the minority shareholders (Gugler & Yurtoglu, 2003). By actively paying out residual cash, less money is available for the blockholders to extract for private benefit. However, some studies like Mancinelli & Ozkan (2006) find that companies with higher ownership concentration are paying fewer dividends, thereby supporting the rent extraction hypothesis. On the other hand, Berzins, Bøhren, & Stacescu (2018) find that companies indeed pay out dividends to reduce agency conflicts between the blockholders and other minority shareholders.

It is however apparent that the relationship between ownership concentration, agency cost, and payout is ambiguous: On the one hand, concentrated ownership may reduce agency conflicts between managers and shareholders, which may indicate a substitution effect of corporate payout and ownership (Gugler & Yurtoglu, 2003; Mori & Ikeda, 2015; Rozeff, 1982). On the other hand, concentrated ownership structures have their own set of agency problems because large shareholders may be inclined to derive private benefits by using their higher control power in the company at the expense of minority shareholders (Gugler & Yurtoglu, 2003). The latter may imply the need for a higher need of corporate payout to offset these morally hazardous intentions.

Concerning this ambiguity of the relationship between concentrated ownership and corporate payout policy, another theory that is closely connected to agency theory sheds light on the supposedly ambiguous relationship: The *managerial entrenchment theory*. This theory predicts that the relationship between corporate payout policy and ownership is, in fact, dependent upon the level of ownership concentration: According to Farinha (2003), before a certain threshold of concentrated ownership shareholdings, increasing ownership concentration helps the company diminish the agency costs between shareholders and managers (Horizontal Agency Conflicts). This would indicate a negative relationship between ownership concentration and corporate payout, as well

as the substitution effect of ownership and payout explained before. However, if the shareholding of a shareholder passes that threshold, the agency cost of ownership concentration outweigh the benefits of increased monitoring. This then poses that payout policy becomes a compensative tool at high concentration levels for alleviating these agency costs; this implies a positive relationship between the two variables past the threshold (Farinha, 2003).

Farinha (2003) tests this hypothesis and finds confirmative evidence for a U-shaped relationship between the ownership concentration and payout. Truong & Heaney (2007) spot exactly the same significant convex relationship between the largest shareholder's ownership stake and the dividends paid. They find a negative relationship between dividend payout and shareholding of the major shareholder at relatively low levels of shareholding, but a positive relationship between the two variables at higher levels of shareholding of the largest shareholder. The negative relationship at low levels is supportive of the notion that dividends and ownership are in fact substitutional devices for mitigating agency cost between shareholders and managers. At higher levels of shareholding of the largest shareholder, dividends are needed in order to ensure that minority shareholders are not expropriated and effective monitoring is maintained (Truong & Heaney, 2007). Overall, this delivers both evidence for agency theory as well as the managerial entrenchment hypothesis.

2.2.2.2 Horizontal Agency Conflicts – Different types of shareholders and their relationship with corporate payout

Given the fact that horizontal agency conflicts are focusing on the expropriation of small shareholders by large shareholders, it is important to recognize that shareholders are not homogenous. There are multiple different shareholders that have different characteristics and generally, different types (i.e. identity) of shareholders have different goals and incentives (Douma et al., 2006). Thus, it is important to clarify what effects different shareholder types may have.

Existing literature commonly lists four main types of shareholders: *Institutional shareholders* (e.g. banks or mutual funds), *insiders* (family, managers, employees), *the government/governmental entities, other (industrial) corporations*.

Financial institutional shareholders, such as banks, insurances, or mutual funds, are professional investors and are hence expected to generally have greater expertise and specialized training to successfully monitor companies; subsequently, they are deemed to be very good monitors of a company (Crane et al., 2016). They are also assumed to be better at mitigating agency conflicts (Chiang & Lai, 2015) because they usually have fewer business ties or personal ties with the company they hold shares in, and a generally more active stance in monitoring (Aggarwal, Erel, Ferreira, & Matos, 2011; Grossman & Hart, 1980). Taken together, this is often referred to as *arm's-length monitoring* (Huang & Zhu, 2015) which means that institutional investors are supposed to be less personally involved and are therefore not compromised in their role as effective monitors of the company. Thus, they are keeping the company at *arm's-length* rather than "up close" and personal. Therefore, theory predicts that institutional ownership is a considerably better corporate governance mechanism than other major shareholders (Douma et al., 2006) and should thereby either force corporate payout to mitigate agency problems (Crane et al., 2016) or substitute for corporate payout (Truong & Heaney, 2007).

On the other hand, *insiders* (such as families, directors, or employees) are expected to be more involved with running the day to day business and they are usually more emotionally bound to the company (Andres et al., 2019). As a result, fewer information asymmetries, and lower agency costs concerning the manager-owner agency problems are likely (Gugler, 2003; Schmid, Ampenberger, Kaserer, & Achleitner, 2010). However, concerning the focus of this study, the horizontal agency conflict, other arguments propose that insiders are more prone to empire-building and extraction of private benefits (Firth, Gao, Shen, & Zhang, 2016). This subsequently predicts more agency problems between major and minor shareholders if an insider is a major shareholder.

In companies where the *government* is a large shareholder, it is argued that a *double-principal-agent* issue exists (Gugler, 2003): When the government has shareholdings in a company, principal-agent problems between managers and owners, as discussed previously, exist. However, the politicians working for the government are elected by the citizens, thus they are "agents" to the citizens. Therefore, additional agency issues surface as the citizens could be seen as the actual owners of that company. The citizens appointed agents (politicians) to act on their behalf. These politicians then appointed agents (managers of a company) to act on their behalf, too (Gugler, 2003). As such, the citizens do not directly control/monitor the company, but the government does so on behalf of the citizens. Following this, Gugler (2003) puts the hypothesis forward that the politicians/government would like to see payout out by a company because (1) payout indicates the economic well-being of a company and (2) they reduce the free cash that managers may waste.

The fourth major type of shareholders is other *companies* that sell goods or services to their customers. Similar to when the government is a major shareholder of a company, corporations that have shareholders of their own also face double principal-agent issues. Given this, they are proposed to be less effective at monitoring (Andres et al., 2019). However, the fact that managers are supposed to monitor other managers may lead to different scenarios: The monitoring managers owning shares in another company may decide to side with the managers they are supposed to control, and thus adopt a less shareholder-optimal program (Andres et al., 2019). This may occur because they may sympathize with the managers of the company that they have stake in because they are in a similar situation themselves. However, as Andres et al. (2019) also point out, the opposite prediction is also possible; a positive relationship between large shareholding by corporations and corporate payout may be expected due to the double-principal agent issue.

Empirical evidence has provided valuable insights into the effects of different large shareholders: Crane et al. (2016) find evidence for the positive effect of institutional ownership on corporate payout, especially for dividends. Similar results are obtained by

Short, Zhang, & Keasey, (2002). These results are in line with the prediction that institutional owners press for corporate payout due to them being superior monitors and actively taking a stand. However, Firth et al. (2016) find that among the institutional investors, only mutual funds shareholdings have a significant positive impact on dividends, whereas the effect of other institutional investors is insignificant.

Truong & Heaney (2007) distinguish the major shareholder based on identity (insider, financial institution, and state) and show that firms are less likely to pay dividends if the largest shareholder is an insider. Andres et al. (2019) find that companies, in which families are the largest shareholders, have a negative relationship with dividend payout, especially at high levels of shareholding. This is again supporting the notion that insiders are more prone to keeping money inside the company for the extraction of private benefits. These results are also in line with the notion that large insiders may prefer larger retained earnings to more easily use them for their private benefits, as indicated by the agency theory and the rent extraction hypothesis.

Le & Le (2017) find that the level of shareholding of the largest shareholder and dividend payout are negatively related, regardless of the identity. However, if the largest shareholder is the government, the company pays larger dividends than if the largest shareholders is of a different type (Le & Le, 2017). This provides support for the idea of a double-agency problem in government-owned entities. Gugler (2003), too, finds that the target payout is highest for companies with governmental entities holding the largest stakes, also consistent with the prediction of the *double principal-agent problem.* Further, Andres et al. (2019) find that there is a positive relationship between payout and companies which are owned by other corporations. This provides evidence for the argument that other non-financial companies as large shareholders also press for payout because of the double principle-agent problem.

Gugler & Yurtoglu (2003) finds that in companies where there is only one large shareholder, regardless of identity, dividend payout is reduced with increased holdings of that shareholder. This suggests the expropriation of minority shareholders, consistent with the rent extraction hypothesis.

However, Gugler & Yurtoglu (2003) further note that in companies where there are multiple large shareholders, these other blockholders have a positive effect on dividend payout. Gugler &Yurtoglu (2003) indicate the benefits of a second large shareholder in mitigating minority shareholder expropriation and agency cost between shareholders are significant. The other large shareholders seem to press for payout to reduce rent extraction of the largest shareholder, as the results of Gugler & Yurtoglu (2003) indicate.

Theoretical arguments, as well as empirical evidence regarding the effect of multiple large shareholders, are scarce yet seemingly important to consider.

Maury & Pajuste (2005), as well as Jiang, Cai, Jiang, & Nofsinger (2019), propose that the existence of multiple large shareholders may lead them monitoring each other. This can be done by e.g. insisting on extra audits (Pagano & Röell, 1998) or forcing payout. Thus, having multiple large shareholders may lead to a greater propensity to pay out because they force payout as a means of monitoring and to avoid rent extraction, as indicated by Gugler & Yurtoglu (2003).

Aside from Gugler & Yurtoglu (2003), Maury & Pajuste (2005) also find that the existence of multiple shareholders reduces the expropriation of minority shareholders by the largest shareholder and they are thus value-enhancing to the company, thereby supporting the hypothesis that blockholders act as additional monitors. Jiang et al. (2019) also find a positive relationship between corporate dividends and the existence of multiple large shareholders, delivering support for the monitoring hypothesis in which payout increases. Besides, Faccio et al. (2001) find that the existence of multiple large shareholders increases dividends; thus, additional large shareholders help to mitigate possible wealth expropriation of minority shareholders by the largest shareholder by monitoring and subsequently forcing payout.

2.2.3 Other Firm-Level Mechanisms to Mitigate Agency Costs

So far, I have considered the relationship between ownership and payout policy from the viewpoint of agency theory and related concepts such as rent extraction and the managerial entrenchment hypothesis. All of these shed light on how ownership and payout policy could be related. It has been evident that dividends/repurchases are one of the primary tools to offset multiple forms of agency costs. Nonetheless, it appears reasonable to ask whether other (governance) tools may act as a substitution for dividends and repurchases. This becomes especially important in later analysis, as omitting important variables may lead to incorrect conclusions of the study. Hence, the upcoming subsections explore prior literature about other ways of mitigating agency costs.

2.2.3.1 Debt

Jensen (1986) and Rozeff (1982) note that debt may serve as a substitute for dividends: Debt has a senior, legally binding claim over both dividends and share repurchases. Once a debt contract is agreed, the debtholder gets interest payments based upon either a fixed or floating rate from the company that has received the debt financing. At the end of the contract, the principal amount of the debt must be returned to the lender too. These payments are binding by law. If there is a default in interest payments without any prior consultation and possibly contract (re-)arrangements between the lender and the receiver, the lender can take legal action to get his money back. Equity owners cannot legally claim dividends because they are residual claimants, as previously pointed out. Thus, interest payments on debt are a much more secure cash flow than dividends or repurchases due to debt payments being legally enforcable. Recognizing this, it follows that debt also reduces the amounts of free cash flow available and can thereby possibly serve as a substitute for corporate payout in alleviating agency costs (Jensen, 1986). This suggests a negative relationship between debt and payout. Several studies support this expectation of a negative relationship (DeAngelo et al., 2006; Fama & French, 2001; Jacob & Jacob, 2013; von Eije & Megginson, 2008), while others do

not detect this relationship at a significant level (Gugler, 2003; Raaballe & Hedensted, 2011). However, the results of my study will be controlled for debt and it is expected that debt will be negatively related to corporate payout.

2.2.3.2 Further Firm-Level Corporate Governance Mechanisms

Like debt, other firm-level governance mechanisms may also influence corporate payout. Thus, it is important to investigate the effects of other corporate governance mechanisms on corporate payout and agency cost reduction.

Good firm-level corporate governance has received empirical support that it is generally associated with a higher propensity to pay out and higher payout levels (Jiraporn, Kim, & Kim, 2011). This confirms the idea that dividends are the outcome of good governance, rather than a substitute, as indicated by La Porta et al. (2000) and Jiraporn et al. (2011). De Cesari (2012) provides evidence for the fact that a company's payout policy is used to lessen agency problems between major and minor shareholders. Simultaneously, though, he delivers supportive data in favor of the substitution hypothesis: Companies characterized by weaker governance are more likely to pay dividends to substitute for their weak governance, indicating a negative relationship between governance and payout. On the other hand, Chang et al. (2018) find that firm-level governance plays an influential positive role in the determination of dividend payout. According to them, stronger governance on the firm-level results in higher dividend payout propensity. They find that board independence, the board size, the separation of CEO and board chairman, and yearly audit committee ratification have a significantly positive effect on dividend payout; the existence of dual share classes is significantly negatively related to corporate payout in their study. Regarding stock repurchases, they do not find any significant effect of corporate governance mechanisms. Chae, Kim, & Lee (2009) also find that companies whose agency costs outweigh their financial constraints pay more dividends with better governance. However, they also show that if financial constraints are high (which is typical for smaller, younger firms) and agency costs are high too, firms decrease dividends. They

argue that this happens because their governance is becoming very efficient at dealing with agency problems by itself (Chae et al., 2009). For small firms, often synonymous with stronger financial constraints, the substitution of payout and better governance seem applicable. Thus, the relative importance in a given firm of financial constraints (for example proxied by the size of a company) and agency cost seems to determine payout, consistent with prior literature.

Another mechanism is the board of directors and its composition. Fauver & Fuerst (2006) find that employee representation is part of good corporate governance as it increases monitoring behaviour, possibly because they do not seek to privately extract benefits from the company like managers may do; thus employee representation also has a positive effect on dividend payout to reduce agency costs according to Fauver & Fuerst (2006). Sharma (2011) finds a significant positive relationship between the propensity to pay dividends and board independence. Sharma (2011) argues that this is because greater board independence enhances internal monitoring. As such, the greater propensity to pay out is a result of better monitoring and facilitates the mitigation of agency problems. Thus, one may anticipate that better corporate governance is associated with higher levels of payout and a higher propensity to pay out. However, it is also possible that better corporate governance substitutes for corporate payout as an internal mechanism to reduce agency cost because of enhanced monitoring, as indicated by De Cesari (2012).

2.3 Alternative Explanations of Payout Policy

Having explored the theoretical basis of agency theory and ownership and their possible effects on corporate payout policy, other theoretical arguments for what may drive corporate payout will be explained next.

2.3.1 Tax Clientele Theory & Tax Advantages of Share Repurchases

A different stream of research has focused on explaining the payout policy via the tax clientele theory. This theory does not assume a world without taxes like Miller & Modigliani do but rather assumes that different investors have different preferences. Allen, Bernardo, & Welch (2000) pose two assumptions, the first one being that there are in essence only two clienteles: Individuals that are taxed, and institutions that are not. Institutions are more willing to correct faults within the company by using several corporate governance mechanisms, due to their often considerably large voting power (Allen et al., 2000). The second assumption they propose is that dividends attract institutional investors because these investors are tax-exempted. They further state that, because dividends attract institutional owners, these owners are more likely to take action within the company if it is not well-run. Hence, the real firm quality is more likely to be revealed when dividends are paid, which is why (i) "bad" companies will refrain from paying dividends in order to avoid attracting these investors, and (ii) institutional ownership is assumed to positively influence firm value (Allen et al., 2000). Following from this, investors may either sort themselves to corporations that employ a payout policy they prefer or may try to shape the payout policy of the company they invest in to cater to their preferences (Desai & Jin, 2011).

The empirical evidence for the tax clientele as a first-order determinant of payout policy is not completely conclusive: Desai & Jin (2011) examine the tax clientele theory among institutional investors. They find that while institutional shareholders invest in companies employing their preferred payout policy, companies also cater to the tax-based preference of their institutional shareholders. Yet, DeAngelo et al. (2008) and

Andres et al. (2019) do not find significant evidence of tax-clienteles being a first-order determinant of payout policy, and neither do Schmid et al. (2012).

Looking at the general impact of taxes on payout policy, it is important to recognize that dividends are commonly taxed higher than capital gains on repurchases. Furthermore, capital gains can often be deferred and are only taxed when realized i.e. shares are sold. This may lead to the preliminary conclusion that once managers recognize that tax advantage, they should engage more in repurchases to maximize shareholder wealth, implying that these two forms of payout may substitute for one another.

Azahrani & Lasfer (2012) state that dividends and share repurchases are responsive to the country's tax system: If the classical tax system (double taxation of dividends) is in place, cash dividends are lower and share repurchases are higher. Thus, companies compensate to maximize after-tax shareholder return by repurchasing stock due to the differences in taxation, Azahrani & Lasfer (2012) report. However, La Porta et al. (2000) does not find evidence that taxes significantly affect dividend payments as a payout channel choice, and Deangelo, Deangelo, & Skinner (2000) do not either. Jacob & Jacob (2013) find that an increased dividend penalty reduces the fraction of the total payout that is paid out as dividends, thus finding support for the tax influence on the payout channel choice. However, they also state the tax effect in single-country studies is often lower than is reported, as such rendering it less important in these settings.

Therefore, the actual empirical evidence is inconclusive regarding the actual practical relevance of taxes in determining the payout channel. Further, given that I only investigate a single country, taxes will not be tested for in this study.

2.3.2 Signalling Theory

Another possible explanation for the choice of channel investigated by researchers is based upon the signaling content of payout decisions to overcome asymmetric information between insiders and outsiders of a corporation. Given that the insiders of a company have more information at hand about the company's current position and future outlook than outsiders do, a company may use its payout policy to send signals

about the future to its (outside) shareholders (Bhattacharya, 1979). If a corporation decides to payout (increased) dividends, this acts as a strong and costly signal that the management has a positive outlook on the company's future that allows it to (at least) support the cash outflows associated with the current level of dividend payments (Black, 1976). Conversely, cutting dividends/payout would be interpreted as a negative signal. Share repurchases also indicate – according to this theory – a positive outlook of management on the company's future; it is assumed that shares are only repurchased when the managers think that their company's stock is underpriced. However, dividends are argued to be more "sticky" than repurchases, because dividends are more of a commitment to the future whereas share repurchases are more flexible, and thus dividends present a stronger signal than repurchases (Chang et al., 2018; Chiang & Lai, 2015; De Cesari, 2012; Jacob & Jacob, 2013; Wardhana, 2016).

Further, insiders may signal their unwillingness to expropriate smaller shareholders by paying out (Wardhana, 2016). Sending signals that they do not expropriate minor shareholders is important for them since observed expropriation negatively affects the company's wealth, reputation, and value (Claessens, Djankov, Fan, & Lang, 2002; De Cesari, 2012).

Empirical evidence for the signaling content of payout is rather mixed as well: Denis & Osobov (2008) do not find supporting evidence for signaling to be one of the first-order determinants of payout policy. They find that firms older, larger, more profitable companies have higher propensities to pay dividends compared to younger, smaller, less profitable firms – the latter of which should in theory be more prone to asymmetric information than big, mature companies and thus in higher need of signaling. On the other hand, Amihud & Murgia (1997) find evidence in favor of the signaling theory. They show that stock price reaction to dividend announcements are positive and significant, beyond what could be explained by just earnings changes.

2.4 Hypothesis Development

In the last sections, several theories and factors possibly explaining corporate payout have been described. In doing so, a heavy focus has been put on the agency theory and closely linked theories/hypothesis (free cash flow hypothesis, managerial entrenchment theory, rent extraction hypothesis). This is because agency theory, as well as associated theories, is directly linked to ownership and the potential effect on corporate payout. Other presented theories possibly explaining payout policy, i.e. tax clientele and signaling theory, do not make a direct connection between ownership (concentration) and corporate payout. As such, the hypotheses formulated in this section will focus on agency theory-based predictions. Specifically, the horizontal agency conflicts are the point of attention. This is due to Denmark being associated with higher ownership concentration, which thus makes the vertical agency conflicts (large shareholder – minor shareholder) more prevalent. The upcoming sections present the hypotheses studied in this paper and will shortly summarize and reiterate the basic arguments behind these hypotheses.

2.4.1 Ownership Concentration and Corporate Payout

Ownership concentration is, on the one hand, a possible mechanism to mitigate agency costs arising from vertical agency conflicts (Gugler & Yurtoglu, 2003; Mori & Ikeda, 2015; Rozeff, 1982). As such, a higher degree of ownership concentration may substitute for corporate payout as a mitigation mechanism (Gugler & Yurtoglu, 2003; Rozeff, 1982). Thus, a negative relationship between payout and ownership concentration would exist. However, other authors theorize that there is a positive relationship between the two because companies pay out more when ownership concentration is higher to avoid rent extraction (Gugler & Yurtoglu, 2003). The managerial entrenchment theory proposes both, in that the relationship might be convex. Before a certain level of ownership concentration, increased ownership concentration substitutes payout as a mechanism for mitigating agency costs. However, after a certain threshold, companies pay out more to avoid the consumption of private benefits by large

shareholders – indicating a positive relationship (Farinha, 2003). When tested for, there seems to be confirmative evidence of the convex relationship between ownership concentration and corporate payout (Farinha, 2003; Truong & Heaney, 2007).

Based on this, the first hypothesis – focusing on the relationship between ownership concentration and corporate payout – is formulated as follows:

H_1: Ownership concentration has a convex relationship with corporate payout.

2.4.2 Large Shareholders and Corporate Payout

The specific identities of shareholders are argued to be important in how they may affect corporate payout policy. However, to have an actual influence on the payout policy of a company to his/her preferences, a shareholder has to have enough power to "loudly" voice his/her opinion. To acquire such power and push his/her opinion through at voting decisions, a shareholder has to acquire a considerable amount of shares and belong to the larger portion of shareholders in a company. Hence why my analysis focuses exclusively on large shareholders. It is important to note that "large" does not necessarily mean "controlling" (i.e. more than 50% voting rights). Large shareholders (hereinafter defined as having more than 5% voting rights) can be controlling shareholders, however, they do not need to be. Having a single controlling shareholder makes all other potentially large shareholders irrelevant as, in a voting context, the controlling shareholder can always push his/her decision through. As I also want to investigate the possible effect multiple large shareholders on payout policy, I do not limit myself to dominant shareholders.

However, not all shareholders have the same goals when it comes to corporate payout policy, or have the same skillset (see 2.2.2.2).

Institutional owners are deemed to be very good monitors of the company, arguably better than other types of major shareholders (Chiang & Lai, 2015; Crane et al., 2016; Douma et al., 2006). Due to them being such a good corporate governance mechanism

and monitors, they may either press for payout or substitute for them. They may force payout to mitigate agency problems among shareholders and reduce minor shareholder expropriation, or replace payout as a mitigation tool because they themselves are so good at monitoring that payout is not needed anymore to lessen horizontal agency problems. Prior studies (Crane et al., 2016; Firth et al., 2016) point in the direction that institutional shareholders force payout. Hence, my hypothesis for large financial institutional shareholders is as follows.

H_{2a}: Large financial institutional shareholders have a positive relationship with corporate payout.

If an insider, which may for example be a closely-linked individual or a managers of the company, has a considerable equity stake in a company, the theory argues that they are more likely to withhold funds to consume them for private benefits (Firth et al., 2016). For example, they may use the cash available to invest in pet projects that strenghten their position in the company, rather than use it for the projects that make most sense economically (Jensen & Meckling, 1976; Rozeff, 1982).

Insiders are commonly seen as more closely tied to the company; for example, a manager of a company is likely more (emotionally) tied to the company than a new investor is, who invests in the company for pure diversification reasons amongst hundreds of other companies. However, insiders might also be looking to pay out as a means of signaling that they do not want to expropriate small shareholders (Wardhana, 2016). This is due to the fact that expropriating behaviour is often associated with lower firm value (Claessens et al., 2002). Further, a good reputation of not expropriating shareholders is associated with favourable terms for e.g. debt contracts (La Porta et al., 2000). Thus, insiders may also have a reasons to not keeping cash from small shareholders.The empirical evidence (e.g. Andres et al., 2019; Truong & Heaney, 2007) points to the direction, however, that insiders indeed keep cash retained inside the company to use for private benefit consumption.

As such, my hypothesis is as follows:

H_{2b}: Large insider shareholders have a negative relationship with corporate payout.

If the government is a large shareholder, the theory hypothesizes that due to a double-agency problem, this type of shareholder will be keener to press for payout (Gugler, 2003). Due to the fact that the government itself is – essentially – an agent of the country's people, they might want to force payout to show the citizens that the company is performing well; simultaneously, payout decreases the free cash at the hands of management to potentially waste on non-value maximizing investments (Gugler, 2003). The evidence on this provides support for this notion in some studies (Gugler, 2003; Le & Le, 2017).

H_{2c}: Large government shareholders have a positive relationship with corporate payout.

Lastly, other industrial companies may either press for payout because of their double agent-principle problem or have a negative relationship with corporate payout because they empathize with the other managers (Andres et al., 2019). The reasoning for the double-agency problem is similar to the one provided before for the state-owners. However, the empathy aspect is different; Andres et al. (2019) argue that because the managers of the shareholding-company are experiencing agency problems themselves in their own company, they may adopt a manager-friendly approach rather than shareholder-friendly one in the company they hold stake in. On the other hand, they may also be aware of this and thus choose to mitigate these problems by deliberately voting in favour of payout. Again, however, there are also other benefits derived from not expropriating small shareholders (La Porta et al., 2000). The evidence provided by e.g. Andres et al. (2019) points in the direction that large shareholders that are other

companies has a positive relationship with corporate payout. Thus, my hypothesis with regard to these shareholders is as follows:

H_{2d}: Large shareholders that are other companies have a positive relationship with corporate payout.

The literature also notes that having multiple large shareholders has a positive effect on corporate payout policy (Faccio et al., 2001; Gugler & Yurtoglu, 2003; Jiang et al., 2019; Laeven & Levine, 2008; Pagano & Röell, 1998). Pagano & Röell (1998) argue that large shareholders may monitor other large shareholder by e.g. "insisting on audits, orchestrating votes at shareholder meetings, generating publicity, or taking legal action against management's policies" (p.193). Thus, they may also force payout in order to minimize the possible rent extraction of the other large shareholders and expropriation of the small shareholders. The positive effect of multiple large shareholders is also found in other studies by Faccio et al. (2001) and Gugler (2003); specifically Gugler (2003) mentions that increasing equity stake of the second largest shareholder also increases the dividend ratio. Thus, an additional large shareholder monitors the largest shareholder to limit rent extraction via payout while also limiting expropriation of small shareholders.

H_3: Having more than one large shareholder has a positive relationship with corporate payout.

It is again important to highlight that "corporate payout" hereby refers to both intensity (how much) and the propensity to pay (how likely).
Previous literature often focuses on one type of payout, mostly dividends, as the dependent variable. However, I test for the effect on the general payout, as well as its components (repurchases and dividends) to get a more detailed picture of if there are

preferences of either dividends or repurchases in different models. As such, I may find a relationship when the dependent variable is changed to either dividends or repurchases and thus potentially discover relationships with predictors that would otherwise go unobserved.

3. Methodology

This section will outline how the statistical models are constructed and how the variables used to test the hypotheses are measured. An overview of the variables and their measurement can be found in Table 1. Further, I indicate which criteria are employed for the sampling procedure, which robustness tests are used, and how outliers are dealt with.

3.1 Statistical Analyses & Models

The most common methods used in prior research that investigates corporate payout and ownership are (a) logit regression for testing the propensity to pay out (e.g. Denis & Osobov, 2008; Khalfan & Wendt, 2020; Mancinelli & Ozkan, 2006; Truong & Heaney, 2007) and (b) multiple (OLS) regression for analyzing the level of payout (e.g. Andres et al., 2019; Jiraporn et al., 2011). As such, both of these methods are used in this study as well since they fit the data too, as later shown.

To carry out statistical analyses, certain conditions have to be met. The sample size is one of these issues in (multiple) regression analysis. Henseler (2019) states that at least 20, but preferably 50-100 observations are appropriate for multiple regression. The sample size of n=59 results in generally 276 firm-year observations. As later discovered, some regressions have dependent variables with fewer observations; however, no less than 50 in any instance. Thus, the sample size does not appear to be a problem in the study.

Further, there are four statistical assumptions of regression analysis, namely normality of distribution, homoscedasticity, linearity, and absence of correlated errors (Hair, Black, Babin, & Anderson, 2014; Henseler, 2019). These are tested before applying the regressions to the dataset. To test these, descriptive, univariate statistics are generated. To test if the distribution of the variables is approximately normal, normal probability plots are used if the descriptive statistics indicate potential problems due to severe deviations. Checking for multicollinearity is important too, as a high degree of multicollinearity can severely restrict the results of the research (Hair et al., 2014).

Multicollinearity is commonly checked by using the variance inflation factor (VIF). The respective VIF-value should be below 10, but preferably below 5; if this is the case, substantial multicollinearity can be ruled out as a major problem (Henseler, 2019). In case any of the variables does meet the criteria, this has to be remedied by e.g. transformation.

Endogeneity problems refer to the possibility of reversed causality between the dependent and independent variables. In this context, prior researchers also considered that payout policy may drive ownership structures and concentration (Khalfan & Wendt, 2020; Truong & Heaney, 2007), but did not find proof of that. As discussed before, theories like the tax clientele theory posit that shareholders may preferably invest in companies that employ their favored payout policy. This would indicate a reverse causality, or endogeneity, problem. Not addressing and accommodating these problems may severely limit the outcomes and usefulness of the results. Thus, I employ a one-year lag in the independent variables, following Chiang & Lai (2015), Khalfan & Wendt (2020), and Firth et al. (2016). This reduces the length of the initial sampling period from 2013 – 2018 by one year to 2014 - 2018. For example, this now assumes that the payout of 2018 (t) is predicted by the indepent variable values of 2017 (t-1). Using lagged variables takes care of endogeneity problems.

3.1.1 The Propensity to Pay Out

Given the research background and research question, the study considers both the decision to payout and how much to pay out. Thus, hypotheses have to be considered and tested twice; once to assess the decision to pay out or not, and once to test the payout level.

Consistent with Truong & Heaney (2007), Denis & Osobov (2008), and Mancinelli & Ozkan (2006), I use logit binary regression to determine the propensity to pay out. Logistic binary regressions, in contrast to multiple regressions, are characterized by having a dichotomous dependent variable (Hair et al., 2014). The dependent variables,

i.e. the decision to pay out or not, are dummies, thus only having two options (either 1 or 0). Hence, logistic regression is appropriate for testing the propensity to pay out.
To get a complete picture, separate models for the propensity to pay out in general (the sum of dividends and repurchases), dividends, and repurchases, respectively, are estimated. This is done to see if the results are uniform across the different payout types or not. The model is depicted below.

$$Pr(PAYOUT_{i,t} = 1) = Logit\ (\alpha_0 + \beta_1 Squared\_Conc_{i,t-1} + \beta_Z SType_{i,t-1} + \beta_3 OtherLarge\_SH_{i,t-1} \beta_x CONTROLS_{i,t-1} + \varepsilon_{i;t-1})$$

where:

$PAYOUT_{i,t}$ = Payout decision of a company i in year t

$Squared\_Conc_{i,t-1}$ = Cumulative ownership of the three largest shareholders of company i in year t-1, squared

$SType_{i,t-1}$ = Voting right percentage held by the three largest shareholders (per type) of company i in year t-1

$OtherLarge\_SH_{i,t-1}$ = Shareholder structure dummy (i.e. one or multiple large shareholders) of company i in year t-1

$CONTROLS_{i,\ t-1}$ = Control variables related to firm characteristics and corporate governance (see Table 1) of company i in year t-1

$\varepsilon_{i;t-1}$ = error term

3.1.2 The Level of Payout

To address how the level of payout (i.e. how much a firm pays out, if it pays out) is impacted, OLS multiple regression will be used, following Jiraporn et al. (2011) and Andres et al. (2019). OLS multiple regression can be used since the models involve a single dependent variable that is metric (the different payout ratios), predicted by at least two independent, metric variables (Hair et al., 2014). Following Khalfan & Wendt (2020) and van Beusichem (2016), the numerator of the payout ratio i.e. dividends, repurchases, or the general payout, has to be larger than 0 for this analysis. For the sake of brevity, only the new variable introduced for these models is explained below.

$$PAYOUT\_RATIO_{i,t} = \alpha_0 + \beta_1 Squared\_Conc_{i,t-1} + \beta_Z SType_{i,t-1} + \beta_3 OtherLarge\_SH_{i,t-1} \beta_x CONTROLS_{i,t-1} + \varepsilon_{i;t-1}$$

Where:

$PAYOUT\_RATIO_{i,t}$	= Payout ratio of a company i in year t where payout > 0

3.1.3 Robustness Test

Robustness tests will be applied after the main model regressions are run. A robustness test aims at testing how sensitive the outcomes are to modifying e.g. methods or variables used (Duffhues & Kabir, 2008).

For the robustness test, I employ different measures for key variables. The denominator of the dependent variables in the payout ratios will be changed from total assets to sales and net income (see e.g. Khalfan & Wendt (2020) and Alzahrani & Lasfer (2012)). Further, I use a dummy variable instead of the exact percentage held per shareholder type, similar to a measure van Beusichem (2016) uses.

3.2 Measurement of Variables

3.2.1 Dependent Variables

General payout ratios (dividends + share repurchases), dividends ratios, and repurchase ratios are measured in their total amount per observation scaled by total assets. This thus displays the general payout ratio (*Pay_TA*), the dividend ratio (*Div_TA*), and the repurchase ratio (*Rep_TA*). This is in line with similar studies such as Khalfan & Wendt (2020) and Alzahrani & Lasfer (2012). In this study and the upcoming analysis, *dividends* refer to ordinary cash dividends on common stock only. For further robustness tests, the payout ratio variables are scaled by sales instead of total assets, also following Alzahrani & Lasfer (2012), as well as scaled by net income. All raw financial data is collected in 000 DKK.

A dichotomous variable is created for repurchases, dividends, and general corporate payout respectively, following other studies such as Schmid et al. (2012) and Khalfan & Wendt (2020). The general corporate payout dummy (*Pay*) will take a value of 1 if a company either repurchased shares, paid dividends, or did both in a given year, 0 if otherwise. The dummy for dividends (*Div*) will take a value of 1 if a given company paid dividends in a certain year and did not repurchase, 0 if otherwise. The dummy for repurchases (*Rep*), similar to the other variable, will take a value of 1 if a company repurchased shares in a given year and did not pay out dividends, 0 if otherwise.

3.2.2 Independent Variables

Data is collected on the top three largest shareholders of a company, following prior research such as Pajuste & Maury (2002) and van Beusichem (2016).

Large shareholders are defined as having at least 5% of the total voting rights. The fraction of voting rights, i.e. the percentage, is collected rather than just the fraction of total shares owned. This is because voting rights can differ substantially in companies with multiple share classes, as is allowed in Denmark. For example, shareholder X may have 15% of shares of class A, while shareholder Y may have 5% of class B share. However, the B-shares may hold ten times the voting rights that the A-shares hold. Thus, only accounting for the percentage of outstanding shares owned would misrepresent the actual amount of 'voice' a shareholder has in a voting situation. In companies with only a single share class, the fraction of shares and the voting right percentage are the same. The actual influence of a shareholder on decisions in the company is dependent upon the voting power of a shareholder rather than only cash flow rights. It hence follows that voting right percentage is the more appropriate measure to accurately depict the influence of a shareholder.

Subsequently, following a similar approach to van Beusichem (2016) and Truong & Heneay (2007), the large shareholder(s) and their respective holdings are categorized as and collected in one of the following categories:

They may fall under the definition of being a *financial institution* (*DFIN_Ownership; FIN_Ownership)* which are banks, investment companies, insurance companies, financial companies, or mutual-/ pension funds.

Shareholders are categorized as an *insider* (*DINS_Ownership; INS_Ownership*) if they are closely tied to the company. These can be managers, families, employees, directors, individuals, or closely tied company/institution (e.g. business group affiliations).

Alternatively, the shareholder can also be the government or a government-entity (*DState_Ownership; State_Ownership)*

These four classifications are primarily derived from Truong & Henaey (2007), amongst others.

Also, another identity is added, which is a regular, *industrial company (DComp_Ownership; Comp_Ownership)*. This addition refers back to Andres et al. (2019), who introduce this identity in their study.

The cumulative holdings of the three largest shareholders are added up (*OwnershipConc*), following an approach similar to Khalfan & Wendt (2020). However, Khalfan & Wendt (2020) mainly test for a possible positive linear relationship between corporate payout and ownership concentration. To test for the convexity of the relationship as proposed by the managerial entrenchment theory, we test for a non-linear relationship: The managerial entrenchment theory proposes a convex relationship, meaning quadratic and thereby non-linear (Farinha, 2003; Truong & Heaney, 2007). Following Truong & Heaney (2007) and Farinha (2003), the variable will be transformed via squaring it; subsequently, this is expressed in the variable *Squared_Conc.*

In case there is more than one large shareholder, the dummy variable *OtherLarge_SH* takes a value of 1, 0 if otherwise, following Schmid et al. (2012).

3.2.3 Control Variables

3.2.3.1 Corporate Governance

The variables controlling for other corporate governance mechanisms will focus on six of the seven most researched topics in academia, following Chang et al. (2018). The seven main categories are board size, board independence, board structure, separation of CEO and chairman of the board, audit independence, stock classes, and audit ratification (Chang et al., 2018). The only one from these not included is the *CEO/chairman separation*, because Danish law prohibits the CEO to be the chairman of the board (see 2.1.3) and as such, this variable is redundant to test.

Going forward, the classification “independent” always refers to the directors/auditors elected by shareholders. It is important to distinguish between shareholder-elected members and employee representatives, as the latter are always considered to be non-independent by the Danish corporate governance recommendations (Corporate

Governance Committee, 2013). However, due to them being essentially mandatory on the board after a certain firm size, this study only considers the status of (in-)dependence for the shareholder-elected members, as only they can either be independent or dependent. The variables are defined as follows: *Board independence* (Board_IND) is measured as the fraction of independent shareholder-elected board members to total shareholder-elected board members. *Board structure* (Board_STR) equals 1 if the shareholder-elected board representatives are elected on an annual basis, 0 if otherwise. *Board size* (Ln_Board_SZ) is measured as the natural logarithm of the total number of all directors on the board, including employee-elected representatives.

Audit independence (Audit_IND) is measured as the percentage of independent directors on the audit committee. *Audit ratification* (Audit_RAT) equals 1 if the audit committee is ratified on an annual basis, 0 if otherwise. *Stock classes* (StockClass) is measured as the number of stock classes with voting rights a company has in a given year. These definitions follow along the lines of Chang et al. (2018).

3.2.3.2 Firm Characteristics

The control variables chosen for firm characteristics are the ones common in most literature on corporate payout. These are profitability (Alzahrani & Lasfer, 2012; Denis & Osobov, 2008; Truong & Heaney, 2007), leverage (Andriosopoulos & Hoque, 2013; DeAngelo et al., 2006; Fama & French, 2001; Jacob & Jacob, 2013), growth opportunities (Alzahrani & Lasfer, 2012; Berzins et al., 2018, 2019; DeAngelo et al., 2006), and company size (Andriosopoulos & Hoque, 2013; Denis & Osobov, 2008; Jacob & Jacob, 2013). In addition to the common control variables, the earned/contributed capital mix will be used as a control variable due to its apparent significant effect on corporate payout across various studies (see DeAngelo et al., 2006; Denis & Osobov, 2008; Jacob & Jacob, 2013).

Profitability (Profit) is measured as return on assets which is commonly calculated as net income over book value of total assets, following Alzahrani & Lasfer (2012). *Leverage* (Lev) is measured as the book value of total liabilities over the book value of

total assets of a specific year, following Truong & Heaney (2007). The ratio of earned to contributed capital can either be approximated by using retained earnings (RE) to the book value of total assets or retained earnings over the book value of total equity (Banyi & Kahle, 2014; DeAngelo et al., 2006; Denis & Osobov, 2008). Banyi & Kahle (2014) make the argument that the approximation of earned/contributed capital of using retained earnings (RE)/total assets (TA) is preferable due to less "mathematical distortions than RE/TE for firms with low total common equity" (p. 349). Further, they argue that the results are not qualitatively different using RE/TA. Thus, this paper will measure the earned/contributed capital as the ratio of retained earnings to total assets.

The investment/growth opportunities (*Growth*) are proxied by the market value of the company (total assets - book value of equity + market value of equity) scaled by the book value of total assets (Alzahrani & Lasfer, 2012; Denis & Osobov, 2008). Firm size is measured using the natural logarithm of the total asset book value of a company divided by 1000 (*Ln_Size*), similar to Brockman, Tresl, & Unlu (2014), Firth et al., (2016), and van Beusichem (2016). Lastly, industry dummies based on the first digit SIC-code is created to account for possible industry effects (*IndustryDummy*). In Table 1, the term *book value* is abbreviated as *BV*. The dependent variables are not lagged (year *t*) whereas all non-dependent variables are lagged by one year (*t-1*).

Table 1: Overview of Variables and Respective Measurement

Variable	Definition and Measurement
Dependent Variables	
Payout Dummy Variables	
Pay	*1 if dividends and/or repurchases in year for a company > 0*
Div	*1 if dividends in a given year for a company > 0 and repurchases = 0*
Rep	*1 if share repurchases in year for a company > 0 and dividends = 0*
Payout Ratios	
Pay_TA; Pay_Sales; Pay_NI	*(Ordinary dividends + repurchases) over BV of total assets (TA), over sales (sales), or over net income (NI)*
Ln_Pay_TA; Ln_Pay_Sales; Ln_Pay_NI	*Natural logarithm of Pay_TA, of Pay_Sales, or of Pay_NI*
Div_TA; Div_Sales; Div_NI	*Ordinary dividends over BV of total assets (TA), over sales (sales), or over net income (NI)*
Ln_Div_TA; Ln_Div_Sales; Ln_Div_NI	*Natural logarithm of Div_Ta, of Div_Sales, or of Div_NI*
Rep_TA;Rep_Sales; Rep_NI	*Share repurchases over BV of total assets (TA), over sales (sales), or over net income (NI)*
Ln_Rep_TA; Ln_Rep_Sales; Ln_Rep_NI	*Natural logarithm of Rep_TA, of Rep_Sales, or of Rep_NI*
Independent Variables - Ownership	
Ownership concentration variable (H_1)	
Squared_Conc	*Sum of the holdings of the three largest shareholders to the power of 2*
Shareholder type dummy variables (H_{2a-d})	
DFIN_Ownership	*1 if voting right percentage held by a financial institution > 0 (dummy)*
DINS_Ownership	*1 if voting right percentage held by an insider > 0 (dummy)*
DSTATE_Ownership	*1 if voting right percentage held by a state-owned entitiy or the governmnet > 0 (dummy)*
DCOMP_Ownership	*1 if voting right percentage held by a non-financial, industrial company > 0 (dummy)*
Shareholder type – percentages held (H_{2a-d})	
FIN_Ownership	*Voting right percentage held by the large shareholder if it is a financial institution*

INS_Ownership	*Voting right percentage held by the large shareholder if it is an insider*
STATE_Ownership	*Voting right percentage held by the large shareholder if it is a state-owned entity or the government*
COMP_Ownership	*Voting right percentage held by the large shareholder if it is a non-financial, industrial company*
Multiple shareholder dummy variable (H_3)	
OtherLarge_SH	*1 if more than one shareholder has >5% voting rights (dummy)*
Control Variables -Corporate Governance	
Board_IND	*Independent shareholder-elected board members over total shareholder-elected board members (ratio)*
Board_STR	*1 if the shareholder-elected board representatives are elected on an annual basis (dummy)*
Ln_Board_SZ	*Natural logarithm of the total number of directors on the board*
Audit_IND	*Independent shareholder-directors on the audit committee over total number of shareholder-directors on the committee (ratio)*
Audit_RAT	*1 if the audit committee is ratified on an annual basis (dummy)*
StockClass	*Number of stock classes with voting rights*
Control Variables – Firm Characteristics	
Profit	*Net income over BV of total assets (ratio)*
Lev	*BV of total liabilities over BV of total assets (ratio)*
RE_TA	*Retained earnings over BV of total assets (ratio)*
Growth	*(BV of total assets – BV of equity + market value of equity) over BV of total assets (ratio)*
Ln_Size	*Natural logarithm of (BV of total assets divided by 1000)*
IndustryDummy	*Based on first number of the SIC code (dummies)*

3.3 Data and Sampling

The bulk of the data is derived from the ORBIS database. The companies must be publicly listed companies and come from Denmark. I collect data from the companies for the years 2013-2018: however, due to the one year lag employed in the analysis, I loose one year of observations afterward. Thus, the final sample comprises data from 2014-2018. I choose to investigate publicly listed companies because of the stricter reporting rules of public companies and thus the likely more accurate data.

I exclude financial companies (SIC code 6000-6999), like Truong & Heaney (2007) and utility companies (SIC code 4000-4999) following Denis & Osobov (2008) and Fama & French (2001) amongst others. This is common practice in the financial research literature.

Also, following Alzahrani & Lasfer (2012) and Denis & Osobov (2008), companies with negative book equity are excluded given that their dividend policy may be driven by other motives. Following these filters, an initial sample size of 74 companies is given by the database. While this may seem small at first compared to countries such as Germany, other studies that also used Denmark within their research exhibit very similar sample sizes of Danish companies. They are commonly ranging between 50-100 companies, sometimes using different databases (see Alzahrani & Lasfer, 2012; Denis & Osobov, 2008; Jacob & Jacob, 2013).

If a company had missing data, was widely held in a specific year, or was not listed in a given year, the observations for that company in that year were dropped from the sample. This approach follows similar research such as Alzahrani & Lasfer (2012), Chiang & Lai (2015), and De Cesari (2012).

While collecting the data, this led to a drop in the overall maximum sample size to 59: Thirteen companies were missing data (mostly ownership structure and corporate governance-related) for all six years, one was widely held in all years, and one further company is based on the Faroe Islands. The Faroe Islands politically belong to the Danish Kingdom, but are autonomous. As such, the company does not have to follow any of the laws associated with being an actual Danish listed company. The first digit

US SIC-codes, the frequency they occurred in the final sample, and a brief description are given in Table 2. We see quite a concentration in the manufacturing industry, which compromises about 49.63% of the sample.

Given that repurchases, ownership, and corporate governance data are not part of the ORBIS database, information on these was hand-collected via the annual reports, corporate governance reports, if available, and press releases.

It is important to note that companies do not have to disclose the exact shareholdings of a large shareholder in their annual report. They have to report shareholders holding more than 5%, but they may report ranges such as "shareholder X holds more than 5%" or "holds between 20-25%". In case a company's annual report did not state the exact holdings of a major shareholder, the prior annual report and latest major shareholder announcement that included this shareholder was used as an approximation.

A major shareholder announcement is a press release that is required if a shareholder's ownership exceeds or falls below certain thresholds (*5%, 10%, 15%, 20%, 25%, 50% or 90%, or either 1/3 or 2/3 of the share capital or voting rights of the company*), according to the *Danish Securities Trading Act*. It may be that the actual shareholding of a shareholder in a given year and the shareholding of this shareholder stated in the latest prior *Major Shareholder Announcement* or prior annual report differ by a few percentage points. However, omitting these observations completely, or setting them to 0, would paint a wrong picture of the ownership structure. Furthermore, as preliminary analysis revealed, most second/third largest shareholders had holdings below 25% and thus, any major deviation in shareholdings would have been reported in a newly released major shareholder announcement due to the close thresholds. Also, more detailed information on the identity of the owners was retrieved from the annual reports and the respective shareholder's website.

Table 2: SIC-Code Explanation and Frequency

First Digit SIC-Code	Definition	Frequency
0	Agriculture, fishing, and forestry	10
1	Mining and construction	15
2	Manufacturing (textile, food, tobacco, paper, wood, chemicals)	54
3	Manufacturing (leather, stone, fabricated metal, machinery)	83
5	Retail & wholesale trade	15
7	Services (computer, personal, amusement)	47
8	Services (health, educational, legal, education, management)	19
9	International affairs & non-operating establishments	3

Notes: The frequencies are based on n=276. The definitions are based upon the ORBIS database descriptions in national industry classifications.

3.3.1 Outliers

In order to mitigate the effects of extreme outliers, all continuous variables are winsorized at the upper and lower 1% tails, following van Beusichem (2016).

Winsorization is a common method in financial literature to take care of outliers (see e.g. Alzahrani & Lasfer, 2012; Chiang & Lai, 2015; De Cesari, 2012; Firth et al., 2016; Nicolosi, 2013). In essence, winsorizing data refers to matching the data above the chosen threshold (e.g. the top 1% and bottom 1%) to the next lowest/highest value found within the threshold. I use a slightly larger winsorization level for *Growth* because using the 1% and 99% tail, the top tail post-winsorization has a value of over 36. The next largest value after that is in the range of 11-12. As such, to mitigate for these large outliers, I use a winsorization level of 2.5% and 97.5%.

As opposed to trimming or truncating data, which is the deletion of observation and cases, winsorization preserves data. Due to the already relatively small sample size of the study in comparison to other aforementioned studies, I choose to winsorize data rather than delete even more observations.

4. Results

In this section, the results of the analyses are discussed and interpreted. First, the summary of the descriptive statistics for the variables is presented. In the sections following that, the regressions analyses and robustness tests are employed to test the hypotheses of the paper.

4.1 Summary of Descriptive statistics

The results of the descriptive statistics for the variables can be found in Table 3. The average value for the *Pay* variable, which is equal to 1 if the company in a certain year paid out at all or not, is 0.605. This means that in about 60.5% of the cases, companies have paid out either dividends, repurchases, or both.

When looking more in-depth at how pay out was composed during the sample period, dividends were used much more frequently (mean value of 55.4%) than repurchases (mean value of 25.7%). When examining the different measures of payout ratios, it is interesting to note that the total payout scaled by sales (Pay_Sales) and scaled by total assets (Pay_TA) exhibit similar means, medians, standard deviations, as well as minimum and maximum values. However, the total payout scaled by net income appears to have very different characteristics; it has a considerably higher range of values, with a minimum value of -0.469 and a maximum value of 6.063. The first value indicates that a company has had a year of negative net income but still paid out dividends, while the latter value indicates that a company paid out about 606.3% relative to its net income. Payout ratio values above 1.0 indicate that a company has a larger cash outflow to its shareholders than net cash inflow. This may mean that the current payout is likely not sustainable for the company given its current earnings and thus, the payout would have to be cut in the future. However, these values may also be due to extraordinary circumstances or one-off events. Indeed, a closer investigation showed that the case exhibiting this large payout ratio of over 600% had given up a business area. The losses associated with this business area had to be recognized in the income statement and therefore an unusually small net income was the result. Still, more cases have payout

ratio values far above 1.0 when the payout is scaled by net income. Thus, high payout ratios are not driven by just two or three cases in the sample period. Similar patterns hold for the ratios of pure dividend payout ratios (Div_NI, Div_TA, Div_Sales) and repurchase payout ratios (Rep_NI, Rep_TA, Rep_Sales). Ratios scaled by sales or assets have similar means, medians, standard deviations, and range of values. If either is scaled by net income, values below 0 and above 1 occur. The values obtained for *Div_TA* and *Rep_TA* are also fairly similar to the values obtained by Khalfan & Wendt (2020), who measure the same variables in a Danish setting, as well as several others. The average dividend payout ratio if scaled by total assets is 0.026, or 2.6% in my dataset. Khalfan & Wendt (2020) obtain a mean payout ratio of dividends to total assets of 0.02, or 2.4%. Further, they obtain a mean repurchase ratio (repurchases over total assets) of 1.2%, compared to my result of 2.19%.

For all the aforementioned variables, the median tends to be quite a bit lower than the mean, which indicates positively-skewed data. This is to be expected as there is quite a bit of discrepancy between the companies in the dataset and is in line with prior research such as Alzahrani & Lasfer (2012) and van Beusichem (2016). Some companies have only been publicly listed for a few years during the sample period, whereas others are large global players that have been public for decades. A more in-depth look reveals that the payout ratios are skewed to a degree that violates basic assumptions of regression. Hence, the payout ratios are transformed into their natural logarithm to mitigate the effects of the skewness (see Table 1) (Farinha, 2003). I lose several observations to the logarithmic transformation since a logarithmic transformation only works for numbers that are larger than 0. If a company has had e.g. =<0 payouts in a given year, the payout ratio is also 0, and hence this observation is lost. However, the number of observations is always above 50, which is the recommended threshold to make a sample work for multiple regression (Henseler, 2019). Further, these logarithmically transformed variables are used for the regression investigating payout intensity. Following prior literature (Khalfan & Wendt, 2020; van Beusichem, 2016), the payout intensity is investigated for observations with payout ratios > 0 anyway. Only for variables that have

the denominator *net income*, I lose slightly more observations compared to the other ratios. This is since some companies had a negative income. However, the loss ranges between three to eight observations, and hence the number of observations is similar to the other transformed ratios.

Ownership concentration, i.e. the holdings of large shareholders irrespective of identity, has a mean value of 0.498, or about 49.8%. Thus, the three largest shareholders together own on average almost half of the voting rights in a company. In some cases, the large shareholder even own upwards of 99% of the voting rights, which is by all means dominant in every voting decision. In 72.1% of the cases, companies had more than one shareholder owning at least 5% of the voting rights (OtherLarge_SH).

Before continuing with the descriptive statistics, it is important to note that when a certain shareholder was not represented as a large shareholder in a given year, they received an observation of "0%" for that specific year. For example, imagine that company A's three largest shareholders for 2018 were two insiders owning 25% and 10%, and a financial institution owning 8%. For company A in 2018, both governmental entities as well as other commercial companies held no stake large enough to be amongst the biggest three. Thus, they were classified as having "0%" for that year in that company. Other studies such as Truong & Heaney (2007) do the same. While this does in fact adjust the percentiles, as well as mean, and minimum downwards, it helps preserve an even sample size, that is also equally large for each shareholder type (276 observations). This, however, results in having upcoming descriptive statistics with e.g. average voting rights held by a specific shareholder that are below the threshold of 5%. Thus, I have provided an additional table for informational purposes in the appendix (Table 4). This table depicts the descriptive statistics for the ownerhsip characteristics when zeros are not considered. This table shows that both insiders and financial institutions make up most of the sample's large shareholders, with other companies only occuring 23 times, and the government only 3 times amongst the largest three shareholders. Thus, especially the regression results for the STATE_Ownership are to be taken with a grain of salt. On the other hand, this is very informational since it shows

that the government is almost never among the three largest shareholders in non-financial, non-utility, publicly listed companies in Denmark.

The upcoming discussion of the descriptive statistics again refers to Table 3.

Financial institutions tended to be most often part of the largest three shareholders; in fact, they were represented in 69.2% of the observations (*DFIN_Ownership*). Further, they owned a mean of 20.4% of voting rights, with a maximum of 83%. Insiders tended to own the most votes on average (approx. 26.3%) and also had the highest maximum votes (87.4%). This is not surprising given that insiders are closely related to the company and thereby likely have an interest beyond payout in the company. To exercise such interest, however, significant major voting power compared to other shareholders is required. They also were part of the large shareholders in more than half of the cases (56.2%). Government-related entities owned, on average, 0.5%, with a maximum of 50%, and only occurred among the three largest shareholders 1.1% of the time. Other companies held an average of 2.3% of voting rights, with a maximum of 54.2%, and were part of the biggest three shareholders 8.3% of the time. Concerning the corporate governance variables, both boards and audit committees tended to be fairly independent on average (70.1% and 75.2%, respectively). Audits were ratified annually, and of the shareholder-elected members in boards, 89.9% of the time they were elected on an annual basis. Companies also tended to have only one stock class (mean = 1,3); however, there was one instance in which a company had three share classes with voting rights. Looking at the firm-characteristic, the growth measure ranged from 0.594 to 12.842. This illustrates the range of companies in the sample, with both mature, large companies that have low(er) growth opportunities, as well as, young extremely high growth companies. Moreover, companies had total liabilities worth around 45.9% of their book value of total assets, on average. Return on assets, the profitability measure, has a mean value of around 2.2%; it was, however, in some cases as high as 38%. Also, some companies had negative returns on assets of less than -77%. This again, points towards rather young companies, which are yet to be profitable, and/or companies with extraordinarily bad years or facing financial distress. The mean value of the

earned/contributed capital mix (RE/TA) is 20.5%. While the maximum value for this ratio is 78.7%, there are also cases in which RE/TA is negative (min. value -2.359). Upon further investigation, these companies all had negative retained earnings as well as negative net income. Thus, these might also point towards very young companies or firms that are facing difficult financial times.

Checking for the VIF-values revealed no variables showing high/significant degrees of multicollinearity except for one instance: When using the full model, i.e. all predictors at once, the VIF-values of *Squared_Conc*, *FIN_Ownership*, and *INS_Ownership* exceed the threshold of 10. This does make sense since both institutional owners and insiders are the most represented shareholder types in the study, and *Squared_Conc* measures ownership concentration of the three largest shareholders irrespective of type. Thus, they measure somewhat similar concepts, as *Squared_Conc* is effectively computed from the other ownership variables if measured as the percentage. To remedy this, Hair et al. (2014) suggest using the model with highly correlated variables (the full model including all variables) for predictive purposes only. Otherwise, they put forward that one could leave out the variables that cause high collinearity, i.e. *Squared_Conc* in my case. Interestingly though, the VIF-values of *Squared_Conc* and all ownership types are below a VIF-value of 5 if the dummy variables for the ownership types are used. Using these, multicollinearity would cease to be a problem for the regression. Thus, to avoid multicollinearity to be an issue, I only include *Squared_Conc* in the full models when I use the dummy variables of the different ownership types. I still consider the effect of ownership concentration when also all ownership types are considered but avoid the influence of multicollinearity.

Table 3: Descriptive Statistics

	Mean	Std. Deviation	Minimum	Percentiles 25	50	75	Maximum	Number of observations
Dependent Variable								
Pay	0.605	0.490	0	0.000	1.000	1.000	1	276
Div	0.554	0.498	0	0.000	1.000	1.000	1	276
Rep	0.257	0.438	0	0.000	0.000	1.000	1	276
Pay_TA	0.049	0.088	0.000	0.000	0.017	0.045	0.407	276
Pay_Sales	0.046	0.076	0.000	0.000	0.017	0.052	0.323	276
Pay_NI	0.534	0.996	-0.469	0.000	0.268	0.728	6.063	276
Ln_Pay_TA	-3.162	1.173	-6.877	-3.874	-3.329	-2.462	-0.254	167
Ln_Pay_Sales	-3.163	1.197	-6.497	-3.939	-3.391	-2.323	0.982	167
Ln_Pay_NI	-0.432	0.895	-2.735	-0.976	-0.481	-0.033	3.372	159
Div_TA	0.026	0.046	0.000	0.000	0.010	0.031	0.244	276
Div_Sales	0.025	0.040	0.000	0.000	0.009	0.030	0.195	276
Div_NI	0.358	0.712	-0.147	0.000	0.162	0.500	5.089	276
Ln_Div_TA	-3.453	0.876	-5.469	-3.995	-3.571	-2.897	-1.243	153
Ln_Div_Sales	-3.487	0.917	-5.525	-4.056	-3.630	-2.659	-1.578	153
Ln_Div_NI	-0.739	0.854	-3.067	-1.206	-0.751	-0.363	3.372	150
Rep_TA	0.022	0.057	0.000	0.000	0.000	0.000	0.303	276
Rep_Sales	0.020	0.049	0.000	0.000	0.000	0.001	0.233	276
Rep_NI	0.150	0.465	-0.458	0.000	0.000	0.000	3.317	276
Ln_Rep_TA	-3.326	1.792	-8.554	-4.265	-2.813	-2.124	-0.254	71
Ln_Rep_Sales	-3.265	1.741	-8.937	-4.282	-2.855	-1.973	0.982	71
Ln_Rep_NI	-1.074	1.505	-5.941	-1.492	-0.780	-0.337	1.978	66
Independent Variables								
OwnershipConc	0.498	0.244	0.051	0.270	0.503	0.700	0.997	276
Squared_Conc	0.307	0.249	0.003	0.073	0.253	0.490	0.994	276
DFIN_Ownership	0.692	0.462	0	0.000	1.000	1.000	1	276
DINS_Ownership	0.562	0.497	0	0.000	1.000	1.000	1	276
DSTATE_Ownership	0.011	0.104	0	0.000	0.000	0.000	1	276
DCOMP_Ownership	0.083	0.277	0	0.000	0.000	0.000	1	276
FIN_Ownership	0.204	0.231	0.000	0.000	0.128	0.296	0.830	276
INS_Ownership	0.263	0.292	0.000	0.000	0.162	0.542	0.874	276
STATE_Ownership	0.005	0.052	0.000	0.000	0.000	0.000	0.500	276
COMP_Ownership	0.023	0.094	0.000	0.000	0.000	0.000	0.542	276
OtherLarge_SH	0.721	0.449	0	0.000	1.000	1.000	1	276
Control Variables								
Board_IND	0.701	0.257	0.000	0.511	0.750	1.000	1.000	276
Board_STR	0.899	0.302	0	1.000	1.000	1.000	1	276
Ln_Board_SZ	1.848	0.372	1.099	1.609	1.792	2.197	2.708	276
Audit_IND	0.752	0.273	0.000	0.600	0.750	1.000	1.000	276
Audit_RAT	0.899	0.302	0	1.000	1.000	1.000	1	276
StockClass	1.312	0.502	1.000	1.000	1.000	2.000	3.000	276
Profit	0.022	0.175	-0.776	-0.007	0.040	0.095	0.380	276
Lev	0.459	0.200	0.050	0.327	0.450	0.605	0.946	276
RE_TA	0.205	0.621	-2.359	0.210	0.370	0.546	0.787	276
Growth	2.661	2.788	0.594	0.972	1.404	3.166	12.842	276
Ln_Size	7.277	2.062	3.082	5.663	7.147	8.812	12.070	276
IndustryDummy1	0.054	0.227	0	0.000	0.000	0.000	1	276
IndustryDummy2	0.304	0.461	0	0.000	0.000	1.000	1	276
IndustryDummy3	0.308	0.462	0	0.000	0.000	1.000	1	276
IndustryDummy4	0.054	0.227	0	0.000	0.000	0.000	1	276
IndustryDummy5	0.159	0.367	0	0.000	0.000	0.000	1	276
IndustryDummy6	0.072	0.260	0	0.000	0.000	0.000	1	276
IndustryDummy7	0.011	0.104	0	0.000	0.000	0.000	1	276

Notes: This table contains the descriptive statistics for the sample of n=59 Danish publicly lsited, non-utility, non-financial companies between 2014-2018. I report the number of observations per variable, the mean, the standard deviation, the minimum, the maximum and the quartiles. All continous variables, with the exception of Growth, are winsorized at the 1% and 99% tail. Growth is winsorized at the 2.5% and 97.5% tail.

4.2 Bivariate Analysis - Correlation Matrix

The bivariate anaylsis is conducted using Pearson's correlation matrix (Table 5). Correlation values of over 0.7 or under -0.7 may, generally speaking, indicate problems with regard to potential collinearity if they are used in the same regression (Hair et al., 2014). I find two correlation values between variables used in the same regression that may hint at collinearity problems: *Audit_IND* is highly positively correlated with *Board_IND* (0.876**), which is not suprising given the fact that the audit committee is derived from the board, hence why a more independent board would likely entail a more independent audit committee. The second instance is with *Ln_Board_SZ* and *Ln_Size*. Their r-value is equal to 0.718 ***, indicating a significant positive correlation. Again, this is relatively straight forward to explain, given that larger firms would also likely need larger boards. In order to mitigate potential impact of these collinearity issues, I run the full models again, but leave out *Audit_IND* and *Ln_Board_SZ* in one model, and *Board_IND* and *Ln_Size* in the other. These are reported as models (IX) and (X) in the main regressions. Aside from that, no correlations of predictor variables appearing simultaneously in upcoming regressions exhibit a r-value of over 0.7.

Table 5: Pearson Correlation Matrix[4]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Pay	1												
(2) Div	0.901**	1											
(3) Rep	0.475**	0.294**	1										
(4) Ln_Pay_TA	.b	0.082	0.485**	1									
(5) Ln_Pay_Sales	.b	-0.012	0.520**	0.941**	1								
(6) Ln_Pay_NI	.b	0.089	0.231**	0.443**	0.402**	1							
(7) Ln_Div_TA	.b	.b	0.293**	0.866**	0.805**	0.298**	1						
(8) Ln_Div_Sales	.b	.b	0.298**	0.780**	0.873**	0.265**	0.904**	1					
(9) Ln_Div_NI	.b	.b	-0.200*	0.067	0.055	0.801**	0.234**	0.211**	1				
(10) Ln_Rep_TA	.b	0.042	.b	0.783**	0.723**	0.513**	0.395**	0.246	-0.064	1			
(11) Ln_Rep_Sales	.b	-0.043	.b	0.750**	0.766**	0.471**	0.395**	0.336*	-0.066	0.973**	1		
(12) Ln_Rep_NI	.b	-0.085	.b	0.524**	0.414**	0.685**	0.041	-0.085	0.055	0.891**	0.860**	1	
(13) Squared_Conc	0.147*	0.165**	-0.065	-0.171*	-0.156*	0.057	-0.057	-0.019	0.182*	-0.359**	-0.357**	-0.265*	1
(14) DFIN_Ownership	-0.186**	-0.156**	-0.110	-0.011	-0.018	-0.006	-0.066	-0.075	-0.005	0.048	0.030	0.048	-0.124*
(15) DINS_Ownership	0.123*	0.045	0.102	-0.088	-0.038	-0.099	-0.108	-0.051	-0.116	-0.109	-0.084	-0.086	0.263**
(16) DSTATE_Ownership	0.085	0.094	0.018	-0.087	-0.041	-0.157*	-0.075	-0.007	-0.118	-0.327**	-0.283*	-0.404**	0.071
(17) DCOMP_Ownership	0.136*	0.165**	-0.027	-0.137	-0.212**	-0.033	-0.159*	-0.245**	0.000	-0.185	-0.246*	-0.076	0.082
(18) FIN_Ownership	-0.186**	-0.121*	-0.187**	-0.087	-0.126	0.013	-0.064	-0.098	0.068	-0.111	-0.155	0.047	0.250**
(19) INS_Ownership	0.245**	0.192**	0.099	-0.062	-0.019	0.006	0.018	0.073	0.057	-0.192	-0.163	-0.194	0.556**
(20) STATE_Ownership	0.085	0.094	0.018	-0.087	-0.041	-0.157*	-0.075	-0.007	-0.118	-0.327**	-0.283*	-0.404**	0.071
(21) COMP_Ownership	0.119*	0.142*	-0.054	-0.083	-0.136	0.038	-0.104	-0.164*	0.059	0.016	-0.019	0.121	0.101
(22) OtherLarge_SH	-0.139*	-0.103	-0.114	-0.017	-0.030	0.099	-0.046	-0.045	0.145	-0.152	-0.198	-0.091	-0.001
(23) Board_IND	-0.207**	-0.151*	-0.033	0.148	0.178*	0.091	0.178*	0.217**	0.050	0.094	0.102	0.017	-0.250**
(24) Board_STR	-0.075	-0.036	-0.077	0.145	0.136	-0.097	0.174*	0.157	-0.091	0.073	0.091	-0.107	0.078
(25) Ln_Board_SZ	0.469**	0.471**	0.271**	0.086	0.112	0.008	0.218**	0.271**	-0.021	-0.100	-0.111	-0.188	0.097
(26) Audit_IND	-0.154*	-0.086	-0.067	0.108	0.158*	0.043	0.146	0.220**	0.026	0.074	0.085	-0.052	-0.212**
(27) Audit_RAT	0.121*	0.085	0.088	0.014	-0.028	0.044	-0.005	-0.072	0.016	-0.074	-0.075	-0.067	0.110
(28) StockClass	0.207**	0.267**	-0.068	-0.104	-0.147	0.011	-0.114	-0.143	0.055	0.011	-0.034	0.040	0.338**
(29) Profit	0.482**	0.458**	0.341**	0.600**	0.529**	0.046	0.639**	0.558**	-0.148	0.391**	0.332**	0.077	0.056
(30) Lev	-0.075	-0.043	0.014	-0.140	-0.165*	0.030	-0.224**	-0.222**	-0.089	-0.194	-0.231	-0.008	-0.037
(31) RE_TA	0.406**	0.375**	0.141*	-0.081	-0.058	0.051	-0.097	-0.058	0.086	0.017	0.025	-0.034	0.247**
(32) Growth	0.104	0.095	0.219**	0.550**	0.528**	0.040	0.621**	0.573**	-0.085	0.429**	0.403**	0.122	-0.113
(33) Ln_Size	0.492**	0.467**	0.335**	0.095	0.156*	-0.005	0.108	0.202*	-0.085	-0.093	-0.040	-0.229	0.071

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
b Cannot be computed because at least one of the variables is constant.

[4] Unfortunately, due to the size of the table, this table had to be implemented as a picture. All other forms would have stretched the table over 6+ pages, making it very unpleasant to read.

(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
1																			
-0.589**	1																		
0.070	-0.119*	1																	
0.059	-0.209**	0.348**	1																
0.590**	-0.584**	-0.051	-0.027	1															
-0.634**	0.798**	-0.095	-0.223**	-0.553**	1														
0.070	-0.119*	1**	0.348**	-0.051	-0.095	1													
0.045	-0.167**	0.082	0.808**	-0.099	-0.180**	0.082	1												
0.442**	-0.094	0.065	0.188**	0.160**	-0.186**	0.065	0.151*	1											
0.199**	-0.337**	0.078	-0.267**	0.220**	-0.317**	0.078	-0.391**	-0.029	1										
0.166**	-0.176**	0.035	-0.116	0.148*	-0.049	0.035	-0.097	-0.075	0.076	1									
0.003	-0.044	0.155*	0.046	-0.039	0.093	0.155*	-0.013	-0.165**	0.120*	0.045	1								
0.210**	-0.263**	0.095	-0.280**	0.167**	-0.244**	0.095	-0.394**	-0.015	0.876**	0.071	0.235**	1							
0.036	0.066	0.035	0.058	-0.027	0.080	0.035	0.053	-0.129*	0.123*	-0.073	0.199**	0.177**	1						
-0.180**	0.098	-0.065	0.100	-0.031	0.290**	-0.065	0.155**	-0.258**	-0.248**	0.089	0.317**	-0.168**	0.209**	1					
-0.156**	0.127*	0.073	-0.006	-0.184**	0.196**	0.073	0.018	-0.141*	-0.182**	-0.038	0.333**	-0.091	-0.026	0.126*	1				
0.206**	-0.064	0.039	-0.067	0.158**	-0.094	0.039	-0.138*	0.120*	0.228**	0.113	0.188**	0.251**	0.115	-0.029	-0.024	1			
-0.198**	0.261**	0.009	0.011	-0.149*	0.338**	0.009	0.092	-0.113	-0.336**	-0.037	0.196**	-0.274**	-0.115	0.249**	0.628**	-0.024	1		
-0.116	-0.089	-0.044	-0.139*	-0.057	-0.018	-0.044	-0.141*	-0.023	0.197**	0.146*	0.113	0.204**	0.024	-0.097	0.162**	-0.163**	-0.304**	1	
-0.023	-0.042	0.219**	0.070	-0.093	0.118*	0.219**	-0.026	-0.122*	0.031	0.151*	0.718**	0.191**	0.131*	0.200**	0.467**	0.280**	0.358**	0.031	1

4.3 Regression Results

In the upcoming sections, the hypotheses presented before are tested via various regression methods. In the OLS regression tables, I present the unstandardized coefficients.

4.3.1 The Payout Propensity

The decision to pay out to shareholders or not is the first step in assessing a company's payout policy. Table 6 depicts the results of the binary logit regressions.

In panel A, the dependent variable is the dummy *Pay*. I do not find any supporting evidence for the hypotheses; neither the squared ownership concentration variable (*Squared_Conc*) nor the different shareholder types (FIN_Ownership, INS_Ownership, STATE_Ownership, COMP_Ownership) or the dummy for multiple shareholders (OtherLarge_SH) are statistically significant in any model. The insignificance of *STATE_Ownership* is consistent with other studies including Denmark such as Khalfan & Wendt (2020). This trend of insignificance among hypothesis-related variables continues for panel B, where the dividend dummy *Div* is the dependent variable. Generally though, this is contrary to what was expected based upon agency theory.

In panel C I find that ownership concentration has a concave rather than convex relationship with the repurchase decision, indicated by the statistically significant negative relationship at the 10% in model (II). This would indicate that the propensity to repurchase increases with an increase in ownership concentration at low levels, but at high levels, repurchases would become less likely. Also, I find that an increase in *FIN_Ownership* decreases the likelihood of repurchasing shares, indicated by the robust, statistically significant negative coefficients in model (III) and models (VIII) – (X). While this does not support the hypothesis posed in the prior sections, this shows that if one strictly looks at the repurchase decision, increases in financial institutional ownership decreases the likelihood of repurchases. This points in the direction of a substitutive effect of institutional ownership and repurchases, which would be in line with the alternative prediction made by agency theory that being a very good monitor

reduces the need for payout (Easterbrook, 1984; Rozeff, 1982; Truong & Heaney, 2007). Further, I find partial support for hypothesis 2_b, which posits that insider ownership is negatively related to payout, i.e. repurchases in this case, because of rent extraction. On its own, ownership by insiders does not have a significant effect on the repurchase propensity - but in the full models, I observe a significant negative coefficient. Thus, an increase in ownership of insiders leads to a decrease in the propensity to repurchase when shareholders other than insiders are also present. This is more in line with results posited by Le & Le (2017) and Truong & Heaney (2007) and the agency idea that, in the presence of other large shareholders, insider try to withhold funds inside the company for their private benefits.

Lastly, ownership by other companies (*COMP_Ownership*) is negative and statistically significantly related to the repurchase decision, both on its own (model (VI)) and in the full models. This may hint at a dislike of industrial companies as shareholders for repurchases, as they are not as strong of a commitment device compared to dividends (De Cesari, 2012).

However, concerning the control variables, I find several statistically significant relationships that are present in multiple models and panels. In panel A, for the governance characteristics, *Board_STR* and *Audit_IND* have a persistent significant, negative relationship in all models of panel A at the 5% level. As such, both an annually elected board and more independent audit committees reduce the propensity to pay out. This indicates that better governance acts as a substitute for corporate payout . However, the negative relationships of board structure and audit independence do not support the common notion that better governance is positively associated with payout (see e.g. Jiraporn et al. (2011) and Chang et al. (2018)). Rather, it supports a substitution effect of better governance (i.e. annual election of boards, annual ratification of the audit committee) and payout. This is more in line with the results of De Cesari (2012). However, out of the two, only *Audit_IND* continues to be significant one of the other panels (panel C), with a persistent significant negative relationship with *Rep*, leading to the same conclusion.

While the earned/contributed capital mix (RE_TA) shows some significantly positive relationship with *Pay* in panel A in six out of the ten models, the significance is only barely present at the 10% level. Still, however, it indicates that companies at later stages in their lifecycle with a higher proportion of earned to contributed capital are more likely to pay out, in line with DeAngelo et al. (2006). Thus, firms that are more likely to experience higher agency cost are more likely to pay out to mitigate these conflicts.

Profitability and firm size are significantly positively related to *Pay*, whereas leverage is significantly negatively affecting the decision to pay out. These are thus consistent with a vast array of other studies (Chang et al., 2018; DeAngelo & DeAngelo, 2006; Denis & Osobov, 2008; Fama & French, 2001; Jacob & Jacob, 2013; Raaballe & Hedensted, 2011; von Eije & Megginson, 2008). This is consistent with the agency theory prediciton that larger and more profitable firms are more likely to pay out to mitigate agency problems created by higher generated earnings, and that leverage can substitute for payout. However, only firm size and profitability continue to be significantly positively related to *Div* (panel B) and *Rep* (panel C), whereas leverage is not significant anymore.

The decision to pay dividends (panel B) is positively related to board size, where a larger board leads to a more likely dividend payout. This result complements the findings of Chen, Leung, & Goergen (2017) who also find a positive effect of board size on dividend payout. As previously indicated by the correlation matrix, board size tends to go hand-in-hand with firm size. As such, this may indicate that larger boards are more likely to initiate dividends because they are larger firms that hence are more exposed to agency problems. However, this effect ceases when the dependent variable is changed to *Rep* (panel C). *StockClass* is significantly positively related to the payout decision in models (II), (III), (IV), (VII), and (IX) in panel B. In panel C, this relationship is also significant, but negative. Raaballe & Hedensted (2011) find the same relationship between dividends and dual share classes. They use dual share classes as a proxy for ownership concentration; my results hence point towards the fact that more concentrated ownership structures – if proxied by more shares classes - prefer dividends to repurchases as a pre-

commitment device to offset agency costs over the repurchases. This also supports other studies like De Cesari (2012).

In panel C, *Board_IND* has a significant positive relationship with the decision to repurchase. Greater board independence hence increases the likelihood of repurchases and thus complements them, in line with the notion that better governance has a positive effect on payout (Jiraporn et al., 2011), while increased audit independence decreases the propensity to repurchase. It appears as though different firm-level corporate governance mechanisms have differing effects (substitutive or complementary, or non at all) on different forms of payout. Hence, stating that corporate governance overall has a positive effect on payout (see Jiraporn et al., 2011) seems to be too generalized. Chen et al. (2017) and Sharma (2011) also find a positive effect of greater board independence, but on dividend payout. For the dividend dummy (panel B), I do not find this relationship. However, they do not investigate repurchases. Further, it is important to note that the alternative specifications of the full model (models (IX) and (X)) in accordance with the results of Table 5 did not have a significant impact on the results regarding the main variables of interest. The only significant changes that occured were found in Table 6, panel C. There, *Ln_Size* and *Ln_Board_SZ* were only significant in the full model when the other one was excluded. Overall, though, collinearity between the variables does not seem to pose that great of a problem.

The pseudo-R^2 measure used in the logit models is Nagelkerke. Nagelkerke has been chosen over Cox and Snell for the reason that the latter is limited and cannot reach a value of 1, which would indicate a perfect fit (Hair et al., 2014). Nagelkerke's measure overcomes this limitation and can hence range from 0 to 1, with an increase towards 1 signaling better model fit. The lowest pseudo-R^2 in the models is observed in panel C, model (IV) and (V), with a value of 48.6%; the highest value is found in panel A, model (IX), exhibiting a value of 66.5%. Comparetively, I find that my values are either at the same level or higher than the ones presented in other studies such as Khalfan & Wendt (2020) (usually around 40%). I hence conclude that the models fit reasonably well.

Table 6: The Decision to Pay Out or Not

Panel A: Pay

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-5.075	-5.145	-5.378	-5.805	-5.075	-5.061	-4.872	-5.664
	(0.002)***	(0.002)***	(0.001)***	(0.001)***	(0.002)***	(0.002)***	(0.004)***	(0.002)***
Squared_Conc		0.266						
		(0.788)						
FIN_Ownership			-1.093					-0.197
			(0.244)					(0.875)
INS_Ownership				1.055				1.180
				(0.196)				(0.310)
STATE_Ownership					32.605			32.254
					(0.999)			(0.999)
COMP_Ownership						0.690		2.133
						(0.780)		(0.457)
OtherLarge_SH							-0.198	-0.259
							(0.686)	(0.616)
Board_IND	1.580	1.647	1.404	1.576	1.580	1.622	1.504	1.604
	(0.402)	(0.388)	(0.464)	(0.413)	(0.402)	(0.391)	(0.429)	(0.416)
Board_STR	-1.693	-1.709	-1.559	-1.614	-1.693	-1.697	-1.724	-1.649
	(0.018)**	(0.017)**	(0.032)**	(0.027)**	(0.018)**	(0.017)**	(0.016)**	(0.026)**
Ln_Board_SZ	1.309	1.256	1.598	1.475	1.309	1.281	1.339	1.481
	(0.111)	(0.137)	(.067) *	(0.084) *	(0.111)	(0.121)	(0.106)	(0.096)*
Audit_IND	-4.118	-4.167	-3.782	-4.030	-4.118	-4.064	-4.131	-3.817
	(0.027)**	(0.027)**	(0.046) **	(0.034) **	(0.027) **	(0.030)**	(0.028)**	(0.050)*
Audit_RAT	0.879	0.860	0.823	0.858	0.879	0.853	0.827	0.694
	(0.229)	(0.239)	(0.279)	(0.243)	(0.229)	(0.247)	(0.266)	(0.364)
StockClass	0.318	0.312	0.261	0.255	0.318	0.287	0.255	0.064
	(0.548)	(0.566)	(0.620)	(0.631)	(0.548)	(0.593)	(0.643)	(0.911)
Profit	7.366	7.373	7.644	7.656	7.366	7.366	7.336	7.698
	(0.012)**	(0.012)**	(0.012) **	(0.013) **	(0.012) **	(0.012)***	(0.013) **	(0.014)**
Lev	-2.710	-2.668	-2.578	-2.557	-2.710	-2.683	-2.562	-2.214
	(0.036)**	(0.040)**	(0.048) **	(0.051) *	(0.036) **	(0.037)**	(0.057) *	(0.107)
RE_TA	1.209	1.172	1.242	1.110	1.209	1.199	1.223	1.090
	(0.098)*	(0.113)	(0.099) *	(0.135)	(0.098) *	(0.099)*	(0.098) *	(0.152)
Growth	0.139	0.143	0.121	0.137	0.139	0.139	0.143	0.141
	(0.187)	(0.178)	(0.281)	(0.211)	(0.187)	(0.186)	(0.179)	(0.214)
Ln_Size	0.877	0.897	0.829	0.904	0.877	0.874	0.877	0.896
	(0.000)***	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.000) ***	(0.000) ***
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	276	276	276	276	276	276	276	276
Overall Percentage correctly predicted	**86.96%**	**86.96%**	**87.32%**	**87.32%**	**86.96%**	**86.96%**	**87.68%**	**88.00%**
Pseudo-R^2	**65.8%**	**65.8%**	**66.1%**	**66.2%**	**65.8%**	**65.8%**	**65.9%**	**66.5%**

Table 6 (continued)

Panel A (continued): Pay

Model	**(IX)**	**(X)**
Constant	-4.997 (0.005)***	-4.619 (0.006)***
Squared_Conc		
FIN_Ownership	0.173 (0.882)	-1.495 (0.119)
INS_Ownership	1.377 (0.215)	0.252 (0.817)
STATE_Ownership	34.386 (0.999)	34.800 (0.999)
COMP_Ownership	3.374 (0.228)	0.817 (0.767)
OtherLarge_SH	-0.247 (0.632)	-0.179 (0.706)
Board_IND	-1.420 (0.096)*	
Board_STR	-1.638 (0.025)**	-0.813 (0.200)
Ln_Board_SZ		3.788 (0.000)***
Audit_IND		-2.067 (0.018) **
Audit_RAT	0.350 (0.620)	1.335 (0.073)*
StockClass	0.313 (0.566)	-0.517 (0.302)
Profit	6.671 (0.018)**	9.790 (0.001)***
Lev	-2.504 (0.044)**	-0.386 (0.752)
RE_TA	0.845 (0.218)	1.874 (0.018)**
Growth	0.149 (0.165)	0.120 (0.246)
Ln_Size	0.991 (0.000)***	
Industry Dummy	YES	YES
Observations	276	276
Overall Percentage correctly predicted	**87.30%**	**85.50%**
Pseudo-R^2	**64.30%**	**62.70%**

Table 6 (continued)

Panel B: Div

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-5.489 (0.000)***	-6.040 (0.000)***	-5.588 (0.000)***	-5.467 (0.001) ***	-5.489 (0.000)***	-5.530 (0.000)***	-6.051 (0.000)***	-6.161 (0.000) ***
Squared_Conc		0.018 (0.934)						
FIN_Ownership			-0.416 (0.640)					-0.261 (0.820)
INS_Ownership				-0.042 (0.954)				0.278 (0.786)
STATE_Ownership					36.587 (0.999)			35.747 (0.999)
COMP_Ownership						2.973 (0.215)		2.775 (0.314)
OtherLarge_SH							0.510 (0.245)	0.400 (0.381)
Board_IND	0.818 (0.625)	0.822 (0.625)	0.748 (0.657)	0.823 (0.623)	0.818 (0.625)	1.086 (0.519)	1.118 (0.508)	1.222 (0.474)
Board_STR	-0.874 (0.185)	-0.875 (0.186)	-0.817 (0.224)	-0.878 (0.185)	-0.874 (0.185)	-0.920 (0.169)	-0.793 (0.232)	-0.788 (0.253)
Ln_Board_SZ	1.695 (0.029) **	1.692 (0.031) **	1.810 (0.027)**	1.686 (0.032)**	1.695 (0.029) **	1.563 (0.046) **	1.577 (0.044) **	1.612 (0.051) *
Audit_IND	-1.748 (0.276)	-1.750 (0.277)	-1.629 (0.318)	-1.756 (0.276)	-1.748 (0.276)	-1.601 (0.318)	-1.869 (0.242)	-1.573 (0.332)
Audit_RAT	0.271 (0.687)	0.269 (0.690)	0.249 (0.714)	0.272 (0.686)	0.271 (0.687)	0.154 (0.822)	0.430 (0.531)	0.280 (0.692)
StockClass	0.832 (0.687)	0.832 (0.082) *	0.800 (0.096) *	0.836 (0.083) *	0.832 (0.687)	0.711 (0.139)	0.982 (0.052) *	0.798 (0.123)
Profit	8.613 (0.082) *	8.616 (0.001)***	8.740 (0.001)***	8.595 (0.001) ***	8.613 (0.082) *	8.732 (0.001)***	8.655 (0.001)***	8.941 (0.001) ***
Lev	-1.562 (0.186)	-1.560 (0.188)	-1.498 (0.209)	-1.568 (0.186)	-1.562 (0.186)	-1.454 (0.210)	-2.063 (0.102)	-1.771 (0.162)
RE_TA	1.056 (0.116)	1.053 (0.126)	1.072 (0.114)	1.061 (0.117)	1.056 (0.116)	0.994 (0.134)	1.021 (0.122)	0.947 (0.164)
Growth	0.035 (0.706)	0.035 (0.706)	0.028 (0.776)	0.036 (0.703)	0.035 (0.706)	0.037 (0.688)	0.028 (0.764)	0.023 (0.809)
Ln_Size	0.398 (0.034) **	0.399 (0.039) **	0.377 (0.051) *	0.399 (0.033) **	0.398 (0.034) **	0.409 (0.029) **	0.429 (0.024) **	0.413 (0.036) **
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	276	276	276	276	276	276	276	276
Overall Percentage correctly predicted	**82.61%**	**82.61%**	**84.42 %**	**82.61%**	**82.61%**	**82.25%**	**82.61%**	**83.3%**
Pseudo-R^2	**58.7%**	**58.7%**	**58.8%**	**58.7%**	**58.7%**	**59.2%**	**59.1%**	**59.5%**

Table 6 (continued)

Panel B (continued): Div		
Model	**(IX)**	**(X)**
Constant	-5.577 (0.001)***	-4.619 (0.006)***
Squared_Conc		
FIN_Ownership	0.218 (0.842)	-0.910 (0.412)
INS_Ownership	0.412 (0.677)	-0.019 (0.985)
STATE_Ownership	37.000 (0.999)	36.662 (0.999)
COMP_Ownership	3.665 (0.174)	2.263 (0.402)
OtherLarge_SH	0.421 (0.350)	0.322 (0.464)
Board_IND	0.222 (0.775)	
Board_STR	-0.950 (0.165)	-0.404 (0.522)
Ln_Board_SZ		2.816 (0.000)***
Audit_IND		-0.463 (0.546)
Audit_RAT	0.048 (0.942)	0.568 (0.417)
StockClass	1.127 (0.023)**	0.424 (0.346)
Profit	8.221 (0.001)***	10.162 (0.000)***
Lev	-2.218 (0.056)*	-0.607 (0.589)
RE_TA	0.699 (0.261)	1.378 (0.049)**
Growth	0.032 (0.728)	0.027 (0.781)
Ln_Size	0.615 (0.000)***	
Industry Dummy	YES	YES
Observations	276	276
Overall Percentage correctly predicted	**82.60%**	**79.0%**
Pseudo-R^2	**58.0%**	**58.30%**

Table 6 (continued)

Panel C: Rep

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-21.326 (0.999)	-20.940 (0.999)	-21.433 (0.999)	-21.440 (0.998)	-21.326 (0.999)	-20.697 (0.999)	-21.158 (0.999)	-20.024 (0.999)
Squared_Conc		-1.982 (0.054)*						
FIN_Ownership			-2.617 (0.031)**					-4.946 (0.004)***
INS_Ownership				0.284 (0.715)				-2.674 (0.025)**
STATE_Ownership					32.639 (0.999)			32.794 (0.999)
COMP_Ownership						-8.600 (0.068)*		-11.66 (0.025)**
OtherLarge_SH							-0.419 (0.742)	0.225 (0.648)
Board_IND	4.935 (0.006)***	4.292 (0.020)**	5.094 (0.005) ***	5.015 (0.006)***	4.935 (0.006)***	4.721 (0.008)***	4.858 (0.008) ***	4.397 (0.016)**
Board_STR	-0.933 (0.173)	-0.696 (0.326)	-0.604 (0.392)	-0.927 (0.175)	-0.933 (0.173)	-1.473 (0.045)**	-0.941 (0.167)	-1.009 (0.196)
Ln_Board_SZ	0.670 (0.446)	0.979 (0.288)	1.350 (0.144)	0.732 (0.411)	0.670 (0.446)	0.687 (0.437)	0.704 (0.425)	1.542 (0.123)
Audit_IND	-6.431 (0.000)***	-6.094 (0.001)***	-6.328 (0.001)***	-6.460 (0.000)***	-6.431 (0.000)***	-6.710 (0.000)***	-6.381 (0.001)***	-6.728 (0.000)***
Audit_RAT	1.007 (0.169)	1.302 (0.099)*	1.098 (0.153)	0.997 (0.172)	1.007 (0.169)	1.207 (0.100)	0.967 (0.194)	1.742 (0.046)**
StockClass	-1.525 (0.001)***	-1.422 (0.002)***	-1.689 (0.001)***	-1.557 (0.001)***	-1.525 (0.001) ***	-1.656 (0.001)***	-1.544 (0.001)***	-1.471 (0.004)***
Profit	6.963 (0.003)***	6.247 (0.010)**	7.061 (0.004)***	7.080 (0.003)***	6.963 (0.003)***	6.542 (0.006)***	6.905 (0.004) ***	5.740 (0.024)**
Lev	-1.262 (0.322)	-1.567 (0.237)	-0.429 (0.750)	-1.153 (0.378)	-1.262 (0.322)	-1.382 (0.285)	-1.189 (0.359)	-0.974 (0.499)
RE_TA	-0.546 (0.366)	-0.252 (0.688)	-0.572 (0.343)	-0.591 (0.337)	-0.546 (0.366)	-0.429 (0.491)	-0.547 (0.364)	0.054 (0.938)
Growth	0.146 (0.114)	0.166 (0.088) *	0.141 (0.144)	0.142 (0.124)	0.146 (0.114)	0.159 (0.090) *	0.147 (0.110)	0.17 (0.110)
Ln_Size	0.498 (0.008)***	0.394 (0.042)**	0.320 (0.111)	0.488 (0.010)**	0.498 (0.008)***	0.559 (0.005)***	0.489 (0.010) **	0.306 (0.167)
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	276	276	276	276	276	276	276	276
Overall Percentage correctly predicted	**87.32%**	**88.41%**	**88.41%**	**86.96%**	**87.32%**	**88.04%**	**86.96%**	**87.30%**
Pseudo-R^2	**49.8%**	**51.1%**	**51.1%**	**49.8%**	**49.8%**	**51.4%**	**49.8%**	**54.9%**

Notes: These tables report the beta coefficients for the logit regressions with the dependent variables Paz (Panel A), Div (Panel B), and Rep (Panel C). The main variables of interest are Squared_Conc, FIN_Ownership, INS_Ownership, STATE_Ownership, COMP_Ownership, and OtherLarge_SH.

Table 6 (continued)

Panel C (continued): Rep

Model	**(IX)**	**(X)**
Constant	-19.122 (0.999)	-19.276 (0.999)
Squared_Conc		
FIN_Ownership	-3.746 (0.007)***	-5.500 (0.000)***
INS_Ownership	-2.194 (0.041)**	-3.203 (0.007)***
STATE_Ownership	35.545 (0.999)	33.791 (0.999)
COMP_Ownership	-8.815 (0.050)*	-10.725 (0.014)**
OtherLarge_SH	-0.006 (0.989)	-0.007 (0.987)
Board_IND	-1.118 (0.176)	
Board_STR	-0.568 (0.411)	-0.520 (0.454)
Ln_Board_SZ		2.358 (0.001)***
Audit_IND		-3.079 (0.001)***
Audit_RAT	1.090 (0.170)	1.842 (0.033)**
StockClass	-1.507 (0.003)***	-1.660 (0.001)***
Profit	6.066 (0.013)**	5.823 (0.021)**
Lev	-1.496 (0.261)	-0.266 (0.847)
RE_TA	-0.275 (0.652)	0.144 (0.832)
Growth	0.140 (0.154)	0.168 (0.110)
Ln_Size	0.308 (0.020)**	
Industry Dummy	YES	YES
Observations	276	276
Overall Percentage correctly predicted	**85.9%**	**86.2%**
Pseudo-R^2	**48.60%**	**52.60%**

The variables are defined as in Table 1. The parentheses include the p-values. Significance at the 10% (*), 5% (**), and 1% (***) level is indicated.

4.3.2 The Payout Level

Besides the decision to pay out or not, corporate payout is further defined by its intensity, i.e. how much to pay. The OLS regression results are depicted in Table 7.

In panel A, I find supportive evidence for hypothesis 3 in the full models, where *OtherLarge_SH* is significantly positively related to *Ln_Pay_TA* at the 5% level in both model (VII), (VIII), (IX) and (X). These results are complementary to prior studies such as Faccio et al. (2001) Gugler & Yurtoglu (2003), and Maury & Pajuste (2005), as well as the prediction made based on agency theory. Hence, multiple large shareholders serve as an additional monitoring mechanism by which they monitor eachother and hence press for higher payouts to avoid private rent extraction. In the same panel, I do not find support for any other hypothesis.

In panel B, the dividend ratio (*Ln_Div_TA*), I find support for multiple hypotheses. I find that ownership concentration has a convex relationship with the dividend ratio, supportive of the first hypothesis; the coefficient of *Squared_Conc* is positive and significant at the 1% level. This indicates that at low levels of ownership concentration, an increase in the voting percentage owned by the large shareholders leads to a decrease in dividend payout intensity because the positive effect of increased concentration outweighs the agency costs. However, at high levels of ownership concentration, the firms make larger dividend payouts to offset the increasing agency costs due to very concentrated holdings. Here, dividend payout becomes a mitigation mechanism for agency problems. This result strengthens prior studies such as Truong & Heaney (2007) and Farinha (2003), who find the same convex relationship between dividends and ownership concentration.

Further, I find partial support in the full model for hypotheses 2_a and 2_d; the coefficients of *FIN_Ownership* and *COMP_Ownership* are positive and statistically significant in the models (VIII), (IX) for both, and in (X) only for *FIN_Ownership*. This leads to the conclusion that in the presence of multiple large shareholders, large financial institutional shareholders press for higher dividend payout, in line with Crane et al. (2016) and Short et al. (2002). Further, due to the double-agency problem, large

shareholders that are other companies also press for higher dividends when other large shareholders are involved. This result is complementary to other studies such as Andres et al. (2019) and Le & Le (2017) who also find that when large shareholders are other industrial companies, (dividend) payout is higher.

Interestingly, in the same model, I also find a significantly positive association of *INS_Ownership* with the dividend payout level. It thus seems as though large insider shareholders also positively affect the intensity of dividend payout, possibly because they do want to signal that they do not expropriate minor shareholders to keep their reputation and have favourable future loaning conditions. This would be more in line with a signaling hypothesis (Wardhana, 2016).

In panel C (repurchase ratio), I find a significant negative coefficient at the 1% level for *Squared_Conc* in model (II). This is in line with the results obtained from the logit regression before. Thus, at low levels of shareholder concentration, an increase in concentration is followed by an increase in the repurchase ratio, whereas at high levels of concentration, a decrease of the repurchase ratio is observable.

In models (IV), (VIII), (IX), and (X), I find strong support for hypothesis 2_b; I observe a significant negative relationship at the 1% level for *INS_Ownership*. With an increase in ownership by large insiders, the repurchase ratio decreases; this is the opposite that was observed in the dividend ratio (panel B). Hence, this suggests that large insiders may prefer dividends over repurchases to offset agency problems, which is complementary to the conclusions drawn by De Cesari (2012), who also finds a preference for dividends over repurchases for large insiders. Large governmental owners have statistictically siginificant negativ relationship with the repurchase ratio in all models they are included (*STATE_Ownership*). This would not be in line with the hypothesis related to governmental owners; however, as pointed out before, due to the very low occurence of large governmental shareholders, their results should be interpreted with caution.

About the control variables, I find in panel A that board structure (*Board_STR*) is significantly positively related at mostly the 5% level to the payout ratio, while the

coefficient of board size (*Ln_Board_SZ*) is significantly negativ at the 10% level (and once at each the 5% and 1% level) for all but model (VIII). The significant positive relationship of *Board_STR* also continues in panel B (dividend ratio) but not in panel C. Hence, yearly elected boards, i.e. an indication of better governance, increase the payout ratio, which is supportive of the idea that better governance leads to more (dividend) payout, similar to the results of Jiraporn et al. (2011). Smaller boards have higher payout ratios, which may point towards more of a signalling behaviour of small firms that use higher relative payout ratios to show their positive future outlook (Bhattacharya, 1979; Wardhana, 2016).

Further, in panel A I find a consistently positive and significant relationship of *Growth* with the payout ratio, while *RE_TA* is significantly negatively related to the payout ratio throughout all specifications. Both indicate that younger, more growth-heavy firms exhibit higher payout ratios. This significant positive coefficient of *Growth* is also found in panel B & C throughout all specifications, while RE_TA is only significant in panel B still. Thus, this points more towards the direction of a signaling effect of payout, as hypothesized by Bhattacharya (1979) and opposite of agency theory. This positive relationship of growth opportunities is also found by Khalfan & Wendt (2020) for the dividend ratio in their Finnish, Norwegian, and Swedish sub-samples. In addition, I also find that companies with more stock classes have lower dividend payout ratios (Table 7, panel B). Profitability and leverage remain the same as before in panel A of Table 7. Thus, more profitable firms with less debt exhibit higher general payout as well as higher dividend payout ratios when I consider more than one shareholder type. Larger firms also tend to pay higher dividend ratios (panel B) and repurchase more in terms of actual repurchase level (panel C). In panel C, I also find that annual audit ratification is significantly negatively related at the 1% to the repurchase ratio, indicating that yearly ratified audit committees – which are part of good governance – have lower repurchase ratios and thus substitute for one another.

In terms of model fit, the adjusted R^2 values range from 46.6% (panel C, model IV) to as high as 62.7% (panel C, model (IX)). Related studies (Alzahrani & Lasfer, 2012;

Khalfan & Wendt, 2020; Truong & Heaney, 2007) often have lower or similar adjusted R^2 values. Thus, I conclude that my models explain a similar to a sometimes even greater amount of variation compared to models presented by other researchers.

Overall, I find only partial support for hypothesis one where *Squared_Conc* is significantly positively related to the dividend payout ratio (panel B). I also find partial support for hypothesis 2_a in the panel B and partial support for hypothesis 2_b in panel C. Hypothesis 2_d is supported partially in two out of four models in panel B, whereas the third hypothesis finds strong support panel A.

Table 7: The Payout Intensity

Panel A: Ln_Pay_TA

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-4.910 (0.000)***	-4.905 (0.000)***	-4.875 (0.000)***	-4.863 (0.000)***	-4.910 (0.000)***	-5.034 (0.000)***	-5.338 (0.000)***	-5.351 (0.000)***
Squared_Conc		0.102 (0.799)						
FIN_Ownership			0.203 (0.589)					0.163 (0.769)
INS_Ownership				-0.267 (0.310)				-0.058 (0.893)
STATE_Ownership					2.325 (0.261)			2.184 (0.285)
COMP_Ownership						0.887 (0.222)		0.545 (0.559)
OtherLarge_SH							0.393 (0.010) **	0.370 (0.018) **
Board_IND	0.688 (0.227)	0.715 (0.219)	0.661 (0.249)	0.635 (0.268)	0.688 (0.227)	0.800 (0.166)	0.901 (0.112)	0.924 (0.115)
Board_STR	0.521 (0.021)**	0.505 (0.030)**	0.487 (0.037)**	0.511 (0.023)**	0.522 (0.020)***	0.540 (0.016)**	0.584 (0.009)***	0.563 (0.017) **
Ln_Board_SZ	-0.646 (0.091)*	-0.672 (0.091)*	-0.701 (0.078)*	-0.713 (0.066)*	-0.647 (0.091)*	-0.778 (0.050)*	-0.852 (0.027)**	-0.978 (0.021)
Audit_IND	-0.218 (0.696)	-0.225 (0.689)	-0.218 (0.697)	-0.188 (0.736)	-0.218 (0.697)	-0.112 (0.842)	-0.278 (0.612)	-0.203 (0.716)
Audit_RAT	-0.149 (0.621)	-0.169 (0.589)	-0.170 (0.577)	-0.148 (0.624)	-0.150 (0.620)	-0.209 (0.494)	-0.097 (0.744)	-0.152 (0.631)
StockClass	-0.240 (0.172)	-0.247 (0.166)	-0.229 (0.197)	-0.191 (0.293)	-0.240 (0.172)	-0.217 (0.218)	-0.124 (0.487)	-0.096 (0.602)
Profit	4.776 (0.000)***	4.792 (0.000)***	4.710 (0.000)***	4.622 (0.000)***	4.781 (0.000)***	4.756 (0.000)***	5.082 (0.000)***	4.962 (0.000) ***
Lev	-1.166 (0.045)**	-1.156 (0.048)**	-1.207 (0.041)**	-1.199 (0.040)**	-1.167 (0.045)**	-1.099 (0.060)*	-1.371 (0.018)**	-1.357 (0.022) **
RE_TA	-0.684 (0.011)**	-0.702 (0.012)**	-0.694 (0.010)**	-0.659 (0.015)**	-0.685 (0.011)**	-0.734 (0.007)***	-0.793 (0.003)***	-0.819 (0.005) ***
Growth	0.114 (0.003)***	0.115 (0.003)***	0.119 (0.003)***	0.120 (0.002)***	0.114 (0.004)***	0.118 (0.003)***	0.109 (0.004)***	0.117 (0.003) ***
Ln_Size	0.069 (0.303)	0.074 (0.290)	0.085 (0.247)	0.084 (0.224)	0.069 (0.301)	0.083 (0.224)	0.096 (0.149)	0.118 (0.119)
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	167	167	167	167	167	167	167	167
R^2	**56.0%**	**56.0%**	**56.1%**	**56.3%**	**56.0%**	**56.5%**	**58.0%**	**58.3%**
Adjusted R^2	**50.7%**	**50.3%**	**50.4%**	**50.7%**	**50.7%**	**50.8%**	**52.5%**	**51.9%**

Table 7 (continued)

Panel A (continued)

Model	**(IX)**	**(X)**
Constant	-5.494 (0.000)***	-5.066 (0.000)***
Squared_Conc		
FIN_Ownership	-0.262 (0.622)	-0.170 (0.736)
INS_Ownership	-0.267 (0.530)	-0.265 (0.526)
STATE_Ownership	1.388 (0.495)	2.266 (0.270)
COMP_Ownership	-0.086 (0.922)	0.030 (0.973)
OtherLarge_SH	0.311 (0.045)**	0.329 (0.034)**
Board_IND	0.423 (0.205)	
Board_STR	0.642 (0.006)***	0.665 (0.004)***
Ln_Board_SZ		-0.576 (0.070)*
Audit_IND		0.470 (0.173)
Audit_RAT	0.038 (0.903)	-0.030 (0.921)
StockClass	-0.287 (0.091)*	-0.181 (0.318)
Profit	4.834 (0.000)***	5.125 (0.000)***
Lev	-1.384 (0.021)**	-1.075 (0.054)*
RE_TA	-0.565 (0.037)**	-0.663 (0.015)**
Growth	0.108 (0.007)***	0.115 (0.004)***
Ln_Size	-0.011 (0.834)	
Industry Dummy	YES	YES
Observations	167	167
R^2	**56.60%**	**57.20%**
Adjusted R^2	**50.60%**	**51.30%**

Table 7 (continued)

Panel B: Ln_Div_TA

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-5.280 (0.000)***	-5.323 (0.000)***	-5.218 (0.000)***	-5.316 (0.000)***	-5.280 (0.000)***	-5.318 (0.000)***	-5.434 (0.000)***	-5.695 (0.000)***
Squared_Conc		0.926 (0.001)***						
FIN_Ownership			0.356 (0.167)					1.355 (0.001)***
INS_Ownership				0.151 (0.423)				1.039 (0.001)***
STATE_Ownership					1.158 (0.414)			1.309 (0.335)
COMP_Ownership						0.222 (0.666)		1.612 (0.015)**
OtherLarge_SH							0.168 (0.139)	0.133 (0.229)
Board_IND	0.468 (0.263)	0.768 (0.064) *	0.408 (0.329)	0.515 (0.223)	0.468 (0.263)	0.494 (0.243)	0.503 (0.227)	0.78 (0.063)*
Board_STR	0.651 (0.000) ***	0.514 (0.002)***	0.591 (0.001)***	0.657 (0.000)***	0.651 (0.000)***	0.656 (0.000)***	0.679 (0.000)***	0.531 (0.002)***
Ln_Board_SZ	0.242 (0.385)	0.022 (0.937)	0.147 (0.608)	0.281 (0.322)	0.242 (0.385)	0.210 (0.468)	0.137 (0.634)	-0.17 (0.567)
Audit_IND	-0.354 (0.401)	-0.500 (0.222)	-0.338 (0.421)	-0.397 (0.351)	-0.354 (0.401)	-0.320 (0.457)	-0.303 (0.471)	-0.307 (0.456)
Audit_RAT	-0.004 (0.987)	-0.211 (0.324)	-0.042 (0.843)	-0.006 (0.979)	-0.004 (0.987)	-0.022 (0.919)	0.009 (0.965)	-0.289 (0.192)
StockClass	-0.332 (0.009) ***	-0.395 (0.001)***	-0.308 (0.015)**	-0.364 (0.006)***	-0.332 (0.009)***	-0.324 (0.012)**	-0.272 (0.038)**	-0.351 (0.009)***
Profit	3.215 (0.000) ***	3.535 (0.000)***	3.107 (0.000)***	3.325 (0.000)***	3.215 (0.000)***	3.222 (0.000)***	3390 (0.000)***	3.759 (0.000)***
Lev	-2.120 (0.000) ***	-1.976 (0.000)***	-2.181 (0.000)***	-2.100 (0.000)***	-2.120 (0.000)***	-2.098 (0.000)***	-2.187 (0.000)***	-2.113 (0.000)***
RE_TA	-0.634 (0.001) ***	-0.803 (0.000)***	-0.649 (0.001)***	-0.650 (0.001)***	-0.634 (0.001)***	-0.646 (0.001)***	-0.681 (0.000)***	-0.934 (0.000)***
Growth	0.082 (0.004) ***	0.083 (0.003)***	0.09 (0.002)***	0.078 (0.008)***	0.082 (0.004)***	0.083 (0.004)***	0.080 (0.005)***	0.088 (0.002)***
Ln_Size	0.046 (0.343)	0.103 (0.042)***	0.072 (0.169)	0.041 (0.403)	0.046 (0.343)	0.049 (0.320)	0.052 (0.288)	0.133 (0.013)**
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	153	153	153	153	153	153	153	153
R^2	**63.9%**	**66.7%**	**64.4%**	**64.0%**	**63.9%**	**63.9%**	**64.4%**	**67.9%**
Adjusted R^2	**59.0%**	**61.9%**	**59.3%**	**58.9%**	**59.0%**	**58.7%**	**59.4%**	**62.4%**

Table 7 (continued)		
Panel B (continued)		
Model	**(IX)**	**(X)**
Constant	-5.678 (0.000)***	-5.418 (0.000)***
Squared_Conc		
FIN_Ownership	1.276 (0.001)***	0.947 (0.007)***
INS_Ownership	0.991 (0.001)***	0.772 (0.010)**
STATE_Ownership	1.221 (0.356)	1.428 (0.302)
COMP_Ownership	1.541 (0.014)**	1.028 (0.104)
OtherLarge_SH	0.124 (0.251)	0.124 (0.270)
Board_IND	0.466 (0.044)**	
Board_STR	0.554 (0.001)***	0.619 (0.000)***
Ln_Board_SZ		0.254 (0.279)
Audit_IND		0.276 (0.272)
Audit_RAT	-0.264 (0.214)	-0.126 (0.560)
StockClass	-0.389 (0.002)***	-0.401 (0.003)***
Profit	3.725 (0.000)***	3.845 (0.000)***
Lev	-2.123 (0.000)***	-1.841 (0.000)***
RE_TA	-0.886 (0.000)***	-0.773 (0.000)***
Growth	0.087 (0.002)***	0.089 (0.002)***
Ln_Size	0.099 (0.009)***	
Industry Dummy	YES	YES
Observations	153	153
R^2	**67.60%**	**66.00%**
Adjusted R^2	**62.70%**	**60.90%**

Table 7 (continued)

Panel C: Ln_Rep_TA

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-0.794	-3131	-0.921	-2.161	-0.794	-0.588	0.071	-0.932
	(0.682)	(0.073)*	(0.644)	(0.236)	(0.682)	(0.765)	(0.973)	(0.639)
Squared_Conc		-5.338						
		(0.000)***						
FIN_Ownership			0.428					-2.104
			(0.748)					(0.289)
INS_Ownership				-3.441				-4.703
				(0.001)***				(0.001)***
STATE_Ownership					-6.889			-11.298
					(0.029) **			(0.001)***
COMP_Ownership						2.101		0.794
						(0.473)		(0.819)
OtherLarge_SH							-0.530	-0.632
							(0.273)	(0.239)
Board_IND	0.387	-0.439	0.494	0.854	0.387	0.295	0.273	0.330
	(0.800)	(0.738)	(0.754)	(0.543)	(0.800)	(0.848)	(0.858)	(0.812)
Board_STR	-0.197	0.169	-0.192	0.179	-0.197	-0.088	-0.044	0.519
	(0.791)	(0.790)	(0.797)	(0.794)	(0.791)	(0.907)	(0.954)	(0.468)
Ln_Board_SZ	-1.752	-2.060	-1.831	-3.693	-1.752	-2.131	-1.619	-3.999
	(0.155)	(0.051)*	(0.149)	(0.005)***	(0.155)	(0.115)	(0.190)	(0.004)***
Audit_IND	-0.161	-0.956	-0.261	-1.072	-0.161	0.136	0.086	-0.506
	(0.913)	(0.450)	(0.863)	(0.435)	(0.913)	(0.929)	(0.954)	(0.723)
Audit_RAT	-2.438	-1.939	-2.464	-2.235	-2.438	-2.471	-2.355	-1.947
	(0.009)***	(0.015)**	(0.009)***	(0.009)***	(0.009)***	(0.008)***	(0.011)**	(0.021)**
StockClass	0.939	2.793	1.009	2.806	0.939	0.973	0.864	3.070
	(0.122)	(0.000)***	(0.121)	(0.001)***	(0.122)	(0.112)	(0.156)	(0.000)***
Profit	3.778	0.384	3.74	0.519	3.778	3.576	4.114	-0.166
	(0.096)*	(0.850)	(0.102)	(0.818)	(0.096) *	(0.119)	(0.072) *	(0.942)
Lev	-0.598	-1.642	-0.726	-2.301	-0.598	-0.706	-0.194	-1.856
	(0.690)	(0.208)	(0.643)	(0.119)	(0.690)	(0.641)	(0.900)	(0.201)
RE_TA	0.315	-0.324	0.271	-1.361	0.315	-0.069	0.241	-1.993
	(0.776)	(0.733)	(0.810)	(0.229)	(0.776)	(0.955)	(0.828)	(0.110)
Growth	0.253	0.216	0.251	0.206	0.253	0.253	0.231	0.170
	(0.038) **	(0.038)**	(0.041)**	(0.064)*	(0.038)**	(0.038)**	(0.060) *	(0.122)
Ln_Size	0.037	0.463	0.065	0.714	0.037	0.097	-0.096	0.691
	(0.883)	(0.050)*	(0.809)	(0.022)**	(0.883)	(0.715)	(0.730)	(0.031) **
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	71	71	71	71	71	71	71	71
R^2	**60.3%**	**71.9%**	**60.4%**	**60.4%**	**60.4%**	**60.7%**	**61.2%**	**71.1%**
Adjusted R^2	**47.5%**	**62.2%**	**46.6%**	**46.6%**	**47.5%**	**47.1%**	**47.8%**	**58.7%**

Notes: This table reports the beta coefficients for the OLS regressions with the dependent variables Ln_Pay_TA (Panel A), Ln_Div_TA (Panel B), and Ln_Rep_TA (Panel C). The main variables of interest are Squared_Conc, FIN_Ownership, INS_Ownership, STATE_Ownership, COMP_Ownership, and

Table 7 (continued)

Panel C (continued)

Model	**(IX)**	**(X)**
Constant	-3.275 (0.083)**	-0.759 (0.707)
Squared_Conc		
FIN_Ownership	-2.727 (0.194)	-1.316 (0.503)
INS_Ownership	-3.551 (0.012)**	-3.090 (0.009)***
STATE_Ownership	-8.175 (0.012)**	-8.033 (0.006)***
COMP_Ownership	-2.173 (0.513)	0.805 (0.821)
OtherLarge_SH	-0.497 (0.370)	-0.940 (0.079)*
Board_IND	-0.811 (0.348)	
Board_STR	0.774 (0.301)	0.823 (0.255)
Ln_Board_SZ		-1.811 (0.044)**
Audit_IND		-0.010 (0.990)
Audit_RAT	-1.007 (0.222)	-1.517 (0.068)*
StockClass	1.817 (0.013)**	2.067 (0.002)***
Profit	1.372 (0.571)	2.235 (0.276)
Lev	-0.658 (0.6659)	-0.506 (0.706)
RE_TA	0.059 (0.955)	-0.725 (0.515)
Growth	0.200 (0.090)*	0.187 (0.097)*
Ln_Size	-0.095 (0.669)	
Industry Dummy	YES	YES
Observations	71	71
R^2	**65.20%**	**68.20%**
Adjusted R^2	**52.20%**	**56.30%**

OtherLarge_SH. The variables are defined as in Table 1. The parentheses include the p-values. Significance at the 10% (*), 5% (**), and 1% (***) level is indicated.

4.3.3 Robustness Tests

In this section, I use robustness tests, i.e. different measurements of key variables, to see if the main results presented before are sensitive to these changes.

4.3.3.1 Shareholder Type Dummies

Instead of using the actual levels of shareholding per shareholder, I substitute these for dummy variables of each shareholder type that disregard the detailed amounts of voting rights held by a large shareholder. This also alleviates the multicollinearity between *Squared_Conc* and *FIN_Ownership* and *INS_Ownership,* as explained before, and lets me test them simultaneously in a full model.

In Table 8 (Appendix), which depicts the logit regressions using the new dummy variables, I find similar results of the likeliness of general payout (panel A) to the initial regression (Table 6, panel A). The only difference is that I now find partial support for hypothesis 2_d. Using the dummy of company ownership, *DCOMP_Ownership,* I find a positive and significant relationship at the 10% level in the full model of panel A. Thus, having large shareholders that are companies increases the likelihood of a general payout, which is supportive of the managers pressing for payout following the double-agency problem and the results of Gugler (2003), but the level of shareholding is not significant. Though, this appears to only be of relevance when one considers also other shareholder types at the same time (model (VIII)). I also find a significant positive relationship of *DCOMP_Ownership* with *Div* in panel B, however, not in the full model. While this suggests that having large shareholders that are other companies increases the likelihood of dividend payout, this relationship does not seem robust. In general, the relationship here does not seem very robust for *(D)COMP_Ownership* for these two panels. In panel C, I find supportive evidence of the initial models, as I also find model (VI) to exhibit a significantly negative coefficient of *DCOMP_Ownership* with *Rep.*

In panel B, I find that *FIN_Ownership* is now insignificant and negative whereas in the initial logit regressions before, the coefficient was insignificant. However, as with *DCOMP_Ownership,* the significance of the relationship is not validated by other

specifications in either the initial regression nor this panel of the robustness test. The same conclusion can also be drawn for *OtherLarge_SH,* which also does only display a positive significant relationship with the dividend decision at the 10% level in only one model (model (VIII)). Hence, this does also appear to not be robust.

In panel C, I find robust evidence of the concave relationship of ownership concentration (*Squared_Conc*) with the repurchase decision as the coefficient is negative and significant in both models (model (II) and (VIII)). *FIN_Ownership* is insignificant now using the dummy variable, and also positive. This is thus not validating the results of the initial logit regression where I found significant negative relationships with *Rep* when using the aggregate voting rights held by large institutional shareholders. It hence appears as though the actual voting percentage held by financial institutions is of high significance when considering the impact they have on the likelihood of share repurchase activity. However, this does not validate the results found before. Further, I do not find any relationships that validate the former results of the hypotheses-related variables.

When looking at the OLS regression using the shareholder type dummies (Table 9, Appendix), I also find that the robustness of the results vastly differs upon the specification. In panel A, I only find supportive evidence of the prior results of Table 7 in the seventh model; there, *OtherLarge_SH* is again positively significantly related to *Ln_Pay_TA.* However, this significance vanishes in the full model. The same goes for both *DFIN_Ownership* and *DCOMP_Ownership,* who have significant positive relationships with *Pay* in their models, but not in the full model. In the prior analysis, the coefficients for *FIN_Ownership* and *COMP_Ownership* insignificant in panel A of Table 7. These new results hence only provide partial support for hypotheses 2_a and 2_d; having large institutional owners/large owners that are other companies increases the payout intensity, but only when other shareholders are not considered (see the full model). Hence, the results for these two are also not robust.

In panel B, I find robust evidence for the convex relationship of ownership concentration with the dividend payout ratio, both in the full model and the model only considering

the control variables and *Squared_Conc*. I also find, in the full model, that *DINS_Ownership* is significant and negative at the 1% level. In table 7, panel B, *INS_Ownership* was significantly positively related to the dividend ratio in the full model. This new result, however, supports the hypothesis 2_b. Hence, having large insider shareholders, among other large shareholders, results in the insiders trying to lower the dividend payout ratio to have more at their disposal for rent extraction. But when the actual voting rights of the insiders increase, they pay out larger dividends. However, the evidence for this is not robust throughout all models. *OtherLarge_SH* is significant in the full model of panel B, delivering partial support for the third hypothesis that having more than one large shareholder increases dividend payout ratios. However, the evidence, again, is only partial as the variable is insignificant in both the prior panel B of Table 7 and in the seventh model of panel B in Table 9.

Panel C also exhibits similar results to the initial models, except that *DINS_Ownership* is now insignificant. Hence, the prior results are not validated if they are only measured as dummies.

4.3.3.2 Alternative Payout Ratios

Aside from scaling the payout by total assets, other studies use net income and sales as denominators.

Using these, I run the OLS regressions again (Appendix, Table 10). In panel A(1) uses sales as the new denominator, and panel A(2) uses net income. The same order holds for the other panels which have a different numerator. I find qualitatively similar results to the main (full) models of panel A(1) and (2). In neither of the panels I find qualitatively heavy deviations from the prior OLS regression in Table 7, neither in sign nor significance. The results appear to be robust to the new denominators. One variable is the exception: In panel B(2) of table 10, *OtherLarge_SH* is positive and significant at the 5% (10%) level, which would support hypothesis 3. However, this relationship is not significant in panel B(1) and not in panel B of Table 7.

The only other interesting observation I see is that using net income as a denominator, the control variables become largely insignificant (except for *Ln_Rep_NI*). I suspect that this is because net income, as described in 4.1, exhibits very different characteristics from the variables that use either sales or total assets as the denominator. However, the main results do not appear to be affected by this too much.

5. Conclusion

In the upcoming sections I am going to round-off the paper by reitaring the most important results and discussing these with regard to the research question (5.1). Thereafter, in 5.2, the limitations of my study and suggestions for further research are proposed. These suggestions for others researchers are both drawn from the limitations and the results found in this study.

5.1 Disussion of the Results

In this study, I investigate the research question "*What are the effects of large shareholders on corporate payout policy in Danish publicly listed companies?"*. To do so, I collect ownership data of the three largest shareholders of a company in a given year and also dissect them into four different types (financial institutional, insider, state, and industrial). I look at both the decision to pay out or not using logit regressions, as well as how much to pay out (OLS regressions).

Using several robustness tests, I find relatively robust supporting evidence for the first hypothesis when the dependent variable is the dividend payout ratio. Here, ownership concentration has a significant convex relationship in most specifications. This supports other researchers' results (Farinha, 2003; Truong & Heaney, 2007) that at low levels of ownership concentration, an increase in concentration substitutes for payout (dividends). This is because at low levels of concentration, large shareholders align interests better between management and shareholders; at this point, the benefits such as better interest alignment alleviate vertical agency problems and outweigh the negatives of potential private rent extraction and horizontal agency problems. At high levels of concentration, higher payout (dividends) serves as a substitutive device to mitigate the associated agency costs created by a high degree of concentration.

Interestingly, though, I find that ownership concentration has a robust concave relationship with both the repurchase propensity and intensity; i.e. repurchases complement an increase of ownership concentration at low levels, whereas at higher levels, both the propensity and intensity of repurchases decrease with further ownership

concentration. One may conclude that this is due to repurchases being less sticky than dividends, i.e. not as strong of a pre-commitment device to mitigate agency cost that can more easily be cut compared to dividends (Andriosopoulos & Hoque, 2013; Kalay & Lemmon, 2007; Khalfan & Wendt, 2020). However, given the convex relationship of ownership concentration and dividend ratio, the results may imply that at lower levels of ownership concentration, other shareholders may not feel as "threatened" by the large shareholders having an increasing concentration because of the benefits associated with an increased ownership concentration at low levels (e.g. better interest alignment).

Nonetheless, the large shareholders want to offset possible allegations of minority shareholder expropriation that may damage their reputation and thus use repurchases to show their commitment to treating the smaller shareholders well. Dividends, being more sticky, may thus only be used at high levels of concentration, when a stronger commitment device is needed to offset the agency problems among shareholders.

Large financial institutional owners have a relatively robust positive relationship with the dividend payout ratio, supportive of hypothesis 2_a. An increase in ownership by these shareholders results in an increase in the dividend ratios, which is along the lines of prior studies; they also show the same effect of institutional shareholders pressing for more dividends due to them being active monitors of the company and hence use dividends as a means to reduce horizontal agency cost (Crane et al., 2016; Short et al., 2002). Financial institutional shareholders further are less likely to repurchase shares, however, this relationship is only significant if one takes into account the actual percentage of voting rights held. This could again be related to the argument of dividend stickiness over the less strong commitment of repurchases. The mere presence of large institutional shareholders did not exhibit a robust significant relationship.

Large insiders had an overall semi-robust significant positive relationship with the dividend payout ratio, too. This is not supportive of the hypothesis that insiders tend to retain funds for private rent extraction. Rather, it seems like they tend to pay out higher dividends to keep their reputation and mitigate agency cost, thus not adversely affect the firm value and future debt conditions by expropriating minor shareholders (Claessens,

Djankov, Fan, & Lang, 2002; De Cesari, 2012). However, this relationship only persists in full models and not when considered on their own.

An increase of voting rights held by governmental shareholders reduced the repurchase ratios in all regressions, which was not in line with the prediction that they have a positive effect on corporate payout. This may hint at a distaste for repurchases as they are not strong enough to alleviate the special double-agency problem they face. However, it is again important to recognize the extremely low occurrence of large governmental shareholders; as such, the results here for governmental shareholders and their effect on corporate payout policy are not to be generalized.

Large shareholders that are companies had an overall decently robust negative relationship with the propensity to repurchase shares. Taken together with the fact that depending upon the specification, these shareholders had a positive significant (albeit not robust) relationship with the (dividend) payout propensity possibly hints at a slight preference of dividends over repurchases for these shareholders. They use the sticky dividends to alleviate the double-agency problem they have due to them being agents, while simultaneously also principals. However, given that the positive association of these shareholders with the propensity to pay out in general/dividends is only significant in two out of four models (and both times only barely at the 10% level), this is rather speculative.

Having more than one large shareholder shows a robust positive relationship with the general payout ratio. Multiple large shareholders monitor each other by pressing for higher payouts to limit the expropriation of minor shareholders and reduce agency costs (Gugler & Yurtoglu, 2003; Pagano & Röell, 1998). This is supportive of the third hypothesis; however, this statistical relationship does not hold consistently for either the repurchase or dividend ratio. Still, this points in the same direction as prior studies such as Gugler & Yurtoglu (2003) and Maury & Pajuste (2005).

Also, I find rather robust evidence for the positive relationship of profitability with general payout and dividend intensity and ratio, as well as repurchase intensity, in line with prior research (Chang et al., 2018; DeAngelo & DeAngelo, 2006; Denis & Osobov,

2008; Fama & French, 2001; Jacob & Jacob, 2013; Raaballe & Hedensted, 2011; von Eije & Megginson, 2008). The same can be said for other common control variables such as the positive, relatively consistent relationship of firm size with general payout, dividend, and repurchase propensity, as similar found by Denis & Osobov (2008), Chang, Dutta, Saadi, & Zhu (2018) and Raaballe & Hedensted (2011). Thus, more profitable, larger firms are more prone to agency problems and hence are more likely to pay out to mitigate them, compared to less profitable, smaller firms. Firms with less debt are also more likely to pay out and also pay out more, consistent with e.g. Fama & French (2002) and Truong & Heaney (2007). The results for other corporate governance characteristics deliver mixed results.

Considering the complete analyses and results, the research question can be answered, but not with a single sentence. As shown, payout is a tool used to mitigate the agency costs appearing among shareholders. However, I show that the results of the ownership variables can vary significantly if the decision to pay out or the amount paid out is measured. Further, it also depends if the dependent variable is related to the composite payout, only dividends, or only repurchases. Not all types of large shareholders have a significant relationship with the forms of corporate payout, and no type has a consistent significant relationship among all models and specifications.

To conclude, I contribute to the existing literature by showing how different types of large shareholders affect the propensity to pay out and the pay out intensity in Danish listed companies and thus (don't) use payout to mitigate agency conflicts. By differentiating between a general payout (dividends + repurchases), only dividends, and only repurchases, I further pinpoint the differences in relationship and direction of the ownership concentration irrespective of type, the different shareholder types, as well as between shareholder structures that only have one versus multiple large shareholders.

Investors may draw from this that if they want to receive higher dividends, they are well-advised to look out for companies with a more concentrated ownership structure that are profitable, large, and do not have a lot of debt. Further, they optimally have yearly

elected boards and preferably the least amount of stock classes possible (i.e. 1). Also, a company that then has great growth opportunities will pay out more dividends. Although, the growth opportunities do have the smallest impact on the dividend ratios given that it has the smallest beta-coefficient in all models where the dividend ratio is the dependent variable. Comparetively higher general payout ratios can be achieved by acquiring stake in companies that have multiple large shareholders.

If investors specifically look for higher repurchase ratios, they should look for more widely-held companies and where insiders hold less voting rights. Further, these companies should also have ample growth opportunities, if one wants to receive higher repurchase ratios. Compared to the dividend payout ratio, the growth opportunities have a much larger beta-coefficient for the repurchase ratio and hence are more economic importance in this case.

5.2 Limitations and Further Research

This section addresses the limitations of this study and gives insight into further potential areas of research.

While the sample size is rather similar to many other studies that concern themselves with Denmark and is large enough to use for statistical analyses, it is still the sample size that somewhat limits the study. For example, large government owners only existed in three cases. In these, they were the largest shareholder in a given company; however, they were never the second or third largest shareholder throughout the sample. Hence, the results for this ownership type are not as informative as for the other types due to extremely low observations. On the other hand, though, this might very well be indicative of the low involvement of governmental entities as large shareholders in Denmark, which is a valuable piece of information. Hence, it might be interesting to see which companies state-entities invest in. Although, it might still be useful to examine the effects of governmental entities on corporate payout policy in a dedicated study.

Generally speaking, though, a larger time frame (10+ years) with subsequently more observations may be beneficial to extend on and validate the results found in this study. While I collected six years of data (2013 - 2018), I had to subtract one year due to lagged variables to account for endogeneity issues (2014 – 2018).

In addition to this, the study purely focuses on listed companies in Denmark. While it is harder to obtain data for private firms, it would be of additional value to see if the relationships presented in this thesis also hold for private firms or if they exhibit vastly different characteristics.

Also, it would certainly be advisable to access a database that compiles ownership data of Danish firm, if such a database exists. All governance and ownership-related data had to be hand-collected, which took a very significant portion of the time spent on the thesis. By having a database with all data combined, it would be easier to examine a significantly longer time frame and hence validate the results. Further, this would remove the "human" factor of data collection, i.e. possible human error in data collection.

As another limitation and also further potential further research, one may think about further dissecting ownership types into smaller structures. That means e.g. dissecting general insider ownership into ownership by individuals, family members, and then comparing them. Alternatively, one may look into the different effects of institutional shareholders, such as comparing banks to investment funds to insurances in the Danish setting, similar to Firth et al. (2016). Firth et al. (2016) showed that only mutual funds had a significant effect on corporate payout, while other institutional investors did not. By doing so, the individual effects and relationships of these "sub-types" can be examined. Also, this investigation may explain why my analyses often showed insignificant effects of shareholder types on corporate payout. It is possible that e.g. only one sort of insider/institutional shareholder has a significant effect, while the others do not. Thus, a composite classification may suppress the effects of subtypes.

Further, some scholars also use alternative methods instead of OLS regression. These include vector autoregressive models (Khalfan & Wendt, 2020) as an alternative

solution to the possible endogeneity problem between ownership and payout, as well as two-stage-least squared regression as a different method of robustness test (Firth et al., 2016; Truong & Heaney, 2007). Using these alternative methods may prove useful to give further insight into the robustness of the results presented in this paper.

Also, as established before, the payout ratios scaled by net income seemed to exhibit very different characteristics, hence why comparability of the results with the other ratios may be more difficult. Introducing different denominators such as payout per share (Firth et al., 2016) may thus also be a good way to assess how robust the relationships are without running into the problem of negative denominators.

Lastly, one of the more interesting results was the concave relationship of ownership concentration and repurchase ratio. This result was suprising and hence it would be worthwile to investigate this phenomenon again, possible in other countries or with a different measure of ownership concentration.

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Appendix

Table 4: Sub-Sample Characteristics for Voting Rights Held > 0

				Percentiles				
	Mean	**Std. Deviation**	**Minimum**	**25**	**50**	**75**	**Maximum**	**Number of observations**
OwnershipConc	0.498	0.244	0.051	0.270	0.503	0.700	0.997	276
Squared_Conc	0.307	0.249	0.003	0.073	0.253	0.490	0.994	276
FIN_Ownership	0.294	0.224	0.050	0.116	0.225	0.449	0.830	191
INS_Ownership	0.469	0.235	0.056	0.222	0.532	0.696	0.874	155
STATE_Ownership	0.500	0.000	0.500	0.500	0.500	0.500	0.500	3
COMP_Ownership	0.275	0.197	0.051	0.095	0.281	0.540	0.542	23

Table 8: The Likelihood of Payout - Robustness Test using Shareholder-Type Dummies

Panel A: Pay

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-5.075	-5.145	-5.324	-6.463	-5.075	-4.914	-4.872	-6.619
	(0.002)***	(0.002)***	(0.001)***	(0.001)***	(0.002)***	(0.002)***	(0.004) ***	(0.002)***
Squared_Conc		0.266						-0.245
		(0.788)						(0.814)
DFIN_Ownership			-0.732					-0.374
			(0.162)					(0.601)
DINS_Ownership				0.685				0.909
				(0.181)				(0.201)
DSTATE_Ownership					16.302			15.221
					(0.999)			(0.999)
DCOMP_Ownership						1.319		2.059
						(0.283)		(0.074)*
OtherLarge_SH							-0.198	-0.224
							(0.686)	(0.702)
Board_IND	1.580	1.647	1.183	1.816	1.580	1.437	1.504	1.443
	(0.402)	(.388)	(0.541)	(0.345)	(0.402)	(0.448)	(0.429)	(0.479)
Board_STR	-1.693	-1.709	-1.500	-1.676	-1.693	-1.683	-1.724	-1.628
	(0.018) **	(.017) **	(0.044) **	(0.023) **	(0.018) **	(0.018) **	(0.016) **	(0.043)**
Ln_Board_SZ	1.309	1.256	1.629	1.509	1.309	1.109	1.339	1.462
	(0.111)	(0.137)	(0.600) *	(0.078) *	(0.111)	(0.178)	(0.106)	(0.105)
Audit_IND	-4.118	-4.167	-3.730	-4.121	-4.118	-3.597	-4.131	-3.093
	(0.027) **	(0.027) **	(0.052) *	(0.029) **	(0.027) **	(0.059) *	(0.028) **	(0.124)
Audit_RAT	0.879	0.860	0.914	0.839	0.879	0.816	0.827	0.678
	(0.229)	(0.239)	(0.212)	(0.255)	(0.229)	(0.260)	(0.266)	(0.375)
StockClass	0.318	0.312	0.138	0.400	0.318	0.207	0.255	0.097
	(0.548)	(0.566)	(0.799)	(0.460)	(0.548)	(0.697)	(0.643)	(0.868)
Profit	7.366	7.373	7.936	7.525	7.366	7.397	7.336	7.847
	(0.012) **	(0.012) **	(0.010) **	(0.013) **	(0.012) **	(0.011) **	(0.013) **	(0.014)**
Lev	-2.710	-2.668	-2.363	-2.766	-2.710	-2.722	-2.562	-2.442
	(0.036) **	(.040) **	(0.079) *	(0.038) **	(0.036) **	(0.032) **	(0.057) *	(0.084)*
RE_TA	1.209	1.172	1.126	1.251	1.209	1.208	1.223	1.291
	(0.098) *	(0.113)	(0.133)	(0.106)	(0.098) *	(0.095) *	(0.098) *	(0.117)
Growth	0.139	0.143	0.105	0.150	0.139	0.136	0.143	0.138
	(0.187)	(0.178)	(0.347)	(0.176)	(0.187)	(0.193)	(0.179)	(0.273)
Ln_Size	0.877	0.897	0.841	0.916	0.877	0.869	0.877	0.891
	(0.000)***	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.000) ***	(0.001)***
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	276	276	276	276	276	276	276	276
Overall Percentage correctly predicted	**86.96%**	**86.96%**	**87.69%**	**87.32%**	**86.96%**	**86.59%**	**87.68%**	**87.68%**
Pseudo-R^2	**65.8%**	**65.8%**	**66.3%**	**66.3%**	**65.8%**	**66.2%**	**65.9%**	**67.3%**

Table 8 (continued)

Panel B: Div

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-5.489	-6.040	-5.671	-4.894	-5.489	-5.392	-6.051	-5.739
	(0.000)***	(0.000)***	(0.000)***	(0.004)***	(0.004)***	(0.000)***	(0.000)***	(0.002)***
Squared_Conc		0.018						-0.180
		(0.934)						(0.850)
DFIN_Ownership			-0.521					-1.684
			(0.264)					(0.013)**
DINS_Ownership				-0.348				-0.816
				(0.438)				(0.180)
DSTATE_Ownership					18.294			16.732
					(0.999)			(0.999)
DCOMP_Ownership						1.947		1.664
						(0.052)*		(0.143)
OtherLarge_SH							0.510	1.082
							(0.245)	(0.051)*
Board_IND	0.818	0.822	0.388	0.776	0.818	0.803	1.118	-0.099
	(0.625)	(0.625)	(0.823)	(0.642)	(0.625)	(0.635)	(0.508)	(0.956)
Board_STR	-0.874	-0.875	-0.717	-0.945	-0.874	-0.896	-0.793	-0.389
	(0.185)	(0.186)	(0.295)	(0.152)	(0.185)	(0.185)	(0.232)	(0.602)
Ln_Board_SZ	1.695	1.692	1.993	1.593	1.695	1.381	1.577	1.925
	(0.029)**	(0.031)**	(0.016)**	(0.042)**	(0.029)	(0.084)*	(0.044)**	(0.031)**
Audit_IND	-1.748	-1.750	-1.336	-1.831	-1.748	-1.123	-1.869	-0.296
	(0.276)	(0.277)	(0.422)	(0.254)	(0.276)	(0.493)	(0.242)	(0.863)
Audit_RAT	0.271	0.269	0.282	0.290	0.271	0.177	0.430	0.593
	(0.687)	(0.690)	(0.677)	(0.668)	(0.687)	(0.792)	(0.531)	(0.415)
StockClass	0.832	0.832	0.710	0.814	0.832	0.67	0.982	0.626
	(0.687)	(0.082)*	(0.144)	(0.089)*	(0.082)*	(0.168)	(0.052)*	(0.229)
Profit	8.613	8.616	9.274	8.597	8.613	8.787	8.655	10.981
	(0.082)*	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.000)***
Lev	-1.562	-1.560	-1.27	-1.570	-1.562	-1.599	-2.063	-1.878
	(0.186)	(0.188)	(0.300)	(0.179)	(0.186)	(0.167)	(0.102)	(0.147)
RE_TA	1.056	1.053	1.006	1.041	1.056	1.016	1.021	0.729
	(0.116)	(0.126)	(0.140)	(0.114)	(0.116)	(0.128)	(0.122)	(0.284)
Growth	0.035	0.035	0.009	0.036	0.035	0.036	0.028	-0.069
	(0.706)	(0.706)	(0.929)	(0.694)	(0.706)	(0.700)	(0.764)	(0.511)
Ln_Size	0.398	0.399	0.349	0.402	0.398	0.415	0.429	0.331
	(0.034)**	(0.039)**	(0.071)*	(0.030)**	(0.034)**	(0.028)**	(0.024)**	(0.099)*
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	276	276	276	276	276	276	276	276
Overall Percentage correctly predicted	**82.61%**	**82.61%**	**85.5%**	**81.2%**	**82.6%**	**82.2%**	**82.61%**	**83.0%**
Pseudo-R^2	**58.7%**	**58.7%**	**59.1%**	**58.9%**	**58.7%**	**59.9%**	**59.1%**	**61.8%**

Table 8 (continued)

Panel C: Rep

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-21.326	-20.940	-21.308	-22.140	-21.326	-21.002	-21.158	-21.967
	(0.999)	(0.999)	(0.999)	(0.999)	(0.999)	(0.999)	(0.999)	(0.999)
Squared_Conc		-1.982						-2.709
		(0.054)*						(0.018)**
DFIN_Ownership			0.312					0.550
			(0.541)					(0.415)
DINS_Ownership				0.568				1.134
				(0.257)				(0.096)*
DSTATE_Ownership					16.319			18.858
					(0.999)			(0.999)
DCOMP_Ownership						-1.763		-1.443
						(0.084)*		(0.213)
OtherLarge_SH							-0.419	-0.169
							(0.742)	(0.765)
Board_IND	4.935	4.292	5.061	5.216	4.935	4.893	4.858	4.711
	(0.006)***	(0.020) **	(0.005)***	(0.004)***	(0.006)***	(0.006)***	(0.008)***	(0.010)**
Board_STR	-0.933	-0.696	-1.073	-0.786	-0.933	-1.336	-0.941	-0.929
	(0.173)	(0.326)	(0.139)	(0.265)	(0.173)	(0.058)*	(0.167)	(0.257)
Ln_Board_SZ	0.670	0.979	0.460	0.923	0.670	0.802	0.704	1.343
	(0.446)	(0.288)	(0.626)	(0.305)	(0.446)	(0.354)	(0.425)	(0.176)
Audit_IND	-6.431	-6.094	-6.633	-6.374	-6.431	-6.853	-6.381	-6.451
	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.001)***	(0.000)***
Audit_RAT	1.007	1.302	1.023	0.947	1.007	1.164	0.967	1.379
	(0.169)	(0.099) *	(0.164)	(0.192)	(0.169)	(0.113)	(0.194)	(0.095)*
StockClass	-1.525	-1.422	-1.473	-1.569	-1.525	-1.578	-1.544	-1.473
	(0.001)***	(0.002)***	(0.002)***	(0.001 ***	(0.001)***	(0.001)***	(0.001)***	(0.002)***
Profit	6.963	6.247	6.753	7.082	6.963	6.717	6.905	5.640
	(0.003)***	(0.010)**	(0.005)***	(0.003)***	(0.003)***	(0.005)***	(0.004)***	(0.021)**
Lev	-1.262	-1.567	-1.414	-1.06	-1.262	-1.169	-1.189	-1.370
	(0.322)	(0.237)	(0.272)	(0.410)	(0.332)	(0.360)	(0.359)	(0.314)
RE_TA	-0.546	-0.252	-0.495	-0.616	-0.546	-0.489	-0.547	-0.155
	(0.366)	(0.688)	(0.418)	(0.317)	(0.366)	(0.424)	(0.364)	(0.814)
Growth	0.146	0.166	0.167	0.145	0.146	0.155	0.147	0.216
	(0.114)	(0.088)*	(0.092)*	(0.112)	(0.114)	(0.097)*	(0.110)	(0.049)**
Ln_Size	0.498	0.394	0.544	0.461	0.498	0.531	0.489	0.384
	(0.008)***	(0.042)**	(0.007)***	(0.015)**	(0.008)***	(0.005)***	(0.010)**	(0.072)*
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	276	276	276	276	276	276	276	276
Overall Percentage correctly predicted	**87.32%**	**88.41%**	**87.3%**	**86.6%**	**87.3%**	**88%**	**86.96%**	**87.7%**
Pseudo-R^2	**49.8%**	**51.1%**	**49.9%**	**50.2%**	**49.8%**	**51.0%**	**49.8%**	**53.7%**

Notes: This table reports the beta coefficients for the logit regressions. The main variables of interest are Squared_Conc. DFIN_Ownership. DINS_Ownership. DSTATE_Ownership. DCOMP_Ownership. and OtherLarge_SH. Panel A depicts the logit regression with the dependent variable Pay. Panel B depicts the logit regression with the dependent variable Div. Panel C depicts the logit regression with the dependent variable Rep. The variables are defined as in Table 1. The parentheses include the p-values. Significance at the 10% (*). 5% (**). and 1% (***) level is indicated.

Table 9: Payout Intensity - Robustness Test using Shareholder-Type Dummies

Panel A: Ln_Pay_TA

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-4.910	-4.905	-4.737	-4.690	-4.910	-5.076	-5.338	-5.249
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Squared_Conc		0.102						0.525
		(0.799)						(0.252)
DFIN_Ownership			0.366					0.420
			(0.042)**					(0.107)
DINS_Ownership				-0.146				0.106
				(0.402)				(0.663)
DSTATE_Ownership					1.162			0.519
					(0.261)			(0.623)
DCOMP_Ownership						0.494		0.524
						(0.094)*		(0.138)
OtherLarge_SH							0.393	0.208
							(0.010)**	(0.251)
Board_IND	0.688	0.715	0.936	0.640	0.688	0.713	0.901	1.281
	(0.227)	(0.219)	(0.105)	(0.265)	(0.227)	(0.209)	(0.112)	(0.038)**
Board_STR	0.521	0.505	0.337	0.464	0.522	0.600	0.584	0.389
	(0.021)**	(0.030)**	(0.159)	(0.048)**	(0.020)**	(0.009)***	(0.009)***	(0.163)
Ln_Board_SZ	-0.646	-0.672	-1.044	-0.729	-0.647	-0.870	-0.852	-1.522
	(0.091)*	(0.091)*	(0.015)**	(0.065)*	(0.091)*	(0.031)**	(0.027)**	(0.003)***
Audit_IND	-0.218	-0.225	-0.465	-0.224	-0.218	0.059	-0.278	-0.268
	(0.696)	(0.689)	(0.412)	(0.689)	(0.697)	(0.918)	(0.612)	(0.649)
Audit_RAT	-0.149	-0.169	-0.175	-0.140	-0.150	-0.257	-0.097	-0.374
	(0.621)	(0.589)	(0.559)	(0.643)	(0.620)	(0.403)	(0.744)	(0.261)
StockClass	-0.240	-0.247	-0.091	-0.220	-0.240	-0.177	-0.124	0.011
	(0.172)	(0.166)	(0.630)	(0.215)	(0.172)	(0.323)	(0.487)	(0.953)
Profit	4.776	4.792	4.536	4.659	4.781	4.816	5.082	4.866
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Lev	-1.166	-1.156	-1.210	-1.168	-1.167	-1.021	-1.371	-1.120
	(0.045) **	(0.048) **	(0.036)**	(0.045) **	(0.045)**	(0.081)*	(0.018)**	(0.059)*
RE_TA	-0.684	-0.702	-0.686	-0.671	-0.685	-0.765	-0.793	-0.931
	(0.011) **	(0.012) **	(0.010)**	(0.013) **	(0.011) **	(0.005)***	(0.003)***	(0.001)***
Growth	0.114	0.115	0.142	0.118	0.114	0.117	0.109	0.149
	(0.003)***	(0.003)***	(0.001)***	(0.003)***	(0.004)***	(0.003)***	(0.004)***	(0.001)***
Ln_Size	0.069	0.074	0.131	0.086	0.069	0.080	0.096	0.180
	(0.303)	(0.290)	(0.074)*	(0.221)	(0.301)	(0.233)	(0.149)	(0.030)***
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	167	167	167	167	167	167	167	167
R^2	**56.0%**	**56.0%**	**57.2%**	**56.2%**	**56.0%**	**56.9%**	**58.0%**	**59.3%**
Adjusted R^2	**50.7%**	**50.3%**	**51.7%**	**50.6%**	**50.7%**	**51.3%**	**52.5%**	**52.7%**

Table 9 (continued)

Panel B: Ln_Div_TA

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-5.280	-5.323	-5.350	-5.056	-5.280	-5.345	-5.434	-4.954
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Squared_Conc		0.926						1.081
		(0.001)***						(0.001)***
DFIN_Ownership			-0.099					-0.300
			(0.463)					(0.110)
DINS_Ownership				-0.154				-0.525
				(0.203)				(0.002)***
DSTATE_Ownership					0.579			-0.015
					(0.414)			(0.983)
DCOMP_Ownership						0.175		-0.132
						(0.410)		(0.582)
OtherLarge_SH							0.168	0.240
							(0.139)	(0.053)*
Board_IND	0.468	0.768	0.428	0.410	0.468	0.461	0.503	0.554
	(0.263)	(0.064)*	(0.310)	(0.328)	(0.263)	(0.270)	(0.227)	(0.188)
Board_STR	0.651	0.514	0.705	0.593	0.651	0.683	0.679	0.475
	(0.000)***	(0.002)***	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.016)**
Ln_Board_SZ	0.242	0.022	0.356	0.161	0.242	0.157	0.137	-0.036
	(0.385)	(0.937)	(0.266)	(0.573)	(0.385)	(0.598)	(0.634)	(0.919)
Audit_IND	-0.354	-0.500	-0.322	-0.349	-0.354	-0.227	-0.303	-0.435
	(0.401)	(0.222)	(0.448)	(0.406)	(0.401)	(0.613)	(0.471)	(0.308)
Audit_RAT	-0.004	-0.211	0.001	0.005	-0.004	-0.050	0.009	-0.148
	(0.987)	(0.324)	(0.995)	(0.980)	(0.987)	(0.820)	(0.965)	(0.513)
StockClass	-0.332	-0.395	-0.374	-0.305	-0.332	-0.304	-0.272	-0.375
	(0.009)***	(0.001)***	(0.007)***	(0.017) **	(0.009)***	(0.020)**	(0.038)**	(0.006)***
Profit	3.215	3.535	3.303	3.086	3.215	3.257	3390	3.635
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Lev	-2.120	-1.976	-2.109	-2.117	-2.12	-2.062	-2.187	-2.049
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
RE_TA	-0.634	-0.803	-0.634	-0.617	-0.634	-0.662	-0.681	-0.823
	(0.001)***	(0.000)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.000)***	(0.000)***
Growth	0.082	0.083	0.073	0.087	0.082	0.083	0.080	0.069
	(0.004)***	(0.003)***	(0.018)**	(0.003)***	(0.004)***	(0.004)***	(0.005)***	(0.024)**
Ln_Size	0.046	0.103	0.033	0.062	0.046	0.049	0.052	0.128
	(0.343)	(0.042)***	(0.529)	(0.221)	(0.343)	(0.318)	(0.288)	(0.024)**
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	153	153	153	153	153	153	153	153
R^2	**63.9%**	**66.7%**	**63.8%**	**64.3%**	**63.9%**	**64.0%**	**64.4%**	**69.8%**
Adjusted R^2	**59.0%**	**61.9%**	**58.9%**	**59.2%**	**59.0%**	**58.9%**	**59.4%**	**64.4%**

Table 9 (continued)

Panel C: Ln_Rep_TA

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-0.794	-3131	-1.713	-0.530	-0.794	-0.820	0.071	-2.965
	(0.682)	(0.073)*	(0.390)	(0.792)	(0.682)	(0.674)	(0.973)	(0.164)
Squared_Conc		-5.338						-4.438
		(0.000)***						(0.004)***
DFIN_Ownership			0.857					0.723
			(0.101)					(0.271)
DINS_Ownership				-0.336				0.292
				(0.589)				(0.627)
DSTATE_Ownership					-3.445			-3.926
					(0.029)**			(0.051)*
DCOMP_Ownership						0.812		1.315
						(0.512)		(0.303)
OtherLarge_SH							-0.530	-0.502
							(0.273)	(0.389)
Board_IND	0.387	-0.439	1.540	0.378	0.387	0.240	0.273	0.334
	(0.800)	(0.738)	(0.354)	(0.806)	(0.800)	(0.877)	(0.858)	(0.834)
Board_STR	-0.197	0.169	-0.409	-0.250	-0.197	0.006	-0.044	0.449
	(0.791)	(0.790)	(0.581)	(0.740)	(0.791)	(0.994)	(0.954)	(0.543)
Ln_Board_SZ	-1.752	-2.060	-2.579	-2.038	-1.752	-1.979	-1.619	-2.697
	(0.155)	(0.051) *	(0.051)*	(0.132)	(0.155)	(0.125)	(0.190)	(0.039)**
Audit_IND	-0.161	-0.956	-1.362	-0.329	-0.161	0.165	0.086	-0.928
	(0.913)	(0.450)	(0.402)	(0.828)	(0.913)	(0.916)	(0.954)	(0.531)
Audit_RAT	-2.438	-1.939	-2.447	-2.353	-2.438	-2.436	-2.355	-2.022
	(0.009)***	(0.015) **	(0.008)***	(0.013)**	(0.009)***	(0.009)***	(0.011)**	(0.051)*
StockClass	0.939	2.793	1.446	1.120	0.939	1.021	0.864	2.812
	(0.122)	(0.000)***	(0.033)**	(0.109)	(0.122)	(0.102)	(0.156)	(0.000)***
Profit	3.778	0.384	2.793	3.494	3.778	3.512	4.114	0.262
	(0.096)*	(0.850)	(0.224)	(0.135)	(0.096)*	(0.129)	(0.072)*	(0.904)
Lev	-0.598	-1.642	-1.472	-0.692	-0.598	-0.624	-0.194	-1.780
	(0.690)	(0.208)	(0.349)	(0.649)	(0.690)	(0.679)	(0.900)	(0.209)
RE_TA	0.315	-0.324	-0.081	0.093	0.315	-0.081	0.241	-1.068
	(0.776)	(0.733)	(0.942)	(0.938)	(0.776)	(0.949)	(0.828)	(0.394)
Growth	0.253	0.216	0.285	0.243	0.253	0.256	0.231	0.241
	(0.038)**	(0.038)**	(0.019)**	(0.049)**	(0.038)**	(0.037)**	(0.060)*	(0.031)**
Ln_Size	0.037	0.463	0.306	0.106	0.037	0.064	-0.096	0.475
	(0.883)	(0.050)*	(0.303)	(0.707)	(0.883)	(0.802)	(0.730)	(0.100)
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	71	71	71	71	71	71	71	71
R^2	**60.3%**	**71.9%**	**62.3%**	**60.5%**	**60.3%**	**60.6%**	**61.2%**	**72.8%**
Adjusted R^2	**47.5%**	**62.2%**	**49.2%**	**46.8%**	**47.5%**	**47.0%**	**47.8%**	**60.4%**

Notes: This table reports the beta coefficients for the OLS regressions. The main variables of interest are Squared_Conc, DFIN_Ownership, DINS_Ownership, DSTATE_Ownership, DCOMP_Ownership, and OtherLarge_SH. Panel A depicts the OLS regression with the dependent variable Ln_Pay_TA. Panel B depicts the OLS regression with the dependent variable Ln_Div_TA. Panel C depicts the OLS regression with the dependent variable Ln_Rep_TA. The variables are defined as in Table 1. The parentheses include the p-values. Significance at the 10% (*), 5% (**), and 1% (***) level is indicated.

Table 10: Alternative Denominators of Payout Ratios

Panel A (1): Ln_Pay_Sales

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-3.931	-3.918	-3.848	-3.884	-3.931	-3.974	-4.324	-4.256
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Squared_Conc		0.275						
		(0.500)						
FIN_Ownership			0.486					0.516
			(0.201)					(0.360)
INS_Ownership				-0.263				0.036
				(0.321)				(0.934)
STATE_Ownership					0.744			0.624
					(0.721)			(0.763)
COMP_Ownership						0.309		0.141
						(0.675)		(0.881)
OtherLarge_SH							0.361	0.356
							(0.020)**	(0.024)**
Board_IND	0.510	0.581	0.446	0.457	0.510	0.549	0.706	0.659
	(0.376)	(0.323)	(0.440)	(0.430)	(0.376)	(0.348)	(0.219)	(0.266)
Board_STR	0.488	0.447	0.408	0.477	0.488	0.494	0.545	0.464
	(0.032)**	(0.057)*	(0.082)*	(0.036)**	(0.032)**	(0.030)**	(0.016)**	(0.051)*
Ln_Board_SZ	-0.787	-0.857	-0.918	-0.852	-0.787	-0.832	-0.975	-1.124
	(0.042)**	(0.033)**	(0.022)**	(0.031)**	(0.042)**	(0.039)**	(0.013)**	(0.009)***
Audit_IND	0.243	0.226	0.244	0.272	0.243	0.279	0.187	0.202
	(0.667)	(0.690)	(0.666)	(0.631)	(0.667)	(0.626)	(0.737)	(0.722)
Audit_RAT	-0.259	-0.313	-0.309	-0.257	-0.259	-0.280	-0.21	-0.274
	(0.396)	(0.322)	(0.315)	(0.400)	(0.396)	(0.367)	(0.485)	(0.395)
StockClass	-0.351	-0.369	-0.323	-0.303	-0.351	-0.343	-0.243	-0.219
	(0.049)**	(0.041)**	(0.071)*	(0.101)	(0.049) **	(0.057)*	(0.179)	(0.244)
Profit	2.584	2.627	2.428	2.428	2.584	2.576	2.862	2.709
	(0.009)***	(0.009)***	(0.015)**	(0.016)**	(0.009)***	(0.010)**	(0.004)***	(0.007)***
Lev	-2.103	-2.078	-2.202	-2.134	-2.103	-2.079	-2.290	-2.377
	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.001)***	(0.000)***	(0.000)***
RE_TA	-0.680	-0.728	-0.702	-0.654	-0.680	-0.697	-0.779	-0.813
	(0.013)**	(0.010)**	(0.010)**	(0.017)**	(0.013)**	(0.012)**	(0.004)***	(0.006)***
Growth	0.150	0.152	0.161	0.155	0.150	0.151	0.145	0.157
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Ln_Size	0.177	0.191	0.214	0.191	0.177	0.182	0.202	0.241
	(0.010)**	(0.008)***	(0.004)***	(0.006)***	(0.010)**	(0.009)***	(0.003)***	(0.002)***
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	167	167	167	167	167	167	167	167
R^2	**56.8%**	**56.9%**	**57.3%**	**57.1%**	**56.8%**	**56.9%**	**58.4%**	**58.9%**
Adjusted R^2	**51.6%**	**51.4%**	**51.8%**	**51.6%**	**51.6%**	**51.3%**	**53.0%**	**52.6%**

Table 10 (continued)

Panel B (1): Ln_Div_Sales

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-4.483	-4.537	-4.365	-4.515	-4.483	-4.552	-4.654	-4.869
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Squared_Conc		1.168						
		(0.000)***						
FIN_Ownership			0.678					1.852
			(0.011)**					(0.000)***
INS_Ownership				0.135				1.241
				(0.493)				(0.000)***
STATE_Ownership					-0.351			-0.175
					(0.812)			(0.898)
COMP_Ownership						-0.181		1.519
						(0.735)		(0.023)**
OtherLarge_SH							0.187	0.161
							(0.114)	(0.149)
Board_IND	0.284	0.663	0.170	0.326	0.284	0.258	0.324	0.570
	(0.514)	(0.118)	(0.692)	(0.460)	(0.514)	(0.557)	(0.456)	(0.176)
Board_STR	0.632	0.460	0.520	0.638	0.632	0.628	0.664	0.441
	(0.000)***	(0.007)***	(0.004)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.010)**
Ln_Board_SZ	0.120	-0.158	-0.062	0.155	0.120	0.131	0.002	-0.378
	(0.681)	(0.577)	(0.834)	(0.602)	(0.681)	(0.656)	(0.995)	(0.208)
Audit_IND	0.139	-0.045	0.168	0.100	0.139	0.121	0.195	0.143
	(0.753)	(0.913)	(0.697)	(0.822)	(0.753)	(0.787)	(0.656)	(0.730)
Audit_RAT	-0.203	-0.464	-0.277	-0.205	-0.203	-0.201	-0.189	-0.536
	(0.359)	(0.035) **	(0.207)	(0.365)	(0.359)	(0.357)	(0.391)	(0.018)**
StockClass	-0.380	-0.460	-0.335	-0.409	-0.38	-0.383	-0.314	-0.402
	(0.004)***	(0.000)***	(0.010)**	(0.003)***	(0.004)***	(0.004)***	(0.023)**	(0.003)***
Profit	1.557	1.961	1.352	1.656	1.557	1.550	1.753	2.125
	(0.046)**	(0.009)***	(0.078) *	(0.037) **	(0.046) **	(0.047) **	(0.026) **	(0.005)***
Lev	-2.792	-2.611	-2.908	-2.774	-2.792	-2.797	-2.867	-2.865
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
RE_TA	-0.617	-0.830	-0.646	-0.631	-0.617	-0.607	-0.670	-0.964
	(0.002)***	(0.000)***	(0.001)***	(0.002)***	(0.002)***	(0.003)***	(0.001)***	(0.000)***
Growth	0.101	0.102	0.117	0.097	0.101	0.101	0.098	0.112
	(0.001)***	(0.000)***	(0.000)***	(0.002)***	(0.001)***	(0.001)***	(0.001)***	(0.000)***
Ln_Size	0.145	0.216	0.193	0.140	0.145	0.142	0.151	0.260
	(0.005)***	(0.000)***	(0.000)***	(0.007)***	(0.005)***	(0.006)***	(0.004)***	(0.000)***
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	153	153	153	153	153	153	153	153
R^2	**64.0%**	**68.1%**	**65.7%**	**64.2%**	**64.0%**	**64.0%**	**64.7%**	**70.2%**
Adjusted R^2	**59.2%**	**63.6%**	**60.8%**	**59.0%**	**59.2%**	**59.2%**	**59.7%**	**65.1%**

Table 10 (continued)

Panel C (1): Ln_Rep_Sales

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-0.576	-3.061	-0.834	-2.094	-0.576	-0.448	0.128	-1.209
	(0.768)	(0.075)*	(0.677)	(0.243)	(0.768)	(0.882)	(0.951)	(0.540)
Squared_Conc		-5.678						
		(0.000) ***						
FIN_Ownership			0.873					-2.364
			(0.514)					(0.230)
INS_Ownership				-3.821				-5.175
				(0.000)***				(0.000)***
STATE_Ownership					-5.821			-10.526
					(0.065)*			(0.001)***
COMP_Ownership						1.299		-0.530
						(0.660)		(0.877)
OtherLarge_SH							-0.431	-0.476
							(0.377)	(0.369)
Board_IND	0.528	-0.351	0.745	1.046	0.528	0.471	0.435	0.562
	(0.732)	(0.785)	(0.638)	(0.449)	(0.732)	(0.762)	(0.779)	(0.684)
Board_STR	-0.375	0.014	-0.366	0.042	-0.375	-0.308	-0.250	0.277
	(0.616)	(0.982)	(0.626)	(0.950)	(0.616)	(0.689)	(0.742)	(0.696)
Ln_Board_SZ	-2.430	-2.758	-2.592	-4.585	-2.430	-2.664	-2.321	-4.696
	(0.052)*	(0.009)***	(0.044)**	(0.000)***	(0.052)*	(0.052)*	(0.065)*	(0.001) ***
Audit_IND	-0.063	-0.910	-0.269	-1.075	-0.063	0.120	0.138	-0.732
	(0.966)	(0.465)	(0.860)	(0.426)	(0.996)	(0.938)	(0.927)	(0.605)
Audit_RAT	-2.612	-2.081	-2.665	-2.387	-2.612	-2.632	-2.544	-2.081
	(0.005)***	(0.008)***	(0.005)***	(0.005)***	(0.005)***	(0.006)***	(0.007)***	(0.013)**
StockClass	0.927	2.899	1.069	3.000	0.927	0.948	0.866	3.273
	(0.130)	(0.000)***	(0.102)	(0.000)***	(0.130)	(0.125)	(0.160)	(0.000)***
Profit	1.436	-2.173	1.360	-2.182	1.436	1.312	1.710	-2.905
	(0.525)	(0.281)	(0.550)	(0.327)	(0.525)	(0.567)	(0.454)	(0.206)
Lev	-1.285	-2.395	-1.546	-3.176	-1.285	-1.352	-0.956	-2.751
	(0.396)	(0.064) *	(0.327)	(0.030) **	(0.396)	(0.379)	(0.540)	(0.059)*
RE_TA	0.040	-0.640	-0.050	-1.821	0.040	-0.198	-0.020	-2.208
	(0.971)	(0.495)	(0.965)	(0.104)	(0.971)	(0.874)	(0.986)	(0.075)*
Growth	0.273	0.233	0.270	0.221	0.273	0.273	0.255	0.191
	(0.026)**	(0.023) **	(0.029)**	(0.044)**	(0.026)**	(0.028)**	(0.040) **	(0.081)*
Ln_Size	0.272	0.725	0.328	1.024	0.272	0.309	0.164	1.003
	(0.285)	(0.002)***	(0.225)	(0.001)***	(0.285)	(0.253)	(0.561)	(0.002)***
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	71	71	71	71	71	71	71	71
R^2	**57.3%**	**71.2%**	**57.6%**	**66.8%**	**57.3%**	**57.4%**	**57.9%**	**69.9%**
Adjusted R^2	**43.6%**	**61.2%**	**42.9%**	**55.3%**	**43.6%**	**42.7%**	**43.3%**	**56.9%**

Table 10 (continued)

Panel A (2): Ln_Pay_NI

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-0.863	-0.859	-0.874	-0.874	-0.863	-1.022	-1.242	-1.489
	(0.388)	(0.386)	(0.385)	(0.385)	(0.388)	(0.308)	(0.217)	(0.143)
Squared_Conc		0.825						
		(0.060)*						
FIN_Ownership			-0.063					0.602
			(0.877)					(0.236)
INS_Ownership				0.050				0.639
				(0.862)				(0.181)
STATE_Ownership					-0.305			-0.209
					(0.891)			(0.924)
COMP_Ownership						1.175		1.817
						(0.135)		(0.078)*
OtherLarge_SH							0.354	0.317
							(0.035)**	(0.062)*
Board_IND	0.484	0.694	0.493	0.494	0.484	0.635	0.645	0.909
	(0.438)	(0.271)	(0.434)	(0.433)	(0.438)	(0.314)	(0.300)	(0.157)
Board_STR	-0.353	-0.468	-0.343	-0.351	-0.353	-0.321	-0.291	-0.317
	(0.165)	(0.072)*	(0.195)	(0.170)	(0.165)	(0.206)	(0.249)	(0.230)
Ln_Board_SZ	-0.218	-0.412	-0.200	-0.203	-0.218	-0.414	-0.430	-0.687
	(0.612)	(0.346)	(0.652)	(0.643)	(0.612)	(0.355)	(0.324)	(0.149)
Audit_IND	0.042	-0.017	0.042	0.035	0.042	0.189	0.036	0.178
	(0.946)	(0.977)	(0.946)	(0.955)	(0.946)	(0.761)	(0.953)	(0.772)
Audit_RAT	-0.083	-0.255	-0.076	-0.083	-0.083	-0.175	-0.052	-0.265
	(0.801)	(0.453)	(0.819)	(0.801)	(0.801)	(0.601)	(0.873)	(0.450)
StockClass	0.035	-0.016	0.031	0.026	0.035	0.071	0.152	0.11
	(0.854)	(0.932)	(0.873)	(0.898)	(0.854)	(0.714)	(0.441)	(0.589)
Profit	0.375	0.622	0.394	0.408	0.375	0.423	0.707	0.992
	(0.742)	(0.583)	(0.731)	(0.724)	(0.742)	(0.709)	(0.533)	(0.392)
Lev	0.666	0.768	0.676	0.671	0.666	0.758	0.501	0.627
	(0.317)	(0.246)	(0.314)	(0.316)	(0.317)	(0.255)	(0.449)	(0.349)
RE_TA	0.205	0.05	0.208	0.200	0.205	0.132	0.104	-0.095
	(0.478)	(0.866)	(0.474)	(0.493)	(0.478)	(0.652)	(0.721)	(0.762)
Growth	0.042	0.045	0.041	0.041	0.042	0.046	0.037	0.041
	(0.323)	(0.288)	(0.352)	(0.346)	(0.323)	(0.281)	(0.381)	(0.345)
Ln_Size	-0.043	-0.001	-0.048	-0.046	-0.043	-0.024	-0.020	0.019
	(0.559)	(0.987)	(0.550)	(0.545)	(0.559)	(0.743)	(0.788)	(0.818)
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	159	159	159	159	159	159	159	159
R^2	**14.3%**	**16.5%**	**14.3%**	**14.3%**	**14.3%**	**15.7%**	**17.0%**	**19.0%**
Adjusted R^2	**3.3%**	**5.1%**	**2.6%**	**2.6%**	**3.3%**	**4.2%**	**5.7%**	**5.9%**

Table 10 (continued)

Panel B (2): Ln_Div_NI

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	-0.692	-0.783	-0.649	-0.727	-0.692	-0.811	-1.051	-1.421
	(0.483)	(0.415)	(0.513)	(0.464)	(0.483)	(0.416)	(0.287)	(0.152)
Squared_Conc		1.261						
		(0.004)***						
FIN_Ownership			0.276					1.402
			(0.484)					(0.020)**
INS_Ownership				0.143				1.125
				(0.615)				(0.019)**
STATE_Ownership					-0.077			0.094
					(0.972)			(0.964)
COMP_Ownership						0.696		2.072
						(0.371)		(0.042)**
OtherLarge_SH							0.379	0.332
							(0.027)**	(0.051)*
Board_IND	-0.151	0.253	-0.193	-0.110	-0.151	-0.066	-0.086	0.270
	(0.815)	(0.694)	(0.767)	(0.866)	(0.815)	(0.920)	(0.892)	(0.679)
Board_STR	-0.181	-0.368	-0.227	-0.174	-0.181	-0.165	-0.116	-0.263
	(0.472)	(0.146)	(0.383)	(0.491)	(0.472)	(0.512)	(0.640)	(0.308)
Ln_Board_SZ	0.031	-0.259	-0.043	0.069	0.031	-0.072	-0.201	-0.55
	(0.942)	(0.546)	(0.923)	(0.874)	(0.942)	(0.871)	(0.645)	(0.265)
Audit_IND	0.627	0.436	0.635	0.589	0.627	0.731	0.756	0.791
	(0.336)	(0.493)	(0.330)	(0.371)	(0.336)	(0.270)	(0.241)	(0.221)
Audit_RAT	-0.002	-0.28	-0.031	-0.004	-0.002	-0.060	0.027	-0.313
	(0.995)	(0.389)	(0.923)	(0.990)	(0.995)	(0.854)	(0.932)	(0.359)
StockClass	0.022	-0.062	0.041	-0.009	0.022	0.049	0.157	0.078
	(0.909)	(0.737)	(0.832)	(0.965)	(0.909)	(0.799)	(0.424)	(0.699)
Profit	-1.664	-1.238	-1.748	-1.561	-1.664	-1.639	-1.276	-0.861
	(0.139)	(0.261)	(0.124)	(0.174)	(0.139)	(0.146)	(0.255)	(0.446)
Lev	-0.278	-0.054	-0.319	-0.260	-0.278	-0.209	-0.425	-0.268
	(0.682)	(0.935)	(0.640)	(0.703)	(0.682)	(0.760)	(0.527)	(0.690)
RE_TA	0.318	0.094	0.306	0.302	0.318	0.279	0.212	-0.069
	(0.269)	(0.746)	(0.288)	(0.297)	(0.269)	(0.337)	(0.459)	(0.820)
Growth	0.033	0.033	0.039	0.029	0.033	0.035	0.028	0.034
	(0.439)	(0.428)	(0.370)	(0.504)	(0.439)	(0.412)	(0.514)	(0.130)
Ln_Size	-0.075	0.002	-0.055	-0.080	-0.075	-0.066	-0.063	0.025
	(0.314)	(0.983)	(0.490)	(0.289)	(0.314)	(0.380)	(0.394)	(0.763)
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	150	150	150	150	150	150	150	150
R^2	**13.4%**	**18.9%**	**13.7%**	**13.5%**	**13.4%**	**13.9%**	**16.4%**	**20.8%**
Adjusted R^2	**1.5%**	**7.0%**	**1.1%**	**0.9%**	**1.5%**	**1.3%**	**4.4%**	**7.1%**

Table 10 (continued)

Panel C (2): Ln_Rep_NI

Model	**(I)**	**(II)**	**(III)**	**(IV)**	**(V)**	**(VI)**	**(VII)**	**(VIII)**
Constant	0.530	-0.757	0.416	0.416	0.530	0.571	1.521	1.442
	(0.785)	(0.670)	(0.834)	(0.909)	(0.785)	(0.775)	(0.457)	(0.487)
Squared_Conc		-4.354						
		(0.001)***						
FIN_Ownership			0.463					-0.842
			(0.718)					(0.681)
INS_Ownership				0.463				-3.413
				(0.021)**				(0.038)**
STATE_Ownership					-5.593			-8.637
					(0.065)*			(0.016)**
COMP_Ownership						0.308		1.055
						(0.916)		(0.770)
OtherLarge_SH							-0.675	-0.642
							(0.156)	(0.249)
Board_IND	0.760	-0.126	0.875	0.875	0.760	0.751	0.592	0.762
	(0.602)	(0.924)	(0.561)	(0.435)	(0.602)	(0.610)	(0.682)	(0.593)
Board_STR	-1.716	-1.316	-1.702	-1.702	-1.716	-1.689	-1.623	-0.900
	(0.031)**	(0.066)*	(0.034)**	(0.137)	(0.031)**	(0.045)**	(0.039)**	(0.285)
Ln_Board_SZ	-1.240	-1.782	-1.352	-1.352	-1.240	-1.308	-0.928	-3562
	(0.309)	(0.110)	(0.287)	(0.025) **	(0.309)	(0.346)	(0.448)	(0.033)**
Audit_IND	-0.630	-1.099	-0.727	-0.727	-0.630	-0.584	-0.361	-0.640
	(0.651)	(0.383)	(0.612)	(0.403)	(0.651)	(0.692)	(0.795)	(0.657)
Audit_RAT	-2.159	-1.982	-2.200	-2.200	-2.159	-2.164	-2.010	-2.055
	(0.016)**	(0.014)**	(0.016)**	(0.009)***	(0.016)**	(0.017)**	(0.024)	(0.018)**
StockClass	1.099	2.723	1.187	1.187	1.099	1.104	0.956	2.825
	(0.068)*	(0.000)***	(0.070)*	(0.003)***	(0.068)*	(0.070)*	(0.112)	(0.005)***
Profit	1.598	-1.968	1.587	1.587	1.598	1.586	1.793	-1.654
	(0.500)	(0.404)	(0.507)	(0.627)	(0.500)	(0.509)	(0.446)	(0.550)
Lev	3.285	1.834	3.142	3.142	3.285	3.243	3.916	1.373
	(0.060)*	(0.253)	(0.082)*	(0.559)	(0.060)*	(0.073)*	(0.030)**	(0.487)
RE_TA	1.419	0.822	1.358	1.358	1.419	1.353	1.445	-0.558
	(0.206)	(0.418)	(0.235)	(0.905)	(0.206)	(0.296)	(0.193)	(0.697)
Growth	0.165	0.159	0.164	0.164	0.165	0.165	0.138	0.106
	(0.155)	(0.129)	(0.162)	(0.220)	(0.155)	(0.161)	(0.234)	(0.351)
Ln_Size	-0.069	0.308	-0.038	-0.038	-0.069	-0.058	-0.247	0.471
	(0.775)	(0.205)	(0.882)	(0.122)	(0.775)	(0.824)	(0.359)	(0.228)
Industry Dummy	YES	YES	YES	YES	YES	YES	YES	YES
Observations	66	66	66	66	66	66	66	66
R^2	**52.1%**	**62.3%**	**52.2%**	**57.3%**	**52.1%**	**52.1%**	**54.1%**	**60.1%**
Adjusted R^2	**35.1%**	**47.8%**	**33.9%**	**40.9%**	**35.1%**	**33.7%**	**36.5%**	**41.0%**

Notes: This table reports the beta coefficients for the OLS regressions. The main variables of interest are Squared_Conc, FIN_Ownership, INS_Ownership, STATE_Ownership, COMP_Ownership, and OtherLarge_SH. Panel A (1) depicts the OLS regression with the dependent variable Ln_Pay_Sales, Panel A (2) with the dependent variable Ln_Pay_NI. Panel B(1) depicts the OLS regression with the dependent variable Ln_Div_Sales, Panel B(2) with the dependent variable Ln_Div_NI. Panel C(1) depicts the OLS regression with the dependent variable Ln_Rep_Sales, Panel C(2) with the dependent variable Ln_Rep_NI. The variables are defined as in Table 1. The parentheses include the p-values. Significance at the 10% (*), 5% (**), and 1% (***) level is indicated.