

Ownership Structure's Effect on Dividend Payout Policy

A study on controlling shareholders' effect on dividend payout ratios of Swedish listed firms through a corporate governance perspective

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Abstract

Swedish firms' distinct ownership structures with high prevalence of controlling shareholders and separation of ownership and control via the use of dual class shares creates potential for large conflicts of interests between controlling shareholders and minority shareholders. Dividend payouts can act as a device for restricting these agency conflicts by disgorging cash to minority shareholders. This paper examines the relation between ownership structure and dividend payout ratio of listed firms in Sweden. We study 112 firms, listed at Nasdaq OMX Stockholm's Mid cap and Large cap, during the period 2010-2017. Our study concludes that the existence of a controlling shareholder is statistically significant associated with higher dividend payout ratio. We do not find any statistically significant effect of having another large shareholder besides the controlling owner, nor for separation of a controlling owners' voting and cash flow rights via dual class shares. The results suggest that controlling shareholders in Sweden do not expropriate minority owners by paying lower dividends.

Keywords: Ownership Structure, Nasdaq OMX Stockholm, Agency Costs, Dividend Payout, Controlling Shareholder

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1. Introduction

The ownership concentration of Swedish listed firms is significantly higher of firms in other developed countries, especially than in the United Kingdom and the United States where firms are generally widely held. The large majority of Swedish firms are characterized by having a controlling shareholder with above 20 percent of the voting rights and which hence have the de-facto control of the firm's decisions (La Porta et al., 1999; Faccio and Lang, 2002; Gugler and Yurtoglu 2003).

Large shareholders can promote good corporate governance by having both larger cash incentives and enough voting control to efficiently monitor management compared to smaller shareholders. Consequently, large shareholders can reduce principal-agent conflicts between managers and shareholders that arise due to managers not always acting in the shareholders' interests. However, concentrated ownership can give rise to other corporate governance issues. Large investors acting in their own interests can act detrimental to minority investors by extracting private benefits that are not in the minority investors best interest (Shleifer and Vishny, 1986 & 1997). Therefore, in countries with high ownership concentration the main corporate governance issue is not the traditional agency conflict between managers and shareholders, but between controlling shareholders and minority shareholders (Gugler and Yurtoglu, 2003).

Sweden is one of the countries where the principal agent conflict between managers and shareholders is likely to be limited due to Swedish firms' controlling shareholder structures. However, the concentrated ownership structure of Swedish firms could potentially cause large conflicts between controlling shareholders and minority shareholders. This conflict can further be enlarged by differences between controlling shareholders' voting rights and cash flow rights created by the use of dual class shares, with Sweden having the greatest use of dual class shares in continental Europe (Faccio and Lang, 2002; La Porta et al., 1999; Bebchuk, 1999). Nevertheless, Sweden's extra-legal institutions including press have been proposed as potential mitigators of minority expropriation, as controlling shareholders are concerned about keeping a reputation for treating minority owners well (Holmén and Knopf, 2004; Dick and Zingales, 2004; Bebchuck et al., 1999).

To limit minority expropriation by controlling shareholders, dividends are highlighted as an ideal device since dividends guarantee a pro-rata payment to all shareholders and reduce the cash that can be expropriated in the firm (Gugler and Yurtoglu, 2003; Faccio et al., 2001).

Dividends' effect of reducing agency costs has been suggested as an explanation to one of the top unsolved puzzles in the field of Corporate Finance: the question of why firms pay dividends and what factors influence their dividend policies, referred to as the 'Dividend Puzzle' (Black, 1976).

Although the ownership structures of Swedish firms could cause large conflicts of interests between controlling and minority owners, the evidence for minority expropriation in Sweden is mixed (Nenova, 2003; Holmén and Knopf, 2004; Cronqvist and Nilsson, 2003). Moreover, research connecting ownership structure and dividend policy is limited. A few scholars have studied German firms (Gugler and Yurtoglu, 2003) and Asian and European firms (Faccio et al., 2001). Gugler and Yurtoglu (2003) find evidence for that large shareholders in Germany expropriate minority owners by paying lower dividends, and that the separation of voting and cash flow rights increases expropriation. However, having other large shareholders that can monitor the largest shareholder reduces minority expropriation by increasing the dividend payout. Faccio et al. (2001) also propose that other large shareholders can mitigate expropriation.

To our knowledge, there are limited previously published papers covering how the ownership structure of Swedish listed firms affect their dividend policies. Our paper aims to fill this research gap by studying controlling shareholders' effect on dividend payout ratios for listed firms in Sweden, adding to the existing body of literature on dividend theory and corporate governance issues.

1.1 Research Question

The aim of this paper is to investigate the relationship between controlling shareholders and dividend payout ratio by listed firms in Sweden. The following questions will be addressed:

- 1) Does the existence of a controlling shareholder lower the dividend payout ratio?
- 2) Does the presence of another large shareholder increase dividend payout ratios for firms with a controlling shareholder?
- 3) Does the separation of a controlling shareholders' voting rights and cash flow rights via dual class shares decrease the dividend payout ratio?

1.2 Disposition

This paper is organized as follows. Section 2 presents a review of the existing literature within the field of dividend policy through a corporate governance perspective and on the ownership structure of firms in Sweden. In Section 3, the hypotheses to be tested are presented. Section 4 consists of an overview of how the data used has been gathered, followed by a description of the methodology used to analyze the data in Section 5. Descriptive statistics and results from the regressions are presented in Section 6. In Section 7, the results are discussed in connection to previous research. Finally, Section 8 concludes with conclusions and suggestions for future research. References and Appendix are provided in the end of the paper.

2. Literature Review

2.1 The Dividend Puzzle

The question of why firms pay dividends and what factors that determine their payout policies is one of the most debated within the field of Corporate Finance. The plethora of academic research has failed to provide a comprehensive explanation to firms' dividend policies, which Fischer Black (1976) famously named The Dividend Puzzle, concluding that: *"The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together"*. Brealey and Myers (2002) list the dividend controversy as one of the ten most important unsolved problems in Finance.

The controversy about why firms pay dividends dates back to the start of the 1960's, when Miller and Modigliani (1961), henceforth 'M&M', posted their seminal research on the 'Dividend Irrelevance' theory. M&M stated that in a perfect capital market, companies' dividend payout decisions have no impact on firm value and investors are indifferent between if companies pay out share of their earnings as dividends or retain all their earnings. The theory relies on M&M's definition of a perfect capital market as a market where buyers and sellers are price takers, have symmetric information and experience no transaction costs for buying or selling shares. Moreover, no principal-agency problems nor tax differentials between dividends and capital gains are assumed to exist. The irrelevance theory seemed to contradict the early empirical studies by Lintner (1956), who by surveying listed firms' managers in the United States found that managers deliberately follow target dividend payout policies and wish to keep a stable dividend payout ratio.

In the wave of M&M's paper, several researchers went on quest to challenge the irrelevance claim by relaxing some of the perfect market assumptions underlying the theory. A growing body of research has studied the occurrence of corporate governance issues which M&M assumed not to be present. In specific, conflict of interest between controlling and minority shareholders is currently one of the most highlighted market imperfections within the Dividend Puzzle research field, having received little attention until the beginning of the third millennium (Porta et al., 2000; Gugler and Yurtoglu, 2003; Faccio et al., 2001).

2.2 Dividends Reducing Agency Conflicts Between Managers and Shareholders

Principal-agent theory, introducing the market imperfection of agency conflicts between managers and shareholders, suggest that paying dividends can be against managers' interests. A principal-agent relation is commonly defined in line with Jensen and Meckling (1976) as a contract under which the principal delegates decision making to the agent to act on their behalf. Given that both parties will maximize their utility, it is likely that the agent will not always act in the principal's best interest. The relation between shareholders and managers is well described as a principal-agent relation, where agency problems arise by the separation of ownership and control of the firm. The discrepancy between the value of a fully manager-owned and less than fully manager-owned firm is measured as the agency cost. To decrease the divergences from the shareholders' interest, shareholders can employ monitoring costs to monitor managers. Dividends can act as a such monitoring cost employed to reduce agency costs between managers and shareholders (Jensen and Meckling, 1976). The most influential contributions on dividends' agency reducing effect between managers and shareholders have been made by Easterbrook (1984), Jensen (1986) and Rozeff (1982).

Easterbrook (1984) argues that dividends are useful in reducing agency costs as firms that pay out dividends more regularly need to go to the capital market to finance their business. When requiring capital market financing, firms' affairs are scrutinized by an investment intermediary acting as a monitor for the interest of existing shareholders as well as of new potential investors. Hence, dividends act as a mechanism to reduce agency costs between owners and management by increasing firms' need to obtain new capital and incur monitoring of the capital markets. In addition, Jensen (1986) highlights dividends role in minimizing agency costs by reducing free cash flows in the hands of managers. The free cash flow referred to is the cash in excess of what is required to finance all the firm's positive net present value projects. Reducing the cash restricts managers' opportunity to overinvest and undertake negative net present value projects, a risk that is pronounced when managers have a large surplus of cash at hand. Jensen points out that debt fills a similar agency-cost minimizing role as dividends by reducing free cash flow.

The study of Rozeff (1982) was the first to empirically investigate firms' payout policies from an agency perspective. Studying firms in the United States, Rozeff proposes that higher dividends lowers agency costs but raises transaction costs of financing, presenting a model in which a firm's dividend payout is decided by balancing these two market imperfection costs. On one hand, rational shareholders want management to minimize the transaction costs that

raising external funds involves and prefer retaining earnings. On the other hand, rational shareholders wish to minimize agency costs by demanding dividends. Rozeff finds that shareholders demand higher dividend payout ratios if a firm's ownership is more dispersed, as the agency conflict between managers-shareholders is larger when ownership is dispersed. When shareholders hold a larger ownership stake each, shareholders have greater ability to influence managers' behavior which decreases agency costs and lowers the optimal dividend payout ratio.

2.3 Dividends Limiting Conflicts Between Controlling and Minority Shareholders

When firms have a dispersed ownership base a monitoring shareholder incur the full costs of monitoring but receives only the benefits of monitoring in proportion to its equity holding, with other shareholders free-riding on the monitoring shareholder. Hence, the incentive for a small shareholder to monitor managers is negligible (Jensen and Meckling, 1976). The agency theories focusing on conflicts between managers and shareholders are in line with Berle and Mean's (1932) traditional image of firms as being widely held. Such dispersed ownership of firms results in managers, rather than shareholders, having de-facto control of firms. However, more recent studies highlight that it is common for listed firms in developed countries to have a controlling shareholder with over 20 percent of voting rights (La Porta et al., 1999; Faccio and Lang, 2002). When control is concentrated to a large investor, this investor has the cash flow incentives to monitor managers and enough voting control to protect their shareholder interests. However, while large investors can help reduce agency costs between shareholders and managers concentrated ownership can give rise to other corporate governance issues. Large investors acting in their own interests can expropriate minority investors (Shleifer and Vishny, 1986 & 1997).

In countries with high ownership concentration, the main issue in corporate governance is not the traditional agency conflict between managers and shareholders but the conflict between large controlling shareholders and small minority shareholders (Gugler and Yurtoglu, 2003). With a controlling shareholder it is referred to a shareholder that holds a significant stake, at 20 percent or ten percent of voting rights, and hence has the de-facto control of the firm. The agency problem between controlling and minority owners has its roots in that the controlling owner receives the full benefits of the private benefits extraction while bearing only a fraction of its cost (Gugler and Yurtoglu, 2003). The agency problem between controlling and

minority shareholders is potentially enlarged by controlling owners holding control rights in excess of their cash flow rights. Bebchuck et al. (1999) term the ownership structure of a controlling shareholder holding a small share of cash flow rights as a 'Controlling Minority Shareholder' (CMS), arguing that this separation of ownership and control by dual class shares, stock pyramids and cross-holdings can create large agency costs.

Dividends are highlighted as an ideal device for limiting minority expropriation since dividends guarantee a pro-rata payment to all shareholders and reduce the cash in the firm that can be expropriated (Gugler and Yurtoglu, 2003; Faccio et al., 2001). Gugler and Yurtoglu (2003), by studying German firms, propose that concentrated ownership and large differences between ownership and control is related to lower dividend payout. The authors find that dividend payout ratios are i) negatively related to the voting stake of the largest shareholder, ii) positively related to the stake of the second largest shareholder holding at least five percent of the voting rights and iii) negatively related to the separation of voting rights and cash flow rights of the largest shareholder. Their findings provide evidence for that large shareholders expropriate smaller shareholders in Germany, and that the existence of other large shareholders can reduce minority expropriation by monitoring the largest shareholder.

Linking agency theory with signalling theory, Gugler and Yurtoglu (2003) additionally propose that large shareholders can signal their avoidance to expropriate minority owners by paying dividends. Dividend reductions signal the opposite, by increasing the cash that the largest shareholder can expropriate. This is empirically supported by the negative wealth effects in size of two percentage points found for dividend reductions by firms with ownership structures that make minority expropriation more likely than for other firms.

In line with Gugler and Yurtoglu's findings that the presence of another large shareholder seems to monitor the largest shareholder, Faccio et al. (2001) suggest that for European firms the presence of another large shareholder (with above ten percent of voting rights) dampen expropriation by being associated with higher dividend payouts. Studying controlling shareholders' effect on dividend policies both in European and in East Asian firms, Faccio et al. find that in East Asia the presence of another large shareholder is, in contrast to in Europe, associated with lower dividend payouts as the second largest shareholder tends to collude with the largest shareholder and intensify minority expropriation.

However, in contrast to Gugler and Yurtoglu's finding that lower dividends are paid by firms with higher risk of minority expropriation, Faccio et al. propose that firms which investors

anticipate higher risk of minority expropriation in fact pay higher dividends to mitigate these concerns. Faccio et al. study firms belonging to a group of firms controlled by the same shareholder, for which the controlling owner can set intragroup terms for sales of assets and services. The discrepancy between the controlling owner's ownership rights and voting rights is used as a proxy for the risk of minority expropriation. Finding that for the group of firms that are tightly affiliated by a control chain with over 20 percent of voting rights in each link, firms with higher discrepancy between ownership and control pay higher dividends. In contrast, for firms that are loosely affiliated to a group by a control chain with only ten percent of votes, firms with a higher difference between ownership and control rights pay lower dividends. This indicates that for firms with ownership that make investors alert to the risk of minority expropriation, expropriation is reduced by higher dividend payouts. On the other hand, for firms with ownership that make investors less alert to risk of expropriation such expropriation seems prevalent (Faccio et al., 2001).

2.4 Ownership Structure in Sweden and Determinants of Minority Expropriation

2.4.1 Swedish Firms' Ownership Structures

Sweden is highlighted as one of the countries where the principal agent conflict between managers and shareholders is likely to be limited due to Swedish firms' distinct ownership structures. As noted by La Porta et al. (1999) and Faccio and Lang (2002), Swedish firms are characterized by highly concentrated ownership, with 75 percent of the largest firms having an ultimate controlling shareholder with over 20 percent of voting rights and nearly half of the firms being family controlled. Families in Sweden control above one third of the value of the top 20 largest listed firms. Ownership concentration and family control is significantly higher in Sweden than other developed countries. Moreover, members of the controlling family often participate in management, ensuring tight connections between managers and controlling shareholders.

However, the ownership structure of Swedish firms could potentially cause large conflicts between controlling shareholders and minority shareholders. Sweden has several mechanisms that support controlling shareholders' power, having the greatest use of dual class shares in continental Europe with the lowest percentage of ownership required to ensure control at a 20 percent level (Faccio and Lang, 2002; La Porta et al., 1999). The large majority of listed firms in Sweden use dual class shares, most commonly using high voting A-shares with ten

votes per share and low voting B-shares with one vote per share. The shares with superior voting rights are often not publicly traded (Cronqvist and Nilsson, 2003). Other less dominating control mechanism used by controlling shareholders are pyramid structures and cross holdings (Faccio and Lang, 2002; La Porta et al., 1999). Nevertheless, in Sweden alike other Western European countries the majority of firms with controlling owners have another large shareholder with at least ten percent of voting rights. This indicates the potential for large shareholders to monitor each other and minimize minority expropriation (La Porta et al., 1999; Faccio and Lang, 2002; Gugler and Yurtholu, 2002).

What explains Swedish firms' concentrated ownership structure? La Porta et al. (1998) suggest that a country's legal protection of investors can help explain a country's ownership structures, with concentration of ownership being higher in countries with lower investor protection. Studying 49 countries around the world and examining laws for minority protection and quality of law enforcement, La Porta et al. (1998) find that Common Law countries have stronger protection and lower firm ownership concentration than Civil Law countries. An anti-director rights scoring is used as a proxy for legal protection (Please refer to Appendix List 1 for description of the rights). Sweden scores 3.0 out of maximum 6.0 in the anti-director rights ranking, in line with Scandinavian peers. To put in context, Common Law countries score on average 4.0 with the United States and the United Kingdom being among the countries with top scores of 5.0. These findings indicate that Sweden has a weak to medium minority protection.

2.4.2 Determinants of Minority Expropriation: Legal Protection

The degree of minority shareholder expropriation seems to vary between countries depending on level of legal protection, with minority expropriation being enlarged by legal systems that do not protect minority shareholders due to either lacking laws and/or poor law enforcement (La Porta et al., 2000; La Porta et al., 1998). La Porta et al. (2000) test for dividend payout being dependent on a countries' shareholder protection, exploring two different models of dividend payout determinants. The first model assumes dividend payouts as 'outcomes' of legal shareholder protection, with higher dividends in countries with high minority owner protection. In contrast, the second model assumes dividends as 'substitute' for legal protection, with higher dividends in countries with low minority protection as firms in such countries need to build a reputation for treating minority shareholders well despite the poor legal protection to be able to raise external capital on attractive terms in the future.

In a study of over 4,000 firms from 33 countries around the world with different level of minority shareholder protection, La Porta et al. (2000) find support for the outcome model, that dividend payouts are higher in countries with high minority protection. Moreover, in countries with high minority protection, firms with better investment opportunities have lower dividend payout. The findings indicate that high shareholder protection results in higher dividend ratios as minority shareholders can use their legal powers to force firms to disgorge cash, especially if reinvestment opportunities are poor. In countries where minority owners are highly protected they will accept lower dividends if firms have good investment opportunities, being confident that the retained earnings will be directed to profitable growth investments which in the future will pay off and then dividends will be received. The level of minority protection is closely related to a country's legal origin with Civil Law countries having lower protection than Common Law countries. This is evident in the dividend patterns across countries, with Civil Law countries paying out the highest median dividend payout ratio and Common Law countries the lowest.

2.4.3 Determinants of Minority Expropriation: Non-Legal Protection

A growing body of research propose that the degree of minority expropriation is dependent on non-legal mechanisms (Gomes, 2000; Dyck and Zingales, 2004; Bebchuck et al., 1999). Gomes (2000) proposes that minority expropriation will not take place despite lack of full protection for minority shareholders, due to controlling shareholders' interest in building a reputation for treating minority owners well. In a multi-period model, if a controlling owner extracts private benefits after going public investors will discount the firm's stock price and the controlling owner's shares will be sold at a lower price when the owner wishes to sell equity to diversify idiosyncratic risk. This help explain why investors are willing to become minority shareholders despite limited legal protection. In line with Gomes, Dyck and Zingales (2004) highlight reputation as a powerful disciplining mechanism of controlling shareholders. The connection between what is written in the press and a firm's reputation is strong, with the risk of being embarrassed in the press being a constraining force of minority expropriation. Sweden ranks fifth in terms of newspaper circulation in Dyck and Zingales' study on 39 countries, suggesting that the press serves as an extra-legal force that mitigates minority expropriation.

Moreover, Gomes (2000) argues that dual class shares and pyramidal structures which are used by controlling minority shareholders (CMS) increase the reputation building effect.

These control mechanisms enable large shareholders to divest more equity without losing control. Hence, large shareholders have more room to build a reputation for extracting low private benefits as reputation is developed based on the potential of future sales of shares. In line with Gomes, Bebchuck et al. (1999) highlight that CMS who return to the equity market must bear the price for the expected agency costs of CMS structures unless these shareholders can establish a reputation for sound management. Bebchuck et al. (1999) additionally note that reputational concerns role in controlling agency costs can offer a clue to why families are the most common CMS. Families wish to preserve their control positions to benefit their offspring and may hence limit their appropriation of private benefits.

2.4.4 Minority Expropriation in Sweden

Despite Sweden's relatively weak formal legal minority protection and ownership structures with potential to cause large conflicts of interests between controlling and minority shareholders, studies on the prevalence of minority expropriation in Sweden have produced inconsistent findings (Nenova, 2003; Holmén and Knopf, 2004; Cronqvist and Nilsson, 2003).

Nenova (2003) estimates private benefits of control to be insignificant in Sweden, in the size of only one percent of a firm's market capitalization. This suggests that controlling owners in Sweden do not have the intent to expropriate minority owners, as the private benefits that could be extracted are negligible. The level of legal protection seem to explain the large differences between private benefits of control in highly-protected Common Law countries (4.5 percent) and weakly-protected French Civil Law countries (over 25 percent). The authors find evidence for that the legal framework explain nearly 70 percent of cross-country variation of private benefits. However, legal differences fail to explain why Swedish private benefits of control are low (Nenova, 2003).

In line with Nenova (2003), Bergström and Rydqvist's (1990) earlier study finds little support for minority expropriation in Sweden. Testing the hypothesis that Swedish firms use dual class shares to expropriate minority owners, the authors expect that large shareholders would not own more equity than is required to gain control. On the contrary, the empirical study reaches the result that the largest shareholder holds more equity than required for control of firms. No data support the hypothesis that dual class shares are used as a means of wealth expropriation by holding control with little equity. Consistent with the two previously mentioned studies on minority expropriation, Holmén and Knopf (2004) find limited evidence

of minority expropriation in Sweden. The authors put forward that Sweden's extra-legal institutions can explain the low degree of minority expropriation despite the relatively weak legal protection. In specific, tax compliance and newspaper circulation, highlighted as disciplining forces in the study by Dick and Zingales (2004), enforce greater shareholder protection.

In large contrast to previously mentioned studies, Cronqvist and Nilsson (2003) argue that minority expropriation is highly prevalent in Sweden. The agency costs of controlling minority shareholders (CMS) are estimated to be between six and 25 percent of firm value on median for listed Swedish firms. Consistent with La Porta et al.'s (1998) claim that the Swedish minority shareholder protection is relatively weak, the authors propose that the barrier is low for CMS to engage in private benefits extraction at expense of minority owners.

3. Hypotheses

To fulfill the purpose of this thesis, to examine if controlling shareholders affect firms' dividend policies, we formulate three hypotheses that will be tested through quantitative tests. We formulate our first hypothesis as follows:

H1: The existence of a controlling shareholder lowers a firm's dividend payout ratio

Based on the findings of Gugler and Yurtoglu (2003) that dividend payout ratios are negatively related to the voting stake of the largest shareholder, we hypothesize that having a controlling shareholder lowers a firm's dividend payout ratio. Our second hypothesis is as follows:

H2: For firms with a controlling shareholder, the presence of another large shareholder increases dividend payout ratios

Following Faccio et al.'s (2001) findings that the presence of another large shareholder is associated with higher dividend payouts in European firms due to its monitoring role of the largest shareholder which reduces minority expropriation, we hypothesize that another large shareholder increase dividends. The monitoring role of another large owner, increasing dividends, is also supported by Gugler and Yurtoglu (2003). Finally, we formulate our third hypothesis:

H3: A controlling shareholder holding more voting rights than cash flow rights, due to dual class shares, decreases a firm's dividend payout ratio

We hypothesize that a separation of a controlling shareholder's voting rights and cash flow rights is negatively related to dividend payout ratio, in line with Gugler and Yurtoglu's (2003) finding that such separation of control and ownership of the largest shareholder is associated with lower payout ratios.

4. Data

The following part describes how we have gathered, sorted and managed our data. An overview of the data that has been gathered, the databases used and some possible risks associated with the data and data gathering will be presented.

4.1 Ownership Data

To analyze how companies' dividend payouts are affected by companies' ownership structures data has been retrieved from Holdings, a Swedish database covering ownership of Swedish listed companies. Data is retrieved for companies matching the following criteria: [1] The companies were listed on either Nasdaq OMX Stockholm Large Cap or Nasdaq OMX Stockholm Mid Cap as of December 31st 2017, [2] The companies are primarily listed in Sweden, however they may be cross-listed on other stock exchanges as well and [3] The companies have been listed for a minimum of five years in order to have continuous data to perform analysis over time.

Some companies may have been listed on Swedish stock exchanges for smaller sized firms during some time of the period studied but moved to Nasdaq OMX Stockholm Mid or Large Cap during the time period, however we see no large reasons to adjust for this. Moreover, the reason for excluding companies not primarily listed in Sweden is that we want to ensure that the companies operate under the same regulations in order to make valid comparisons. The study covers the years 2010-2017 to exclude the potential misleading effects of the financial crisis in 2007-2008 on dividend payout ratios. 148 companies match the above criteria, which were then matched with their corresponding company specific and financial data. Out of the 148 companies, 80 are listed on Nasdaq OMX Stockholm Mid Cap list and 68 firms are listed on Nasdaq OMX Stockholm Large Cap list.

For the 148 companies, we retrieve ownership data from the time period 2010-2017. The data from Holdings include [a] The name of shareholders [b] Shareholders' cash flow rights and [c] Shareholders' voting rights. All data is for the end of each year, as per 31st of December.

The Holdings database report both private shareholdings as well as legal entities' shareholdings. Holdings do not only provide information on direct private ownership but also includes private persons' indirect holdings via trusts or holding companies, aggregated as one ownership stake. Family members are generally not grouped into a single owner. Since we

cannot identify if family members have voting pacts or the same ownership agenda with regards to dividend policy, we argue that studying control per investor rather than per family is the preferred choice.

Holdings have complete shareholder information for all larger shareholders of Swedish listed companies who are legal entities, have their tax base in Sweden, hold a minimum of 500 shares in a company and at least 0.1 percent of the voting rights. Holdings retrieve their data from Euroclear which is considered a credible data source due to its strict regulations. As we are only studying the top largest owners of the included companies, the risk of misrepresentation in the data is minimal. In addition, we have manually double checked our data by cross checking a part of the sample with the book series 'Ägarna och Makten'. The book series was published by SIS Ägarservice until 2015 when the company was acquired by Modular Finance, which made all data available online by creating the Holdings Database.

4.2 Financial Data

In order to answer our research question, we need to complement the ownership data with financial and company specific data regarding the companies. This data is gathered from Thomson Reuters' Eikon database. From the database we gather company specific information, including industry classification, date of initial public offering and currency. For the total sample of 148 companies, we retrieve financial data including income statement metrics and balance sheet items. For instance, per share metrics such as dividend per share and earnings per share as well as income statement items including revenue and net income. Balance sheet data includes total assets, equity value, debt as well as cash and cash equivalents in order to calculate relevant leverage metrics. Data was gathered for the same period as for ownership data, thus 2010-2017. All financial data is from the end of the firms' fiscal years.

Given the large amount of data gathered we are unable to manually check for errors for the full sample. However, we have double checked a sample of our dataset with their respective annual reports in order to validate the correctness and to manually adjust for missing data points. While recognizing the potential risks of some errors or missing values in the dataset, due to the size of the dataset, potential deviations are unlikely to materially impact the results of the study.

4.3 Final Dataset

After merging the above datasets into one, further adjustments were made. Thomson Reuters classifies companies into ten business sectors. Firms belonging to the financial sector, including real estate firms, trusts, holding companies, insurance and banking & investment services, were excluded since their business structure and financial information are of a very different nature compared to other sectors. Moreover, some similar studies have excluded firms either with negative net profit or dividends per share (DPS) exceeding their earnings per share (EPS) (Faccio et al., 2001). However, we have not excluded such observations as they do not represent errors in the data. The fact that firms can have negative or larger than one DPS/EPS ratios rather reflects the tendency of firms to wish to avoid cutting dividends although earnings are negative or low for a certain year, as noted by previous scholars (Lintner, 1956). Based on the same reasoning, we have chosen to not exclude outliers from our sample. In all, our dataset consists of 112 companies and 890 observations with data covering an eight-year period. Please see Table 5 in Appendix for the construction of our final sample and Table 6 in Appendix for an overview of industry representation of our sample.

5. Methodology

In the following section, the model design of our regressions is discussed. The hypotheses and research questions presented in Section 3 will be tested through a fixed effects model. In this section the model used is presented as well as the tests performed in order to validate the use of the model. Finally, the regressions that will be performed are described.

5.1 Fixed Effects Model

As the final dataset consists of multidimensional data involving measurements over time for specific companies, and as the data is not available for all the years due to our inclusion criteria, the dataset consists of panel data that is unbalanced but fixed. To decide which regression method to use we performed a few tests. Firstly, in order to decide if a fixed effects regression model would be suitable to employ on our panel data we analyzed whether the ownership structure actually changes over time or if it instead is rather constant. We checked whether companies during the chosen time period chosen have changed from having dispersed ownership to a controlling shareholder or vice versa. Controlling shareholders are defined as shareholders holding more than 20 percent of the voting rights in a corporation (La Porta et al., 1999; Faccio et al., 2001). We conclude that 30 percent of our companies experience this change and therefore determined to keep the panel data and use fixed effect regression model instead of performing multiple OLS regression where we were to cluster at the firm level. To determine whether to use the fixed effect model or the random effect model we performed the Hausman test and could conclude that using the fixed effects model was the preferred choice.

The equation for the fixed effects model is:

$$\gamma_{it} = \beta_1 x_{it1} + \dots + \beta_k x_{itk} + \alpha_i + u_{it}, t = 1, \dots, T,$$

where the β_j are the parameters to estimate and α_i is the unobserved effect.

The fixed effects model is based on a number of assumptions that have to hold in order for the regression results to be valid. These assumptions are described in Appendix List 2. We have performed tests to see if our data validates these and if an assumption does not hold, we attempt to correct for it to the extent possible. To test for multicollinearity which occurs when the independent variables are highly correlated with one another, we calculate the variance inflation

factor (henceforth VIF) for all models. The lowest value for VIF is one which indicates that there is no multicollinearity problem, values between one and five implies that there is a moderate level of multicollinearity that one does not have to be concerned of. A value higher than five indicates that the variables are highly correlated, and that multicollinearity is likely to exist. Our VIF values indicate that no multicollinearity problem exist as all variables in our regression have a VIF value below two. In order to examine if our data sample is heteroskedastic, we perform a Breush-Pagan test. The null hypothesis of mentioned test states that all residuals have the same variance, presence of homoskedacity, and the alternative hypothesis states that the variance of the error terms differ amongst observations, heteroskedacity. If heteroskedasticity is present we will present robust standard errors to correct for this.

Lastly, we argue that our study is unlikely to suffer from reverse causality, which would be that dividend payout ratios affect the presence of a controlling shareholder instead of the opposite. Reverse causality would imply that large shareholders are attracted to higher dividend payout ratios and hence invest in firms with higher dividend payout ratios. Our reason to trust that the risk of reverse causality is negligible is due to how dividends are decided. It is the shareholders during the annual general meeting that get to decide the dividend payout, which initially has been recommended by the board. Hence, the largest shareholders are the ones in fact deciding dividends. In contrast, if we would have studied smaller shareholders that do not have significant power to affect dividend policy, we would have been more concerned of reverse causality.

5.2 Dependent Variable

The dependent variable in our regressions are the dividend payout ratio, defined as the dividend per share (DPS) divided by the earnings per share (EPS). DPS is measured as the firm's common stock dividend on an annualized basis, divided by the weighted average number of common shares outstanding for the year. EPS is the firm's reported earnings per share, defined as the net profit divided by the weighted average number of shares outstanding during the year. Net profit is post goodwill impairments and extraordinary items. Using the ratio between DPS and EPS is the most commonly used measure for dividend payout in studies on firms' dividend payout patterns and ownership structures as it is comparable across firms (Gugler and Yurtoglu, 2003; Faccio et al., 2001; Rozeff, 1982).

Some studies on dividend payout ratio have included the sum of both common and preferred dividends (Gugler and Yurtoglu, 2003; Faccio et al., 2001). However, Faccio et al. (2001) note that preferred stock rather resembles debt in locking the firm into fixed obligations and measuring dividend payout as only to common shareholders can hence better reflect the yearly dividend payout decision. Therefore, as the characteristics of the dividend decision to common shareholders versus preferred shareholders differs it would be less correct to include preferred dividends in this study. The effect of not including preference shares is negligible in this study. Preferred dividends are in Sweden used by approximately 20 firms, almost exclusively by real estate firms (Avanza 2019). As we exclude all financial firms from our sample, which includes real estate companies, only one firm in our sample (SAS) has had preferred shares outstanding during the time period studied.

Previous studies have primarily studied firms' dividend payout ratios based on average dividend payout ratio during a five- or seven-year time period (Rozeff, 1982; Faccio et al., 2001). Studying average dividend payout ratio is a way to avoid the problems associated with panel data of firm-specific effects being constant over time, which has enabled the previous studies to perform OLS regressions. However, by employing the fixed effects model in our study we are able to study dividend payout ratios per year while adjusting for firm-specific effects.

5.3 Independent Variables

The independent variables for the regressions refer to ownership variables measuring the presence of controlling shareholders, other large shareholders and the divergence of voting rights and cash flow rights of the controlling shareholder. These independent variables include:

1. *Controlling shareholder* – Dummy variable that is equal to one if a firm has a controlling shareholder and equal to zero if not. A controlling shareholder is present if the largest shareholder holds above 20 percent of the firm's voting rights. The cut off of 20 percent of the votes is in line with earlier studies that assume that 20 percent of votes is sufficient to ensure control of a firm (La Porta et al., 1999; Faccio et al., 2001; Giannetti and Simonov, 2006). A few studies additionally test for ten percent of votes as a cut off for control (La Porta et al., 1999; Faccio et al., 2001). However, Faccio et al. suggest that 20 percent is needed for effective control in Europe. To ensure that changing the cut off of control does not significantly

alter the results, we additionally test for defining controlling shareholder at the ten percent level in our robustness checks.

2. *Another large shareholder* – Dummy variable that is equal to one if i) the firm has a controlling shareholder holding more than 20 percent of the voting rights and if ii) the second largest shareholder holds more than ten percent of the voting rights. The cut off of ten percent of votes has been used by previous studies (Faccio et al., 2001) as it is assumed to be large enough of voting rights to potentially have a meaningful influence on the controlling shareholder. In our robustness checks we additionally test for raising the cut off to 20 percent of the voting rights.

3. *Separation of the controlling shareholder's control and cash flow rights* – Dummy variable equal to one if i) the firm has a controlling shareholder at the 20 percent level and if ii) the controlling shareholder's cash flow rights are different from its voting rights measured by the quota of voting rights/cash flow rights being different than one, implying that the company has dual class shares issued. This is interesting to examine as the shareholder's incentives are predicted to differ if it holds more voting rights than cash flow rights compared to equal holding of voting and cash flow rights. This variable for separation of ownership and voting rights of the controlling or largest owner has been used in several previous studies (Gugler and Yurtoglu, 2003; Faccio et al., 2001). Further in the robustness checks, we test for a larger threshold of the divergence.

5.4 Control Variables

In order to control for other potential factors affecting companies' dividend payout ratios a number of control variables are included in the regressions. The control variables added are:

1. *Size* – a firm's size is commonly included as a control factor in studies on a firm's ownership structure's impact on its dividend payout ratio. In line with these studies, the logarithm of total assets is used as proxy for firm size. Previous studies suggest that firm's size is related to a firm's dividend payout ratio, however previous studies do not find consistent evidence for the sign of the relationship being negative or positive (Gugler and Yurtoglu, 2003; Faccio et al., 2001). Total assets include the firm's total book value of debt and total book value of equity.

2. *Growth rate* – growth rate is measured as the firm's revenue growth year-on-year. Rozeff (1982) highlights that a firm's past revenue growth as well as forecasted growth is

negatively related to its dividend payout ratios as growth is associated with higher investment expenditures to support the growth, and hence faster growing firms would tend to retain funds to a higher degree. As we have limited access to firms' management forecasts and analyst forecast of future growth, we account only for firms' past growth rate. Controlling for past sales growth as a proxy for growth opportunities which may require retention of earnings to finance investment projects is in line with previous studies by Faccio et al. (2001) and La Porta et al. (2000).

3. *Leverage* – measured as the firm's ratio of total debt to total equity. Total debt includes notes payable, short-term debt, current portion of long-term debt or capital leases and long-term debt. Total equity consists of the book value of equity held by preferred and common shareholders, not including minority shareholders' interest. Leverage is added as a control variable in similar studies to this paper, finding a negative relation between firms' leverage and their dividend payout ratios (Gugler and Yurtoglu, 2003; Rozeff, 1982; Faccio et al., 2001). Levered firms are proposed to pay lower dividends as they need to pay interest on loans (Faccio et al., 2001) and because debts and dividends are proposed to be substitutes in reducing agency problems as both decrease the free cash flow under management's control (Jensen, 1986).

Since the fixed effects model adjusts for any time invariant factors, no industry dummies are included as control variables as the industry a firm operates within is likely to be highly constant.

5.5 Regressions

To test our hypotheses, we perform a fixed effect regression as mentioned in Section 5.1. By performing four regressions, we test whether the presence of [1] a controlling shareholder has a negative effect on dividend payout ratio, [2] a second large shareholder increases the dividend payout ratio and [3] separation of a controlling shareholders' voting rights and cash flow rights via dual class shares decrease the dividend payout ratio. The first regressions consist of all independent variables and control variables tested against the dividend payout ratio and we subsequently test different constellations of the independent variables in order to verify the validity of the results. Descriptions of variables' definitions are found in Table 1.

Regression 1: Dividend Payout Ratio = $\beta * CSH_D_{it}(dummy) + \beta * CSH_ASH_D_{it}(dummy) + \beta * CSH_DC_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \text{Log}(\text{Total Assets})_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t= year

Regression 2: Dividend Payout Ratio = $\beta * CSH_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \text{Log}(\text{Total Assets})_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t= year

Regression 3: Dividend Payout Ratio = $\beta * CSH_D_{it}(dummy) + \beta * CSH_ASH_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \text{Log}(\text{Total Assets})_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t= year

Regression 4: Dividend Payout Ratio = $\beta * CSH_D_{it}(dummy) + \beta * CSH_DC_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \text{Log}(\text{Total Assets})_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t= year

Table 1: Variable Description	
<i>Dependent variable</i>	
Dividend Payout Ratio	Dividend per share divided by earnings per share
<i>Independent variables</i>	
CSH_D	1 = Presence of a controlling shareholder that holds more than 20 percent of the voting rights of the company
CSH_ASH_D	1= If there is a controlling shareholder and a second large shareholder that holds more than ten percent of the voting rights
CSH_DC_D	1= Presence of a controlling shareholder and the company has dual class shares
<i>Control variables</i>	
Growth Rate	Company's past growth rate as proxy for growth opportunities
Log(Total Assets)	The logarithm of a company's total assets as a proxy for a firm's size
D/E-Ratio	Debt to equity ratio as a measurement of a firm's leverage

6. Descriptive Statistics and Results

6.1 Descriptive Statistics

This section will primarily cover descriptive statistics of the data. The descriptive statistics for the final dataset show that on average during the time period studied, 66 percent of the firms in our sample have a controlling shareholder with more than 20 percent of the votes and 52 percent of the firms have dual class shares. Moreover, on average 41 percent of the companies have a controlling shareholder as well as dual class shares. For on average 32 percent of our sample there is a second large shareholder present that holds more than ten percent of the votes. This is all presented in Table 2 below.

Table 2: Descriptive Statistics for Companies' Shareholder Structure					
Year	Number of Companies	Companies with Dual Class Shares	Companies with Controlling Shareholder	Controlling Shareholder & Dual Class Shares	Controlling Shareholder & 2 nd Large Shareholder
2010	107	51%	62%	39%	29%
2011	111	50%	65%	41%	34%
2012	112	51%	67%	41%	38%
2013	112	50%	67%	40%	32%
2014	112	52%	68%	42%	31%
2015	112	53%	69%	43%	34%
2016	112	54%	66%	42%	30%
2017	112	53%	67%	42%	30%
Mean	111	52%	66%	41%	32%

As can be seen in Table 3, on average the largest owner holds 28.95 percent of the voting rights and 20.28 percent of the capital rights which shows the high occurrence of dual class shares. The largest shareholder's voting to cash flow ratio is 1.84 on average. While it is most common for the largest owner to hold more voting rights than capital rights, it is interesting to acknowledge that for 35 observations in our sample the opposite occurs. These cases are explained by a shareholder holding more lower voting shares, typically B shares, than higher voting rights shares, typically A shares. Since we are also interested in the second largest shareholders, information regarding the second largest shareholders' ownership is presented in Table 3 as well. There is a substantial drop when it comes to voting rights between the largest

and second largest owner. On average, the second largest shareholder holds 10.57 percent of the voting rights in a firm, which is a drop of more than 18 percentage points. The difference is slightly smaller when it comes to cash flow rights. On average, the largest owner holds 20.28 percent of the cash flow rights compared to 8.83 percent held by the second largest shareholder, a difference of 11.45 percentage points. Consequently, the second largest owner has a smaller discrepancy between voting and cash flow rights than the largest owner, with a voting to cash flow ratio of 1.56 on average compared to the largest owner's average ratio of 1.84.

Table 3: Descriptive Statistics for Companies' Ownership Structure				
Independent Variables	Min	Max	Mean	Median
Largest owner's voting rights	2.52%	81.66%	28.95%	26.51%
2 nd largest owner's voting rights	0.43%	35.03%	10.57%	9.38%
Largest owner's cash flow rights	1.71%	76.46%	20.28%	17.25%
2 nd largest owner's cash flow rights	0.43%	35.03%	8.83%	7.11%
Largest owner's voting to cash flow ratio	0.70	8.57	1.84	1.01
2 nd largest owner's voting to cash flow ratio	0.27	7.48	1.56	1.00

The dependent variable in our regressions is the dividend payout ratio. On average, companies in our sample pay out 47 percent of their net profit. By studying the outliers we have in our sample, for instance the number of firms that have a dividend payout ratio (DPS/EPS) higher than 20 we find that the high ratios are not because of data errors but due to the fact that the firms' EPS were significantly lower than usual in a certain year while the DPS were kept relatively more stable. We concluded that the outliers carry valuable information about firms' dividend payout behavior and hence these outliers are not excluded. Please see Appendix Table 7 for descriptive statistics of the dependent variable.

Regarding our control variables, we can see that our proxy for size, total assets, has a large interval which is not surprising as the final dataset includes firms from both Nasdaq OMX Stockholm Large cap and Nasdaq OMX Stockholm Mid cap. The minimum value for leverage, the debt to equity ratio, is -20 which is due to a negative book value of equity. For our dataset

of 890 observations, ten observations have negative book value of equity. Please see Appendix Table 8 for descriptive statistics of the control variables.

6.2 Results of Regressions

In this section we present and analyze the results from the fixed effects model regressions. Table 4 below presents the regression results for regressions presented in Section 5.

Firstly, in Regression 1 all three independent variables and the control variables are tested against the dependent variable dividend payout ratio. The dummy variable of having a controlling shareholder with more than 20 percent of the voting rights has a positive effect on the dividend payout ratio with a coefficient of 0.54, being statistically significant at a ten percent significance level. Thus, there is evidence that the dividend payout ratio is higher if the company has a controlling shareholder present. Moreover, we cannot infer that having another large shareholder has any effect on the dividend payout ratio due to the lack of significance on any conventional level, however it shows a minor negative tendency. Neither the variable of the controlling shareholder having different cash flow and voting rights is statistically significant, though it indicates a small positive association with the dividend payout ratio. For the control variables size, growth and leverage we cannot draw any statistically significant conclusions. However, the results show a tendency that size is positively associated with the dividend payout ratio, a very small tendency for growth rate being negatively associated with dividend payout ratio and a negligible positive effect of higher leverage on dividend payout ratio.

Secondly, Regression 2 includes the dummy for whether a company has a controlling shareholder or not present as well as the control variables common for all regressions. The controlling shareholder variable has a positive effect on dividend payout ratio with a coefficient of 0.58, being statistically significant at a five percent level. Neither of the control variables are statistically significant on any conventional level. However, the results indicate tendencies in line with Regression 1.

Thirdly, Regression 3 includes the dummy for having a controlling shareholder present and the dummy for having another large shareholder that has more than ten percent of the votes besides having a controlling shareholder. The results of the regression are in line with the previous regressions where the dummy for a controlling shareholder has a significant positive influence on the dividend payout ratio on a five percent significance level with a coefficient of 0.58. Having another large shareholder present shows an indication to being negatively

associated with dividend payout ratio, however it is not statistically significant on any conventional level. The control variables show the same effects as in previous regressions and are not statistically significant on any conventional level.

Lastly, Regression 4 includes the dummy for having a controlling shareholder present and a dummy for the controlling shareholder having different cash flow rights and voting rights. The results are in line with previous results where the dummy for controlling shareholder has a positive significant influence on the dividend payout ratio with a coefficient of 0.54 on a five percent significance level. Whilst not statistically significant on any conventional level, the results show a tendency that companies with a controlling shareholder that has different cash flow rights and voting rights have higher dividend payout ratios than companies with a controlling shareholder holding equal cash flow and voting rights. The control variables show the same indication of effects as in previous regressions and are not statistically significant.

Given our results, we reject our first hypothesis' null hypothesis as it is statistically significant in all of the regressions. We can therefore accept the alternative hypothesis that the presence of a controlling shareholder increases the dividend payout ratio for Swedish firms listed on Nasdaq OMX Large and Mid Cap. However, we fail to reject the null hypotheses for our second and third hypotheses as we do not find statistically significant results on any conventional level. Thus, we cannot conclude that either the null hypotheses are true or the alternative hypotheses are true as our tests are not strong enough to reject the null hypotheses.

Table 4: Fixed Effects Regression on Dividend Payout Ratio				
	Regression (1)	Regression (2)	Regression (3)	Regression (4)
Dividend Payout Ratio				
<i>Independent variables</i>				
CSH_D	0.544 *	0.576 **	0.583 **	0.539 **
CSH_ASH_D	-0.011		-0.016	
CSH_DC D	0.097			0.098
<i>Control Variables</i>				
Growth Rate	-0.029	-0.030	-0.030	-0.029
Log(Total Assets)	0.142	0.143	0.143	0.141
Debt	0.003	0.003	0.003	0.003
Adjusted R-squared	-0.142	-0.139	-0.140	-0.140
F-statistic	1.437	2.138	1.709	1.726
Observations	875	875	875	875
***, **, and *, represent significance levels of 0.01, 0.05 and 0.1, respectively The model includes fixed effects for company and year				

6.3 Robustness Tests

In order to control that the conclusions drawn for our hypotheses are correct we have performed robustness checks to verify that the results persist when redefining the three independent variables. The reason for performing these tests is because our independent variables are based on previous researchers' arguments for certain thresholds of values.

The first robustness check is with regards to the threshold for being defined as a controlling shareholder. It is tested at a ten percent level in addition to the previous 20 percent level, in line with the studies of La Porta et al. (1999) and Faccio et al. (2001) which test for both levels of de-facto control. The second robustness check is with regards to what threshold to use for the second largest shareholder's voting rights. We perform tests for the 20 percent level in addition to the previous test on ten percent level, to check if having another large shareholder could have significant effect on the dividend payout ratio if the second shareholder is large enough. Finally, a third robust regression is performed to test our third independent variable in the original regression, where we tested for the occurrence of having a controlling shareholder with different voting and cash flow rights. As the difference between voting and capital rights could sometimes be very small, we test if our findings are robust when the ratio of voting to cash flow rights is higher than 1.2x. This allows to check if any significant effect of separation of a controlling shareholder's voting and cash flow rights can be found on payout ratio when there is a meaningful difference between control and cash incentives. The redefined variables are defined in Appendix Table 9.

Please find descriptive statistics of the independent variables used in the robust regression in Appendix Table 10. Changing the threshold for controlling shareholder to having a largest shareholder with ten percent of votes results in 90 percent of the firms in our dataset having a controlling shareholder on average during the time period studied, compared to the lower 66 percent when controlling shareholder was defined as 20 percent of votes (Table 2). Moreover, when another large shareholder is defined as the second largest shareholder holding more than 20 percent of votes instead of more than ten percent, only ten percent of firms in the sample have another large shareholder on average during the time period besides a controlling shareholder with 20 percent of votes. When another large shareholder was defined as previously at ten percent, 32 percent of firms had another large shareholder on average. Finally, when the difference between a controlling shareholder's voting to cash flow rights is set to a cutoff of above 1.2x the number of firms in the sample with discrepancy between voting and cash flow rights are slightly lower, 36 percent on average versus previously 41 percent.

The results from the robustness check regressions are shown in Appendix Table 11. The first regression of our robust regressions, Regression 1.1, where we test for having a controlling shareholder at ten percent of voting rights, did not yield any statistically significant results on a conventional level and we can therefore not draw any conclusions. In Regression 1.2, the variable of having another large shareholder at 20 percent of voting rights is tested. As in line with regression 1 from our original regression, the variable for having a controlling shareholder with 20 percent of the votes is statistically significant with a coefficient of 0.54. None of the other variables in the regression are statistically significant on any conventional level, but the coefficients are similar to the original regression. Defining another large shareholder at 20 percent of voting rights instead of the original ten percent consequently do not alter our previous results. Regarding Regression 1.3, where the variable for a controlling shareholder having different voting and cash flow rights is measured at a 1.2x cutoff, we receive results in line with the original regression. The variable for having a controlling shareholder with more than 20 percent of the votes is statistically significant with a coefficient of 0.53. None of the other variables in the regression are statistically significant on any conventional level, but the coefficients have the same sign as in the original regressions.

To summarize, one can conclude that the results from our original regressions persist even when performing robustness tests by changing the threshold for the independent variables.

7. Discussion

We can conclude that the presence of a controlling shareholder is related to a higher dividend payout ratio. Our findings contrast with Rozeff's (1982) proposal that shareholders demand lower dividend payout ratios if the firm ownership is more concentrated. Rozeff argues that when ownership is concentrated, shareholders have better ability to influence managers which decreases agency costs between managers and shareholders and hence lowers the optimal dividend payout ratio. However, a potential explanation to the contradictory result is that different agency problems are dominating in our study versus Rozeff's. Rozeff studies firms in the United States, which are characterized by dispersed ownership where managers have de-facto control as each shareholder has limited incentives and limited ability to monitor managers. In a setting with such dispersed ownership, the agency problem between managers and shareholders is dominant. Increasing ownership concentration lowers the optimal dividend payout as each shareholder gain greater monitoring incentives, decreasing the manager-shareholder conflict (Jensen and Meckling, 1976; Shleifer and Vishny, 1986 & 1997).

In contrast, in the Swedish firm setting with higher concentration of ownership and control, the manager-shareholder agency problem is less dominant and the need for dividends to reduce the manager-shareholder conflict is lower. Instead, the conflict between the controlling shareholder and minority shareholders arise as the main corporate governance issue (Gugler and Yurtoglu, 2003). We propose that the positive relation between the presence of a controlling shareholders and dividend payout ratio for Swedish firms is due to the agency conflict between non-controlling and controlling owners, with dividends acting as a way to reduce this agency costs and risk of minority expropriation.

Our findings contrast with Gugler and Yurtoglu's (2003) findings from studying German firms, concluding that i) large shareholders in Germany expropriate minority shareholders by paying lower dividends, ii) the presence of another large shareholder can help monitor the largest owner and reduce the minority expropriation by enforcing higher dividends and iii) minority expropriation is larger, i.e. dividends lower, when the largest owner holds less cash flow rights than voting rights. On the contrary to indicated by their finding i), we argue that controlling shareholders implies higher dividend payout ratios, indicating that controlling shareholders in Sweden do not expropriate minority shareholders by inducing lower dividends. With regards to their findings ii) and iii) we cannot find any statistically significant evidence for the effect of another large shareholder or separation of ownership and voting rights of the controlling shareholder. Hence, in contrast with also Faccio et al. (2001) we cannot conclude

that another large shareholder limits minority expropriation. Moreover, it has been suggested that separation of voting rights and cash flow rights via dual class shares has the potential to enlarge the conflict between controlling and non-controlling owners (Bebchuck et al., 1999). We cannot conclude that dual class share structures enlarge minority expropriation in Swedish firms.

That we do not find statistically significant results that another large shareholder is associated with higher dividend payout ratios in firms with controlling shareholders is not surprising in the light of that we find that a controlling shareholder is related to higher dividend payout ratios. If controlling owners in Swedish firms do not expropriate minority holders, there is no need for other large owners to monitor the controlling owners by forcing them to pay higher dividends. However, as we find no significant results for that the effect of another large shareholder is zero this is not statistically proven.

German firms are, alike Swedish firms, characterized by having large presence of controlling shareholders (Faccio and Lang, 2002; La Porta et al., 1999; Gugler and Yurtoglu, 2003). Our paper's contradictory findings with Gugler and Yurtoglu are hence less likely to be due to diametrically different ownership structures and agency problems. Rather, the conflict between non-controlling shareholders and controlling shareholders is, as argued by the authors, assumed to be the dominating corporate governance issue in Germany. Then, what helps explain the Swedish case?

While an explanation of why the presence of a controlling shareholder is associated with higher dividend payouts is beyond the scope of this paper, previous studies on minority expropriation in Sweden could offer some clues. Although some studies indicate the existence of high minority expropriation in Swedish firms (Cronqvist and Nilsson, 2003), the large majority of studies conclude that minority expropriation is negligible in Sweden (Nenova, 2003, Holmén and Knopf, 2004; Bergström and Rydqvist, 1990). Legal institutions offering high protection against minority expropriation do not seem to be the explaining factors, as Swedish legal protection of minority investors is regarded to be relatively weak (La Porta et al., 1998). Rather, Sweden's extra-legal institutions including press have been proposed as the mitigator of minority expropriation, as controlling shareholders are concerned about keeping a reputation for treating minority owners well. (Holmén and Knopf, 2004; Dick and Zingales, 2004; Bebchuck et al., 1999).

8. Conclusions

8.1 Main Conclusions

This paper has investigated the relationship between ownership structure and dividend payout ratio by listed firms in Sweden. The main findings are that the existence of a controlling shareholder is related to a higher dividend payout ratio. We do not find any statistically significant effect on dividend payout ratio of having another large shareholder besides the controlling shareholder, nor for separation of a controlling shareholder's voting and cash flow rights via dual class shares.

Swedish firms' distinct ownership structures with high prevalence of controlling shareholders and separation of ownership and control via the use of dual class shares creates potential for large conflicts of interests between controlling shareholders and minority shareholders. However, this paper does not find support for that controlling shareholders in Sweden use their control position to expropriate minority shareholders.

While the explanation of *why* controlling shareholders are related to higher dividend payout ratios in Sweden is beyond the scope of our study, our findings are in line with several previous studies suggesting that minority expropriation is negligible in Sweden. Potential explanations offered are Sweden's high extra-legal institutions and controlling shareholders' wish to keep a reputation of being shareholder friendly by not expropriating minority owners, to be able to attract capital from minority shareholders.

8.2 Generalizability

Since a large body of research suggest that country-specific factors including legal and extra-legal mechanisms influence the degree of minority expropriation of controlling shareholders (La Porta et al., 2000; La Porta et al., 1998, Nenova, 2003; Dyck and Zingales, 2004; Holmén and Knopf, 2004), the findings of this paper should not be extended to firms outside Sweden. Moreover, we are slightly cautious with generalizing the results to firms listed on smaller stock exchanges as well. The potential conflict between controlling and non-controlling owners in smaller firms is likely at least as large as for the Large and Mid cap firms studied in the scope of this paper, since smaller firms in Sweden even more commonly have a controlling owner (Faccio and Lang, 2002). However, as Small cap firms are less covered by analysts and press,

the reputational concern effect that potentially drive controlling owners to pay higher dividends to build a reputation of treating minority owners well may be less strong for small firms.

8.3 Limitations of Results and Suggestions for Future Research

This paper focus on how the ownership structures of firms affect their dividend payout policies. However, this study does not investigate if dividend payouts are affected by the type of controlling owner. One suggestion for further research is to explore if different owner types of controlling shareholders influence firms' dividend payout ratios. As half of firms in Sweden with a controlling shareholder at 20 percent level are estimated to be family controlled (La Porta et al., 1999), our findings are likely based on firms dominated by controlling families.

Studying the type of owner could be an interesting extension to our paper as the type of owner could be associated with different use of dual class shares. Previous research indicate that controlling families tend to use dual class shares more often than corporations and financial institutions, as well as having a larger deviation from one-share-one vote than other controlling owners. Having families as controlling minority shareholders are hence suggested to cause more severe agency problems between controlling and minority shareholders (Cronqvist and Nilsson, 2003). Moreover, different types of controlling shareholder can have different tax-induced preferences for dividends versus capital gains due to different investors tax positions (Holmen et al., 2008). A study on controlling owners' type can further investigate if the origin of owner is related to the dividend payout ratio. Foreign ownership in Swedish stock markets is significant with foreign owners holding over 40 percent of market value, and foreign owners' taxes on dividends can differ from domestic owners due to withholding tax structures (Statistics Sweden, 2017; Skatteverket, 2019).

Additionally, it is acknowledged that cash can be distributed to shareholders by dividends or stock repurchases. We limited our study to the distribution of cash to shareholders by dividend payouts. Some researchers based on studying US listed firms have suggested that stock repurchases are a substitute for dividends (Skinner, 2008). However, more recent studies on listed Swedish firms show that stock repurchases are made in addition to dividends rather as a substitute (Jansson and Olaison, 2010). We find the dividend payout of firms to be the main variable of interest for our study, since stock repurchases compared to dividends are more pro-cyclical, paid by firms with higher temporary excess cash flow and does not create the same expectation among investors that the firm will continue to repurchase a similar number of shares

in the following year. Hence, stock repurchases and dividend payouts are likely to have different implications from an agency cost-reducing perspective as stock repurchases is less of a commitment (Jagannathan et al., 2000). However, suggestion for future research is to study the effect of a firm's ownership concentration on their payout to shareholders in form of both dividends and share repurchases, to discern if controlling shareholders have a tendency to do larger share repurchases as well.

Lastly, this paper takes into account how controlling shareholders' ownership and voting rights are separated by dual class shares. Other mechanisms to separate ownership and control are pyramiding and cross-holdings. Pyramiding occurs when a shareholder owns one firm via another firm, while cross-holdings refers to when two or more firms are linked horizontally by holding ownership in one another (Bebchuck et al., 1999). A potential extension to this study is the inclusion of these two control-mechanism. Studies on pyramid structures involves tracing the ultimate controlling owner. Identification of the ultimate owner is often performed by determining the voting rights required for control, commonly at 20 percent of voting rights, and tracking the ownership via control chains (see for example previous studies by Cronqvist and Nilsson, 2003 and Faccio et al., 2001). For instance, a shareholder can have 40 percent of votes in Firm A. Firm A in turn has 20 percent of the votes in Firm B, while Firm B has 30 percent of votes in Firm C. The investors share of control rights in Firm B is measured by the weakest link of votes in the control chain, which in this case is 20 percent. Hence, the investor is the ultimate controlling shareholder of firm C. The investors ownership in firm C can largely differ from its control rights, measured by multiplying the fraction of shares the investors owns in Firm A, B and C. Assuming one-share-one-vote, the investors ownership in firm C is hence only 2.4 percent ($40\text{ percent} \times 30\text{ percent} \times 20\text{ percent}$).

As pyramiding and cross-holding structures are used by shareholders in Sweden, we encourage future research on how these indirect ownership structures affect firms' dividend policies. However, based on previous studies we have reason to believe that the dual class share system is the top one most relevant mechanism for separation of ownership and control in Sweden. While the majority of all listed firms in Sweden have dual class shares outstanding, only 15 percent of firms with controlling shareholders at 20 percent level use pyramid structures and less than one percent adopt cross-holdings (Faccio and Lang, 2002). The tendency to use pyramids and cross-holdings seems to be slightly larger for the top largest firms (La Porta et al., 1999). Consequently, previous studies support that our paper cover the most relevant control mechanism.

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10. Appendix

List 1. Anti-Director Rights Scoring System

Anti-director rights scoring system of Porta et al. (1998). The six rights are the following:

- 1) Vote by mail: if shareholders are allowed to mail their proxy vote directly to the firm instead of being required to show up in person or send a representative to the shareholder meeting.
- 2) Non-requirement of share deposit: if shareholders are not required to deposit their shares with the firm or a financial intermediary several days before the shareholder meeting, which is a practice for preventing shareholders from selling their shares close to the meeting.
- 3) Cumulative voting or proportional board representation: if the firm has a system to strengthen minorities ability to elect a director by allowing shareholders to cast all their votes for a single nominee when the firm has multiple openings on its board or having minorities naming a proportional number of directors.
- 4) Protection against oppression by directors: if minority owners have the right to challenge directors' decisions in court and right to force the firm to repurchase shares of owners who object large management decisions, e.g. mergers or asset sales.
- 5) Pre-emptive rights to new issues: if existing minority owners have right to buy new shares, protecting them from dilution and shares being issued at below-market prices to favored investors.
- 6) Percentage of capital required to call for an extraordinary shareholders' meeting: the lower percentage of aggregated cash flow rights of minority investors required to call for an shareholders' meeting, the easier can minority owners arrange such meeting to challenge management.

List 2. Fixed Effects Model Assumptions

- 1) We have a random sample from the cross section.
- 2) Each explanatory variable change over time (for at least some i), and no perfect linear relationships exist among the explanatory variables.
- 3) For each t , the expected value of the idiosyncratic error given the explanatory variables in all time periods and the unobserved effect is zero: $E(u_{it} | X_i, \alpha_i) = 0$.
- 4) $Var(u_{it} | X_i, \alpha_i) = Var(u_{it}) = \sigma_\mu^2$, for all $t = 1, \dots, T$.

- 5) For all $t \neq s$, the idiosyncratic errors are uncorrelated (conditional on all explanatory variables and α_i) : $Cov(u_{it}, u_{is} | X_i, \alpha_i) = 0$.
- 6) Conditional on X_i and α_i the u_{it} are independent and identically distributed as Normal $(0, \sigma_\mu^2)$.

Table 5. Sample Size and Selection Method					
Selection Method			Sample Size		
Step	Criteria	Source	Data Loss	Data loss %	Observations
1.	Ownership data from 2010-2017 was downloaded for companies matching the criteria in Section 4.1	Holdings			1,188
2.	Financial and Company Data was collected for all companies not excluded in the sample above	Thomson Reuter's Database Eikon			1,188
3.	Financial firms excluded	Thomson Reuter's Database Eikon	298	25%	890
Data in Regressions					
4.	Missing data for calculating dividend payout ratio		11	1.24%	879
5.	Ownership Data	Holdings			890
6.	Control Variable: Growth Rate	Thomson Reuter's Database Eikon	5	0.5%	875
7.	Control Variable: Total Assets	Thomson Reuter's Database Eikon			875
8.	Control Variable: Debt to Equity Ratio	Thomson Reuter's Database Eikon			875

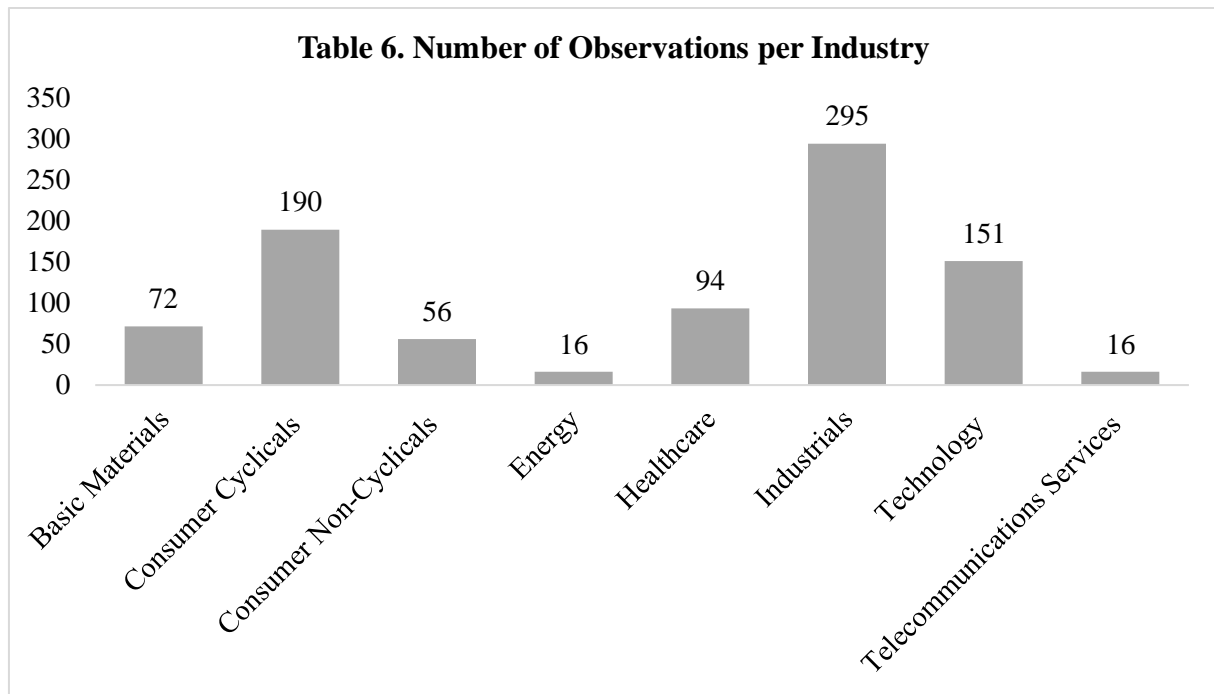


Table 7: Descriptive Statistics of Dependent Variable					
Dependent Variable	Min.	Median	Mean	Max.	NA's
Dividend Payout Ratio	-21.62	0.47	0.48	20.00	11
Dividend per Share	0.00	1.95	2.56	26.02	9
Earnings per Share	-19.99	3.37	4.78	201.94	5

Table 8: Descriptive Statistics of Control Variables					
Control Variables	Min.	Median	Mean	Max.	NA's
Total Assets (MSEK)	11.30	2 410	14 170	236 400	-
Debt to Equity	-20.00	0.34	0.40	33.00	-
Growth Rate	-100%	8%	22%	3,350%	5

List 3. Robust Regressions Equations

Regression 1.1: $Dividend\ Payout\ Ratio = \beta * CSH_10_D_{it}(dummy) + \beta * CSH_ASH_D_{it}(dummy) + \beta * CSH_DC_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \log(Total\ Assets)_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t = year

Regression 1.2: Dividend Payout Ratio = $\beta * CSH_D_{it}(dummy) + \beta * CSH_ASH_20_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \text{Log}(\text{Total Assets})_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t= year

Regression 1.3: Dividend Payout Ratio = $\beta * CSH_D_{it}(dummy) + \beta * CSH_ASH_D_{it}(dummy) + \beta * CSH_DC_1.2_D_{it}(dummy) + \beta * Growth\ Rate_{it} + \beta * \text{Log}(\text{Total Assets})_{it} + \beta * \frac{D}{E} - Ratio_{it} + \alpha_i + u_{it}$, where i = Company and t= year

Table 9: Variable Description for Robust Regressions	
<i>Dependent variable</i>	
Dividend Payout Ratio	Dividend per share divided by earnings per share
<i>Independent variables</i>	
CSH_D	1 = Presence of a controlling shareholder that holds more than 20 percent of the voting rights of the company
CSH_ASH_D	1= If there is a controlling shareholder and a second large shareholder that holds more than ten percent of the voting rights
CSH_DC_D	1= Presence of a controlling shareholder and the company has dual class shares
CSH_10_D	1 = Presence of a controlling shareholder that holds more than ten percent of the voting rights of the company
CSH_ASH_20_D	1= If there is a controlling shareholder and a second large shareholder that holds more than 20 percent of the voting rights
CSH_DC_1.2_D	1= Presence of a controlling shareholder and the company has a dual class shares where the controlling shareholder's voting to cash flow rights ratio is higher than 1.2x
<i>Control variables</i>	
Growth Rate	Company's past growth rate as proxy for growth opportunities
Log(Total Assets)	The logarithm of a company's total assets as a proxy for a firm's size
D/E-ratio	Debt to equity ratio as a measurement of a firm's leverage

Table 10: Descriptive Statistics of Variables in Robust Regressions				
Year	Number of Companies	Companies with Controlling Shareholder at >10% of votes	Companies with 2 nd Largest Shareholder at >20% of votes	Controlling Shareholder with Votes/Cash flow ratio >1.2x
2010	107	90%	9%	36%
2011	111	90%	10%	37%
2012	112	91%	11%	37%
2013	112	91%	11%	36%
2014	112	92%	11%	36%
2015	112	89%	10%	36%
2016	112	89%	11%	36%
2017	112	90%	10%	38%
Mean	111	90%	10%	36%

Table 11: Robust Regressions Results			
	Regression (1.1)	Regression (1.2)	Regression (1.3)
Dividend Payout Ratio			
<i>Independent variables</i>			
CSH_10_D	0.001		
CSH_D		0.543 **	0.525*
CSH_ASH_D	0.167		-0.012
CSH_ASH_20_D		-0.062	
CSH_DC_D	0.396	0.089	
CSH_DC_1.2_D			0.184
<i>Control Variables</i>			
Growth Rate	-0.025	-0.030	-0.029
Log(Total Assets)	0.143	0.141	0.140
D/E- Ratio	0.003	0.003	0.003
Adjusted R-squared	-0.147	-0.142	-0.141
F-statistic	0.819	1.440	1.467
Observations	875	875	875
<p>‘***’, ‘**’, and ‘*’, represent significance levels of 0.01, 0.05 and 0.1, respectively</p> <p>The model includes fixed effects for company and year</p>			