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The Impact of Ownership Concentration on M&A Stock Market Performance:

A Study of Acquiring Swedish Public Companies

Master Thesis in Finance

by

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ABSTRACT

This paper estimates the effects of concentrated ownership of Swedish public companies prior, at and after the announcement of an acquisition. Exploiting the available access to detailed information regarding ownership and control structures in Swedish public companies, we are able to separate voting rights from cash flow rights to estimate ownership concentration. Using an event study, we analyse a sample of 249 completed transactions in 2017. We control for concentration of ownership, dual-class shares, size, leverage, relative P/E, payment method and cross border effects. Our findings show that voting rights of the largest shareholder in the range of 20% - 50% have significantly positive effects on firm performance. Whereas the use of dual-class shares is found to have a significant negative effect.

Keywords: Ownership concentration, dual-class shares, corporate governance, mergers and acquisitions, agency cost

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1. Introduction

This paper investigates the market response to bidding, Swedish, public companies that complete acquisitions, in 2017. We measure the short-term effects on stock market price movements of the acquiring company, at and adjacent to the announcement date, using an event study. We estimate the effect by measuring the cumulative abnormal returns around the date of announcement of the takeover. Our study emphasise testing the effects of companies that can be classified as having concentrated ownership or having dual-class shares (DCS), as well as control for size, leverage, cash holdings, cross border, relative P/E and payment method. Our findings show that corporate acquisitions within our sample generate positive abnormal returns and that ownership concentration in the range of 20% - 50% have a significant and positive effect. Further, we find that the employment of DCS has significant negative effect which we interpret as the agency cost of using controlling minority shareholder (CMS) structures.

Contrary to the image of Berle and Means (1932) of the widely held corporation with dispersed ownership, publicly traded companies in most countries often have large controlling shareholders which are active in corporate governance (La Porta, Lopez-De-Silanes and Shleifer, 1999; Holderness, Kroszner and Sheehan, 1999; Claessens, Djankov and Lang, 2000). The current debate regarding the effects of concentrated ownership is divided. Those in favour argue that large shareholders contribute with monitoring as well as allowing the company to focus on long-term investments without fear of being raided (Gomes, 2000). Whereas those against argue that large shareholders and controlling minority shareholders lead to entrenchment and agency costs. Literature regarding ownership structure tells us that companies exhibit different ownership structures depending on what legal framework they operate in and the degree of protection shareholders can expect. In essence, small shareholders need protection from expropriation by large shareholders. Common law that is primarily used in Anglo-Saxon countries offers the strongest protection and has the most dispersed ownership. Whereas, Civil law is the legal framework in Germany, Scandinavia, France and other continental countries, which offers gradually less protection (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2000). Therefore, companies in these regions have gradually more concentrated ownership as a mean to protect their interests. Sweden is considered to have semi-strong protection but was still found to be one of the most active users of CMS structures by La Porta et al. (1999). In addition, La Porta et al. (1999) find that concentration of ownership is often made possible due to CMS structures such as DCS, stock pyramids and cross holdings.

These structures allow minority shareholders to have a disproportionate amount of voting rights compared to cash-flow rights. Ownership concentration and the use of CMS structures are potentially highly problematic because they allow controlling shareholders to expropriate non-controlling shareholders and entrench themselves. Further, the concentration and use of CMS structures protects the controlling shareholders from pressure by corporate governance mechanisms such as monitoring, by non-controlling shareholders or by the market-for-corporate-control. The situation creates a potential agency cost, since the controlling shareholders internalise only a fraction of the negative financial consequences whilst enjoying all the private benefits. Assuming that the value of private benefits has an inverse relationship with the individual's ownership in the company, private benefits should exhibit diminishing returns. That suggests that at some point the controlling shareholder's stake in the company becomes sufficiently large to align their interests with that of the non-controlling shareholder. In other words, a level of ownership exists where the fraction of the financial costs that the controlling owner internalises becomes so great, that the best line of action will be to maximise firm value.

The objective of this study is to extend the research by Cronqvist and Nilsson (2003) who estimated the agency cost of controlling minority shareholders of 309 listed Swedish companies between 1991-1997. They hypothesised that the actual power and entrenchment of the controlling owner was an increasing function of their ownership. Their findings show that controlling vote ownership was associated with a decrease of 6% - 25% in firm value (Tobin's Q) for the median firm, and that CMS structures could be associated with large agency costs, even in developed countries with strong legal restrictions on self-serving (Cronqvist and Nilsson, 2003). The source of the discount was determined to be partly due to the overall lower ROA for companies with concentrated vote control, but also that owners hang on to control for too long. We extend their research by investigating the short-run market response of acquiring, Swedish, public companies that can be defined as having a concentrated ownership structure, or that use CMS structures.

Even though CMS structures have been studied to some extent, to our knowledge, few studies have investigated the short-term impact on firm value, stemming from ownership concentration. The subject is important for several reasons to both small and large shareholders alike. Knowing the effect on firm value from the choice of ownership and equity structure can have implications on both corporate governance, policy making and strategic decision making of management

and boards. Since ownership structure affects the decision making in companies, the empire building argument becomes even more relevant for companies that do not exhibit concentrated ownership. To answer our research question, we follow MacKinlay (1997). The same event-study methodology was used by e.g. Goergen and Renneboog (2004) when they measure the short-term wealth effects of European domestic and cross border takeover bids. However, they did not take ownership structure or DCS into consideration. Caprio, Croci and Del Giudice (2011) study how ownership structure and family control influence the decision of 777 large continental companies in participating in M&A and control for both ownership structure as well as DCS. Among their findings, they are able to show that there exists a negative relationship between the probability of takeover and an increase in ownership when the largest shareholder has more than 50 % of the voting rights. By combining and applying their methods, we are able to measure the market response around the announcement date of the acquisition.

Our study focuses on acquisitions by Swedish, public companies exclusively. The choice of looking at solely the bidder is due to that the majority of acquisitions in Sweden are made by a public bidder and a private target company. Since we cannot measure the effect on the private target company, our study focuses on the bidding firm. There are several advantages of studying acquiring companies from one country exclusively. First, Sweden has been the subject for other studies on CMS at numerous occasions (La Porta et al., 1999; Bebchuk, Kraakman and Triantis, 1999; Holmén and Nivorozhkin, 2007). It also makes an excellent testing ground due to the popular use of control structures by companies as well as the relatively easy access to detailed source of information regarding ownership and corporate control instrument data. Second, which is the main advantage for this study. By analysing public companies from Sweden exclusively, we get a sample of firms that all face the same set of legal restrictions but have all chosen to implement different ownership and governance structures. By studying acquisitions closed in 2017 exclusively, we ensure that our findings are as up to date as possible, as well as limit the risk of changes in legislation affecting our sample.

The research question we aim to answer is: Does ownership concentration impact firm value? Corporate acquisitions present us with an ideal setting to measure the potential agency cost as they are among the largest investments a company can make and could therefore lead to a heightened conflict between shareholders and managers. In order to test our research question, we develop two hypotheses which are based on three assumptions. First, we assume private benefits for the controlling party result in costs for shareholders. Second, in line with Grossman

and Hart (1988) and Holmén and Nivorozhkin (2007), we assume that only one party at a time can derive substantial private benefits of control. Third, it is assumed that the private benefits fall to the largest controlling shareholder. Under these assumptions and given prior research we develop the following hypotheses regarding the acquiring firm:

Hypothesis 1: *If the acquiring company has a controlling owner, the relative impact of agency costs will decrease with voting power.* .

Hypothesis 2: *The usage of dual-class shares will have a negative impact on firm performance.*

We argue that our research topic is of increasing importance, since we can observe an overall increase in global transactions in the past years that now exceed the levels that were observed prior to the financial crisis (Baker McKenzie: *Global Transactions Forecast 2019*), and where Sweden is one of the most active countries relative to its GDP. Baker McKenzie estimates that the combined M&A and IPO activity in Sweden in 2017 represented 1,1 % of the total global transaction value. Our research contributes to the literature regarding the effects of ownership concentration and the use of CMS structures on firm value.

2. Theory and Institutional Setting

According to the Swedish Companies Act, a Swedish, public company must have three decision making bodies. The shareholders' meeting, the board of directors and the managing director. Additionally, there must be a controlling body, the auditor, which is appointed at the shareholders' meeting. The board of directors is elected by the shareholders at the annual general meeting, where the weight of each shareholder's vote is decided by his or her current holding of voting rights. In turn, the board of directors elects the managing director who will be in charge of the daily operations of the company.

La Porta et al. (1999) present evidence that having 20% of the shareholder votes is usually enough to have effective control of a company, giving the shareholder substantial influence regarding the selection of the management team of the firm. They show that a majority of the firms which can be categorised as having a controlling owner, include a management member from the controlling owner. Additionally, they find that outside of the US, the controlling owner

is often the founder of the firm or a descendant. Suggesting that ownership concentration above a certain threshold is linked to classic management entrenchment theory as well as the convergence of interest hypothesis.

The management entrenchment hypothesis predicts that firm assets can be worth less if managed by management that is left unmonitored. If managers hold little equity and the company's' shareholders are too dispersed, due to high costs, the non-controlling shareholders will not be able to monitor or take action against non-value maximising behaviour from insiders or controlling owners. Further, it predicts that as ownership and control are separated, agency cost arises. The agency cost can be mitigated by increasing the manager's ownership, but this may also lead to increased entrenchment and protection from the market for corporate control. Several studies have shown that family CMS are substantially less likely to be taken over compared to other firms (Weston, 1979; Morck, Schleifer and Vishny, 1988; Cronqvist & Nilsson, 2003). Thus, the management entrenchment hypothesis suggests that high ranges of management ownership can have an adverse effect on firm value.

The convergence of interest hypothesis on the other hand predicts a strictly positive relationship between management ownership and firm value, implying that extracting private benefits or engaging in self-serving exhibit diminishing returns with respect to management ownership. According to Jensen and Meckling (1976), as management ownership increases, managers pay a larger share of the costs related to non-value maximising behaviour and therefore become less likely to squander corporate wealth. Thereby it reduces agency costs and increases firm value. Both hypotheses boil down to management acting in their self-interest and how to mitigate the conflict of interest between shareholders and managers. Between the two hypotheses, the former has earned the most recognition in literature.

It is well-documented that corporate acquisitions are sometimes used by managers to extract private benefits (Jensen, 1983; Jarrell, Brickley and Netter, 1988; Andrade, Mitchell and Stafford, 2001). Apart from being relevant from the perspective of potential entrenchment or agency costs, it also presents an opportune moment to measure the effect of ownership concentration, as the sizeable investment can lead to heightened conflicts of interest between shareholders and managers.

2.1 Motives for Mergers and Acquisitions

Theory regarding why companies engage in M&A activities mainly present three reasons, synergies, hubris and agency. Synergies are defined by Sirower (1997) as "*increases in competitiveness and resulting cash flow beyond what the two companies are likely to accomplish independently*" and create shareholder value if the company is able to realise them. Mulherin and Boone (2000) study the acquisition and divestiture activity of a sample of 1,305 firms between 1990-1999. They find positive wealth effects for both acquisitions and divestitures, which supports the synergy hypothesis but they find no evidence for agency or hubris.

The competing motive, the hubris hypothesis, states that management sometimes engages in M&A activity even though no synergies exist. Management misevaluates the target and the synergies that can be gained from the transaction, or their own ability to manage the joint company. In the end they end up paying a too high premium and therefore destroying shareholder value.

Mueller and Sirower (2003) test four hypotheses in a sample of 168 mergers of large companies between 1978 to 1990. The authors find strong evidence for both the hubris and agency hypotheses, some support for the market-for-corporate-control hypothesis but very little to no evidence that mergers create synergies.

The third motive, agency, also called managerialism, refers to M&A as the product of managers' self-interests, i.e. managers engage in value extraction for themselves rather than focusing on creating shareholder value. Acquiring another company presents the manager with an opportunity to extract value at the expense of the other shareholders. This can occur in several ways. Jensen (1986) argues that managers can engage in empire building behaviour by using free cash flow to acquire companies and thus increasing the size of their own company. One rationale for this is that firm size has been found to correlate with manager pay (Gabaix and Landier, 2008). Therefore, managers have incentives to engage in revenue increasing M&As that are value destroying activities for shareholders. Bauguess and Stegemoller (2008) offer an alternative explanation and suggest that managers use corporate acquisitions as a means to diversify their private wealth that is often tied up in the company.

Another view presented by Shleifer and Vishny (1989), suggests that managers may attempt to entrench themselves by acquiring specific targets that fit their specific skill set. With this action, the bidding company becomes more dependent on management and management enhances their job security. The agency cost in this scenario consists not only of a potential reduction in company value by acquiring a suboptimal target, but also the considerable entrenchment of

management. Masulis, Wang and Xie (2009) study a sample of US based DCS companies and find that as the wedge between insider voting rights and cash flow rights widens, CEO compensation increases and the value of company cash holdings is reduced to outside shareholders. This is done through management engaging more frequently in shareholder value-destroying acquisitions and that capital expenditure contributes less to shareholder value. Their findings support the agency hypothesis.

2.2 Background: Dual-Class Shares and Swedish Ownership

Due to high concentration of ownership and the frequent use of CMS structures in Sweden, Swedish companies are inherently related to the risk of both expropriation of shareholders, as well as entrenchment of management. La Porta et al. (1999) study ownership structures of large companies in the 27 wealthiest nations and find that Sweden is the most frequent user of DCS, have the second highest presence of pyramidal ownership structure and the third highest occurrence of cross holdings. These structures exist in order to separate cash-flow rights from control-rights, and thus effectively concentrate control to a few shareholders. The major benefit of DCS is that by issuing shares with superior voting power, it enables the founders of the companies to expand the company by gaining access to the capital markets, without losing too much control of the company in the process. Several high-profile companies such as Google, Facebook and LinkedIn have chosen to adopt this form of equity structures.

The most common setup in Sweden is that one class A share equals ten class B shares in terms of voting power[1]. There are some companies, such as Under Armour and Snapchat that have gone to the extreme of issuing common stocks with zero voting power. These stocks are referred to as class C shares and are usually held by employees.

DCS are commonly considered as weak corporate governance (Gompers, Ishii and Metrick, 2010) and are among the strongest anti-takeover mechanisms a company can adopt. Ruback (1988) state that "*dual class plans may be the most effective universal anti-takeover device ever invented*" and Gompers et al. (2010) describe the mechanism as "*dual-class shares are the most extreme example of anti-takeover protection*".

However, the cumulative findings on the effects on company performance from DCS is weak or inconclusive. Supporters of the equity structure argue that it is a governance structure that

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[1] Internationally the classifications are reversed, i.e. class B shares have ten times the voting power compared to class A shares.

can be value enhancing because it allows management to concentrate on long term value creation instead of having to focus on current stock price and fearing hostile takeover attempts (Grossman and Hart, 1988; Harris and Raviv, 1988; Masulis et al., 2009). Other supporters highlight the benefits for companies with growth opportunities to gain access to capital, whilst still being able to retain stable ownership with a long investment horizon (Gomes, 2000; Nüesch, 2016). Opponents to the DCS system on the other hand argue that it allows controlling shareholders to extract private benefits, incur agency costs to the firm as well as protect entrenched managers against the market for corporate control. Overall, shareholders with disproportionate voting rights versus cash flow rights bear a smaller proportion of the financial risks and the consequences of their actions. Both Grossman and Hart (1988) and Harris and Raviv (1988) analyse DCS theoretically and are able to show that the optimal equity structure is one-share-one-vote. This is the structure that maximises the probability of a value-enhancing takeover being accepted. In modern times, the opponents of DCS have grown in numbers and a common critique to the equity structure is that at the very least it should include a sunset clause that limits the lifespan of the superior votes.

Few studies have focused on the impact of ownership concentration on firm value. The few that have, often include Sweden due to the popular use of CMS structures. La Porta et al. (1999) report that Sweden is the only country that is a top-ranked country in the usage of DCS, pyramid structures and cross holdings. Barca and Becht (2002) report a very high concentration of ownership in Sweden when compared internationally. In a sample of 304 companies, listed on the Stockholm Stock Exchange in 1998, they find that 82.2% of the companies had a well-defined owner with more than 25% of the votes. Similarly, Holmén and Nivorozhkin (2007) report in their sample of 200 firms, that 79% of the companies employ DCS. Further, they report that the median controlling shareholder holds 29% of the cash-flow rights and almost 50% of the voting rights.
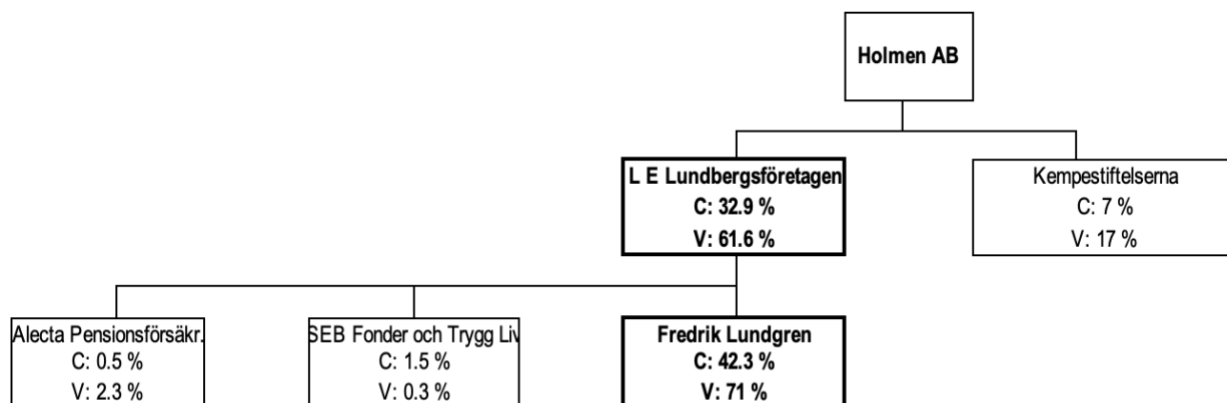

Figure 1 Holmen AB. Illustrates how cash-flow rights (C) and voting rights (V) are separated by using DCS in Holmen AB and L E Lundbergsföretagen. Under the 20 percent rule, Fredrik Lundgren is assigned ultimate control in both companies. The control chain is represented by the thick-bordered boxes.

Figure 1 illustrates the separation of cash-flow rights and controlling rights by the use of DCS and pyramidal structures. The CEO and founder of the company is Fredrik Lundberg. In February 2019, by having shares with superior voting power, Fredrik was able to own 42.3 % of the cash-flow right in L E Lundbergsföretagen whilst controlling 71 % of the voting rights in the company. In turn, L E Lundbergsföretagen has invested in Holmen AB, another Swedish public company in which they own 32.9 % of the cash-flow rights and 61.6 % of the voting rights. In the end, by having shares with superior voting power, the setup allows Fredrik Lundberg to be the controlling owner of Holmen AB and still only hold 14 % of the cash-flow rights.

Even though the example is a simple one-step pyramid, it illustrates a structure that is common in Sweden where many of the largest companies are owned by a few powerful individuals or families such as the Wallenberg's, either directly, through DCS or with different pyramidal structures. This claim is supported by La porta et al. (1999) who find that in Sweden the average *"ultimate family owner"* owns 2.5 of the top 20 domestic firms, compared to their universal sample average of 1.33. Being the ultimate owner is the equivalent to having a controlling stake in the company. La Porta et al. (1999) define five separate categories of controlling shareholders (*ultimate owners*) and classify each as an ultimate owner if its influence in the company exceeds 20 % of the votes. They reason that the high prevalence of ultimate ownership is evidence of significant control of productive resources by the largest shareholding families. Further, they conclude that if a controlling family exists, they participate in management in 69% of the time and 75% of the time in countries with good shareholder protection.

3. Previous Findings

3.1 Market Response to M&A

The evidence presented on the outcome of M&A is largely based on event studies performed in the US or UK, where the majority of the studies indicate that the outcome differs between target and acquirer. M&A appears to generate positive abnormal returns on average, adjacent to the announcement date for the target company, whilst the outcome for the acquiring company is less certain. The bidders' return ranges from slightly positive to negative abnormal returns. The relationship can be observed in the stock price close to the announcement date, where the target stock often experiences an increase due to the premium the bidder pays. Bruner (2004)

and Weston, Mitchell, Mulherin, Siu and Johnson (2004) reach different conclusions when aggregating previous research, where Bruner (2004) concludes that the average benchmark-adjusted return to corporate investment in M&A is close to zero. Weston et al. (2004) reach the conclusion, that the effects of M&A are positive. The latter claim is supported by findings by Andrade et al. (2001), Mulherin and Boone (2000) and Yilmaz and Tanyeri (2016).

Kyimaz and Baker (2008) investigate the short-term market response of large domestic M&A transactions of public companies in the US between 1989 to 2003. They find that overall, acquiring firms generate abnormal returns that are significantly negative, and that target companies experience significantly positive returns. Further, they observe that acquiring companies performance varies from significantly negative to significantly positive, depending on industry. Target performance remains significantly positive across industries. Additionally, they come to the conclusion that the main motive for companies engaging in M&A are synergies, even though they also find some support for hubris.

In contrast, Goergen and Renneboog (2004) study the short-term wealth effects of large European takeover bids between 1993-2000. From their sample of 228 mergers and acquisitions, they find a significant announcement effect of 9 % for target firms, whereas the effect for bidders is only 0.7 %. They test for several variables such as if it is a hostile or friendly takeover, if the transaction is a domestic or cross border, payment method, relative size of target, valuation of acquirer and more. All variables but the relative size of the target generates cumulative abnormal average returns. Further, they find strong evidence for both the synergy and the hubris hypothesis.

3.2 Ownership Concentration and Dual-Class Shares

One of the earliest studies investigating the potential impact on firm value from management ownership was made by Morck, Schleifer and Vishny (1988). In a cross sectional analysis of Fortune 500 firms, they investigate the relationship between board ownership of the firm's common stock and Tobin's Q. They find evidence of a significant non-monotonic relationship. Firm value increases from low levels of board ownership until it reaches 5%, then decreases as a function of board ownership until it equals 25%. Beyond this point, additional ownership has a strict positive effect, and at the 65% level, Tobin's Q is approximately the same as it was at the 5% level. The authors speculate that in the range of 5% - 25%, the financial incentive effect

to maximise firm value can still be operative, it is just dominated by the entrenchment effect. Further, their findings show that Tobin's Q decreases for older firms if they are managed by a member of the founding family.

Cronqvist and Nilsson (2003) analyse a sample of 309 Swedish firms, traded at the Stockholm Stock Exchange between 1991-1997. Similar to our study, Cronqvist and Nilsson (2003) categorise their sample according to whether the largest shareholder can be classified as a controlling owner or not. They hypothesise that the actual power and entrenchment of the controlling owner is an increasing function of her ownership. To estimate the agency cost of CMS, they test for DCS and other corporate control instruments, return on assets, operational performance, firm size, leverage, type of controlling owner and more. Cronqvist and Nilsson (2003) determine that compared to other types of controlling owners, families use CMS structures in the form of DCS 1.5-2 times more often. Further, by measuring Tobin's Q, they estimate the agency cost of having controlling shareholders in the range of 6-25 % for the median firm, across all categories of controlling owners. Lastly, they conclude that the discount on firm value appears to stem from the controlling owners of the companies, holding on for too long. In their sample, firms with family CMS are 50 % less likely to be taken over compared to non-CMS firms.

Claessens, Djankov, Fan and Lang (2002) study 1,301 publicly traded companies in East Asia and find that as the gap between cash-flow rights and voting rights of the largest shareholder decreases, so does the value of the company. The reverse is true if the wedge between voting rights and cash-flow rights increases. Similar results are found by Lins (2003) who studies a sample of 1,433 firms in 18 emerging markets, and by Barontini and Caprio (2006) who investigate ownership structures in continental Europe. Villalonga and Amit (2009) studies family firms in the US and find that the agency conflict between large and small shareholders is primarily driven by the divergence in cash-flow rights and voting rights. They conclude that the source of the wedge is primarily the use of DCS.

Holmén and Nivorozhkin (2007) analyse 200 Swedish listed firms between 1985-2001, testing for the relation between the use of DCS and the risk of takeovers. Their findings stress the need for control of the identity of the controlling owner, as their findings show that the use of DCS by family controlled firms reduces firm value. The primary reason being due to non-transferable private benefits of control.

4. Data & Methodology

4.1 Sample Selection

We start by collecting data of all acquisitions being closed during the year 2017 by companies based in Sweden from the database Capital IQ. The sample thus includes acquisitions that were announced prior to 2017 but where the transaction was closed in 2017. The announcement of all these acquisitions were made during 2016. In total, there were 293 transactions based on this sampling method. From these transactions we remove those that were made by an acquiring company that were not listed on any stock exchange one year prior to the announcement day of the acquisition, leaving a sample of 251 transactions.

We proceed by gathering data on the five largest shareholders by their total share of votes in each acquiring company. This information could not be accessed for free through any database and had to be retrieved by manually examining annual reports, prior and post announcement. In some cases, there were deviations in information prior and post announcement. For these observations we corrected the data by using information from news articles, seasoned equity offering information and Insynsregistret if applicable to the shareholder. The latter being a database run by the Swedish financial supervisory authority, Finansinspektionen, to which individuals discharging managerial responsibilities are obliged to report their transactions. Two companies were removed due to lack of public information regarding the share of voting rights of the largest shareholders. Thus, we reach our final sample which comprises of 249 transactions.

In many of the acquiring firms, there are large shareholders which are corporate owners rather than individuals. Some of these large corporate shareholders have one or several additional levels of corporate ownership before the individual(s) who has the controlling rights appears. In these firms, we consider the entire chain of corporate ownership when determining who is the ultimate owner, and thereby the largest shareholder of the acquiring company. This is done by examining the ownership structure of each firm in order to determine if there is a single individual at the end of the chain of ownership. Simultaneously, we control if that individual or corporation has a controlling stake in the acquiring firm and to what degree.

There are also cases where there are family relations between shareholders. In these cases we regard the family as one entity and add up their holdings. This classification of ultimate owner and family connections is the same as the one used by La Porta et al. (1999) and Claessens et al. (2000), who examine differences in ownership structures globally. The classification is commonly used in studies investigating the reasons and effects of M&A activities with aspects of ownership concentration, see e.g. Caprio et al. (2011), Francoeur and Rakoto (2012) and Craninckx and Huyghebaert (2015).

We proceed with gathering financial data on the acquiring companies, the target companies and transaction details which will be used in our analysis. We collect data on the total assets of the acquiring firm, if the acquisition was domestic or cross border, leverage, liquidity and price to earnings from Capital IQ. However, regarding target assets and payment method, we are not able to get data for the entire sample from Capital IQ and must use additional sources to complement the data. Regarding total assets of the target, we complement our dataset with information from the database Retriever if it is a Swedish company and data from Bundesanzeiger if it is a German company. For the remaining target firms, we are unable to find similar reliable national databases and instead search for publications of their annual reports. For all but twelve of the target companies, we succeed in complementing the data regarding total assets of the target firm. The data regarding means of payment is complemented by examining the annual reports and press releases of the acquiring companies, enabling us to complement the data to contain information regarding 178 of the transactions.

4.2 Variables

Based on the data gathered on the acquiring firm, target firm and the transaction details, we define variables that will be used in our analysis. We classify our sample based on ownership characteristics and start with the presence of dual-class shares and define a dummy variable which we call DCS. The variable takes the value one for firms that employ DCS and zero otherwise. We include this variable as we aim to build upon the findings of Cronqvist and Nilsson (2003) who found that CMS structures such as DCS lead to agency costs. Additionally, the findings of Villalonga and Amit (2009) show that there exist agency conflicts between large and small shareholders, specifically when the firm employs DCS.

Furthermore, we define two dummy variables based on cut-off values, related to the share of total votes in the firm held by the largest shareholder. The cut-off values are 20% and 50% voting power, creating three brackets of the largest shareholder: below 20% voting power, between 20% and 50% voting power and above 50%. The first dummy variable, 20%<VR<50%, takes the value one if the largest shareholder is in the middle bracket and zero otherwise. The second dummy variable, 50%<VR, takes the value one if the largest shareholder is in the final bracket and zero otherwise. Cronqvist and Nilsson (2003) use a cut-off value of 25% voting power in their study of agency costs related to controlling minority shareholders but give no rationale to why this would be an optimal boundary. La Porta et al. (1999) however provide evidence that at 20% of the voting power the largest shareholder usually has effective control over the company and therefore, we see this as a more appropriate cut-off value. In contrast to Cronqvist and Nilsson (2003), we include an additional cut-off value at 50%. Studies have found that for insider ownership there are positive benefits on firm value when there is large insiders but that the effect only holds for holdings up to 40-50% (McConnell and Servaes, 1990). Similar findings of non-linearity of firm value due to insider holding are found by Morck et al. (1988). Furthermore, large shareholders are more likely to have a larger part of their personal portfolio invested in the firm and thus diverging from a diversified portfolio (Bauguess and Stegemoller, 2008). This gives incentive to diversify with acquisitions through the company rather than divesting in the acquiring company, as they through this will get the benefits of diversification and still have a large influence (Caprio et al., 2011). However, this strategy would be sub-optimal for shareholders that otherwise diversify and thus create an agency conflict between shareholders. We therefore deem it necessary to make a distinction within the group of concentrated owners defined according to La Porta et al. (1999) and add the additional cut-off value at 50% of the voting power as to capture the non-linear effect of ownership.

In addition to our variables on ownership characteristics, we use control variables that have been found by previous studies to have an impact on the market performance of acquiring firms in the event of an announcement of an acquisition. Below follows a description of each variable and the rationale of including it.

The variable relative price-to-earnings (RelPE), measures the effect of the price-to-earnings ratio of the acquiring company relative to the price-to-earnings average within the same industry of Swedish public companies. Same industry is defined by comparing the primary SIC

code groups of the acquirer and the target. If both target and bidder operate within the same group, they are said to be active in the same industry. We include this variable in order to control for the effect of temporarily high firm valuation of the acquirer, which managers take advantage of by using stock as payment or part of the payment. Maksimovic, Phillips and Yang (2013) find that firms with high unexplained value are more likely to engage in acquisitions. We use price-to-earnings as a proxy for this effect to see whether the market interprets an acquisition announcement as a signal of potential opportunism.

The variable relative size, RelSize, is the effect of the size of the target company relative to the acquiring company. The variable is measured as the ratio of total assets of the target to the total assets of the acquirer. Moeller, Schlingemann and Stulz (2004) and Masulis et al. (2009) show that the relative size measure does have an impact on the performance of an acquiring company and shows that for small acquiring firms the effect is positive while for large companies the effect is negative. They further find that the performance dependent on firm size of the acquiring firm is significantly different between smaller and larger firms, where smaller firms perform better unless the acquisition is paid in full using equity. We therefore include the size of the acquiring firm measured as the natural logarithm of total assets of the acquirer, logAssets, as a control variable. The natural logarithm is used since the variation within our sample with regards to total assets is large. The logarithm is included to counteract heteroscedasticity.

Further, we include the variable LTD/E, which is defined as long-term debt to equity. Maloney, Mccormick and Mitchell (1993) show that higher leveraged acquiring firms generate higher returns when announcing an acquisition compared to firms with lower leverage.

Gao (2011) shows that acquiring firms with a higher amount of excess cash experience lower returns in connection with an acquisition announcement when payment is made with only equity. Furthermore, Harford (1999) finds the same to be true for acquiring firms, regardless of the method of payment. We therefore include the variable Cash/A which is the ratio of cash and cash equivalents to total assets of the acquiring firm.

Finally, we include two additional dummy variables. The first dummy variable, CrossBorder, takes the value one if the acquisition is a cross border deal, i.e. the domicile of the target firm being outside of Sweden, and zero otherwise. The variable is included to further control agency conflicts between larger and smaller shareholders regarding diversification as discussed with

the variables regarding non-linear effect of ownership concentration. In this case the effect being geographical diversification rather than by industry. Goergen and Renneboog (2004) find that the geographical location of the target has a positive impact on the performance of the target firm, and domestic acquisitions being more advantageous for the firm value of the acquiring firm. The second dummy variable, 100%Cash, takes the value one for acquisitions where the payment is fully financed by cash and zero otherwise. Goergen and Renneboog (2004) find that means of payment has a large and significant impact on the performance of the target and acquiring firm. They find that all-cash acquisitions underperform compared to acquiring firms using a mix of cash and equity, or solely equity as payment method. Contradictory to this view, Travlos (1987) find the opposite to be true and that fully or partly stock financed acquisitions generate negative abnormal return for the acquiring company. Table I gives an overview of the variables used throughout the study.

In Table II we present descriptive statistics on the data for the acquiring firm, target firm and the transaction. Worth noting is that the variation in total assets is large, for both acquiring firm and target firm. The variation is the largest in acquiring firms with the largest shareholder having between 20% and 50% of the voting power and where the acquiring firm does not employ a DCS structure. As for the target companies, the variation in total assets is the largest when the largest shareholder of the acquiring company has below 20% of the voting power and when the acquiring company does not have a DCS structure.

Table I
Definition of Variables

Variable	Description
100%Cash	Refers to the payment method of the acquiring firm. A dummy variable which takes the value 1 if the payment of the acquisition was made fully in cash and 0 otherwise.
Cash/A	Measures the cash holdings of the acquiring company based on their latest financial filings.
CrossBorder	A dummy variable that takes on the value 1 if the bidder acquires a foreign target, or a 0 if it is a domestic takeover.
DCS	Dual-class shares. A dummy variable that takes on the value 1 if the company has shares with superior voting power. Otherwise it takes the value 0.
logAssets	Defined as the natural logarithm of total assets of the bidder, based on the buyers latest financial filings.
LTD/E	Measures the level of leverage of the acquiring company. This is measures as the long-term debt of the company as a proportion of its equity
Voting Rights	Measures the voting power of the largest shareholder in the acquiring company. We use this measure to divide our observations into three categories; VR < 20 percent, 20 < VR < 50 percent and VR > 50 percent.
RelSize	Measures the relative size of the target to the bidder. Size is defined as total assets of target to total assets of acquirer.
RelPE	Measure price-to-earnings of the bidder in relation to the same industry average price-to-earnings in Sweden.

Table II
Summary Statistics

Table II reports descriptive statistics for each of the six sub-groups in our sample. The data is presented in millions of USD for the sample year of 2017 and the variables included are: Dual-Class Shares (DCS), if the transaction is a domestic or foreign acquisition (CrossBorder), if the method of payment is an all-cash offer (100%Cash), the voting-rights of the largest shareholder (Largest Shareholder), company relative P/E (RelPE), relative size of the target compared to the acquiring firm (RelSize), book value of total assets of buyer (Buyer Tot. Assets), book value of total assets of target (Target Tot.Assets), cash holdings of buyer (Cash/A) and leverage of buyer (LTD/E). For more detailed variable descriptions, see table I.

	VR < 20 %					20 % < VR < 50%					VR > 50 %				
Variable	Mean	Median	Std	Obs.	N	Mean	Median	Std	Obs.	N	Mean	Median	Std	Obs.	N
DCS				20	78				75	142				16	29
Cross Border				37	78				88	142				9	29
100%Cash				51	65				72	89				22	24
Voting Rights	12,50	12,56	3,81			33,77	32,40	8,88			61,85	58,50	6,64		
RelPE	0,79	0,64	0,48			1,02	0,80	1,10			2,15	0,95	2,27		
RelSize	0,05	0,02	0,08			0,10	0,01	0,66			0,13	0,02	0,35		
Buyer Tot. Assets	3464,71	1194,95	5372,52			6743,93	855,65	29951,94			4801,97	1583,20	7270,66		
Target Tot. Assets	125,53	7,14	527,18			51,98	7,63	144,77			48,59	16,69	101,11		
Cash/A	0,10	0,07	0,13			0,07	0,06	0,08			0,09	0,06	0,08		
LTD/E	0,59	0,42	0,56			0,55	0,44	0,54			0,53	0,23	0,54		

	Full Sample					Dual-Class Shares (DCS)					Non-DCS				
Variable	Mean	Median	Std	Obs.	N	Mean	Median	Std	Obs.	N	Mean	Median	Std	Obs.	N
DCS				111	249				111	111				0	138
Cross Border				134	249				68	111				66	138
100%Cash				145	178				58	68				87	110
Voting Rights	30,38	28,80	16,63			35,33	32,40	16,55			26,40	25,80	15,60		
RelPE	1,19	0,77	1,93			1,15	0,80	1,74			1,23	0,73	2,08		
RelSize	0,09	0,01	0,51			0,14	0,01	0,76			0,05	0,02	0,07		
Buyer Tot. Assets	5490,53	1358,30	23000,98			3523,43	1031,60	5786,87			7072,76	1458,55	30364,94		
Target Tot. Assets	74,24	7,56	316,25			49,59	6,75	140,17			95,22	8,97	409,26		
Cash/A	0,08	0,06	0,10			0,07	0,05	0,08			0,09	0,06	0,11		
LTD/E	0,56	0,44	0,55			0,53	0,36	0,63			0,59	0,45	0,47		

Table III
Correlation Matrix

Correlation matrix for all variables. Correlations over 0.2 or below -0.2 are presented as bold values.

	DCS	20%<VR<50%	50%<VR	RelPE	RelSize	logAssets	LTD/E	Cash/A	CrossBorder	100%Cash
DCS	1,000	**0.203**	0.152	-0.033	0.051	0.025	-0.006	**-0.209**	0.171	0.092
20%<VR<50%	**0.203**	1,000	**-0.418**	**0.377**	-0.018	0.016	-0.136	-0.003	-0.178	0.039
50%<VR	0.152	-0.418	1,000	-0.128	0.066	-0.04	0.076	-0.009	0.178	0.041
RelPE	-0.033	**0.377**	-0.128	1,000	0.12	0.013	0.017	0.136	**-0.211**	0.052
RelSize	0.051	-0.018	0.066	0.12	1,000	-0.16	**0.302**	0.044	-0.094	-0.084
logAssets	0.025	0.016	-0.04	0.013	-0.16	1,000	-0.01	-0.084	-0.14	-0.047
LTD/E	-0.006	-0.136	0.076	0.017	**0.302**	-0.01	1,000	-0.186	-0.065	0.013
Cash/A	**-0.209**	-0.003	-0.009	0.136	0.044	-0.084	-0.186	1,000	-0.085	-0.154
CrossBorder	0.171	-0.178	0.178	-0.211	-0.094	-0.14	-0.065	-0.085	1,000	0.098
100%Cash	0.092	0.039	0.041	0.052	-0.084	-0.047	0.013	-0.154	0.098	1,000

4.3 Methodology

In order to investigate whether ownership concentration affects the financial performance of the bidder, we use an event study. We define an event window, which stretches over the trading days prior and post announcement of the acquisition, where we observe changes in the stock prices of acquiring company. The reason for including trading days prior to the announcement is that the share price of both the target and bidder are subject to a run-up effect where rumours and insider information regarding the acquisition are traded upon before the public announcement (Martynova and Renneboog, 2011). The days post announcement are included for the market to fully incorporate the announcement of the acquisition.

As there is no clear empirical nor intuitive cut-off in time for when the pre- and post-effects are incorporated into the share price, we consider three different event windows. This also adds to the robustness of our findings if we find effects that last over these event windows. We use a five-day window (-2, +2), an eleven-day window (-5, +5) and a 21-day window (-10, +10), where T=0 is the announcement day of the acquisition. The same event windows are used by Caprio et al. (2011) and Martynova and Renneboog (2006) who studied similar effects regarding acquisitions.

During the event windows, we calculate the abnormal return of the acquiring company, which is the return attributable to the acquisition. We specify the abnormal return of the acquiring company according to the standard market model specified by Brown and Warner (1985) and hence abnormal return is:

$$AR_{i,t} = R_{i,t} - \alpha_i - \beta_i R_{M,t}$$

Where $AR_{i,t}$ and $R_{i,t}$ is the abnormal return and realised return respectively for firm i during time period t and $R_{M,t}$ is the return of the market index chosen, Affärsvärldens Generalindex (AFGX). AFGX is a broad index compiled of all companies listed on the stock exchanges in Stockholm. The realised return and the market return are observed through prices where we use the price of the B-share for DCS companies. α_i and β_i are estimated from the daily stock returns using the following model:

$$R_{i,t} = \alpha_i + \beta_i R_{M,t} + \varepsilon$$

The estimation of α_i and β_i is done during a time period prior to the event window, during the estimation window. We specify this window as six months prior announcement up until 20 days prior announcement. Thus, our estimation window is (-124, -20).
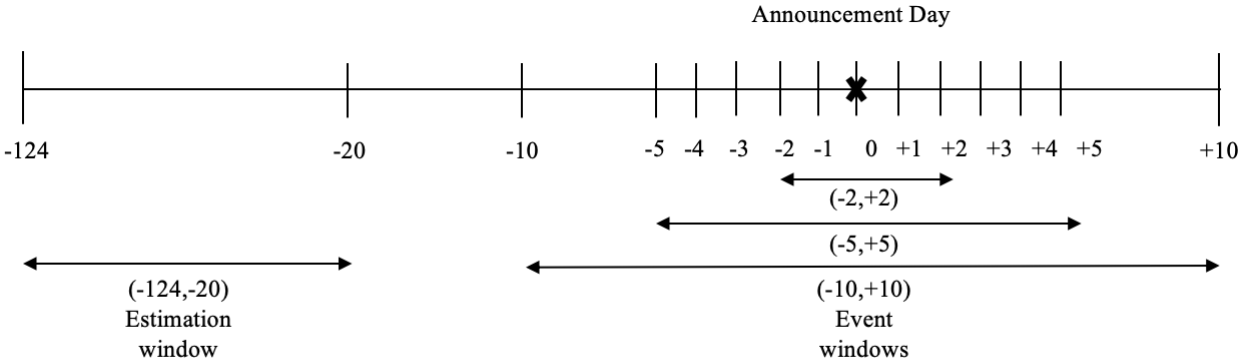

Figure 2. Illustrates the estimation window and the three different event windows used in our model.

In order to test whether the ownership structure of an acquiring firm has bearing on the financial performance, we perform a multivariate regression analysis, using the cumulative daily abnormal returns over the event window as the dependent variable. Cumulative abnormal return (CAR) for the 21-day window is defined as:

$$CAR_i = \sum_{t=-10}^{10} AR_{i,t}$$

The average abnormal return for each day and CAR for each event window is presented below in Table IV.

Table IV
Abnormal Return Data

Abnormal return for the entire event window (-10,10) is presented alongside with the cumulative abnormal return for the same event window and the two shorter windows. The values are rounded to two decimals.

t	Average AR	Cum. AR (-10,10)	Cum. AR (-5,5)	Cum. AR (-2,2)
-10	0.20%	0.20%		
-9	-0.26%	-0.06%		
-8	-0.07%	-0.12%		
-7	0.12%	0.00%		
-6	0.17%	0.16%		
-5	0.29%	0.46%	0.29%	
-4	0.00%	0.46%	0.29%	
-3	-0.01%	0.44%	0.28%	
-2	-0.23%	0.22%	0.05%	-0.23%
-1	0.22%	0.43%	0.27%	-0.01%
0	1.56%	2.00%	1.83%	1.55%
1	-0.27%	1.73%	1.57%	1.29%
2	0.16%	1.89%	1.72%	1.44%
3	0.08%	1.97%	1.81%	
4	0.15%	2.12%	1.95%	
5	-0.05%	2.07%	1.90%	
6	-0.05%	2.02%		
7	0.24%	2.26%		
8	0.23%	2.50%		
9	0.22%	2.71%		
10	0.14%	2.85%		

4.4 Models

We specify two different models, model 1 and 2, where model 2 is an extension of model 1, containing two additional dummy variables. The reason for using two different models is that data on payment method is not available for the entire sample and as we want to control for the effect of payment method, we use two different models to increase the robustness of our findings and to have one model specification on the larger sample.

Model 1:

$$CAR_i = \alpha_i + \beta_1 * DCS_i + \beta_2 * 20\% < VR < 50\%_i + \beta_3 * 50\% < VR_i + \beta_4 * PE_i$$
$$+ \beta_5 * RelSize_i + \beta_6 * LogSize_i + \beta_7 * LTD/E_i + \beta_8 * Cash/A_i$$

Model 2:

$$CAR_i = \alpha_i + \beta_1 * DCS_i + \beta_2 * 20\% < VR < 50\%_i + \beta_3 * 50\% < VR_i + \beta_4 * PE_i$$
$$+ \beta_5 * RelSize_i + \beta_6 * LogSize_i + \beta_7 * LTD/E_i + \beta_8 * Cash/A_i$$
$$+ \beta_9 * CrossBorder_i + \beta_{10} * 100\%Cash_i$$

4.5 Delimitation & Remarks

Due to restrictions in time and resources, certain limitations of the scope of this paper have been necessary to implement. Unlike Cronqvist and Nilsson (2003) who had access to extremely detailed ownership data through the book series *Owners and Power in Sweden's listed companies* by Sundqvist and Sundin (1985-2002), no such register is available for free today. All data regarding ownership and the separation of voting and cash flow rights have been retrieved manually from the annual reports of each company. With this in mind, we selected not to categorise the controlling owners into subgroups as Cronqvist and Nilsson (2003), as well as La Porta et al. (1999). Further, we have limited this research to only measure the effect of the acquiring company. The primary reason for this being that very few transactions occur in Sweden where both bidder and target are listed companies. Since the short-term effect on company performance is impossible to measure for private companies due to not having access to stock prices, we have selected to measure the effect of ownership concentration for the

bidding company. Having imposed all of our restrictions on our sample we ended up with too few observations to be able to control for industry effects. We deemed the risk of capturing legal changes in our sample to be greater than the benefit of including an extra variable and therefore decided not to consider an industry effect.

5. Results & Analysis

5.1 Results

First, we perform t-tests on our sample. The results are presented in Table V. The table presents the average CAR for each specified sub-group within our sample, for each event window and the difference in CAR between companies with and without DCS.

We find that in our entire sample, the CAR for all three event windows are statistically different from zero. This suggests that the return of an acquiring firm following the announcement of an acquisition differs from its normal return. For all three event windows the abnormal return is positive. This is in line with the findings of Martynova and Renneboog (2006 and 2011) and Caprio et al. (2011) who also found positive abnormal return in their aggregate sample. However, where they found a decreasing effect with time, our sample exhibits the opposite relationship. The largest effect (2.85%) is found in the (-10,10) window.

We proceed with dividing our sample based on ownership characteristics and start with the presence of DCS. We find that the acquisitions made by companies with a DCS structure do not have CARs significantly different from zero for any of the event windows. However, the CARs of companies without a DCS structure does have a positive and statistically significant effect which is persistent and increasing with the length of the event window. When comparing the means between companies without a DCS structure to those with, we find that they are significantly different from each other. This suggests that the return of companies might be influenced by the presence of DCS in the event of an acquisition announcement.

Table V
T-test of Differences in Means

T-tests performed on the sample and defined sub-groups within the sample. The average CAR is presented for each event window followed by the corresponding t-statistic in brackets below.*,** and *** represent statistical significance at the 10%, 5% and 1% levels respectively.

Panel A

Event Window	*Full Sample*	*DCS*	*No DCS*	*Diff. No DCS vs DCS*
(-10,10)	2.85% ***	0.47%	4.77% ***	4.30% ***
	(4.043)	(0.504)	(4.755)	(3.081)
(-5,5)	1.90% ***	0.24%	3.25% ***	3.10% **
	(3.155)	(0.259)	(4.102)	(2.505)
(-2,2)	1.44% ***	-0.0749%	2.67% ***	2.75% **
	(2.659)	(-0.092)	(3.727)	(2.537)
N. obs.	249	111	138	

Panel B

Event Window	*VR < 20%*	*20% < VR < 50%*	*50% < VR*
(-10,10)	3.25% ***	1.67% *	7.57% ***
	(2.682)	(1.924)	(2.794)
(-5,5)	3.13% ***	0.76%	4.21%
	(3.041)	(1.106)	(1.526)
(-2,2)	2.41% ***	0.7%	2.48%
	(3.258)	(1.059)	(0.918)
N. obs.	78	142	29

Further, we examine the CARs based on three cut-off values on voting rights for the largest shareholder by voting power. For companies with the largest shareholder holding less than 20% of the voting power, we find the CARs to be positive and statistically significant and the effect to be increasing with the length of the event window. As for companies with the largest shareholder holding between 20% and 50% of the voting power, positive effects are found for all event windows, but only with statistical significance during the (-10,10) event window at the 10% level. We find the same to be true for companies with the largest shareholder having a majority of the voting power by themselves, but here the effect is significant at the 1% level.

Our results suggest that companies with a dispersed ownership structure have a clear positive effect across all three event windows. For companies with concentrated ownership structures, the effect is more uncertain on short-term performance in connection with the announcement of an acquisition. These findings are not in line with the findings of Caprio et al. (2011) who found the effect on CARs to decrease with the length of the event window and increase with the voting power of the largest shareholder. The difference in performance for the (-10,10) event window do however exhibit a pattern similar to the non-monotonic results found by Morck, Schleifer and Vishny (1988). As the largest owner increases his voting rights from 20% - 50%, CAR decreases and then increases again when managers voting rights exceed 50%.

Table VI shows the result of a Wilcoxon rank sum test of the medians between our categories of ownership concentration for each event window. We find that for each event window the median is different when comparing the CAR between firms with a DCS structure compared to those without. When we compare the median we categorise based on voting power of the largest shareholder. We do not find that any of the medians differ from each other, for either bracket or any event window.

Table VI
Ranksum Test of Medians

Table VI presents the p-values of a Wilcoxon rank sum test of the median between the specified categories for each event window. *,** and *** represent statistical significance at the 10%, 5% and 1% levels respectively. Ranksum test of median:

Event Window	DCS vs No DCS			Voting rights			
		DCS	*No DCS*		*VR<20%*	*20%<VR<50%*	*50%<VR*
(-10,10)	*DCS*	-	0.005***	*VR<20%*	-	0.768	0.085
	No DCS	0.005***	-	*20%<VR<50%*	0.768	-	0.039
				50%<VR	0.085	0.039	-
		DCS	*No DCS*		*VR<20%*	*20%<VR<50%*	*50%<VR*
(-5,5)	*DCS*	-	0.010**	*VR<20%*	-	0.225	0.925
	No DCS	0.010**	-	*20%<VR<50%*	0.225	-	0.470
				50%<VR	0.925	0.470	-
		DCS	*No DCS*		*VR<20%*	*20%<VR<50%*	*50%<VR*
(-2,2)	*DCS*	-	0.010**	*VR<20%*	-	0.280	0.592
	No DCS	0.010**	-	*20%<VR<50%*	0.280	-	0.778
				50%<VR	0.592	0.778	-

We proceed to investigate the effect of ownership more closely by conducting a multivariate regression analysis. We consider two different models, model 1 and model 2, which are specified in the methodology section. The results for each of the two models and for each three event windows are presented in the Table VII.

Table VII
Regression Results

Table VII reports CAR Regressions for model 1 and 2 for each of our three event windows. The coefficients are reported with standard errors reported below within parentheses. *, ** and *** represents statistical significance at the 10%, 5% and 1% levels respectively.

	CAR (-10,10)		CAR (-5,5)		CAR (-2,2)	
Variable	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Constant	0.059*	0.080	0.073***	0.131***	0.047*	0.114***
	(1.909)	(1.594)	(2.724)	(2.972)	(1.821)	(2.717)
DCS	-0.047***	-0.065***	-0.041***	-0.056***	-0.029**	-0.037**
	(-2.945)	(-3.162)	(-2.99)	(-3.112)	(-2.22)	(-2.131)
20%<VR<50%	0.071**	0.088***	0.040*	0.049*	0.033	0.038
	(2.564)	(2.712)	(1.661)	(1.747)	(1.452)	(1.422)
50%<VR	0.007	0.018	-0.007	0.001	-0.002	0.002
	(0.403)	(0.838)	(-0.471)	(0.061)	(-0.119)	(0.134)
RelPE	-0.002	-0.004	-0.004	-0.005	-0.006	-0.007*
	(-0.590)	(-0.807)	(-1.140)	(-1.211)	(-1.790)	(-1.909)
RelSize	-0.004	0.090*	0.002	0.051	0.012	0.127***
	(-0.317)	(1.890)	(0.129)	(1.229)	(1.049)	(3.219)
logAssets	-0.003	0.001	-0.002	-0.000	-0.001	0.000
	(-0.869)	(0.057)	(-0.713)	(-0.109)	(-0.341)	(0.034)
LTD/E	-0.017	-0.026	-0.035***	-0.041***	-0.027**	-0.042***
	(-1.243)	(-1.565)	(-2.952)	(-2.865)	(-2.364)	(-3.076)
Cash/A	0.141	0.131	0.017	-0.016	0.049	-0.014
	(1.394)	(0.952)	(0.197)	(-0.134)	(0.585)	(-0.124)
CrossBorder		0.013		-0.006		-0.014
		(0.639)		(-0.325)		(-0.856)
100%Cash		-0.048*		-0.065**		-0.062***
		(-1.677)		(-2.600)		(-2.634)
Adj. R-squared:	0.074	0.114	0.065	0.097	0.078	0.149
N. of observations:	237	173	237	173	237	173

We find that for both model specifications and over all three event windows, the presence of a DCS structure has a negative and significant impact on the performance of the acquiring firm. The effect grows with the length of the event window where in the longest event window firms with a DCS structure have a lower return compared to firms without. The difference being -4.71% and -6.52% for model 1 and model 2 respectively. Our findings are in line with the findings of Cronqvist and Nilsson (2003) and Villalonga and Amit (2009) who also find that

the presence of DCS leads to agency costs between larger and smaller shareholders. When the acquiring firm announces an acquisition, the market interprets this as an agency conflict where the DCS shareholders expropriate value from the remaining shareholders. This is done through entrenchment, private benefits or hubris.

When the largest shareholder holds between 20% - 50% of the voting rights, we find the effect to be positive for each event window and for both models. The effect is statistically significant for the two longer event windows, at the 5% level for both models in the 21-day window and at the 10% level for both models during the eleven-day window. Within this bracket, the controlling owner contributes to a higher return compared to the other two brackets. The result suggests that the market interprets this range of ownership to be value creating for the firm. According to the convergence of interest hypothesis, the positive effect could be the result of alignment of management's interest with that of the company. Alternatively, the positive effect could be attributed to a value increase by monitoring of the large shareholder on behalf of shareholders. As for the shareholders holding more than 50% of the voting power, the effect is marginal and statistically not different from zero. For the two shorter windows, the effect is negative for model 1 and positive for the longest event window as well as in all event windows for model 2. Overall our findings regarding voting power of the largest shareholder is similar with the findings of Morck et al. (1988) and McConnell and Servaes (1990) who find a non-linear relationship with regards to voting power. However, our findings differ as we find no significance for the effect above 50% of the voting power, whereas the former found diminishing returns after this point and the latter a negative effect. For the remaining bracket where the largest shareholder holds less than 20% of the votes, the effect is positive across all event windows and for both models. The effect is significant for all but model 2 during the 21-day event window. We thus find no evidence for large agency costs due to managerial entrenchment or extraction of private benefits in acquiring firms with dispersed ownership. Overall, our findings differ from Caprio et al. (2011), who find a positive impact of family-classed shareholders within the same cut-off groups as we use but where the effect was not statistically different from zero. When they relaxed the definition of the largest shareholder outside of the family classification, the results remained. Overall, M&A generates positive abnormal returns in our sample. The findings thereby give support to the synergy hypothesis as the market interprets the acquisition to have a positive effect on future performance.

As for the effect of Price-to-Earnings ratios for the acquiring firms, we find the effect to be negative for both models across all three event windows. The effect is statistically significant at the 10% level for model 2. However, the results are not persistent across windows and our results regarding PE are therefore inconclusive.

We find that the effect of relative size between target company and acquiring company as well as the effect of the size of the acquiring company to be differing between model specifications and event windows. The effect is not statistically different from zero, except for relative size in model 2 in the two event windows (-2,2) and (-10,10) at the 1% and 10% respectively. The impact of size and relative size is in line with the findings of Moeller et al. (2004) but where their findings are more robust over model specification.

Furthermore, we find that the ratio of long-term debt to equity has a negative impact on the performance of the acquiring company across both models and all three event windows. The effect is significant at the 1% for the event windows (-5,5) and (-2,2) for model 2 and at the 1% level and 5% level respectively for model 1. This finding is in contradiction with the findings of Maloney et al. (1993) but more similar to Harford (1999) who found a negative effect of leverage when considering insider ownership, although without statistical significance. The proportion of cash to assets of the acquiring company has an inconclusive impact for both models and over all three of the event windows but the effect is not significantly different from zero.

Finally, we examine the effect of the two additional variables in model 2, CrossBorder and 100%Cash. The effect on firm performance stemming from cross border acquisitions is observed to be negative for the two shorter event windows and positive for the (-10,10) event window. However, for none of the event windows we find a significant effect.

The effect of the transaction being paid fully with cash is negative across all event windows. The effect is significant at the 10%, 5% and 1% level for the event windows (-10,10), (-5,5) and (-2,2) respectively. Similar to Jensen (1986), this result could indicate that the market might see the acquisition as managers taking advantage of an excess free cash flow in order to entrench themselves or to widen their own influence through empire building. This finding is in line with the findings of Georgen and Renneboog (2004) who found that acquiring firms using equity as a part of the payment method, generate higher returns than all-cash acquisitions.

5.2 Robustness

Our findings are robust to changing the estimation window to include a longer time period prior to the announcement. When prolonging the estimation window from six months to nine months and twelve months prior to announcement without any significant changes in our findings. Additionally, we examine two other model specifications which included interaction terms. The first interaction term is between the effect of payment method and relative price-to-earnings which caused the significance and effect of payment method to drop and have little effect on other findings. The second interaction term is between cash holdings and payment method and the findings remained unchanged from the initial specification of model 2.

6. Conclusion

In this study, we analyse the effect of ownership concentration and the use of CMS structures on firm value of the bidder. Using an event study, we analyse a sample of Swedish listed firms that completed a transaction in 2017 by measuring the change in stock market performance around the announcement date of the acquisition. What differentiates our study from prior studies is that we investigate the short-term effect on firm value, stemming from controlling owners and the use of DCS. Additionally, we differentiate our study from Cronqvist and Nilsson (2003) by including upper cut-off values for ownership concentration. By doing this we capture nuances in agency costs across the different ranges of ownership concentration. Contrary to the reported findings by Cronqvist and Nilsson (2003) of agency costs related to controlling owners, our results show that firm performance increases when the largest shareholder holds 20% - 50% of the voting rights. It appears that when the controlling owner has voting rights in the range of 20% - 50%, the market interprets the announcement as value creating for the firm. We are unable to conclude if we observe this effect due to the market considering management's interests to be aligned with that of the company´s at these levels. An alternative explanation is that the benefits from an increase in monitoring outweighs the drawbacks of further entrenchment by controlling owners within this range. As we only find significant impact on firm performance for one of our specified ownership brackets, we do not find evidence of the non-monotonic pattern in firm value reported by Morck, Schleifer and Vishny (1988). Neither can we confirm the concave pattern predicted by Stulz (1988). Thus, we are unable to provide a complete answer to our first hypothesis, or provide results that are completely in line with either the entrenchment theory or the convergence of interest theory.

Similar to Cronqvist and Nilsson (2003), we present evidence of significant negative impact from the use of DCS. We interpret these results as evidence of agency cost of CMS structures and estimate the effect to be as high as 6.5%, thereby answering our second hypothesis. Further, we find it unlikely that the decrease in firm performance is primarily caused by expropriation. As Holmén and Nivorozhkin (2007) point out, empirical studies generally find that private benefits of control in Sweden are among the lowest in the world. Therefore, the decrease in firm performance is more likely related to suboptimal investment decisions, and the market interpreting the acquisition as a potential entrenchment effect.

An interesting result is that all-cash acquisitions has a significantly negative impact on firm performance across all event windows. These results differ substantially from Travlos (1987), who finds that when equity is part of the payment, it generates negative abnormal returns at announcement. However, our findings regarding payment method are similar to that of Goergen and Renneboog (2004). As our study aims to explore the impact of ownership concentration we leave the subject of payment method and its effects on performance unanswered. In conclusion, we have been able to answer our second hypothesis fully, whereas the first needs to be further investigated.

We believe that future studies on the subject could benefit from including transaction data from neighbouring countries in Scandinavia. These countries have similar legal frameworks and therefore the trade-off between additional observations and accuracy could be acceptable in order to clarify the relationship of ownership concentration and firm value. By expanding the geographical scope one could investigate the importance of industry of operation and its interaction with ownership concentration. Furthermore we leave the question of whether type of shareholder has a role in determining the success of an acquisition, e.g. if the founder is still a large shareholder or if there is a family structure with significant influence. The task of classifying shareholders is tedious and requires information that is hard to acquire for free. However, the type of shareholder has been shown to effect acquisitions, especially the likelihood of acquiring and being acquired. We believe additional light could be shed upon our findings by taking the type of shareholder into consideration.

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