Norwegian School of Economics

Bergen, Spring, 2021

NHH

The Impact of Corporate Governance and Excess Cash Reserves on Acquisition Performance

An empirical analysis of acquirer returns during the last decade in the Nordics

Tor Henrik Hansteen & Rasmus Foldal

Supervisor: Karin S. Thorburn

Master Thesis, Business & Administration, Finance

NORWEGIAN SCHOOL OF ECONOMICS

Executive summary

This thesis researches the effect of agency costs on abnormal stock returns of bidders during the M&A-announcement period. According to agency theory, principal-agency costs may be mitigated if the shareholders (the principal) appropriately monitor the management (the agent) to ensure value-enhancing decision-making. In particular, an influential owner who actively monitors the management should be less likely to spend excess cash reserves poorly, or engage in value destructive investments such as acquisitions. Consequently, we expect bidders with strong owners to (1) perform better in acquisitions, and that (2) cash stockpiles are managed better relative to bidders with dispersed ownership. However, gaining too much control of a firm could cause controlling shareholders to engage in activities and transactions that benefit themselves at the expense of minority shareholders. Thus, principal-principal costs arise as the controlling shareholder seeks ways to benefit themselves at the expense of the minority shareholders. Accordingly, we hypothesize that (3) it is better to have a strong owner than a dispersed ownership concentration, yet too much control is worse than having a strong minority owner without complete control.

Through an event study we analyze our hypotheses by a sample of 1.083 acquisitions across the Nordics from 2011 to 2020. Methodically, we design one measure of ownership concentration to test our two first initial hypotheses, and another design to test the third. We find clear evidence of a positive correlation between concentrated ownership and abnormal stock return during the announcement period. Whether we find evidence that bidders with strong owners manage their cash positions better is a question of what we accept in terms of significance. Moreover, our sample gives clear indications of a principal-principal issue. However, agent-principal issues seem to outweigh principal-principal issues. In our sample, bidders with a *Controlling majority* outperformed bidders with dispersed ownership, but a *Large minority* owner outperformed them both. Our results give evidence of a non-linear relationship between ownership concentration and bidder performance of firms with excess cash reserves. When the largest shareholder becomes too influential, our data shows that they influence the management negatively compared to firms with a large minority owner. Moreover, we observe indications of an opposite effect with respect to governmental owners.

Preface

This thesis represents the conclusion of our Masters of Science in Economics & Business Administration at the Norwegian School of Economics (NHH).

As we both majored in Finance, we wanted our thesis to challenge the skills and knowledge we have acquired during our time at the NHH. M&A is a topic we have found to be of particular interest, and we knew that an M&A-related thesis would require us to summon all our combined abilities. Researching a topic within the field of M&A has been a very engaging and rewarding experience due to its complex nature. Additionally, we both believe that the abilities we have gained during this process will serve us well in future careers.

We have faced a wide set of econometric challenges in obtaining, handling and analyzing our sample. By linking several databases and conducting nearly 1.500 lines of code in R-studio we secured our final sample of 1.083 transactions. Although time-consuming and cognitively challenging, the process was very rewarding when we finally got the results to our research questions.

In particular, obtaining, handling and analyzing a large sample has presented real-world statistical and methodological challenge, which has been especially rewarding. Starting off with a raw sample of 3.082 transactions, we imported data from several sources, and wrote nearly 1.500 rows of code in R-studio.

We are very grateful to have had the honor of both attending Professor Karin S. Thorburn's M&A course and to have her supervise our thesis. Prof. Thorburn has provided invaluable feedback throughout the process. From big picture issues, such as conceptualizing the research questions, to small details, such as methodical design of variables, and comments on significance and estimates in our regressions.

Table of Contents

Executive summary ..... **i**

Preface ..... **ii**

1 Introduction **1**

2 Literature review **5**

2.1 Principal-agency theory 5

2.2 Ownership concentration 6

2.2.1 Principal-principal costs 7

2.3 Excess cash 8

3 Hypothesis Development **11**

4 Methodology **13**

4.1 The dependent variable: Bidder announcement return 13

4.2 Bidder cash model – Cash holding deviation 14

4.3 Ownership concentration 15

4.4 Control variables: 16

4.4.1 Type of owner 17

4.4.2 Size 17

4.4.3 Relative size 17

4.4.4 Method of payment 18

4.4.5 Related acquisition 18

5 Data 20

5.1 M&A data 20

5.2 Ownership Data 21

5.3 Financial data – acquiror firm characteristics 23

6 Descriptive summary 24

7 Results 28

8 Robustness 45

9 Weakness 47

10 Conclusion 48

Appendices 50

A.1 – Variable name and definitions 50

A.2 - Triple interaction models 52

A.3 - Cash holding deviation regression model 54

A.4 - VIF tests 55

References 56

1 Introduction

A corporate takeover is one of the largest and most important investment decisions a firm can undertake (Betton, Eckbo & Thorburn, 2008). The outcome of a corporate takeover is there of high importance for the companies that initiate them. Thus, they have been extensively researched by academics for a long period of time.

There are several reasons to why firms initiate corporate takeovers. The main reasons are synergies in the form of revenue growth or cost reductions to increase profits. (Gauhgan, 2007). By acquiring and integrating another firm's assets or resources into its own operations, a firm can increase profits in two ways; (1) increase sales of existing products, and (2) become more efficient and thus reduce costs.

Academics usually look for empirical evidence of abnormal stock returns at acquisition announcement to evaluate a company's decision of acquiring another firm. Former studies have shown that most of the wealth transfer usually goes to the target which sees their stock rise, while the bidder return averages around 1 % (Betton et al., (2008); Dessaint, Eckbo, and Golubov (2020)). A common explanation for this is that the bidder usually must pay a large premium to acquire a company. If the price is such that the bidder's net present value (NPV) of the investment is zero, all gains of the takeover will go the target (Gugler, Mueller & Yurtoglu, 2008).

Several researchers have examined agency costs as the source of bidder's poor performance relative to targets. Agency costs are costs that arise when a principal delegates decision-making authority to an agent, and the agent undertake actions that conflicts with the principal's best interest due to misaligned incentives. In this context, the shareholders are the principal while the management is the agent. The management may pursue projects that is in their own interest at the expense of shareholders, namely by pursuing projects that does not maximize shareholder (principal) value. This may be done in the form of undertaking sub-optimal, or even value-destroying acquisitions. Consequently, shareholders can reduce this behaviour by actively monitor the management to ensure value-enhancing decisions.

In this study, we examine the principal-agent relationship between shareholders and the management. Several past researchers have found conflicting incentives between the two parties. While shareholders usually seek maximization of shareholder value, the management may be more interested in managing a larger company, be higher compensated or take other actions that improves power and prestige. To reveal if such behaviour is in fact influencing acquisition performance, we study how acquisition performance by Nordic companies varies with ownership concentration and cash holdings. We have chosen to explicitly include the company's cash holdings (see section 4.2 for a definition) in our study to cultivate the agency cost issue as we hypothesize, based on past research, that management with access to large amounts of cash will be more inclined to engage in self-interested actions and thus inflict agency costs.

The effect of excess cash reserves and shareholder concentration have been examined separately in the past and yielded inconsistent results. There are, according to past studies, both benefits and costs associated with holding excess cash reserves. The benefits highlighted by researchers is usually the financial flexibility to pursue profitable investment opportunities as they present themselves in addition to freedom from expensive external financing (Huang, Elkinawy & Jain, 2013; Oler & Waegelein 2011). The costs are mainly related to agency cost theory, where high cash reserves give the management opportunity to pursue value-destroying investments due to self-interested motives such as higher compensations or empire building (Jensen & Meckling, 1976; Shleifer & Vishny, 1997). One way to restrain managers from this behaviour is to actively monitor their actions to ensure value-enhancing acquisitions. Thus, access to large amounts of ready cash have both potential benefits and costs which makes it an interesting variable to include in relation to the principal-agency theory. Moreover, it seems like the best way to exploit the benefits, while reducing the harm of excess cash reserves, is by having a large owner that actively monitors the management.

Accordingly, researchers such as Holderness and Sheehan (1988) have examined how ownership concentration affect firm performance and investment decisions. The theory is that a dispersed ownership concentration leads to weakly controlled managers, which in turn pursue projects and acquisitions that is in their own interest at the expense of the shareholders (Jensen & Meckling, 1976; Shleifer & Vishny, 1997). The reasoning is that when no single shareholder has a large

enough stake in the company, no one has incentive to bear the costs of monitoring, and thus agency costs arise. When the firm has a high ownership concentration, meaning a large shareholder who has incentives to actively monitor the management, some researchers have found evidence of increased firm performance. Most of the past literature points in this direction, and thus we develop the hypothesis that an increase in ownership concentration is associated with an increase in bidder performance. However, as Almazan, Hartzell and Starks (2005) have shown, there are costs to monitoring which might exceed the benefits.

In addition, with high ownership concentration another conflict of interest may arise. Johnson, La Porta, Lopez-De-Silanes & Shleifer (2000) pointed to the principal-principal relationship which is the relationship between majority and minority shareholders. They found evidence of decreased firm performance due to large controlling shareholders extracting corporate resources or other value-decreasing behaviour at the expense of the minority. Thus, we have reasons to believe that there might exist a non-linear relationship between ownership concentration and firm performance. We think this is an interesting phenomenon to investigate, and thus we have developed a third hypothesis to test if there is a non-linear relationship between ownership concentration and firm performance. More specifically, we investigate if firms with a controlling majority shareholder (≥50 % ownership stake) perform better or worse compared to firms without a controlling majority shareholder.

There are to our knowledge no studies that examines the interaction between excess cash holdings and ownership concentration on acquisition performance. Additionally, we examine the more recent principal-principal cost theory which has not been as thoroughly researched as the principal-agent theory. We perform our investigation by analysing a data sample of 1,083 Nordic transactions by 439 unique bidders from 2011-2020. The average ownership fraction of the largest shareholder in our sample is 28.4 % while the average cumulative abnormal return (CAR) is 2.9 % with a median of 1.7 %. We have also controlled for various variables and fixed effects, which we will further elaborate on in our data and methodology section (sections 4 and 5).

Our data shows clear evidence of a positive correlation between abnormal return in takeovers and ownership concentration. The models we propose predicts that bidders with a strong owner will

gain additional abnormal return relative bidders with dispersed ownership of roughly 1.2 %. Moreover, we find evidence that bidders with strong owners are better at leveraging the benefits of accumulating excess cash. However, when the strongest owner gains complete control of the bidder they are no better than a bidder with dispersed ownership at utilizing the benefits of excess cash. This, in and of itself, is evidence of principal-principal costs. However, it is also the only evidence of principal-principal costs we find in our data.

The rest of the paper is structured as follows. In section 2 we present previous literature and theory of firm performance and investment decisions by firms with excess cash reserves and ownership structure separately. We then introduce our hypotheses in section 3, methodology in section 4 and data sample in section 5 which we use to measure the performance of acquisitions. In section 6 we provide descriptive statistics for our sample. In section 7 we discuss and highlight our findings based on our empirical evidence. Finally, we shortly discuss robustness in section 8, weakness in section 9, before we conclude the thesis in section 10.

2 Literature review

In this section we present relevant findings from past literature regarding ownership concentration and excess cash reserves with respect to firm performance and investments. Our findings here lay the foundation for how we approach our data sample in addition to our interpretation of the regression results presented in section 7. We aim to present the reader with consensus of past research while also presenting studies with differing results. Hopefully, we succeed in providing a general overview of past findings and to equip the reader with sufficient knowledge to follow our reasoning later when we discuss our results.

2.1 Principal-agency theory

In general, corporate governance refers to the way in which a company is governed and to what purpose. In modern, public corporations there is a separation of control and ownership where shareholders delegate decision-making authority to the management (Berle, 1932). This is formally known as a principal-agent relationship.

Jensen & Meckling (1976) define an agency relationship as: "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent" (p.5). If the agent maximizes their own utility, the agent may not always act according to the best interest of the principal (Jensen & Meckling, 1976). Consequently, agency costs arise.

One way to reduce agency costs is to monitor the management's actions. Tirole (2006) defines it as interfering with management to obstruct value destroying actions. When shareholders actively monitor their management, they gather information and intervene on value destroying decisions (Tirole, 2006). However, there are costs to monitoring and it is therefore not always clear if monitoring is value-enhancing.

2.2 Ownership concentration

Firms with a high level of concentrated ownership have shareholders with incentives to actively monitor the management due to substantial rights to cash flows and control rights (Schleifer & Vishny, 1997; Urban, 2015). The cash flow rights will potentially make the costs of monitoring worthwhile, and the control rights gives them power to influence the decision-making of the management. In these cases, it is more likely to be in the best interest of the shareholders to actively monitor the management. Active monitoring will reduce opportunistic behaviour of the management as the probability of getting detected increases (Urban, 2015).

One potential cost of active monitoring may be lack of initiative or incentive to gather information by the management (Aghion & Tirole, 1997). The argument is that when management have less autonomy, they will put in less effort if they believe that shareholders will interfere in their decision-making. Thus, potential profitable investment opportunities, such as acquisitions, may be lost (Burkart, Gromb & Panunzi, 1997). Additionally, it is costly for shareholders to spend their time on gathering information to monitor the management.

Maher and Andersson (2000) observed that monitoring in companies with dispersed ownership concentration were weak. As any shareholder that monitor will bear the full costs of monitoring, and the benefits are low, they have incentives to free-ride and hope other shareholders will take the cost (Maher and Andersson, 2000). In addition, no single shareholder has any real influence on the management which further misaligns their incentive to actively monitor (Demsetz, 1983). Companies with low ownership concentration will thus have fewer control mechanisms in place and are more likely to engage in value-decreasing acquisitions or other investments (Harford, 1997). However, as there are costs to monitoring, the net effect is not necessarily negative for firm performance.

Holderness and Sheehan (1988) found that investment decisions, number of mergers and acquisitions, and rates of returns are similar for firms with dispersed and concentrated ownerships. However, they did find evidence of differences in the identity of large shareholders between individuals and corporations (Holderness & Sheehan, 1988). Paletta and Alimehmeti (2012) saw

a positive relationship between ownership concentration and firm value in a study of Italian firms. Their evidence gave support to the theory that higher concentration increases shareholder power and control which aligns managers and shareholder's interests, and consequently increase firm value. Caprio et al. (2011) found that an increase in voting rights of the largest shareholder indeed reduced the probability of a firm undertaking acquisitions.

Contrary to Holderness and Sheehan (1988), Kim and Jung (2019) found that higher ownership concentration reduced the likelihood of become an acquirer. Interestingly, they also found that higher ownership concentration combined with an all-cash offer leads to more negative reactions. According to Kim and Jung (2019), a potential reason for this result was that owners who value control pay in cash instead of stock to maintain control regardless of value and the financial position of the firm. This is a result of majority-minority conflict, and the market thus reacts negative when a firm with large controlling shareholder acquire firms with an all-cash offer, all else equal (Kim & Jung, 2019).

2.2.1 Principal-principal costs

Additionally, Johnson, La Porta, Lopez-De-Silanes & Shleifer (2000) and Shleifer & Vishny (1997) found evidence of conflicts of interests between majority and minority shareholders which can have a negative effect on firm performance. When large enough, controlling shareholders have the power to extract benefits and corporate resources for personal use at the expense of the minority (Johnson et al., 2000; Bebchuck, 1999). This reasoning has led researchers to argue that there is a non-linear relationship between ownership concentration and firm value. The relationship between a large controlling shareholder and negative firm performance was also supported by Anwar (2020) in a study of firms listed on the Oslo Stock Exchange, and by Yun, Ahmad, Jebran and Muhammad (2020) in a study of Chinese companies.

Other potential costs of concentrated ownership that might arise and thus reduce firm value are reduced market liquidity (Holmstrom & Tirole, 1993), low diversification benefits (Demsetz & Lehn, 1985), and lower management initiative (Burkart et al., 1997).

2.3 Excess cash

The literature on cash holdings and firm performance is inconclusive as researchers have found evidence of both positive and negative effect on firm performance. Jensen's (1986) predicted that cash-rich firms would make systematically worse investment decisions, as they are not restrained by external capital markets. Both Easterbrook (1984) and Jensen (1986) have underlined the importance of forcing managers to frequently return to external capital markets as the financing process monitors the behaviour of the management. However, as we have previously shown, the monitoring can be performed by other stakeholders such as the shareholders. When the shareholders actively monitor the management, some studies have found it optimal to generate internal funds to reduce transaction costs (Huang et al., 2013; Oler & Waegelein, 2011). However, there are costs to monitoring which might exceed the benefits.

Prior to the free cash flow theory, Jensen and Meckling (1976) tried to describe the behaviour of self-interested managers. They developed the spending hypothesis which implies that self-interested managers will prefer expansion of the firm and spend excess cash flow when generated. According to Jensen and Meckling (1976), these managers will prefer to spend generated cash in the present, foregoing future investment opportunities with higher net present value (NPV). Harford, Mansi & Maxwell (2006) gave support to this hypothesis when they found that high-level cash firms with weak governance will spend cash more quickly. In other words, self-interested managers will act in their own self-interest when the opportunity presents itself. Thus, it seems like firms with high levels of cash require stronger governance to restrict self-interested managers from pursuing value-destroying investments.

Harford (1997) supported Jensen's free cash flow theory and hypothesized that managers who are given freedom from external capital markets puts less effort in research, and thus makes more mistakes. His findings showed that the abnormal stock return at acquisition announcement is negatively correlated with a firm's deviation of predicted optimal cash reserves. Later, La Rocca and Cambrea (2019) found evidence of decreased firm performance of companies with greater liquid assets due to agency costs and inefficient use of resources.

A similar, but different, hypothesis is the hubris hypothesis of takeovers. This hypothesis implies that managers seek to acquire firms due to hubris or overconfidence, sometimes at the expense of shareholders (Roll, 1986). Hubris is the pride of the managers in the acquiring firm measured by various forms of variables. CEO hubris have been found to be positively associated with the size of premiums paid (Hayward & Hambrick, 1997). Furthermore, overconfident CEOs have been found to do more acquisitions and these acquisitions are more likely to be low-quality and value-destroying (Malmendier & Tate, 2008). In addition, overconfident and hubris-filled CEOs have been found to execute deals more rapidly and at a higher frequency (Aktas, de Bodt, & Roll, 2008). Consequently, the need for monitoring is greater when a firm is run by an influential CEO.

Moreover, Bliss and Rosen (2001) and Harford and Li (2007) showed that CEO compensation increases after acquisitions, which might also lead weakly controlled managers to frequently initiate acquisitions to increase compensations. However, Khorana and Zenner (1998) found that good acquisitions increased compensation, while bad acquisitions reduced them.

On the other hand, Huang et al. (2013), and Oler and Waegelein (2011) found that holding greater liquid assets improves the financial flexibility of the firm and thus improves firm performance. They claim that, in a dynamic business environment, managers prefer financial flexibility to be able to invest in growth opportunities as they present themselves. However, for mature firms with few good growth opportunities, we hypothesize that a cash pay-out in the form of dividends might make the shareholders better off.

Some researchers have argued that firms stockpile cash to actively avoid the extra costs of external capital markets that arise from frictions such as asymmetric information (Myers, 1984). This is known as the pecking order theory. The pecking order theory states that when firms undertake investments, they prefer to use internally generated funds, then safe and risky debt, and last equity to minimize transaction costs. Froot, Scharfstein & Stein (1993) argue that asymmetric information makes internal financing less costly than external financing. This implies that some firms are cash-rich because they plan to undertake investments and believe that it is optimal to internally generate the cash from its operations. If this is a rational thought held by many managers, then we would expect increased abnormal stock returns by firm with excess cash holdings.

Furthermore, Pinkowitz, Sturgess & Williamson (2011) studied US firms with excess cash reserves and did find evidence of timing behaviour by managers of US firms. Their findings implied that managers time the market and use cash only when stocks are undervalued or relatively undervalued, even if they are cash rich. In other words, managers use the cheapest source of capital, and they claim that their findings mitigate the concern that stockpiles of cash leads to overinvestment in acquisitions. Additionally, Nguyen (2016) did not find evidence of excess cash reserves and initiation of value-decreasing investments although he did find evidence of increased probability of becoming a bidder.

3 Hypothesis Development

Hopefully, we have succeeded in highlighting the inconsistent evidence of past literature on ownership concentration and excess cash reserves with respect to firm performance. However, it does seem like consensus is favouring the presence of a large, active owner. Accordingly, we develop our first hypothesis which is that the presence of a large owner affects acquisition performance positively. However, as this thesis is to some extent based on Anwar's (2020) thesis which concluded with the opposite, namely that the presence of a large owner is negatively correlated with acquisition performance, we have decided to two-way test the hypothesis. Consequently, we introduce the following null and alternative:

*$H1_0$: the presence of a large/strong owner **does not** affect acquisition performance*

$H1_A$: the presence of a large/strong owner affects acquisition performance

Moreover, the literature is presenting us with potential benefits and costs of having excess cash reserves with respect to firm and bidder performance. Our interpretation is that bidders have a greater chance of being protected from the negative side effects of accumulating cash, as they avoid agency costs when they have a large owner that actively monitors the management. Consequently, the firm should also be in a better position to reap the benefits: financial flexibility and freedom from expensive external financing. However, due to the ambiguity regarding cash accumulation in the literature we will test the following two-way null and alternative hypothesis:

*$H2_0$: the presence of a large/strong owner **does not** affect how well bidders manage excess cash reserves*

$H2_A$: the presence of a large/strong owner affects how well bidders manage excess cash reserves

Finally, we also want to research costs associated with principal-principal issues as some researchers have claimed to find evidence of. The theory is that the presence of a controlling majority shareholder is less than optimal as they have power to benefit themselves at the expense

of other shareholders. Accordingly, we hypothesize that bidders with a large owner (<50 %, but still high enough for monitoring to be profitable) performs better in acquisitions than bidders with a controlling shareholder (≥50 %). As such, we believe that it is optimal to have a large owner that actively monitors the management while also depending on the voting rights of other shareholders. Thus, we test the following one-way null and alternative hypothesis:

$H3_0$: bidders with a large/strong owner perform equally good, or worse, as bidders with a controlling shareholder

$H3_A$: bidders with a large/strong owner outperforms bidders with a controlling shareholder

4 Methodology

We use announcement returns as the dependent variable to analyze the effects of bidders with concentrated ownership and excess cash on acquisition performance. In this section we will cover the methodology used to estimate the announcement returns and excess cash of the bidders, as well as the control variables used in the analysis.

4.1 The dependent variable: Bidder announcement return

The most common event study methodology utilizes the market model (CAPM) to estimate abnormal returns in for the event. However, we have opted for the market adjusted return methodology, which does not require us to estimate market model OLS parameters. This methodology it is viewed as simpler, as it does *not* require two steps: one estimation period step, and one event window calculation step.

Brown and Warner (1980) argue that the market adjusted return methodology have *no* less power in inference relative to the CAPM-model when using daily data with a short event window. By simulation, Brown and Warner (1985) showed that when abnormal return was present, the CAPM model was equally likely as the market adjusted return model to infer correctly. Binder (1998) argues that this is likely due to estimation error in the market model parameters (α and β), which he argues off-sets greater precision due to risk adjustments. An important assumption for these results is that the events are not clustered in calendar time. This assumption holds for our sample, see section 5.1 for further details on our sample. Consequently, we argue that the market adjusted return model is sufficiently accurate, compared to the standard event study methodology, for our purposes.

As such, the abnormal return for bidder i at time t is:

$$A_{i,t} = R_{i,t} - R_{m,t}$$

Where, $A_{i,t}$ and $R_{i,t}$ is the abnormal return and actual return, respectively, for bidder i at time t. $R_{m,t}$ is the market return of the MCSI World benchmark index at time t.

For the dependent variable not to be contaminated by other, and, for our purposes, exogenous events/news, we apply a short event window. This is also required for Brown and Warner's (1980) conclusions to hold. Additionally, in a short event window, a given bidder's unsystematic risk is arguably less likely to have major influence in the performance of the security. As such, a short event window is more likely to yield inferable results given our choice of methodology.

Resultingly, we use an event window of [-1, +1] that is from one day prior to one day after the date of announcement. This window is short enough for the assumptions of the model to hold (Brown and Warner, 1980), and by adding the day after announcement the model gives the market an additional day to react to the takeover news. Thus, the *cumulative abnormal return* (*CAR*) to bidder i, for any given takeover announcement in our sample, is equal to:

$$CAR_{i,-1,+1} = \sum_{t=-1}^{+1} A_{i,t}$$

4.2 Bidder cash model – Cash holding deviation

Harford (1999) concluded that cash-rich bidders (according to his model) are more likely to engage in takeover activity, have significant negative stock price reaction to the announcement, and display subsequent poor operating performance after the takeover. However, both Huang et al. (2013) and Oler and Waegelein (2011) found that more cash and cash equivalent holdings increases financial flexibility, and as such improved firm performance.

To test *H2*, we examine if, and how, excess cash holdings affect acquisition performance. Hence, an important question is how we define and determine excess cash of the bidders in our sample. For our purposes, Harford's (1999) cash model is too restrictive as it requires future (actual) cash flow from operations for the two years post acquisition. Implementing Harford's model would thus

exclude observations post-2017. Combining this with restrictions in the other end of the timeframe (see section 5.2) would yield an unfortunately small sample.

In more applicable example in the literature, Eckbo, Makaew and Thorburn (2018) modelled Target cash holdings with the following OLS-model, based on Harford et al. (2009):

$$Cash\ holding_{i,t-1} = \beta_0 + \beta_1\, Size_{i,t-1} + \beta_2\, Operating\ Efficiency_{i,t-1} + \beta_3\, \frac{M}{B}_{i,t-1} + \beta_4\, R\&D_{i,t-1} + \beta_5\, Missing\ R\&D\ Dummy_{i,t-1} + \beta_6\, Industry\ dummies_i + \varepsilon_{i,t-1}$$

Where for bidder i at year-end prior to announcement $(t-1)$, *Cash holding* is cash divided by total assets, *Size* is the natural log of total assets, *M/B* is the market-to-book ratio, *R&D* is research and development expense divided by total assets, and *Missing R&D Dummy* is equal to 1 if R&D is missing. *Operating Efficiency* for bidder i at $t-1$ is calculated by the following formula:

$$\frac{COGS_{\,i,t-1} + SGA\ expense_{i,t-1}}{PPE_{\,i,t-1} + total\ current\ assets_{\,i,t-1} - cash_{\,i,t-1} - total\ current\ liabilities_{i,t-1}}$$

Excess cash, or cash richness if you like, is accordingly measured by the deviation of the bidder's actual Cash holding and the model's predicted Cash holding for that bidder-year pair. In other words, the residual of the *Cash holding* model, hereafter called *Cash holding deviation.*

4.3 Ownership concentration

The common practice in the literature is to measure ownership concentration as either the ownership fraction of the largest shareholder (La Porta et al., 1999; Iannotta, Nocera & Sironi, 2007), or the aggregate ownership fraction of the three largest shareholders (La Porta et al., 1998). We define ownership concentration as the former, due to limitations in the ownership data structure (see section 5.2 for further details). Furthermore, considering only the largest owner allow us to examine effects regarding the type of owner of the largest shareholder, which we implement as a secondary hypothesis in this thesis.

Owning 20 % of the votes in a company is according to La Porta et al. (1999) sufficient to have effective control of a firm. The argument is that a proportion of the shareholders are passive in that they do not execute their voting rights. If, for instance, 40 % of the ownership is passive then: $(100\ \% - 40\ \%) * 50\ \% = 30\ \%$ is sufficient for wielding effective control.

Moreover, our impression is that most studies focus geographically on the U.S. and/or U.K., whereas we study the Nordics. According to a report by the OECD (2017), the Nordics are more concentrated than the U.S. and the U.K., especially so for Norwegian companies. The sample of comparable studies will, relative to our sample, have a bias toward lower ownership concentration. Therefore, we argue that this paper should have a slightly stricter definition of ownership concentration compared to La Porta et al. (1999).

Resultingly, we define a concentrated ownership structure as binary variable which is equal to 1 if one entity holds at least 30 % of the shares in a company/bidder, 0 otherwise. This definition is applied to test hypotheses *H1* and *H2*, and hereafter the variable definition is referred to as *Large owner*.

To test *H3* (principal-principal issues) we apply a secondary definition where we split the *Large owner* variable to two variables. *Large minority* is defined as a binary variable which is equal to 1 if one entity holds 30-50 % of the shares in company/bidder, 0 otherwise. *Controlling majority* is defined as a binary variable which is equal to 1 if one entity holds 50 % or more of the shares in a company/bidder, 0 otherwise.

4.4 Control variables:

Below we will shorty introduce the control variables we use to study the effect of the variables of interest.

4.4.1 Type of owner

Governmental participance in the capital markets is more common in the Nordics compared to other OECD countries. Furthermore, it is possible that bidders controlled by governmental entities have other priorities than pure profit maximization. Some actions preferred by a government may not be preferred by non-governmental entities. In addition, governmental entities may in some instances not execute their voting rights in order to segregate politics from an otherwise free capital market. If these two assumptions are correct, then what type of owner the largest shareholder is could affect the acquisition performance (*CAR*). Consequently, we find it necessary to include type of owner as a control variable.

The type of owner-variable is defined as the owner type of the largest shareholder. We categorize ownership into three types: *Governmental*, *Bank* and *Other*. Hereafter, this variable is referred to as *Owner type*.

4.4.2 Size

In an empirical study, Moeller, Schlingemann and Stulz (2004) find that size is negatively correlated with bidder returns. Their results are in fact so strong that the effects are present irrespective of the form of financing and whether the acquiring firm is public or private (Moeller et al., 2004). In level terms their study concludes that small acquirors generate roughly two percentage points higher returns for takeovers (Moeller et al., 2004). An economic rationale is that large firms has more buying power and consequently offer higher premiums (Moeller et al., 2004). Since their findings seem so robust also for public acquirors, we include size as a control variable, calculated as the natural log of the previous year-end total assets. Hereafter, this variable is referred to as *Size.*

4.4.3 Relative size

The return of a given acquisition has greater influence on the bidder's equity value (in other words our dependent variable) if the target is of equal size as the bidder (Asquith, Bruner & Mullins Jr, 1983). For example, if a takeover yields 10 % return over the target's equity and the bidder is of

equal size, then the abnormal return to the bidder will be 10 %. However, if the bidder is much larger, then the abnormal return will be linearly smaller (Asquith et al., 1983). This simple example illustrates the effect of relative size on bidder takeover returns which is empirically supported by the data (Asquith et al., 1983). Furthermore, Jarrell and Poulsen (1989) back the findings, but add that the conclusions are less evident – although still significant – after the 60s.

As a result of the abovementioned empirical findings, relative size is often included as a control variable in M&A event studies. Our sampling does not require targets to be publicly listed, as such we use deal value as a proxy for target size. Thus, *Relative size* is equal to the deal value divided by the previous year-end market capitalization of the bidder.

4.4.4 Method of payment

Deal payment method is generally included as a control variable in acquisition event studies as it can influence bidder return. For instance, any cash payment to the target will impose an immediate tax liability on the target shareholders, hence they will seek compensation in the form of higher premiums (Datta, Pinches & Narayanan, 1992). Moreover, a share payment will usually take longer to execute, which increases transaction costs (Datta et al., 1992). This argument is further supported by Travlos' (1987) empirical evidence that full stock compensation induces negative abnormal stock price reaction. Paying with stock also has a negative signaling effect. The rationale is that the management is best suited to know whether the stock is under- or overvalued and will use stock when their share is overvalued, and cash otherwise.

In our sample, method of payment has four levels: Cash, Shares, Mixed and Unknown. The variable is hereafter referred to as *Deal payment type*.

4.4.5 Related acquisition

In an unrelated acquisition the bidder enters an entirely new industry that lacks similarities with existing operations. Synergy gains tend to be higher for related industry mergers than unrelated mergers, and thus the likelihood of overpayment is lower (Chang, 1998). Morck, Shleifer and Vishny (1990) argues that managers are undiversified, and as such, diversifying the business they

run is in their best interest. Moreover, unrelated acquisitions increase the survival rate of the firm the manager is in control of (Morck, Shleifer and Vishny, 1990). Lastly, the managers might have better fortunes in a new industry (Morck, Shleifer and Vishny, 1990).

Consequently, we include related acquisitions as a control (dummy) variable. The dummy is equal to 1 if the bidder and target have identical four-digit SIC codes, 0 otherwise. Hereafter, the variable is referred to as *Related.*

5 Data

We have gathered the data for our sample from several different sources. In this section we will describe the data sources and provide some descriptive analysis for our variables.

5.1 M&A data

The M&A data in our sample is gathered from the Bureau van Dijk (BvD) M&A database, Orbis. Below we describe the criteria of our M&A data sampling:

(1) *Deal Type: Acquisition*. In the Orbis database, an acquisition is defined as any takeover in which the bidder's final stake in the target is greater or equal to 50 %. Additionally, we require the initial stake to be below 50 %, however, this is criterion is executed at a later stage.

(2) *Deal status: Announced, Completed – Confirmed, Completed – Assumed*. This criterion is a direct consequence of our hypothesis. We want to study announcement results, therefore other deal statuses such as "rumored" will not hold as is not as concrete as a formal announcement from the top management.

(3) *Announcement date period: 01/01/2011 – 31/12/2020*. This filter is a result of the limitations in the BvD ownership database, Zephyr. The size of Zephyr's database was, arguably, limited prior to 2010. In 2009, the ownership data base had 28.1 million links, while in 2019 it contained nearly 200 million links (Bureau van Dijk, 2019). During data collection we noticed observations from 2010 in the ownership data base which were outright wrong. To ease concerns regarding false data we limit the sample accordingly, by not using ownership data prior to 2010. The ownership data is lagged one year relative to the M&A data, which is why, although we include ownership data from 2010, the M&A data starts at 2011.

(4) *Country: Nordic states*. Our hypothesis is a direct consequence of Anwar's (2020) thesis. His sample considered Norwegian deals only. However, since our methodology and hypotheses require financial data as well, which further diminish the sample due to missing data, we include

all Nordic countries. We are comfortable in generalizing Anwar's findings to other Nordic countries as they are quite similar in terms of governmental participation, GDP etc. (Høgenhaven, Averio & Werngren, 2012)

(5) *Deal value (USD): all deals with known deal value (incl. estimates)*. Deal value is an important control variable in our analysis (see section 4.4.3). Note that this criterion filters away many observations, indicating that Orbis requires high data quality in this variable.

Imposing the abovementioned criteria on the M&A-data yield an initial sample of 3.082 deals. However, further data requirements decrease the number of observations in the final sample.

5.2 Ownership Data

To test our hypothesis, we need to gather data on the owner type and ownership fraction of the largest shareholder, for all acquirers in our sample. To obtain the ownership data we executed a company search in Zephyr (BvD's ownership database) for all the unique bidders in our initial sample. The intention is to export the ownership data for each company each year in our sample, which we subsequently lag 1 year relative to the M&A data.

Zephyr requires two pieces of information for the ownership fraction variable. (1) How many shareholders you want to include, and (2) a MM/YYYY date. Regarding the former, we chose the smallest available option – the top five shareholders – as we only need to know the ownership fraction of the largest shareholder. The latter requirement unfortunately introduced some immediate issues. Let us illustrate the issue with an example.

Below is an example of how Zephyr collects and stores information on the top five shareholders for Equinor in 2020. In the rightmost column we see the ownership fraction and data collection month for each shareholder. For three of the five shareholders Zephyr collected the information at 06/2020. However, for the final two the shareholder information is collected at other dates – 09/2020 and 10/2020.

Table 5.2.1: Zephyr's data collection method, real data example for Equinor in 2020

Shareholder name	Country	Data collection date	Ownership %
Norway	NO	06/2020	67.00%
Norway via its funds	NO	10/2020	3.96%
Folketrygdfondet	NO	06/2020	3.00%
Fidelity Mngt & Research	US	06/2020	1.50%
FMR LLC via its funds	US	09/2020	1.47%

Thus, if we ask Zephyr for the ownership fraction of the top five shareholders for 12/2020 (year-end 2020), then the variable will not display either of the values in the table above as neither are collected at 12/2020. Put in other words, Orbis does not have a year-end ownership variable, only data collection date variables.

To solve this issue, we added one ownership variable for each month of each year. Given that there are 10 years (2011-2020) in our sample we end up with 120 ownership variables to export. Subsequently, we find each shareholder's maximum ownership fraction throughout each year. The largest shareholder is finally determined by which shareholder held the largest position in any given year. The data on that shareholder's owner type and ownership fraction is thus our ownership data variables.

Our way of handling this issue allows us to move towards a useful sample, however, it also introduces weakness. In a worst-case scenario, the recorded values on owner type and ownership fraction could be dated almost two years prior to the announcement, during which time the ownership fraction could change significantly. However, we argue that investors holding at least 30% of the shares in a company usually have a long-term perspective. Thus, we assume that significant changes occur in only a few cases.

Lastly, we added the bidders' BvD ID number and ISIN to the exports in order to connect the ownership data with the M&A sample and financial data (Compustat), respectively.

5.3 Financial data – acquiror firm characteristics

Moreover, our hypothesis/testing strategy require some financial data. More specifically, the cash holding model (section 4.2) require variables which are unavailable in the Orbis data space. Consequently, we export all relevant financial data (sections 4.2, 4.4.2 and 4.4.3) from Compustat using each bidder's international security identification number (ISIN) and the deal's year to link the two sources. Moreover, the M&A database in Orbis does not have share price data on dates surrounding announcement. Consequently, we import the stock data for all bidders in our sample from CRSP.

We import currency-exchange (FX/USD) timeseries to remove unwanted currency effects. All currencies are exchanged from their respective local currency to USD. The source for each exchange rate is the Federal Reserve Bank, Foreign Exchange Rates, obtained from WRDS data services.

Finally, we add market returns to enable us to calculate abnormal returns. We use the MSCI World index as our benchmark rather than one local benchmark for each country. We argue that the MSCI World better reflect the fact that capital markets today are so globalized that the marginal investor invests in the global space. We collect historical data on the MSCI World index from Datastream.

For each data source, some of the bidders' ISIN is unknown. However, to connect all the information together, we require every data source to know every bidder's ISIN. Consequently, the import of the financial data reduces our sample to 1,954 acquisitions.

There are still missing information for some of the financial data variables used to calculate cash holding deviation. That, in addition to eliminating some weird observations; zero shares outstanding, ownership fractions of more than 99 %, and toeholds of greater or equal to 50 %, further dimmish the sample. Lastly, we eliminate two observations where CAR [-1, +1] is more than 100 %. The final sample contains 1,083 acquisitions.

6 Descriptive summary

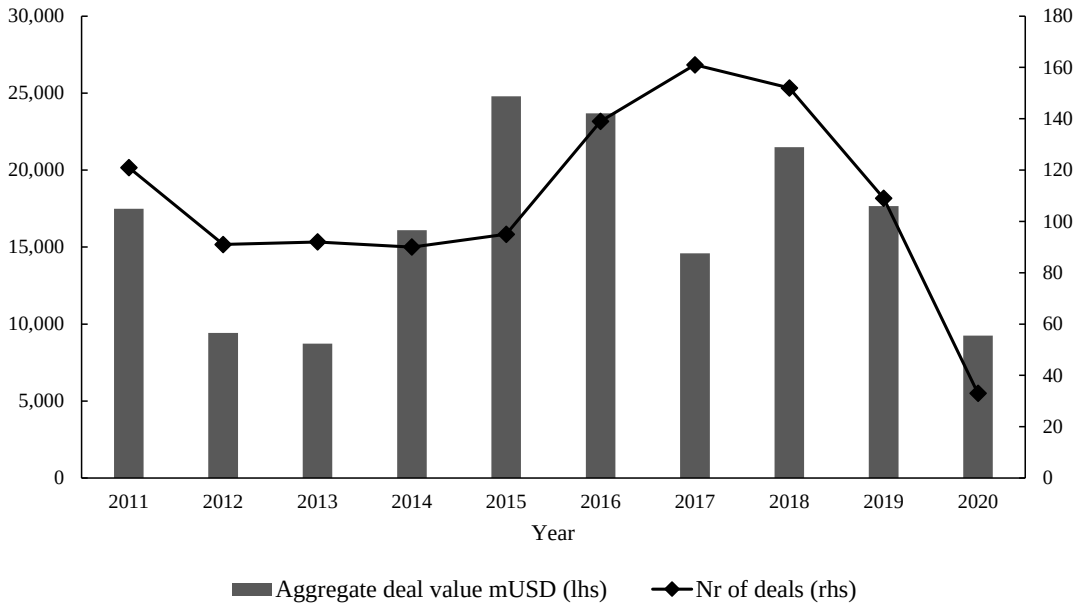
Table 6.1 presents some descriptive information about the sample. The final sample consists of 1,083 acquisitions by 439 unique bidders in total. Note that the owner type variable has 87 missing observations. The average ownership fraction of the largest shareholder is 28.4 %. The average CAR during our specified event window, one day before to one day after announcement, is 2.9 % while the median is 1.7 %. Thus, the distribution of our dependent variable has a fat left tail and a long right tail.

Table 6.1: Introductory key sample statistics

All acquisitions	1,083
Unique bidders	439
Average ownership fraction of largest shareholder	28.4%
Average CAR[-1, +1]	2.9%
Median CAR[-1, +1]	1.7%

Figure 6.2 presents the deal activity by number of deals (line) and aggregate deal value (bars) for each year in our sample.

Figure 6.2: Deal distribution by year. Aggregate deal value (mUSD), and number of deals



From 2012 through 2015 the number of deals in our sample are stable at around 90. However, the aggregate deal value more than doubles during the same period. After 2015, the number of deals increases to 161 deals in 2017. Interestingly, the aggregate deal value in 2017 is lower than both the year prior and after, although the number of deals is higher. Finally, in 2020 we see that both the number of deals and aggregate deal value heavily declines. This is likely a result of Orbis still working on collecting information on the deals executed in 2020.

Table 6.3 presents statistics of all relevant variables grouped by the different definitions of ownership concentration used in the analysis (see section 4.3 for further details). Recall that we use three different definitions of the ownership concentration. *Large owner* is equal to 1 if one shareholder holds at least 30 % of the shares outstanding, 0 otherwise. *Large minority* is equal to 1 if one shareholder holds 30-50 % of the shares outstanding, 0 otherwise. *Controlling majority* is equal to 1 if one shareholder holds at least 50 % of the shares outstanding, 0 otherwise. As such, *Large owner* is the least strict definition of ownership concentration, while *Controlling majority* is the strictest.

Panel A gives insight to the sample distribution of *Owner types* given the different definitions of ownership concentration. *Other* is the most and *Bank* the least frequent owner type in our sample. Furthermore, we observe that *Governmental* is the only *Owner type* where there are more observations categorized as a *Large owner* (33), than not (23 [from: 56 – 33]). Finally, we note that the owner type variable is the only source of missing observations, 87 in total relative to the rest of the sample.

Panel B lists the average and median *Cash holding deviation* (in percentage points) for all definitions of ownership concentration (see section 4.2 for further details regarding the methodology of the *Cash holding deviation* variable). The average *Cash holding deviation* in the sample is, as a consequence of the *Cash holding deviation* methodology, 0 %. However, for *Large owner* bidders, the average *Cash holding deviation* is positive (0.28 %). The median *Cash holding deviation* is negative in the total sample (-0.73 %) and for *Large owners* (-0.41 %). This indicates that the sample distribution of *Cash holding deviation* has a fat left tail, and a long right tail.

Table 6.3 Overview of deal characteristics by our definitions of ownership concentration

Ownership concentration (Ownership fraction)	*Large owner* (≥30%)		*Large minority* (30 - 50%)		*Controlling majority* (≥50%)		*Total* (0-100%)	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Panel A: Owner type, sample distribution (note: 87 missing observations)								
Governmental	33	8%	14	6%	19	12%	56	6%
Bank	11	3%	8	4%	3	2%	90	9%
Other	347	89%	204	90%	143	87%	850	85%
Total	391	100%	226	100%	165	100%	996	100%
Panel B: Cash holding deviation (in percentage points)								
Average	0.28%		0.41%		0.08%		0.00%	
Median	-0.41%		-0.13%		-0.59%		-0.73%	
Panel C: Bidder and deal characteristics (USD Million)								
Average market cap.	7,754.4		4,501.3		12,539.6		4,482.5	
Average total assets	7,451.1		4,990.1		11,071.0		4,617.6	
Median total assets	703.4		1,243.8		463.9		268.8	
Average deal value	159.9		131.9		201.0		150.7	
Median deal value	17.1		16.0		18.0		12.9	
Average relative size	25.6%		24.5%		27.3%		34.2%	
Panel D: Bidder country, sample distribution								
Norway	82	19%	43	17%	39	23%	167	23%
Sweden	247	58%	165	65%	82	48%	646	48%
Denmark	38	9%	7	3%	31	18%	93	18%
Finland	58	14%	38	15%	20	12%	177	12%
Total	425	100%	253	100%	172	100%	1,083	100%
Panel E: Deal payment type, sample distribution								
Cash	137	32%	84	33%	53	31%	308	28%
Shares	26	6%	14	6%	12	7%	85	8%
Mixed	166	39%	95	38%	71	41%	463	43%
Unknown	96	23%	60	24%	36	21%	227	21%
Panel F: Related/unrelated, sample distribution								
Related	131	31%	75	30%	56	33%	319	29%
Unrelated	294	69%	178	70%	116	67%	764	71%

Panel C presents key bidder and deal characteristics. The average market capitalization for a *Large Owner* is USD 7,754.4 million, while for a *Controlling majority* the average market capitalization is USD 12,539.6 million. Thus, average market capitalization increase as the definition of ownership concentration gets stricter (i.e. higher share required to be classified as concentrated ownership). The same pattern is present for average total assets.

Median total assets are lower for a *Controlling majority* (USD 463.9 million) compared to a *Large owner* (USD 703.4 million). This tells us two things: (1) the sample distribution of bidder size has a fat left tail and long right tail, and (2) this characteristic is exaggerated as the definition of ownership concentration gets stricter.

The average deal value for a *Large owner* is USD 159.9 million, while *Controlling majority* has an average deal value of USD 201.0 million.

The average relative deal size is, for all definitions of concentrated ownership, roughly 25 %. Interestingly the total sample average relative deal size higher, at 34.2 %. This informs us that bidders who are not defined as having concentrated ownership engage in larger acquisitions relative to their market capitalization, on average.

Panel D, E and F present how the remaining control variables are distributed across the different specifications of concentrated ownership. By country, half (48 %) of the sample bidders are listed in Sweden, while a quarter (23 %) are in Norway, and the remaining bidders in Denmark (18 %) and Finland (12 %). Regarding deal payment type, mixed is the most frequent followed by cash, for all groupings. Note that the sample contains quite a lot of unknowns in this variable. Finally, unrelated acquisitions are far more frequent than related ones, for all groups. The distribution between these two levels is approximately equivalent for all groups.

7 Results

In this section we present four regression tables and seek to explain the results considering past literature presented in section 2. Let us recall the hypotheses in this thesis. We wish to test whether bidders with a *Large owner* performs better in acquisitions compared to bidders with dispersed ownership (*H1*). Additionally, we hypothesize that bidders with a *Large owner* manage excess cash reserves better than bidders with dispersed ownership (*H2*). However, we also hypothesize that when a single shareholder gain complete control (*Controlling majority*) of a bidder, they will use their influence/power in their best interest at the expense of minorities. As such, we hypothesize that bidders with a *Large minority* owner preforms better than a bidder with a *Controlling majority* owner (*H3*).

We test our hypotheses by analyzing relevant variables in multiple regression models. The first three tables we present in this section, Table 7.1, Table 7.2, and Table 7.3, are used to test *H1* and *H2*, while Table 7.4 is used to test *H3*. We will also use the tables to discuss other interesting observations, such as observations regarding *Owner type*, however, we stress that these observations are of secondary importance in our thesis.

Table 7.1: Initial model specification proposal. In this table we study the *Large owner* variable and its interaction with *Cash holding deviation*. The model in column 1 is a pooled OLS model. Column 2 has the same model with year dummies (omitted from table). Column 3 is an industry fixed effect model, and column 4 is an industry fixed effect model (at the GICS industry group level) with year dummies. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	Dependent variable: CAR[-1, +1]			
	(1)	(2)	(3)	(4)
Cash holding deviation	-0.31 (3.69)	-0.21 (3.71)	-0.50 (3.73)	-0.35 (3.75)
Large owner	0.76 (0.51)	0.81 (0.52)	0.69 (0.53)	0.71 (0.54)
Cash holding deviation * Large owner	9.65 (6.20)	9.25 (6.22)	10.29 (6.33)	9.77 (6.35)
Related	-0.66 (0.54)	-0.73 (0.54)	-0.67 (0.55)	-0.74 (0.56)
Relative Size	0.89*** (0.15)	0.88*** (0.15)	0.82*** (0.16)	0.82*** (0.16)
Size	-0.35*** (0.11)	-0.35*** (0.11)	-0.42*** (0.12)	-0.43*** (0.13)
Shares	-0.96 (1.04)	-0.96 (1.05)	-0.59 (1.06)	-0.60 (1.07)
Mixed	-0.46 (0.61)	-0.52 (0.62)	-0.26 (0.62)	-0.33 (0.63)
Unknown	-1.14 (0.71)	-1.16 (0.72)	-1.12 (0.72)	-1.12 (0.73)
Intercept	4.86*** (1.24)	4.55*** (1.50)		
Industry FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES
Country FE	YES	YES	YES	YES
Observations	1,083	1,083	1,083	1,083
R2	0.06	0.06	0.06	0.06

The main variables of interest in Table 7.1 are *Large owner*, *Cash holding deviation* and the interaction of the two. According to the results in Table 7.1, neither of the variables are significantly different from 0. We cannot conclude that they have an impact on bidder performance, and consequently we have no evidence to reject $H1_0$ and $H2_0$. This result is not too surprising as former literature has concluded with both benefits and costs of excess cash reserves and high ownership concentration. However, we did expect to see an impact from the interaction variable on bidder performance, but the coefficient for the interaction variable is also insignificant.

The only variables with a significant impact on bidder performance in Table 7.1 are the control variables related to bidder size. We observe that *Relative size*, defined as deal value over bidder's market capitalization, is significant on a 1 % level. However, *Relative size* is not very economically significant as you need a deal value equal to the bidder's market capitalization to expect a 0.89 % increase in abnormal stock returns. *Relative size* matters because small targets have a smaller economic impact on the acquirer by share size (Asquith et al., 1983). Thus, larger relative deals tend to increase abnormal stock returns, meaning that larger acquisitions relative to the bidder's current size are more profitable.

On the other hand, the *Size*, which is the log of total assets is negative at 1 % level. This suggests that larger firms tend to make worse acquisitions. Large, mature firms often make worse acquisitions as they pay higher premiums and enter acquisitions with negative dollar synergy gains (Schlingemann & Stulz, 2004).

Lastly, we find no evidence of any association between bidder performance and *Deal payment method* or *Related* acquisitions.

Table 7.2: Model to determine whether *Owner type* should be included. The model in column 1 is a pooled OLS model. Column 2 is an OLS with year dummies (omitted from table). Column 3 is an industry fixed effect model (at the GICS industry group level), and column 4 is an industry fixed effect model with year dummies. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	Dependent variable: CAR[-1, +1]			
	(1)	(2)	(3)	(4)
Bank	2.90*** (1.01)	3.05*** (1.02)	3.20*** (1.04)	3.35*** (1.05)
Governmental	-0.04 (1.78)	0.15 (1.78)	-0.22 (1.81)	-0.10 (1.82)
Large owner	1.26** (0.59)	1.36** (0.59)	1.14* (0.61)	1.22** (0.62)
Bank * Large owner	-1.11 (2.73)	-1.26 (2.76)	-1.12 (2.79)	-1.31 (2.82)
Governmental * Large owner	-3.45 (2.32)	-3.78 (2.34)	-4.48* (2.44)	-4.77* (2.46)
Related	-0.68 (0.57)	-0.76 (0.57)	-0.73 (0.59)	-0.82 (0.59)
Relative size	0.90*** (0.16)	0.90*** (0.16)	0.82*** (0.17)	0.82*** (0.17)
Size	-0.29** (0.13)	-0.29** (0.13)	-0.37*** (0.14)	-0.36*** (0.14)
Shares	-1.08 (1.09)	-1.09 (1.10)	-0.86 (1.12)	-0.87 (1.12)
Mixed	-0.36 (0.65)	-0.45 (0.67)	-0.29 (0.67)	-0.41 (0.68)
Unknown	-1.01 (0.75)	-1.03 (0.76)	-1.10 (0.76)	-1.10 (0.77)
Intercept	3.92*** (1.33)	3.44** (1.60)		
Industry FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES
Country FE	YES	YES	YES	YES
Observations	996	996	996	996
R^2	0.07	0.07	0.07	0.08

The models in Table 7.2 includes *Owner type* and its interaction with *Large owner*. The omitted dummy from *Owner type* is *Other*. As such, *Other* is the base category by which the other *Owner types* (*Bank* and *Governmental*) are compared to. Thus, the *Bank* and *Government* coefficients denotes the expected difference in abnormal return relative to *Other*. Model 1 (2) concludes that if the largest shareholder of a bidder is a *Bank*, we expect 2.90 % (3.05 %) higher abnormal return relative to *Other*, significant at the 5 % level. Moreover, model 1 and 2 concludes that there is no statistical difference between *Governmental* and *Other*. Thus, model 1 and 2 concludes that, all else equal, we can expect higher abnormal returns of acquisitions when the largest owner is a *Bank* rather than *Governmental* or *Other*.

Other is the base/omitted *Owner type*. Thus, the *Large owner* coefficient denotes the expected incremental gain in abnormal return *Other* we can expect if the ownership fraction increased to *Large owner* levels, all else equal. The coefficient of the interaction between *Large owner* and *Bank* (or *Government*) is the expected difference in abnormal return a *Bank* (or *Government*) would get if the *Bank's* ownership fraction increased to *Large owner* levels, relative to *Other*. Thus, the net gain in abnormal return of a *Bank* (or *Government*) is the sum of the interaction and the *Large owner* coefficients, when the ownership fraction increases to *Large owner* levels, all else equal.

In model 1 and 2 in Table 7.2 neither of interaction terms are statistically significant. As such, model 1 and 2 predicts that there is no statistical difference of interacting *Large owner* with the three owner type variables with respect to abnormal stock return. In other words, going from a scenario where the largest shareholder is not a *Large owner* to a scenario where the largest shareholder is a *Large owner* has the same effect for all owner types. Thus, bidder performance is expected to improve equally regardless of owner type when the largest shareholder is large enough to be defined as a *Large owner*.

Large owner is associated with 1.26 % and 1.36 % higher bidder return in model 1 and 2 respectively, both significant at a 5 % level. Since the interactions are insignificant, this is the coefficient in play for all *Large owner* scenarios. Regardless of owner type, model 1 and 2 predicts that an acquisition executed by a *Large owner* can expect higher abnormal returns relative to an

acquisition where a strong owner is not present. This finding retires the conclusions of the regressions in Table 7.1 and speaks in favor of rejecting $H1_0$.

The result is in line with principal-agency theory (Jensen & Meckling, 1976). If the firm has a dispersed ownership concentration, monitoring the management's (agent) decision-making process is far less likely to be profitable. Since monitoring is a time-consuming activity, every shareholder (principal) in the dispersed ownership structure is incentivized to relinquish monitoring activity to one of the other shareholders. However, since the ownership concentration is dispersed, it is more likely that no one are willing to bear the cost of monitoring, and thus no monitoring occurs. Since the management is free of monitoring, they might be more inclined to act in their own best interest – as opposed to the shareholders' interests. As such, the probability that the management undertake poor acquisitions increase, and so does the expected abnormal stock return.

However, if ownership is concentrated enough, the largest shareholder will have the appropriate incentives to perform monitoring. Although time-consuming and costly, the significant cash flow rights may make the monitoring profitable. Thus, our result is in accordance with what we expected, namely that a *Large owner* is correlated with better acquisition performance. This is also the main conclusion of the models in regression Table 7.2.

Based on past literature, return on ownership concentration should in theory only be present when a strong owner executes their rights of control to increase shareholder value. *Governmental* entities, in contrast to (most) other owner types, often have other considerations to manage. They are not always purely focused on capital gains. For instance, the Norwegian government proclaim that economic, social, and environmental sustainability governs their decisions when acting as a shareholder (Norwegian Government, 2021)[1]. This might explain our observation of a negative impact of a *Governmental* owner and abnormal stock return during the acquisition announcement window.

[1] https://www.regjeringen.no/no/tema/naringsliv/statlig-eierskap/statlig-eierskap1/id2009187/

When we include industry fixed effects, in model 3 (4), the interaction coefficient between *Governmental* and *Large owner* is -4.48 % (-4.77 %), significant at a 10 % level. As such, the fixed effect models concludes that for bidders where the largest shareholder is *Governmental*, the *Large owner* scenario lowers expected abnormal return by close to 5 %, compared to *Owner Type Other*. Thus, the net effect of increasing the ownership stake of the largest shareholder to be defined as a *Large owner* for a bidder where the largest shareholder is *Governmental* is –3.34 % and –3.55% for model 3 and 4, respectively ($\beta_{\text{Large Owner}} + \beta_{\text{Owner Type: Governmental * Large Owner}}$). Although the evidence is rather weak, we find this to be an interesting, but not surprising, observation.

Moreover, the fact that this interaction is significant, although weakly so, in two of the models, while *Governmental* is insignificant in all models could indicate a correlation between the two variables.

In Table 6.3 in the descriptive summary (section 6) we can see that *Governmental* is the only factor in this variable which has more observations where it is a *Large owner*, than not. Thus, given the information that the largest owner is *Governmental*, it is also more likely than not that the largest shareholder is also a *Large owner* (>30%) as well. This is additional evidence of a correlation between *Owner type* and *Large owner.*

Moreover, we observe that the bidder is more likely to perform better if the largest shareholder is a bank, all else equal. This effect is significant at a 1 % level in all four models, with a coefficient estimate range of 2.9 to 3.4 %. However, the interaction between Bank (*Owner type*) and *Large owner* is insignificant in all four models. This result allows us to infer that *Owner type* has a significant influence of our dependent variable.

As *Owner type* influence the dependent variable (CAR) in addition to probably being correlated with *Large owner*, excluding it from further analysis could introduce omitted bias. Accordingly, econometrical theory dictates that (1) we cannot trust inference from Table 7.1, and (2) that *Owner type* must be included in further analysis due to omitted bias.

Lastly, we observe that *Relative size* is significantly positive a 1 % level in all models, and *Size* is significantly negative at a 5 % level in model 1 and 2, and significantly negative at a 1 % level in industry fixed effects model 3 and 4. These results, regarding sign of the coefficients, are in line with past literature.

Table 7.3: Preferred model specification to test *H1* and *H2*. In regression Table 7.3 we study the effect of interaction between *Large owner* and *Owner type*, and the interaction between *Large owner* and *Cash holding deviation*. The model in column 1 is a pooled OLS model. Column 2 has the same model with year dummies (omitted from table). Column 3 is an industry fixed effect model, and column 4 is an industry fixed effect model with year dummies. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	Dependent variable: CAR[-1, +1]			
	(1)	(2)	(3)	(4)
Bank	2.94*** (1.01)	3.09*** (1.02)	3.26*** (1.04)	3.40*** (1.05)
Governmental	-0.02 (1.77)	0.16 (1.78)	-0.17 (1.81)	-0.05 (1.82)
Large owner	1.24** (0.58)	1.34** (0.59)	1.12* (0.61)	1.20* (0.61)
Cash holding deviation	-1.83 (3.84)	-1.88 (3.86)	-2.15 (3.89)	-2.12 (3.91)
Bank * Large owner	-0.84 (2.73)	-1.00 (2.76)	-0.87 (2.79)	-1.06 (2.82)
Governmental * Large owner	-3.52 (2.32)	-3.85 (2.34)	-4.56* (2.43)	-4.86** (2.46)
Cash holding deviation * Large owner	12.51* (6.52)	12.05* (6.55)	12.97* (6.67)	12.36* (6.70)
Relative size	0.89*** (0.16)	0.89*** (0.16)	0.82*** (0.17)	0.82*** (0.17)
Size	-0.28** (0.13)	-0.28** (0.13)	-0.35*** (0.14)	-0.35** (0.14)
Shares	-1.03 (1.09)	-1.04 (1.09)	-0.82 (1.12)	-0.83 (1.12)
Mixed	-0.36 (0.65)	-0.44 (0.67)	-0.28 (0.66)	-0.40 (0.68)
Unknown	-1.03 (0.75)	-1.05 (0.76)	-1.13 (0.76)	-1.12 (0.77)
Related	-0.72 (0.57)	-0.80 (0.57)	-0.75 (0.59)	-0.83 (0.59)
Intercept	4.02*** (1.34)	3.49** (1.61)		
Industry FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES
Country FE	YES	YES	YES	YES
Observations	996	996	996	996
R^2	0.07	0.08	0.07	0.08

In Table 7.3 we reintroduce the *Cash holding deviation* variable along with *Owner type* and *Large owner* to test $H1_0$; that the presence of a strong owner does not affect acquisition performance, and $H2_0$ which states that firms with a *Large owner* does not manage excess cash reserves better.

When we study *Large owner* in isolation, there is no practical difference between the models in Table 7.3 and the models in Table 7.2. Both in terms of statistical and economical significance. This means that *Other* performs better than a *Large owner Other,* all else equal. Moreover, since the interaction between *Bank* and *Large owner* is insignificant, the models predict that becoming a *Large owner* is equally positive for *Bank* and *Other*. The same is true for *Government* in the OLS models (model 1 and 2). However, as the *Bank* coefficient is significantly positive (between 2.94 % in model 1 and 3.40 % in model 4), *Banks* start at a higher level, compared to the *Other* and *Governmental.*

However, the interaction between *Large owner* and *Governmental* is significantly negative in the industry fixed effects models, on a 10 and 5 % level for models 3 and 4, respectively. Compared to *Other*, gaining *Large owner* status is negative for a *Government* in the fixed effects models. As such, there are one or more industries where companies generally perform better (worse), and these industries have a high (low) share of governmentally controlled companies in our sample. The net effect of gaining *Large owner* status where the largest owner is a *Government* is –3.44 % and –3.66 % in models 3 and 4, respectively ($\beta_{\text{Large Owner}} + \beta_{\text{Owner Type: Governmental * Large Owner}}$).

In total, gaining *Large owner* status is positive for a *Bank* and *Other*, while it is positive for a *Government* in the OLS-models, however, negative in the fixed effects models. Thus, when we include *Cash holding deviation,* we can still reject $H1_0$ for a *Bank* and *Other* (relative to Table 7.2) at a 5 and 10 % level, dependent on which model (OLS or fixed effects) is applied. For a *Government*, we have ambiguous evidence whether we can reject $H1_0$. Applying OLS-models allow us to reject $H1_0$, however, in the fixed effects models, *Large owner* is negative for a *Government*.

Moreover, in regression Table 7.1, which, as discussed in Table 7.2 could be affected by omitted bias, the coefficient for the interaction between *Cash holding deviation* and *Large owner* was

insignificant in all models. After controlling for *Owner type* and its interaction with *Large owner*, we see that this interaction is significant at a 10 % level in all four models. As such, it gives supports against $H2_0$ that strong owners do not ensure better management of cash holdings with respect to takeover activity. This result applies for all *Owner types* as it is not triple interacted with *Large owner* and *Cash holding deviation.*

Given a situation where a bidder has a strong owner and more cash than our cash holding-model predicts, acquisition performance will, all else equal, be better. Furthermore, as the *Cash holding deviation* variable is continuous, the models predict that firms which accumulate more ready cash are more likely to undertake better acquisitions. Accordingly, we observe evidence that bidder performance improves as *Large owners* actively monitor the management, and consequently that the bidder performance improves with cash holdings. Moreover, this indicates that firms with a *Large owner* is more likely to exploit the benefits of having excess cash. They might be better at leveraging the financial flexibility the cash provides, or they might be less reliant on expensive external financing which makes financing less costly. However, as the level of significance is only 10 %, we can only argue for a weak rejection of $H2_0$.

Moreover, the control variables are in line with the literature previous findings in this thesis, which arguably increases the validity of the findings.

Table 7.4: Model specification to test *H3*. Relative to Table 7.3, we split the *Large owner* variable into *Large minority* and *Controlling majority* to test $H3_0$. A firm has a *Large minority* owner when the largest shareholder has an ownership stake between 30-50 %, while it is defined as a *Controlling majority* in the case of owning more than 50 % of the firm. The model in column 1 is a pooled OLS model. Column 2 has the same model with year dummies (omitted from table). Column 3 is an industry fixed effect model, and column 4 is an industry fixed effect model with year dummies. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	Dependent variable: CAR[-1, +1]			
	(1)	(2)	(3)	(4)
Bank	2.92*** (1.01)	3.05*** (1.02)	3.27*** (1.04)	3.41*** (1.05)
Governmental	-0.01 (1.77)	0.16 (1.78)	-0.14 (1.81)	-0.03 (1.82)
Large minority	1.14 (0.70)	1.28* (0.70)	1.11 (0.73)	1.21* (0.73)
Controlling majority	1.37* (0.79)	1.42* (0.80)	1.16 (0.82)	1.19 (0.82)
Cash holding deviation	-1.81 (3.84)	-1.85 (3.87)	-2.20 (3.90)	-2.18 (3.92)
Bank * Large minority	-0.31 (3.16)	-0.78 (3.20)	-0.73 (3.20)	-1.27 (3.24)
Governmental * Large minority	-5.75** (2.87)	-5.95** (2.89)	-5.99** (2.94)	-6.11** (2.96)
Cash holding deviation * Large minority	18.13** (7.96)	17.28** (8.00)	19.64** (8.17)	18.61** (8.20)
Bank * Controlling majority	-1.66 (4.93)	-1.01 (4.98)	-0.89 (5.09)	-0.14 (5.12)
Governmental * Controlling majority	-1.79 (2.71)	-2.17 (2.73)	-2.99 (2.93)	-3.43 (2.96)
Cash holding deviation * Controlling majority	4.65 (8.98)	4.78 (9.01)	4.11 (9.13)	4.07 (9.17)
Relative size	0.89*** (0.16)	0.89*** (0.16)	0.82*** (0.17)	0.82*** (0.17)
Size	-0.29** (0.13)	-0.29** (0.13)	-0.36*** (0.14)	-0.35** (0.14)
Related	-0.80 (0.57)	-0.86 (0.58)	-0.81 (0.59)	-0.88 (0.59)
Shares	-1.10 (1.09)	-1.10 (1.10)	-0.84 (1.12)	-0.84 (1.12)
Mixed	-0.33 (0.66)	-0.41 (0.67)	-0.22 (0.67)	-0.33 (0.68)
Unknown	-1.05 (0.75)	-1.07 (0.76)	-1.13 (0.77)	-1.12 (0.78)
Intercept	3.96*** (1.36)	3.45** (1.62)		
Industry FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES
Country FE	YES	YES	YES	YES
Observations	996	996	996	996
R2	0.07	0.08	0.08	0.08

When we split *Large owner* into *Large minority* and *Controlling majority*, a bidder will always be either or neither. As such, these variable definitions cover the entire range of ownership fractions. For a *Large minority* we can accordingly view the *Large minority* coefficients, and for a *Controlling majority* we assess the *Controlling majority coefficients.* We assess the outcome of *H3* by comparing the *Large minority* coefficients with the *Controlling majority* coefficients.

Note that the *Large minority* variable is of owner type *Other* by default as in the previous regression tables concerning *Large owner.* The increase we observe in the coefficient of *Large minority* is thus the effect of increasing the ownership stake of the largest shareholder with owner type *Other* to *Large minority* levels. The same is true for the variable *Controlling majority* discussed later in this section.

Firstly, we observe that *Large minority* (30-50 %) has a significant and positive effect on abnormal stock return when we introduce year fixed effects in our models (2) and (4). This observation is in line with our expectation as we hypothesized that a large shareholder would monitor the management in order to ensure value-enhancing acquisitions. Our regression indicates that when the largest shareholder has an ownership stake of 30 – 50 %, we can expect an increase in abnormal stock return of about 1.21 - 1.28 %, relative to an ownership fraction of below 30 %. However, we do regard this result as somewhat weak as it is only significantly different from 0 % in the year fixed effects models.

Bank has an estimated extra gain of between 2.92 % (model 1) to 3.41 % (model 4), significant at the 1 % level in all models. However, while *Bank's* start at a higher level than *Other,* we see no difference in abnormal stock return when we interact *Large minority* with owner type *Bank,* compared to owner type *Other.* We do, however, observe a clear negative association with *Large minority* and *Governmental* owner type. The interaction has a significantly negative influence at abnormal stock returns at a 5 % level in all models in Table 7.4. We observe that the presence of a *Large minority Governmental* owner is associated with a decrease in abnormal stock return of 6 %, which is quite an impact.

From this we infer that a *Governmental Large minority* is more likely to be a passive shareholder, and thus less likely to actively monitor the management's decisions. Consequently, firms with *Governmental Large minority* owner performs worse as the management are given more freedom to undertake value-destroying acquisitions to serve their own interests at the expense of shareholders. Additionally, Nordic governments have often other priorities than to solely maximize shareholder value. This could be equal gender treatment, sustainability or other initiatives that promotes welfare for society (Norwegian Government, 2021). This might also explain the negative results for *Large minority* owners of *Governmental* owner type in addition to the lack of active monitoring.

Moreover, one highly interesting result in Table 7.4 is the effect of a *Large minority* and *Cash holding deviation* on bidder performance. The coefficient shows an impactful and positive effect which is significant at a 5 % level. A 10-percentage point increase in a firm's cash holdings relative to predicted cash holdings is associated with a ~2 % increase in abnormal stock return during the event window. Previous literature (Huang et al., 2013; Oler & Waegelein, 2011) has indicated that there are potential benefits of having access to large amounts of ready cash, and our results indicate that firms are better at utilizing these in the presence of a *Large minority* shareholder.

In Table A.2.2 in Appendix A.2 we investigate the triple interaction between *Large minority, Cash holding deviation* and *Owner type.* The result is that the interaction is positively and significantly correlated with all *Owner types*. However, a *Government Large minority* seems to be especially good at reaping the benefits of excess cash.

Next, we observe that *Controlling majority* is significantly positive at a 10 % level in the OLS models, column 1 and 2. The models shows that when a firm has a *Controlling majority*, we can expect a 1.37-1.42 % increase in abnormal stock return during the event window, all else equal. Since the interaction between *Controlling majority* and the *Owner types* are insignificant, this is the estimated increase in abnormal returns we expect for all *Owner types.* We find this observation as evidence, although somewhat weak, against $H1_0$.

A C*ontrolling majority* has the strongest incentives to monitor management and make sure that acquisitions are value-enhancing. In addition, they have complete control of the decision-making process which enables them to influence the management to undertake acquisitions that maximize shareholder value. It is therefore not surprising to observe a significant, positive effect on the abnormal stock return in the presence of a *Controlling majority*.

Furthermore, we note that the interactions between *Controlling majority* and *Cash holding deviation* are insignificant in all models. Thus, the models predict that *Controlling majorities* manage their excess cash reserves no better than bidders with dispersed ownership.

When comparing *Large minority* with *Controlling majority,* we see no substantial difference in neither statistical nor economic significance. *Large minority* is significantly positive at the 10 % level in the models with year fixed effects (model 2 and 4), while *Controlling majority* is significantly positive at the 10 % level in both OLS models (model 1 and 2).

Next, a noteworthy difference between *Large minority* and *Controlling majority* is the interaction with *Governmental* owner type. When interacted with *Large minority* we see a clear negative impact in all models. However, this is no longer true when the government has acquired a *Controlling majority* position. While the default owner type *Other* and *Bank* seem to have positive incremental gains with respect to abnormal returns by gaining either *Large minority* or *Controlling majority* status, only the latter is true for *Governmental.* This observation does give some, although not much, support against $H3_0$.

Our models clearly indicate that *Large minority* owners are better at utilizing excess cash reserves than *Controlling majority* owners, regardless of *Owner type*. This evidence is found when we compare *Large minority's* and *Controlling majority's* interaction with *Cash holding deviation*. Note that a *Controlling majority* does not manage excess cash any better than bidders with dispersed ownership concentration, in that its interaction with *Cash holding deviation* is not significantly negative. It is interesting to observe when we consider the fact that *Controlling majority* bidders in theory have the most incentives to actively monitor the management due to their substantial cash flow rights and influence in the decision-making process. Accordingly, this

may be an indication that when a single shareholder gets too much, or complete control, they are more likely to exploit their position for personal gains at the expense of minority shareholders.

The result does give support to recent emerging theories of principal-principal costs, and as such might be regarded as evidence against $H3_0$. According to theory, when a single shareholder becomes too large, principal-principal costs will arise (Johnson et al., 2000). As we explained earlier, these are costs that arise due to conflicting incentives between majority and minority shareholders. When one shareholder has absolute control and access to large amounts of cash, our data implies that the management are not undertaking optimal actions that is in the best interests of the shareholders, at least when we compare them to firms with a *Large minority* which lack absolute control.

In this context, there are several ways a *Controlling majority* owner may interfere in the bidding process that may lead to lower bidder performance. One way may be that the *Controlling majority* owner value control, and thus is reluctant to give it up. This might lead to worse bidder performance if the owner avoids issuance of new shares to finance an acquisition even when it is optimal, as hypothesized by Kim and Jung (2019).

Another potential reason could be that firms with a *Large minority* owner is more likely to have other shareholders of reasonable size with incentives to perform active monitoring. Hence, the likelihood that active monitoring occurs at all increase. As the likeliness of active monitoring increase, so should the expected abnormal stock return of acquisitions.

Alternatively, the *Controlling majority* may use their influence to execute acquisitions that benefit themselves at the expense of minority shareholders. This might be self-interested motives such as empire-building or the pursuit of pet projects, similarly to what we discussed in relation to principal-agent conflicts. It might also be that the *Controlling majority* is more likely to influence the management to acquire firms where they have financial interests. Potentially, this could be a way of extracting corporate resources for their own benefit.

In general, we expected to see better bidder performance by firms with concentrated ownership, particularly of firms with excess cash reserves. Our interpretation of past literature was that the presence of a large, active owner seemed to be ideal in order to exploit the financial flexibility to undertake growth opportunities as they present themselves in addition to the freedom from expensive external financing that excess cash reserves provide. However, it seems like this may not be the case when the largest shareholder becomes too large and has complete control as in the case of a *Controlling majority*.

This observation introduces a further insight regarding *H2*. It seems like we can only reject $H2_0$ for *Large minorities*, and not reject $H2_0$ for *Controlling majorities*. However, this is a nuance we did not consider in the hypothesis design, accordingly, we do not separate the two distinctions from each other. The hypothesis considers concentrated ownership, in general. Thus, we still reject $H2_0$.

The observation that *Large minorities* manage excess reserves better than a *Controlling majority* serves as evidence to reject $H3_0$. However, to be confident enough to reject $H3_0$ we require more direct evidence. That is, evidence of differences in the *Large minority* and *Controlling majority* coefficients (and/or their interactions with *Owner type*), that favor a *Large minority*. For these coefficients we see little to no difference, except when the owner is a *Government*, where the models prefer a *Controlling majority*. Thus, due to insufficient evidence, we do not reject $H3_0$.

8 Robustness

Another source of decreased robustness is multicollinearity in the explanatory variables. Intuitively, the most likely source of multicollinearity are the relative size and log size variables as both to some extent address the size of the bidder. If the bidder is large, log size is large, and relative size is small. However, two arguments mitigate the likelihood of multicollinearity. Larger bidders will usually acquire larger targets. Consequently, the relative size variable will not vary too much dependent on bidder size. Additionally, we expressed relative size as deal value divided by market capitalization, as opposed to total assets (in the denominator), which is used as log size, to handle multicollinearity.

To statistically test whether multicollinearity issues are present regardless in our analysis, we perform a variance inflation factor (VIF) test on model/column 2 in Table 7.3 and Table 7.4 These two tables contain the preferred specifications, with regards to the independent variables, to test our hypotheses. As multicollinearity regards the independent variables a VIF analysis of the OLS model will suffice as its conclusions should apply for the fixed effects model as well. This claim holds if the industries or industries-years combinations in and of itself cannot explain the variation in one of the independent variables.

The result of test is available in Appendix A.4. The presence of multicollinearity is assessed by considering the size of the VIF for the individual variables. The VIF value in our models is 3.171 and 3.095. Contrary to what we expected, the test concludes that the most likely source of collinearity is owner type and its intersection with concentrated ownership. However, the size of the VIF do not indicate that our models have multicollinearity issues. Commonly, a cut-off of 5 or 10 is used, where higher values indicate multicollinearity issues. Resultingly, we do not consider multicollinearity to be an issue in our analysis which, arguably, increases the robustness of the conclusions.

We have executed measures to increase robustness, including removal of influential observations in the dependent variables. Regarding the independent variables, there are very few sources of outliers. Moreover, we defined our variables in ways which would decrease the likelihood of

multicollinearity, and statistical testing concludes that it is not present in our preferred models. Resultingly, we argue that the conclusions in the analysis are robust.

9 Weakness

The ownership data introduces potential shortfalls in our analysis due to measurement errors. Orbis collects ownership data throughout the year, which means that observations are spread out in any given year – some are collected in January, others in December, and all in between. The way in which Orbis provides the ownership data for its users forced us to aggregate it by year. Thus, relative to the data in which an acquisition is announced, the ownership data point is potentially lagged up to two years. To illustrate say an acquisition is announced in late December 2019, that observation is then linked with the ownership data from 2018. If the largest ownership fraction of that bidder was observed in January, then the data points are almost two years apart. Vice versa, the timespan between the two data points could be as close as one month. The former scenario is the one which possibly cause measurement errors. Two years is such a long time that the probability of a change in ownership fraction, possibly even the largest shareholder, is high.

Furthermore, the ownership data structure in Orbis made it difficult to reasonably research aggregate specifications (sum of *n* largest shareholders) of concentrated ownership, as doing so would arguably significantly increase probability and extent of measurement error. It is possible that such specifications either increased or decreased the significance of the variables in the regressions. In either case, that would unveil information regarding the conclusion's robustness to variable specification. Given how fundamental the ownership fraction variable is in this thesis, researching aggregate specification would provide us with valuable information.

10 Conclusion

In this thesis, we have studied the effects of strong owners on acquisition performance. As strong owners have more incentives to monitor the management, we expected acquisition performance to be better, in general (*H1*). In addition, there are strong arguments and empirical evidence that firms with large excess cash reserves perform worse in acquisitions. However, we expected bidders with strong owners would be able to make use of the benefits ready cash gives to make better acquisitions (*H2*). Finally, more recent literature point to principal-principal issues when owners get too much control. Accordingly, we wanted to test that in our sample as well (*H3*).

The final sample consisted of 1,083 acquisitions in the Nordics, by in total, 439 unique bidders. Furthermore, as the testing methodology require a wide array of variables, we have used several data sources to acquire the final sample: BvD, Compustat, CRSP and Datastream.

To test the hypotheses, we designed and regressed relevant and control variables on bidders' abnormal announcement returns. The answer to the hypotheses is thus to be found in the sign and significance level of the coefficients.

In our first model specification in regression Table 7.1**,** we found no significant results of interest. The model concludes that we, even on the 10 % level, cannot reject $H1_0$ nor $H2_0$. As such, there is no significant evidence in support of our hypotheses in the models applied in Table 7.1.

In Table 7.2 we found that that *Owner type* has significant explanatory power on abnormal announcement returns (the dependent variable). *Bank* is significant at the 1 % level, and the interaction between *Large owner* and *Government* is significant at the 10 % level in the industry fixed effects models. Thus, we inferred that *Owner type* affects *CAR*. Furthermore, when we included *Owner type*, the *Large owner* coefficients was significant at the 5 and 10 % level – which is strong evidence in favor of rejecting $H1_0$. This, along with additional evidence in the descriptive summary (section 6) led us to conclude that *Owner type* is correlated with both the dependent variable and *Large owner*. Standard econometric theory dictates that such variables must be included in the regression model, as otherwise, omitted bias is possible.

By including *Owner type* as a variable, relative to the models in regression Table 7.1**,** we see that the *Large owner* coefficient (~1.2 %) is significantly positive at a 5 % and 10 % level for the OLS and industry fixed effects models, respectively. Thus, we can reject $H1_0$, and conclude that the presence of a strong owner affects acquisition performance, and positively so.

Furthermore, to evaluate $H2_0$ we noted that the interaction between *Cash holding deviation* and *Large owner* is significantly positive at a 5 % level in all models in Table 7.3. As such, we have sufficient evidence to reject $H2_0$ and conclude that strong owners are better at ensuring that the management make better use of large cash holdings, and thus improve bidder performance. Note that as *Cash holding deviation* is a continuous variable, the models predict that as *Large owners* accumulate more and more cash, abnormal announcement returns increases.

In Table 7.4 we evaluated the outcome of *H3* by comparing the coefficients of *Large minority* (30-50 % ownership fraction) to the coefficients of *Controlling majority* (≥50 %). The difference in both the significance and size of *Large minority* and *Controlling majority* were insubstantial. However, in the interactions with *Owner type,* we saw that the models slightly preferred a *Controlling majority*. This evidence dictates that we cannot reject $H3_0$. However, regarding the interactions with *Cash holding deviation,* we found that only *Large minorities* extracts the benefits of accumulating excess cash. This is evidence in favor of rejecting $H3_0$, however, this evidence alone is not sufficient to reject $H3_0$.

We propose that future research could investigate this hypothesis further, given that we found ambiguous results. Research solely focused on testing this hypothesis could try other testing strategies and specifications of the relevant variables.

Appendices

A.1 – Variable name and definitions

Variable	Description	Source/input
Abnormal return (AR)	Abnormal return for security *i* at time *t* is calculated as return on security *i* subtracted by the market return at time *t.*	*CRSP* & *Datastream*
Cumulative abnormal return (CAR)	The cumulative sum of abnormal returns of security *i* during a space of periods (for instance *n* number of days).	*CRSP* & *Datastream*
Cash holding	Cash divided by total assets.	*Compustat, Eckbo, Makaew, & Thorburn. (2018)*
Cash holding deviation	The residual of the Cash holding model. Variable used to proxy excess cash in our analysis.	*Eckbo, Makaew, & Thorburn. (2018)*
Controlling majority	A scenario where one entity holds at least 50% of the shares outstanding/voting rights.	*Section 3.3*
Deal value	Includes actual value, if disclosed, plus the equity value, enterprise value, a modelled enterprise value based on the company's financials, total target value plus the native deal currency.	*BvD*
Deal payment type	Method of payment. Our sample consists of: cash, stock, mixed and unknown – as defined by *BvD.*	*BvD*
Large minority	A scenario where one entity holds between 30-50% of the shares outstanding/voting rights.	*Section 3.3*
Large owner	A scenario where one entity holds at least 30% of the shares outstanding/voting rights.	*Section 3.3*
Market capitalization	Shares outstanding * share price	*Compustat* & *CRSP*

M/B	Market capitalization prior year-end divided by net assets prior year-end.	*Compustat* & *CRSP*
Missing R&D	A dummy variable equal to 1 if R&D data is missing, 0 otherwise.	*Eckbo, Makaew, & Thorburn. (2018)*
Operating efficiency	A formula for operating efficiency as defined in section 3.2. Used in regression to determine modelled cash holdings.	*Eckbo, Makaew, & Thorburn. (2018)*
Orbis	BvD's M&A database	*BvD*
Owner type	What type of entity the largest owner is, as defined by BvD. Originally had more levels, but we aggregated it to 3: *Bank*, *Governmental* and *Other*.	*BvD*
Related	Dummy variable, equal to 1 if acquiror and target has equal 4-digit NACE code, 0 otherwise	*BvD*
Relative size	Deal value divided by market capitalization prior year-end	*BvD* & *Compustat*
R&D	R&D expense	*Compustat*
Size	Natural log of total assets	*Compustat*
Zephyr	BvD's Ownership database	*BvD*

A.2 - Triple interaction models

Table A.2.1: Results from triple interaction model, investigates where effects found in table 7.3 originate from. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	Dependent variable:			
	CAR[-1, +1]			
	(1)	(2)	(3)	(4)
Bank	2.92*** (1.01)	3.06*** (1.02)	3.25*** (1.05)	3.39*** (1.06)
Governmental	0.01 (1.77)	0.17 (1.78)	-0.15 (1.81)	-0.05 (1.82)
Large owner	1.23** (0.59)	1.33** (0.59)	1.12* (0.61)	1.20* (0.61)
Cash Holding Deviation	-1.86 (4.48)	-1.74 (4.51)	-1.69 (4.54)	-1.55 (4.57)
Relative size	0.89*** (0.16)	0.90*** (0.16)	0.82*** (0.17)	0.83*** (0.17)
Size	-0.28** (0.13)	-0.28** (0.13)	-0.36*** (0.14)	-0.35** (0.14)
Shares	-1.13 (1.10)	-1.14 (1.10)	-0.90 (1.12)	-0.92 (1.12)
Mixed	-0.38 (0.66)	-0.47 (0.67)	-0.31 (0.67)	-0.44 (0.68)
Unknown	-1.02 (0.75)	-1.04 (0.76)	-1.12 (0.77)	-1.11 (0.77)
Related	-0.73 (0.57)	-0.81 (0.58)	-0.76 (0.59)	-0.84 (0.59)
Bank * Large owner	-4.83 (4.56)	-5.25 (4.59)	-4.57 (4.63)	-5.02 (4.66)
Governmental * Large owner	-3.80 (2.33)	-4.11* (2.35)	-4.94** (2.45)	-5.22** (2.47)
Bank * Cash holding deviation	1.50 (8.81)	0.81 (8.90)	-0.14 (8.94)	-0.59 (9.02)
Governmental * Cash holding deviation	-34.06 (37.87)	-30.45 (38.00)	-36.61 (38.17)	-33.05 (38.31)
Cash Holding Deviation * Large owner	11.81* (6.98)	11.25 (7.01)	11.50 (7.15)	10.81 (7.18)
Bank * Large owner * Cash holding deviation	-136.08 (123.41)	-144.33 (123.92)	-124.21 (124.41)	-132.22 (124.96)
Governmental * Large owner * Cash holding deviation	76.77 (52.21)	71.60 (52.48)	89.05* (52.96)	84.92 (53.24)
Intercept	4.01*** (1.34)	3.48** (1.61)		
Industry FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES
Country FE	YES	YES	YES	YES
Observations	996	996	996	996
R^2	0.07	0.08	0.08	0.08

Table A.2.2: Results from triple interaction model, investigates where effects found in Table 7.4 originate from. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	(1)	(2)	(3)	(4)
Bank	2.89*** (1.01)	3.04*** (1.02)	3.25*** (1.05)	3.41*** (1.06)
Governmental	0.02 (1.77)	0.17 (1.78)	-0.14 (1.81)	-0.05 (1.82)
Large minority	1.13 (0.70)	1.27* (0.70)	1.09 (0.73)	1.20 (0.73)
Cash Holding Deviation	-1.90 (4.48)	-1.80 (4.50)	-1.79 (4.55)	-1.69 (4.57)
Controlling majority	1.37* (0.79)	1.43* (0.80)	1.17 (0.82)	1.21 (0.82)
Bank * Large minority	-3.06 (5.07)	-3.75 (5.10)	-3.19 (5.14)	-3.88 (5.17)
Governmental * Large minority	-6.13** (2.87)	-6.34** (2.89)	-6.28** (2.94)	-6.41** (2.96)
Bank * Cash holding deviation	1.47 (8.81)	0.85 (8.89)	-0.09 (8.94)	-0.46 (9.03)
Governmental * Cash holding deviation	-34.56 (37.84)	-30.81 (37.96)	-36.46 (38.18)	-32.63 (38.31)
Large minority * Cash holding deviation	**16.15* (8.40)**	**14.99* (8.44)**	**17.09** (8.62)**	**15.80* (8.66)**
Bank * Controlling majority	-13.39 (10.41)	-13.36 (10.45)	-12.01 (10.57)	-12.11 (10.62)
Governmental * Controlling majority	-1.33 (2.75)	-1.59 (2.77)	-2.35 (3.04)	-2.59 (3.06)
Controlling majority * Cash holding deviation	5.63 (9.31)	5.83 (9.34)	4.22 (9.47)	4.30 (9.50)
Bank * Large minority * Cash holding deviation	-93.31 (134.70)	-98.01 (135.00)	-82.58 (136.21)	-85.33 (136.54)
Governmental * Large minority * Cash holding deviation	**109.76* (56.22)**	**110.60* (56.47)**	**115.41** (56.84)**	**117.41** (57.10)**
Bank * Controlling majority * Cash holding deviation	-395.62 (306.77)	-419.14 (309.11)	-374.62 (314.16)	-406.20 (316.32)
Governmental * Controlling majority * Cash holding deviation	-37.97 (81.97)	-60.72 (82.62)	-21.78 (85.86)	-44.82 (86.66)
Relative size	0.89*** (0.16)	0.90*** (0.16)	0.83*** (0.17)	0.83*** (0.17)
Size	-0.30** (0.13)	-0.29** (0.13)	-0.37*** (0.14)	-0.36*** (0.13)
Shares	-1.22 (1.10)	-1.23 (1.10)	-0.95 (1.12)	-0.96 (1.12)
Mixed	-0.39 (0.66)	-0.50 (0.67)	-0.28 (0.67)	-0.42 (0.68)
Unknown	-1.06 (0.76)	-1.09 (0.76)	-1.13 (0.77)	-1.12 (0.78)
Related	-0.83 (0.58)	-0.91 (0.58)	-0.83 (0.59)	-0.91 (0.59)
Intercept	3.90*** (1.37)	3.35** (1.63)		
Industry FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES
Country FE	YES	YES	YES	YES
Observations	996	996	996	996
R^2	0.08	0.09	0.08	0.09

A.3 - Cash holding deviation regression model

Model A.3.1: Results from Cash holding deviation regression model. *, **. *** denote levels of significance at the 10, 5 and 1% level, respectively. Standard errors in parenthesis.

	Dependent variable:
	Cash holdings
Intercept	0.32^{***} (0.02)
Log Size	-0.01^{***} (0.001)
Operating Efficiency	-0.0000 (0.0000)
M/B	0.002^{***} (0.0005)
Leverage	-0.56^{***} (0.03)
R&D	0.41^{***} (0.04)
Missing R&D	-0.001 (0.01)
Industry FE	YES
Observations	1,083
R^2	0.46
Adjusted R^2	0.44

A.4 - VIF tests

VIF test on model 2 in Table 6.3

	VIF
Owner type	3.091
Large Owner	1.225
Cash holding deviation	1.586
Relative size	1.073
Log Size	1.481
Deal payment type	1.362
Related	1.021
Acquiror country	1.259
Year	1.328
Owner type * Large Owner	3.171
Large Owner * Cash holding deviation	1.559

VIF test on model 2 in Table 6.4

	VIF
Owner type	3.095
Large minority	1.283
Cash holding deviation	1.586
Controlling majority	1.292
Relative size	1.074
Log Size	1.497
Related	1.029
Deal payment type	1.383
Acquiror country	1.347
Year	1.380
Owner type * Large minority	2.043
Large minority * Cash holding deviation	1.336
Owner type * Controlling majority	2.248
Cash holding deviation * Controlling majority	1.253

References

Aghion, P., & Tirole, J. (1997) Formal and real authority in organizations. *Journal of Political Economy, 105*(1), 1-29. Published by The University of Chicago Press

Aktas, N., De Bodt, E. and Roll, R. (2008), *Negotiation under the threat of an auction: friendly deals, ex-ante competition and bid premiums*, SSRN eLibrary

Alimehmeti, G., & Paletta, A. (2012). Ownership Concentration and Effects Over Firm Performance: Evidences From Italy. *European Scientific Journal*, *8*(22). https://doi.org/10.19044/esj.2012.v8n22p%25p

Almazan, A., Hartzell, J. C., & Starks, L. T. (2005). Active Institutional Shareholders and Costs of Monitoring: Evidence from Executive Compensation. *Financial Management, 34*(4), 5-34. https://www.jstor.org/stable/3666396

Anwar, A. (2020). *Ownership Concentration & Acquiring Firm M&A Returns: An empirical analysis of acquirer returns in Norway*. Master thesis, Norwegian School of Economics.

Asquith, P., Bruner, R. F., & Mullins Jr., D. W. (1983). The Gains To Bidding Firms From Merger. *Journal of Financial Economics, 11*(1), 121-139. doi:10.1016/0304- 405X(83)90007-7

Bebchuk, L. A. (1999). A Rent-Protection Theory of Corporate Ownership and Control. *NBER Working Paper Series, 7203*. doi:10.3386/w7203

Berle, A. A., & Means, G. C. (1932). *The Modern Corporation and Private Property*. New York: The Macmillan Company.

Betton, S., Eckbo, B. E., & Thorburn, S. K. (2008). Corporate Takeovers. In *Handbook Of Corporate Finance: Empiricial Corporate Finance* (Vol. 2, pp. 291-430). North Holland.

Binder, J. The Event Study Methodology Since 1969. *Review of Quantitative Finance and Accounting 11***,** 111–137 (1998). doi:10.1023/A:1008295500105

Blakstad, C. S., & Nordberg, H. (2016). *The impact of reduced ownership control on the M&A currency decision: Empirical study of the payment method choice in corporate acquisitions*. Master thesis, Norwegian School of Economics.

Bliss, R. T., & Rosen, R. J. (2001). CEO compensation and bank mergers. *Journal of Financial Economics, 61*(1), 107-138. doi:10.1016/S0304-405X(01)00057-5

Brown, S. J., & Warner, J. B. (1980). Measuring Security Price Performance. *Journal of Financial Economics, 8*(3), 205-258. doi: 10.1016/0304-405X(80)90002-1

Brown, S. J., & Warner, J. B. (1985). Using Daily Stock Returns: The Case of Event Studies. *Journal of Financial Economics, 14*(1), 3-31. doi:10.1016/0304-405X(85)90042-X

Burkart, M., Gromb, D., & Panunzi, F. (1997). Large Shareholders, Monitoring, and the Value of the Firm. *The Quarterly Jounal of Economics, 112*(3), 693-728. doi:10.1162/003355397555325

Caprio, L., Croci, E., & Del Giudice, A. (2008). Ownership Structure, Family Control, and Acquisition Decisions. *Journal of Corporate Finance*, *17*(5), 1636-1657, Available at SSRN: https://ssrn.com/abstract=1293853

Chang, S. (1998), Takeovers of Privately Held Targets, Methods of Payment, and Bidder Returns. *The Journal of Finance*, *53*(1): 773-784. doi:10.1111/0022-1082.315138

Datta, D.K., Pinches, G.E. and Narayanan, V.K. (1992), Factors influencing wealth creation from mergers and acquisitions: A meta-analysis. *Strategic Management Journal*, *13*(1): 67-84. doi:10.1002/smj.4250130106

Demsetz, H. (1983). The Structure of Ownership and the Theory of the Firm. *Journal of Law and Economics, 26*(2), 375-390. doi:10.1086/467041

Demsetz, H., & Lehn, K. (1985). The Structure of Corporate Ownership: Causes and Consequences. *Jounal of Political Economy, 93*(6), 1155-1177. doi:10.1086/261354

Dessaint, O., Eckbo, E.B. & Golubov, A. (2020). Bidder-Specific Synergies and the Evolution of Acquirer Returns. *Tuck School of Business Working Paper No. 3437865*, Available at SSRN: https://ssrn.com/abstract=3437865

Easterbrook, F. (1984). Two Agency-Cost Explanations of Dividends. *The American Economic Review, 74*(4), 650-659. Retrieved from http://www.jstor.org/stable/1805130

Eckbo, E. B., Makaew, T., & Thorburn, K. S. (2018). Are stock-financed takeovers opportunistic? *Journal of Financial Economics, 128*(3), 443-465. https://doi.org/10.1016/j.jfineco.2018.03.006

Froot, K. A., Scharfstein, D. S. & Stein, J. C. (1993). Risk Management: Coordinating Corporate Investment and Financing Policies. *The Journal of Finance, 48*(5): 1629-1658. https://doi.org/10.1111/j.1540-6261.1993.tb05123.x

Gaughan, P. A. (2007). *Mergers, Acquisitions, and Corporate Restructurings*. New Jersey: John Wiley & Sons, Inc.

Gugler, K., Mueller, D. C., & Yurtoglu, B. B. (2008). Insider ownership, ownership concenctration and investment performance: An international comparison. *Journal of Corporate Finance, 14*(5), 688-705. https://doi.org/10.1016/j.jcorpfin.2008.09.007

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics, 89*(1), 20-43. https://doi.org/10.1016/j.jfineco.2007.07.002

Harford, J., & Li, K. (2007). Decoupling CEO Wealth and Firm Performance: The Case of Acquiring CEOs. *The Journal of Finance, 62*(2): 917-949. https://doi.org/10.1111/j.1540-6261.2007.01227.x

Harford, J. (1999), Corporate Cash Reserves and Acquisitions. *The Journal of Finance, 54*: 1969-1997. doi:10.1111/0022-1082.00179

Harford, J., Mansi, S., & Maxwell, W. F. (2005) Corporate Governance and Firm Cash Holdings. *AFA 2006 Boston Meetings Paper*, Available at SSRN: https://ssrn.com/abstract=595150

Mathew L. A. Hayward, & Hambrick, D. (1997). Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris. *Administrative Science Quarterly, 42*(1), 103-127. doi:10.2307/2393810

Holderness, C. G., & Sheehan, D. P. (1988). The role of majority shareholders in publicly held corporations: An exploratory analysis. *Journal of Financial Economics, 20*(1-2), 317-346. doi:10.1016/0304-405X(88)90049-9

Holmstrom, B., & Tirole, J. (1993). Market Liquidity and Performance Monitoring. *Journal of Political Economy, 101*(4), 678-709. doi:10.1086/261893

Huang, Y. , Elkinawy, S. , & Jain, P. K. (2013). Investor protection and cash holdings: Evidence from US cross-listing. *Journal of Banking & Finance*, *37* (3), 937–951.

Iannotta, G., Nocera, G., & Sironi, A. (2007). Ownership structure, risk and performance in the European banking industry. *Journal of Banking & Finance, 31*(7), 2127-2149. https://doi.org/10.1016/j.jbankfin.2006.07.013

Jarrell, G. A., & Poulsen, A. B. (1989). The Returns to Acquiring Firms in Tender Offers: Evidence from Three Decades. *Financial Management, 18*(3), 12-19. doi:10.2307/3665645

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial Behavior, Agency Cost and Ownership Structure. *Journal of Financial Economics, 3*, 305-360. doi:10.1016/0304-405X(76)90026-X

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review, 76*(2), 323-329. doi:10.1086/250042

Johnson, S., La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (2000). Tunnelling. *The American Economic Review, 90*(2), 22-27. Retrieved from https://www.jstor.org/stable/117185

Khorana, A., & Zenner, M. (1998). Executive compensation of large acquirors in the 1980s. *Journal of Corporate Finance, 4*(3), 209-240. https://doi.org/10.1016/S0929-1199(98)00004-2Get

Kim and Jung, (2019). *The Impact of Ownership Concentration and Agency*. Semantic scholar. Available at: https://www.semanticscholar.org/paper/The-Impact-of-Ownership-Concentration-and-Agency-Kim-Jung/ac5c24b20175042940ef467caae95c0345033837

Høgenhaven, S., Averio, P., & Werngren, T. (2012). *The Nordic Model: Local Government, Global Competitiveness in Denmark, Finland and Sweden.* Published by: KommuneKredit, MuniFin & Kommuninvest. Available at: https://www.kommunekredit.dk/wp-content/uploads/2017/08/TheNordicModel.pdf

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny. (1999). Corporate Ownership Around the World. *The Journal of Finance, 54*(2), 471-517. doi:10.1111/0022- 1082.00115

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and Finance. *Journal of Political Economy, 106*(6), 1113-1155. doi:10.1086/250042

La Rocca, M., & Cambrea, D. R. (2019) The effect of cash holdings on firm performance in large Italian companies. *Journal of International Financial Management & Accounting*, *30*(1), 30– 59. https://doi.org/10.1111/jifm.12090

Maher, M., & Andersson, T. (2000). *Corporate Governance: Effects On Firm Performance and Economic Growth*. doi:10.2139/ssrn.218490

Moeller, B. S., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics, 73*(2), 201-228. doi:10.1016/j.jfineco.2003.07.002

Morck, R., Shleifer, A., & Vishny, R. W. (1990). Do Managerial Objectives Drive Bad Acquisitions. *The Journal of Finance, 45*(1), 31-48. doi:10.2307/2328808

Myers, S. C., & Majluf, N. S. (1984). Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not. 13(2), 187-221. doi:10.1016/0304-405X(84)90023-0

Nguyen, Q. H. (2016). *The impact of excess cash reserves on M&A: Evidence from Europe.* Aalto University, Department of Finance. Available at: http://urn.fi/URN:NBN:fi:aalto-201609083735

OECD. (2017). *Owners of the World's Listed Companies*. OECD Capital Market Series. https://www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.pdf

Oler, D., & Waegelein, J. F. (2011). Can long-term performance plans mitigate the negative effects of stock consideration and high cash for acquirers? *Review of Quantitative Finance and Accounting, 37,* 63-86. doi: 10.1007/s11156-010-0195-y

Pinkowitz, L., Sturgess, J., & Williamson, R. (2011). Cash Stockpiles and Investment: Do Cash-Rich Firms Use Cash in Acquisitions? *AFA 2012 Chigago Meetings Paper*. http://dx.doi.org/10.2139/ssrn.1786722

Roll, R. (1986). The Hubris Hypothesis of Corporate Takeovers. *The Journal of Business, 59*, 197-216. Retrieved from www.jstor.org/stable/2353017

Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *The Journal of Finance, 52*(2), 737-783. doi:10.1111/j.1540-6261.1997.tb04820.x

Travlos, N. G. (1987). Corporate Takeover Bids, Methods of Payment, and Bidding Firms' Stock Return. *The Journal of Finance, 42*(4), 943-963. doi:10.2307/2328300

Tirole, J. (2006). *The Theory of Corporate Finance*. Princeton University Press. http://www.library.fa.ru/files/Tirole-Theory-corporate.pdf

Urban, M. P. (2015). *The Influence of Blockholders on Agency Costs and Firm Value: An Empirical Examination of Blockholder Characteristics and Interrelationships for German Listed Firms*. Springer Gabler.

Walker, M. M. (2000). Corporate Takeovers, Strategic Objectives, And Acquiring-Firm Shareholder Wealth. *Financial Management, 29*(1), 56-66. https://www.jstor.org/stable/3666361

Yun, J., Ahmad, H., Jebran, K., & Muhammad, S. (2020). Cash holdings and firm performance relationship: Do firm-specific factors matter? *Economic Research-Ekonomska Istraživanja*, doi: 10.1080/1331677X.2020.1823241