

The Effect of Cross-Border Acquisitions on Shareholders Wealth in the Nordic Market

Abstract:

This study examines the short-term announcement returns of 1961 acquisitions made by Nordic firms during 1997-2012. The aim of the research is to find out how the bidder shareholders wealth is affected by the origin of the acquisition. The study reveals positive announcement returns to the shareholders of the Nordic bidding firms. This holds for both domestic and cross-border acquisitions. However, there is a significant negative cross-border effect of 0,72% during a three-day announcement window. The shareholders of the Nordic bidding firms receive significantly lower announcement returns when acquiring a foreign target compared to a domestic target. The study further examines how the announcement returns are affected by factors like the payment method, ownership structure and industry diversification. The majority of previous studies conducted on the US and UK market show that acquiring a target company using equity bids results in a loss for the shareholders of the bidding company. In contrast to these studies, the shareholders of Nordic bidding firms actually receive higher announcement returns when equity is involved in the deal.

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1. Introduction

Mergers and acquisitions are common forms of corporate growth. It is a field of research that has attracted the attention of scholars in numerous business disciplines. During the 21st century the number of mergers and acquisitions has continued to increase to the point where it has become a major strategic tool for corporate development. There are several driving forces behind an increased activity of international acquisitions. Imperfections in capital markets is one of them, which allow firms to capture gains from market inefficiencies. Deregulations and privatization is another one, which have opened up new opportunities allowing foreign investors to participate in former state-owned companies. The degree of integration in the capital markets will differ across countries and the gains from acquisitions will vary depending on several factors. For these reasons, one could expect that the value created by cross-border acquisitions will also vary for different markets. The existing research of mergers and acquisitions has been focused on the US and UK. The studies of the Nordic market have often been conducted from a qualitative perspective and mostly in the circumstance of a controversial takeover. Therefore, the quantitative research field of the Nordic market is still unexplored.

The aim of this thesis is to find out how the wealth of the shareholders of the bidding company is affected by the origin of the target company in an acquisition. The origin of the target company will be defined in relation to the acquiring company. A domestic acquisition implies that the target company and the acquirer originate from the same country. A cross-border acquisition implies that the target company and the acquirer do not originate from the same country. The study considers the shareholders short-term wealth change of Nordic firms that made acquisitions during the period of year 1997-2012. The study is limited to only consider acquisitions. Mergers have been excluded from the dataset due to difficulties in defining which of the merging firms that should be perceived as the bidder. The wealth change is measured by the cumulative abnormal return received by the bidder shareholders during the announcement window of the acquisition. The short-term shareholder wealth change is defined as the announcement return. The thesis will also explore a number of possible links between the announcement return and ownership structure, payment method and industry diversification. One of the main goals of the thesis is to assess whether the announcement returns differ for cross-border acquisitions compared to domestic acquisitions. By using the short-term announcement returns and current evidence on differences in country

characteristics we will examine whether there exist a cross-border effect for Nordic bidding firms.

The sample includes data concerning 1961 completed acquisitions made by Nordic acquirers where the target companies are both foreign and domestic. All the acquiring companies selected for the dataset are publicly quoted in order to provide essential financial data of share prices and deal values. The target companies are both publicly and privately held which allow us to investigate how the ownership structure of the target company affects the announcement returns. Brown and Warner's (1985) standard event methodology is used in order to calculate the announcement returns for the shareholders of the bidding firm during a three-day announcement window. In order to capture and evaluate underlying significant characteristics of the shareholder wealth change a cross-sectional analysis will be conducted. The study is limited by the fact that more than 90% of the target companies in the dataset are privately held. These private target companies do not reveal necessary financial data. Therefore is not possible to calculate the announcement returns received by the shareholders of the target companies. The emphasis will be on the bidder returns and the existing shareholders of the acquirer. The total acquisition gains, meaning the sum of the shareholders wealth change for both the target and the bidding company, will not be inside of the scope of the research due to these limitations.

Most of the previous studies of mergers and acquisitions have been focused on domestic transactions in the US and UK. Studies conducted by Kiymaz and Mukherjee (2000) and by Biswas, Fraser and Mahajan (1997) reveal different results for these markets. This indicates that market characteristics and geographical location have an impact on the shareholders announcement returns. Since the origin of both the acquirer and the target company seems to affect the announcement returns, a study of cross-border acquisitions in the unexplored Nordic market will yield both interesting results and contribute to the existing research of acquisitions. The findings from this research will allow us to sharpen our conclusions regarding the profitability of acquisitions for the shareholders of Nordic acquirers. There is to my knowledge no previous similar research of the Nordic market.

2. Previous Research

2.1 Shareholder wealth of the bidding firms in the short term

The short term announcement returns is a topic of many research papers where the focus is on domestic acquisitions in the UK and US market. The primary conclusion in the studies of publicly quoted target companies is a dominance of negative or zero cumulative abnormal return to the acquiring shareholders. The minority of the research is focusing on cross-border acquisitions and the wealth gains of the shareholders of the bidding firms. The research presents mixed results as to whether cross-border acquisitions are value creating, value neutral, or value destroying for the shareholders of the bidding company. There are also no clear indications whether the short term announcement returns for cross-border acquisitions differ from domestic acquisitions.

Moshfique and Agyenim (2009) study UK acquirers with a sample of 373 acquisitions of cross-border targets during the period of 1994-2003. Their studies reveal that the shareholders of the bidding firms do not receive significant positive announcement returns. The authors use three different windows for the event study and reveal that on the day of the acquisition announcement there are some positive returns to the shareholders of the bidding firm. However, these positive announcement returns vanish as the event window increases. This is according to the authors consistent with a highly competitive UK market where any abnormal gain quickly disappears. The announcement returns to the shareholders of the UK bidding firms becomes negative for all three event windows $(-1,1)$, $(-5,5)$, and $(-10,10)$.

Kiymaz (2004) conducted a study of the wealth impact when US companies were involved in cross-border mergers and acquisitions. The authors found that the wealth effects varied depending on the country relations between the target company and the bidding company. Factors, such as capital markets, exchange rate volatility and business cycles were affecting the announcement returns to the shareholders of the bidding companies. Potential benefits from cross-border acquisitions were also connected to the social and legal environment of the target country. The wealth impact was measured by the cumulative abnormal returns acquired during several different short-term windows and by conducting a cross-sectional regression using macro-economic variables. The shareholders of US bidding companies only experienced wealth gains if the target company was located in Latin American countries. These findings are in line with Gleason et al (2002) who conducted a study of US companies

that invested in the Pacific Rim region. The authors reported that acquisitions of targets that were located in countries associated with less restrictive financial environment generated positive announcement returns. Also the level of governmental intervention was negatively correlated with the cumulative abnormal returns received by the shareholders of the bidding company. These studies imply that the origin of the target company is affecting the announcement returns received by the shareholders of the bidding companies.

Moeller et al (2004) conducted a study in order to find out how the announcement returns for cross-border acquisitions differ from domestic acquisitions. Their sample consisted of 4430 acquisitions where all the acquirers were originated from the US. Their results reveal that cross-border acquisitions yield approximately 1% higher announcement returns to the shareholders of the bidding firm compared to domestic acquisitions. The only exception was for acquisitions in the UK market. The shareholders of the US bidding firms received lower announcement returns for cross-border acquisitions if the target company was located in the UK market.

Goergen and Renneboog (2004) conducted a study of European acquisitions with a sample of 187 transactions where the target companies were both domestic and foreign. The majority of the transactions involved UK firms. The study reveals positive short term announcement returns to the shareholders of the bidding companies over various announcement windows. The significant mean announcement returns over a 5-day announcement window for the entire sample of European acquisitions is 1,18%. The study also indicates that cross-border acquisitions yield lower announcement returns compared to domestic acquisitions. The authors show results of a negative cross-border effect of approximately 1%. The bidding firms in the UK have no significant gain while bidding firms outside the UK who makes acquisitions in the rest of Europe gain significantly. The authors claim that premiums paid for Continental European targets are considerably lower than for UK targets. Low bid premiums are expected to lead to higher announcement returns received by the shareholders of the bidding companies. UK target shareholders are by legislation better protected from being expropriated by the bidder. The target shareholders have therefore more power to extract higher premiums in takeover negotiations in the UK. Their findings suggest that the bid premium varies depending on the target origin.

Danbolt and Maciver (2012) examine the cross-border acquisitions involving UK companies over the period 1990-2008. The study is analyzing the abnormal returns received by the

shareholders of the bidding company during a 3-day event window surrounding the day of the announcement. The authors find a mean negative cross-border effect of 1,5% for the entire sample of 146 cross-border acquisitions. The shareholders of the bidding firms are not rewarded by acquiring a target company across the border compared with a domestic acquisition. The announcement returns for domestic acquisitions are -0,12% and for cross-border acquisitions -1,72%. The sample used in the study consists of 65 cross-border acquisitions into the UK and 81 cross-border acquisitions out of the UK. There is only one acquisition where the bidding company is originated from the Nordic.

Conn et al (2005) examine the announcement returns in cross-border and domestic acquisitions conducted by UK firms. Their sample consists of 3260 transactions that were announced during 1984-2000. They report that the bidder returns to the shareholders are significantly positive when acquiring a company in Europe and significantly lower if the target is located in the US. They suggest that the market expects acquisitions of targets in Continental Europe to create more value for the bidder shareholders compared to both UK and US.

Biswas, Fraser and Mahajan (1997) report significantly negative announcement returns to the shareholders of the bidding firm when acquiring a domestic target. The announcement returns to the shareholders in cross-border acquisitions do not significantly differ from zero. These results indicate that the shareholders of the bidding companies are more rewarded by an acquisition involving a cross-border target. Their sample consists of 171 financial institutions that made acquisitions in years 1977-1987. The majority of their target and bidder companies originate from either US or UK. There are no Nordic firms represented in their sample.

2.2 Shareholder wealth of the bidding firms in the long term

The other major part of research conducted in the field of acquisitions has been done from a long term perspective. These studies differ from the short term research since the announcement window is now stretched from a few days up to several months or years. The most common finding is that the bidding firm is underperforming compared to market benchmark.

When investigating the synergy gains that arise from an acquisition it could make more sense to study an acquisition from a post-acquisition perspective in order to capture the entire shareholder wealth gain that arises. The debate regarding the efficiency of short and long term studies usually comes down to different views of the market efficiency. From a short term perspective, one assumes that all future incomes are reflected in the share price and therefore long term returns become irrelevant for the analysis. Contrary, long term studies are conducted from a perspective that the market is not able to predict the outcome of a certain acquisition during the announcement window. The most discussed shortcoming of the long run studies are the methodological problems that arise when computing expected returns that should be reliable in a far stretched event window. Aw and Chatterjee (2004) conducted a long term study of large domestic and cross-border acquisitions made by UK firms. All the transactions were above US\$400m and the targets were either UK, US or Continental European firms. They found that cross-border acquisitions by UK firms generated lower long term abnormal returns compared to the domestic acquisitions. Their findings indicate a negative cross-border effect for UK acquirers from a long term perspective.

Conn and Connell (1990) argue that the estimation period of the market model for long run studies is very sensitive and question the robustness of previous research made in US and UK. The authors argue that the results will differ depending on the chosen length of the event window. The study concludes that there is strong evidence of significant wealth gain to the target shareholders but the wealth gain for the shareholders of the acquiring firm remains uncertain. Previous research indicates that there is no clear conclusion regarding the long term wealth gain received by the shareholders of the bidding company. Since our thesis is conducted from a short term perspective the focus will be directed towards the findings of short term studies.

2.3 Ownership effect

The ownership effect is a topic within the field of acquisitions where researchers have found more consistent results. Fuller, Netter and Stegemoller (2002) investigated 3,135 acquisitions made by US acquirers where the targets were both domestic and cross-border companies. The authors found that bidder shareholders' wealth was increasing when acquiring a private firm but decreasing when acquiring a public firm. They did not report separate results for domestic and cross-border acquisitions. The authors suggest that privately held targets are assets that are less liquid compared to public ones. This liquidity effect should be transferred into lower premiums on the price leading to higher announcement returns to the shareholders of the bidding firm. Their results are in line with Moeller et al (2005) who also reported positive announcement returns for private acquisitions and negative announcement returns for public acquisitions in the US.

Chang (1998) conducted a study of US domestic acquisitions during the period of 1981-1992. The aim of the study was to examine how both the ownership structure of the acquisition and the payment method affected the announcement returns to the shareholders of the bidding company. The sample for the study consisted of 281 privately held acquisitions and 255 publicly held acquisitions. For the privately held acquisitions the author found positive announcement returns to the shareholders of the bidding company. For the publicly held acquisitions the author found negative announcement returns to the shareholders of the bidding company. The announcement returns were measured during a two-day event window. The studies of the US market indicate that domestic purchases of private companies are in the short term value creating for the shareholders of the bidding company.

Hietala et al (2003) present a theory in order to explain the negative announcement returns received by the shareholders of the bidding company when acquiring a public targets. The authors assume that the managers of the bidding company are acting in the interest of diversified shareholders, which are holding a portfolio that includes equity of the public target company. The theory is based on constant synergy gains, which arise with the acquisitions. The synergy gains are divided between the shareholders of the target and bidding company. A manager acting in the favor of diversified investors will have less incentive for receiving low bid premiums since the total gains for the acquisition would still be equal. This holds since the diversified investor is expected to have equity in the public

target. With a constant synergy effect, the gain of the shareholders of the bidding company would be offset by a loss of the shareholders of the target company. For private acquisitions this theory doesn't hold since diversified investors are not likely to have equity in the private target. Therefore managers should have more incentives to receive low bid premiums for acquisitions of private targets.

2.4 Choice of payment method

Travlos (1987) conducted a study of successful takeovers by companies listed on the New York Stock Exchange. The sample consisted of 167 domestic acquisitions that occurred during the period of 1972-1981. The acquisitions yielded lower announcement returns to the shareholders of the bidding company when the deals were settled with equity. The author claims that it is more likely that an acquiring company will finance the acquisition with stock if the management assesses the stock as overvalued. However, this signals to the market that the security is overpriced and should drive down the share price of the bidding company. Contrary, if there is a cash settlement this should signal that the stock is undervalued. This signaling theory is supported by empirical studies conducted by Franks et al (1988) and Brown and Ryngaert (1991) who report that stock acquisitions tend to yield negative returns to shareholders of the bidding company. For acquisitions made with cash offers the studies present slightly positive announcement returns to the acquiring shareholders. There are also studies conducted regarding the choice of payment method when there is an uncertainty of the target value. Hansen (1987) argues that in a situation where the bidder is uncertain of the value of the acquisition they tend to prefer to offer shares instead of cash bids. If an acquisition is paid with shares the target will be forced to take part of the risk that the acquirer is overvalued. The study focused on the relationship between the asymmetry of information and the method of payment.

Eckbo and Thorburn (2000) conducted a study on international mergers and acquisitions. The sample used for their event study consisted of 1846 transactions where bidding companies where either US or Canadian firms. All the target companies where Canadian and listed on the Toronto Stock Exchange. The author's results suggest that the impact of the payment method varies depending on the origin of the bidding company. Their research show that offers including equity generated significant positive announcement returns to the

shareholders of Canadian bidding companies. However, the shareholders of US bidding companies did not receive positive announcement returns when equity was involved in the deal. This indicates that the signaling effect could vary depending on the origin of the bidding company.

The majority of research of the US and UK market tend to state that acquisitions made with cash offer generates higher abnormal announcement returns to the shareholders of the bidding company. Goergen and Renneboog (2004) reveal different results for their European study. The authors find that the announcement returns become greater when the target is acquired with equity instead of cash. The sample consisted of 187 acquisitions that occurred in 18 European countries during the period of 1993-2000. The Nordic market is only represented in the sample by 3 transactions. The study is conducted using a 5-day event window and the significant announcement returns to the shareholders of the bidding firm are 0,90% for cash bids. When the transaction is settled with equity the announcement returns rises to 2,57%. The returns are measured for several event windows where all the windows present significant higher returns for equity bids. The study also examines the target shareholders returns that indicate the opposite results compared to the announcement returns to the shareholders of the bidding firm. Target shareholders return is significantly higher when the acquisition is settled with cash. This indicates that higher announcement returns to the shareholders of the bidding company are offset by a loss for the target company shareholders.

2.5 Industry diversification

The relation between industry diversification and shareholder wealth has been a topic of interest to both researchers and managers for the last past decades. There are widespread evidences regarding the gains of diversification. Some studies show that diversified firms on average trade at a premium and other finds discounts. There are difficulties in valuing the costs and benefits that occur when diversifying. Since diversification can be achieved on many different levels and areas it is valuable to use a clear framework when comparing results. By focusing on industry diversification we are able to narrow down the variation and present more specific results. A common method of stating industry diversification is whether an acquired target company is in line with the core business or not. If the acquired company

shares the two digits SIC-code¹ with the bidding company, the acquisition is considered to be in line with the core business. Moeller et al (2004) show that the announcement returns to the shareholders of the bidding company are positively and significantly associated with a deal between two companies that share the same two-digit SIC code. The results are based on cross-border and domestic acquisitions where all the acquirers originated from the US.

Matsusaka (1993) examined 199 firms listed on the New York Stock Exchange in order to investigate acquirer's stock price reaction to acquisitions during the years 1968, 1971, and 1974. The author found that bidder shareholders received positive abnormal returns when the target company was not in line with the core business of the acquirer. However, managerial circumstances were dependent variables for the outcomes. These results only hold if the management of the acquired company was retained. For acquisitions in line with the core business, the bidder returns were zero and negative when the target management was replaced. Industry diversification has the potential to benefit corporate manager from a perspective of status, prestige and personal risk reduction. Therefore the relationship between managers and shareholders plays an important part in industry diversification.

In a study of Swedish takeovers conducted by Douka et al (2001), the authors report that the synergies are greater for acquisitions in line with the core business compared to diversified acquisitions. The authors claim that the managers of the bidding companies engage in diversifying acquisitions at the expense of the shareholders of the acquiring company. The agency costs and operating inefficiencies do not outweigh the gains from the diversification. The authors examine the shareholders return of 101 Swedish firms over the years 1980-1985.

¹ SIC is the abbreviation for Standard Industrial Classification. It is a system to classify business establishments based on which type of activity they are engaged in. Corporations are required to comply and disclosure this classification when stock is initially sold. Corporations are required to continuously update its classification.

2.6 Relative deal value

Relative deal value is the ratio between the transaction value of the acquisition and the enterprise value of the acquiring company. Loderer and Martin (1990) run cross-sectional regressions where they find that the bidder announcement returns are affected by the relative deal value of the acquisitions. Their model indicates that whenever the deal value exceeds 30% of the enterprise value of the bidding company, the returns are significantly higher. The study was conducted with a sample of 5,172 domestic acquisitions made by companies listed on the New York Stock Exchange or the former American Stock Exchange located in New York.

Eckbo and Thorburn (2000) who conducted a study on international mergers between US and Canadian firms also investigated the effect of relative deal value. One of their findings was that the size of the total equity was affecting the profitability of the acquisitions. The bidder shareholders return of domestic acquisitions, where the bidder and the target had similar equity sizes, was significantly higher. The sample consisted of Canadian targets while the bidders were both Canadian and US firms. The targets were both public and privately held but the author did not report returns separately. The authors' findings for this study also indicated that there was a negative cross-border effect since the US firms reported significantly lower bidder returns compared to the Canadian firms. Their research suggested that firms with the smallest total equity listed on the Toronto Stock Exchange provided the highest bidder returns.

Floreani and Rigamonti (2001) examined 56 acquisitions of insurance companies in the US, Europe and Australia over the period 1990-2000. Their findings suggest that the bidder returns are significantly positive with an average of 3.65% and that the relative deal size is positively correlated with the shareholder value creation. When the relative deal value of the acquisition is high compared to the enterprise value of the acquirer, the returns to the bidder shareholders become greater. Even though it appears as if the authors examine a small sample they believe that most studies conducted with large samples include too many acquisitions where the acquisition is of small relative importance for the acquirer. Assuming that this dilutes the significance of the result the authors prevent this by only selecting acquisitions where the target value is at least 2% of the bidder value. For insurance firms they observe a pattern in

the European countries where domestic acquisitions are less value creating for the bidding shareholders compared to cross-border acquisitions.

Alexandris et al (2011) shows that there is a negative relation between acquisition premiums and target size. The study was conducted using a sample of US acquisitions in 1990-2007 where the author found that the shareholders of the bidding company received higher short term announcement returns for large deals. However, the study also examined the announcement returns from a post-acquisition perspective. The results indicate that these bidder gains for large deals vanished in the long term by a negative drift. The cumulative abnormal returns became negative when the measurement time period was extended. Small targets yielded the opposite effect and generated positive returns over time. The authors suggest that the synergy effect of the large deals tend to be reduced due to the complexity of the size. Large deals are according to the author unlikely to be able to provide more economical benefits than the low premium that they are associated with.

3. Hypothesis

3.1 Hypothesis - Cross-border effect

There may be several reasons why acquisitions across the border could result in higher returns to the shareholders of the bidding company. Given imperfections in capital and product markets, an international expansion could reduce the risks through diversification, increase the level of economics of scale, and increase access to capital markets. Equally, returns to the shareholders may decrease due to a more complex environment that could lead to inefficiencies and higher monitoring cost. Many other factors could also affect the outcome, such as politics, languages, and cultural clashes. Therefore international acquirers are taking a risk of not being fully informed regarding vital valuation parameters of the target company, which could lead to an inadequate valuation. There is no clear conclusion to draw from previous studies since the results tend to vary depending on the origin of both the bidder and the target company. Since no previous studies have been conducted on the Nordic cross-border effect we can only evaluate others research and try to appraise the outcome.

Previous research of Moshfique and Agyenim (2009), Moeller et al (2004) and Goergen and Renneboog (2004) indicate that the shareholders of the bidding firm are not rewarded when

the cross-border target is located in the UK market. Their studies indicate that the announcement returns received by the shareholder of the bidding company becomes lower if the cross-border target is located in UK compared to a domestic target company. Conn et al (2005) reveals similar results but for cross-border target that are located in the US market. We expect that these findings do have an impact on our result since 14,6% of the target companies in our sample is located in either UK or US.

In order to appraise the outcome we compare our sample with the samples used in previous research. We find that the most similar samples were used by Danbolt and Maciver (2012) and Goergen and Renneboog (2004). Both their samples included Continental European and UK target companies. Their studies both indicate that cross-border acquisitions yield lower announcement returns to the bidding companies compared to domestic acquisitions. Even though our sample has a smaller ratio of UK target companies, we expect our results to go in line with their findings. If this predication is accurate, we will see a negative cross-border effect for Nordic bidding firms.

Hypothesis 1: Announcement returns received by the shareholders of Nordic bidding firms in cross-border acquisitions are lower compared to domestic acquisitions

3. 2 Hypothesis - Ownership structure of target company

Previous empirical research of the announcement returns in the US market clearly indicates that the announcement returns to the shareholders of the bidding firms are in the short term higher for acquisitions of private targets compared to publicly held targets. According to Fuller, Netter and Stegemoller (2002), the different reactions received by the market could be explained by bidding firms receiving a better price when acquiring a privately held target. This would be defined as a liquidity effect since privately held companies are in general not as easily to sell compared to public ones. The acquirer is expected to capture this effect by receiving a discount when bidding for the private firm. We hypothesis similar effects in the Nordic market, hence the hypothesis:

Hypothesis 2: Announcement returns received by the shareholders of Nordic bidding firms are higher for acquisition of private companies compared to public companies

3. 3 Hypothesis - Method of payment

There is extensive research investigating how the payment method affects the shareholders wealth of the bidding company. The majority of the previous researches conclude that acquisitions that are settled with equity tend to decrease the wealth of the shareholders of the bidding company. The research indicates that the choice of payment method leads to a signaling effect. However, studies by Eckbo and Thorburn (2000) and Goergen and Renneboog (2004) indicate that the signaling effect could vary depending on the origin of the bidding companies. Eckbo and Thorburn (2000) showed that equity deals did not act as signal of over-valued shares for Canadian bidding firms. Goergen and Renneboog (2004) reach the same conclusion for their European sample. However, the Nordic market was only represented by a small fraction in their European sample. Therefore, we do not see these results convincing enough to hold for the Nordic market. Therefore we expect that the Nordic market will react according to the majority of the research that have been conducted on the US and UK market. The expectation is that the Nordic market will receive equity as a signal that the acquiring managers consider their company shares to be over-valued. The use of equity in the deal settlement would therefore yield lower announcement returns to the shareholders of the bidding company compared to cash deals, hence the hypothesis:

Hypothesis 3: Announcement returns received by the shareholders of the Nordic bidding firms becomes lower when the acquisition is settled with equity compared to cash

3. 4 Hypothesis – Industry diversification

Cross-border and domestic acquisitions could either be associated with an increase or decrease in industrial diversification. The research of industry diversification has primary been focused on the US market and reveals mixed results. Matsusaka (1993) show that the benefits from industry diversification overcome the agency costs and possible operating inefficiencies. The study reveals higher announcement returns to the shareholders of the bidding company when the acquisitions are not in line with the core business of the acquirer. Moeller et al (2004) and Douka et al (2001) present contradictory results compared to the study of Matsusaka (1993). There are no clear indications that diversification by acquiring target companies in a new industry sector should gain the shareholders of the bidding company. However, our sample consists of a large share of Swedish acquirers and therefore

we expect that the study conducted by Douka et al (2001) could reflect the Nordic market more accurately. We expect our results to go in line with their study, hence the hypothesis:

Hypothesis 4: Announcement returns received by the shareholders of Nordic bidding firms are lower when acquiring a firm outside the core business line

3. 5 Hypothesis - Relative deal size.

There is no previous study on the Nordic market examining how the relative deal size is affecting the announcement returns to the shareholders of the bidding firm. However, there is an extensive research from other markets that we can use to appraise the outcome. The majority of research point towards a positive correlation between relative deal value and short term announcement returns to the shareholders of the bidding firm. Eckbo and Thorburn (2000) show that announcement returns to the shareholders of Canadian and US bidding firm was significantly higher when the target company and the acquirer had similar equity values. Loderer and Martin (1990) present similar results for the US market. Alexandris et al (2011) show that large deals yield low bid premiums. These low bid premiums are in the short term shifted towards the shareholders of the bidding firm who receives greater announcement returns. Since our study is investigating relative deal sizes we cannot expect that relative large acquisitions will yield low bid premiums. However, we can assume that more caution will be taken when valuing a relative large deal. Considering this decreased risk of over-valuing the targets, we expect that our results will go in line with the studies conducted by Eckbo and Thorburn (2000) and Loderer and Martin (1990), hence the hypothesis:

Hypothesis 5: Announcement returns received by the shareholders of Nordic bidding firms are positively correlated with the relative deal size

4. Data

4.1 Sample description

The data used in the research is collected from Zephyr database. The sample consists of 1961 acquisitions from the time period of 1997-2012. All the bidders in the sample are Nordic companies. Only the transactions involving a change in control are included in the sample thus the deals intending to buy a mere minority are excluded. Takeover attempts have been excluded since only announced and completed deals have been selected for the sample. In order to ensure sufficient available disclosed information all the acquirers are publicly traded companies. However, the target companies are both private and public which allow us to investigate the effects of ownership. The market indices returns, market to book values, and the share prices have been gathered through DataStream. The sample has further been categorized according to the characteristics of the acquisition. These characteristics are such as payment method, industry diversification, and origin. This categorization will allow us to further explain the cross-border effect. Table 1 presents the distribution of the origin of both bidding and target companies. The statistics of the distribution is based on the transactions and not the individual bidding company which means that frequent bidders will be represented numerous times. Sweden is represented most frequently as the origin of the bidding company followed by Norway, Finland, Denmark and Iceland. Icelandic companies are only represented by a small fraction in our sample.

Table 1: Distribution of the origin of the target and bidding companies.

The table is presenting the statistics of the distribution of both bidding and target companies. The table is showing the 25 most frequently targeted countries. A country level presents the statistics with a descending order based on the quantity of target companies. The statistics in the table is presented both in percentages and absolute numbers. The statistics of the distribution is based on the transactions and not the individual bidding company which means that frequent bidders will be represented numerous times. Sweden is representing the most number of acquisitions in the sample. In 869 of the 1961 acquisitions the bidding company has originated from Sweden. In 472 of the 1961 acquisitions the target company has originated from Sweden.

Country	Origin of the bidding company		Origin of the target company	
	N	%	N	%
Sweden	869	44,3%	472	24,1%
Norway	434	22,1%	283	14,4%
Finland	380	19,4%	215	11,0%
Denmark	233	11,9%	156	8,0%
Iceland	45	2,3%	10	0,5%
United States			158	8,1%
United Kingdom			128	6,5%
Germany			76	3,9%
France			57	2,9%
Netherlands			40	2,0%
Canada			27	1,4%
Spain			26	1,3%
Russia			23	1,2%
Poland			22	1,1%
Austria			19	1,0%
Switzerland			19	1,0%
Italy			17	0,9%
Belgium			14	0,7%
Brazil			13	0,7%
Estonia			12	0,6%
Czech Republic			11	0,6%
India			10	0,5%
China			9	0,5%
Lithuania			9	0,5%
Singapore			9	0,5%
Total	1961	100%	1961	100%

The timing of the acquisitions in the sample is illustrated in Figure 1. The sample represents acquisitions from the time period 1997-2012. The graph in figure 1 illustrates three merger waves that occurred during this time period. The number of acquisitions peaked in year 2000, 2006 and 2010. A categorization by these merger waves will later be used in order to evaluate the announcement returns received by the shareholders of the bidding firm.

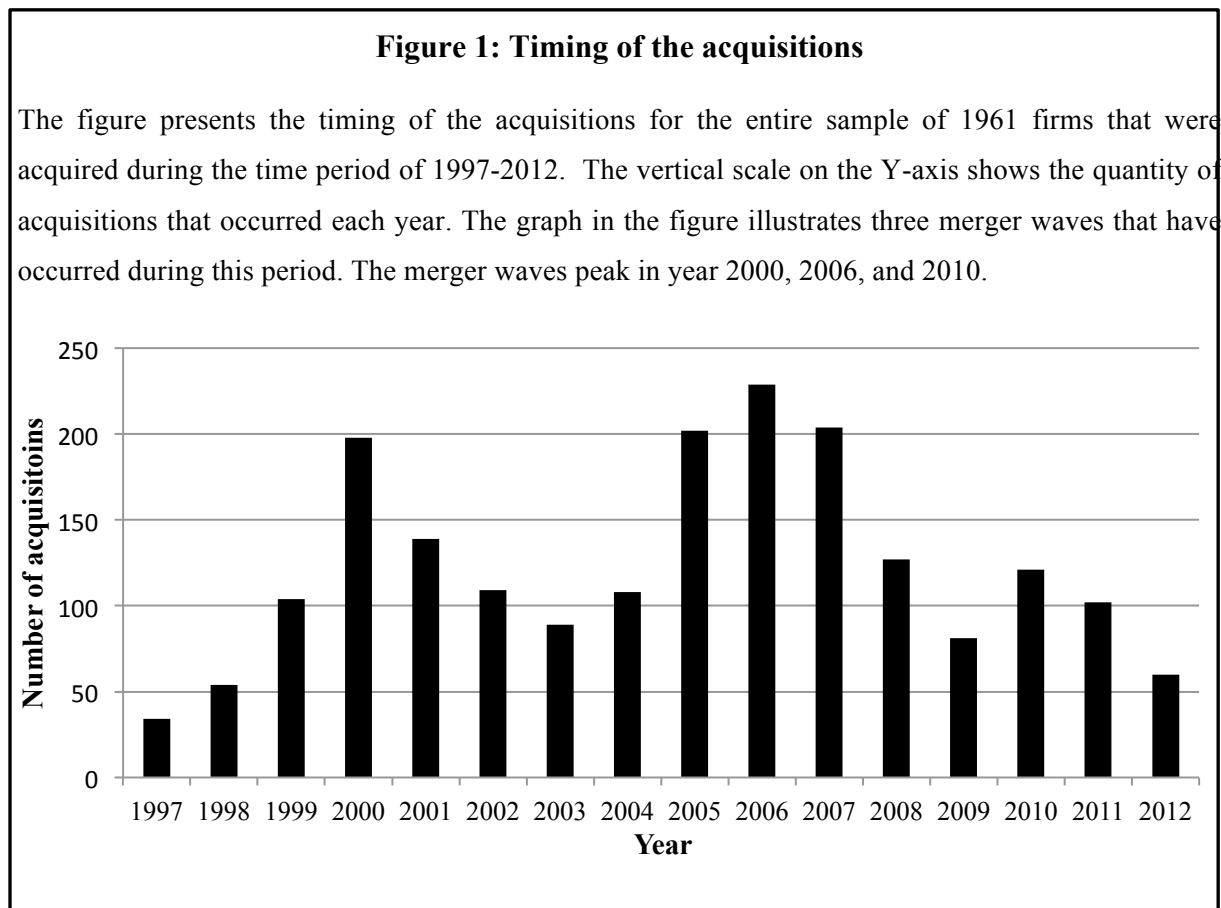


Table 2 is presenting the distribution of the acquisitions made by the Nordic acquirers. The targets are divided into domestic and cross-border acquisitions. There are 812 domestic acquisitions and 1,149 cross-border acquisitions represented in the sample. The majority of the acquisitions are conducted by Swedish bidding companies and the minority conducted by Icelandic bidding companies. There are only 6 domestic Icelandic acquisitions represented in the sample.

Table 2: Sample statistics

The table is presenting the distribution of the 1961 acquisitions based on the origin of the target company. All the acquiring companies in the dataset are Nordic and the acquisitions are presented by country level following alphabetical order. The origins of the target companies are divided into domestic acquisitions and non-Nordic acquisitions. There are 812 domestic acquisitions and 1,149 cross-border acquisitions represented in the sample.

<u>Origin of the bidding company</u>	<u>Number of domestic acquisition</u>	<u>Number of cross-border acquisition</u>
Denmark	88	145
Finland	160	220
Iceland	6	39
Norway	206	228
Sweden	352	517
Total	812	1149

Table 3 presents the statistics of the deal values of the acquired target companies. The numbers are presented in EUR millions and the transactions where the deals values have been below ten thousands euros have been excluded from the sample. The transactions have been categorized into cash, shares, cash & shares, and other. The category “other” consists of dozens of various payment methods where different payment methods have been combined such as convertible bonds, stock swaps and loans. The table shows us that deals settled with shares have the highest mean and median. The statistics of payment method is based on the deal values where the payment methods have been registered in ZEPHYR database. The payment methods are only known for 1205 out of the 1961 deals and therefore these values can be distorted compare to the entire sample.

Table 3: Deal value by payment method (in EUR millions)

The table presents the statistics of the acquisitions based on the deal value. The statistics are sorted according to the payment method used to acquire the target company. The deal values are shown by mean, median, standard deviation, minimum and maximum value. The statistics are based on the 1205 transactions where the payment method has been registered in Zephyr database. The numbers are presented in EUR millions and the statistics for the total sample is presented at the bottom of the chart. The deals that are settled with shares have the highest mean value of 202 EUR millions. The deals settled with a combination of cash and shares have the lowest mean value of 105 EUR millions.

<u>Payment method</u>	<u>Mean</u>	<u>Median</u>	<u>St dev</u>	<u>Min</u>	<u>Max</u>	<u>Number of transactions</u>
Cash	164,5	11,7	4467	0,02	4893	381
Shares	202,1	28,2	1666	0,01	24503	240
Cash & shares	105,7	10,4	495	0,16	6504	215
Other	139,0	11,7	516	0,01	5026	369
Total sample	117,7	13,1	683	0,01	24503	1205

5. Methodology.

5.1 Short-term announcement returns

In order to assess the impact of the acquisition on the shareholders wealth of the bidding company, we use standard event-study methodology. The study is based on the crucial assumption that the capital markets are efficient. This implies that the price of the stock incorporates all current available public information and adjusts to a release of new information instantaneously. The cumulative abnormal returns around the announcement date are calculated according to the event-study methodology developed by Brown and Warner's (1985). The local market index is used as the benchmark in order to calculate the cumulative abnormal returns. Hence, the Swedish acquirers' performance will be measured compared to Affärsvärlden General Index (AFGX) that includes all listed companies on the NASDAQ OMX Stockholm. The underlying assumption is that a local index would capture the short term wealth gain of the shareholders of the bidding company more accurately. All the local indices used in order to calculate the announcement returns are presented in table 14 in the appendix. The cross-sectional variations of the abnormal returns are used in order to estimate the t-statistics. The event window for the study starts one day prior to the announcement of the acquisition and ends one day after. By using a short window for the study we avoid the issue of having market parameters affected by firms conducting multiple acquisitions. Based on the assumption of efficient markets the effect of the acquisition can be observed over a relatively short time period. In the research field of acquisition there is actually no consensus when to start the event window and previous studies shows a great variety of lengths. This study uses a 3-day event window, which is the most common length to use in studies of short term announcement returns. This will allow us to easily compare the results with previous studies.

To further evaluate the effect that the acquisition has on the shareholders wealth of the bidding company we will conduct a cross-sectional regression analysis. We will assess whether the cross-border effect holds after controlling factors that are expected to affect the announcement returns to the shareholders of the bidding company. These are factors such as payment method, target origin and industry diversification.

6. Analysis

6.1 Cross-border effect

The majority of previous research is focusing on the abnormal announcement returns and neglects the cross-border effect. This thesis reveals the wealth change for the shareholders of the bidding company when acquiring a company across borders. The abnormal returns received by the shareholders of the bidding company are evaluated and a two sample mean test is conducted. The test is conducted in order to see if there is a significant difference between the shareholder gains in domestic and cross-border acquisitions. According to Brown's (1985) standard event study methodology, the announcement returns are calculated using a modified market model:

$$AR_i = r_i - r_m$$

Where r_i is the return on firm i and r_m is the return of the local market index. In a perfect efficient market, where share prices adjust to new information instantaneously, it would have been sufficient to only examine the abnormal returns of the announcement day. In practice, research of acquisitions is commonly conducted using an event window. This allows the market to have time to capture announcement reactions, for example when countries have different trading hours. It is also common that firms announce the acquisition on day 0 and then release further financial details of the transaction the next day. Since the event window used in this research stretches over three trading days we use the cumulative abnormal returns for these days.

Table 4 shows the mean announcement returns to the shareholders of the bidding firm during the event window (-1, +1). The sample is divided into domestic and cross-border acquisitions. There are significant positive announcement returns of 2,55% for domestic acquisitions and 1,83% for cross-border acquisitions. This indicates that the shareholders of the Nordic bidding companies increase their wealth during the announcement window when acquiring either a domestic or foreign target company. This is in line with the findings of Goergen and Renneboog (2004) who conducted a study of European domestic and cross-border acquisitions. For the entire European sample, the authors present significant announcement returns of 1,18% to the shareholders of the bidding company. The authors also

present the announcement returns received by the shareholders of Scandinavian acquiring firms. However, this sub-sample only consists of three transactions and therefore the results are not appropriate to compare with.

The difference between the mean announcement returns of the domestic acquisitions and the cross-border acquisitions is considered to be the cross-border effect. In order to examine the significance of the cross-border effect a two sample Satterthwaite t-test is conducted which allows unequal variances in the two samples. According to our first hypothesis, we expected that cross-border acquisitions would yield lower announcement returns to the shareholders of the Nordic bidding firms compared to domestic acquisitions. Since the Satterthwaite t-test show that the negative cross-border effect is significant we conclude that our first hypothesis holds. In order to reveal more information about this cross-border effect we need to further investigate the announcement returns received by the shareholders of the bidding companies.

Table 4: Announcement returns and cross-border effect

The table presents the mean announcement returns received by the shareholders of the bidding company. 1961 transactions have been divided into domestic and cross-border acquisitions. The cumulative abnormal returns are calculated during the three-day announcement window. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country. The cross-border effect is calculated by the difference between the mean announcement returns of the domestic acquisitions and the cross-border acquisitions. A two sample Satterthwaite t-test is conducted in order to examine the significance of the cross-border effect. The shareholders of Nordic bidding companies that acquire domestic target companies yield 2,55% announcement returns during the 3-day event window. The shareholders of Nordic bidding companies, which acquire cross-border target companies, yield 1,83% announcement returns during the 3-day event window. Cross-border acquisitions yield on average 0,72% lower announcement returns to the shareholders of the bidding company compared to domestic acquisitions.

<u>Domestic acquisition</u>	<u>Cross-border acquisition</u>	<u>Cross-border effect</u>
2.55***	1.83***	-0.72**
(7.87, 812)	(8.44, 1149)	(-1.85, 1490 [^])

t statistics and number of observations in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[^] Satterthwaite's degrees of freedom

6.2 Ownership

In table 5 we continue to break down the announcement returns for domestic and cross-border acquisitions. The results are presented by the ownership structure of the acquired company. Out of our sample of 1961 transactions there is a majority of acquisitions where the target company is privately held. Only 191 of the target companies from the entire sample are publicly held. According to our second hypothesis, we expected the announcement returns received by the shareholders of the Nordic bidding firms to be higher for acquisitions of private companies compared to public companies. The results in table 5 show that the shareholders of the Nordic bidding companies receive mean announcement returns of 2,74% when acquiring a private domestic target. These announcement returns are higher compared to acquisitions of public domestic targets. Since we also can see the same pattern for cross-border acquisitions we conclude that our second hypothesis holds. The results are consistent with the studies conducted by Chang (1998), Fuller, Netter and Stegemoller (2002) and Moeller et al (2005) who also reported higher announcement returns for private acquisitions compared to domestic acquisitions. This indicates that the liquidity theory is effective and that the bid premiums are lower for privately held targets. These low bid premiums reward the shareholders of the bidding company who receive higher announcement returns.

Table 5 also reveals that we have a significant negative cross-border effect for private acquisitions across the border. The results indicate that the shareholders of the bidding firm yield on average 0,86% lower announcement returns when acquiring a private firm across the border compared to a domestic acquisition. The cross-border effect for acquisitions of publicly held targets is not significant. This implies that the origin of a publicly held target has either a very small or no effect on the announcement returns received by the shareholders of the bidding company. There is a possibility that the cross-border effect arises from uncertainties in the valuation process of the target company. Privately held companies are not required to disclose as much financial information as a publicly held company. If we assume that foreign acquirer do not have the same possibilities to attain information about a private target as a domestic acquirer. A domestic acquirer would then have an advantage in the valuation process compared to a foreign acquirer. We see this as an explanation for why there is no significant cross-border effect for public acquisitions and a negative cross-border effect for private acquisitions.

Table 5: Announcement returns and cross-border effect by ownership

The table presents the mean announcement returns received by the shareholders of the bidding company. 1961 transactions have been divided into domestic and cross-border acquisitions. The announcement returns from the full sample are presented in the table to act as a point of reference. The sample is then sub-categorized according to the ownership of the target company. The ownership structure of the target company is either publicly owned (i.e. stock listed) or privately owned. The cumulative abnormal returns are calculated during the three-day announcement window. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country. The cross-border effect is calculated by the difference between the mean announcement returns of the domestic acquisitions and the cross-border acquisitions. A two sample Satterthwaite t-test is conducted in order to examine the significance of the cross-border effect. The announcement returns received by the shareholders of the bidding company are higher for acquisitions of privately held targets compared to publicly held targets. The shareholders of the bidding firm yield on average 0,86% lower announcement returns when acquiring a private firm across the border compared to a domestic acquisition. The shareholders of the bidding firm yield on average 0,17% higher announcement returns when acquiring a public firm across the border compared to a domestic acquisition. The cross-border effect for publicly owned targets is not significant.

	<u>Domestic acquisition</u>	<u>Cross-border acquisition</u>	<u>Cross-border effect</u>
Full sample	2.55*** (7.87, 812)	1.83*** (8.44, 1149)	-0.72* (-1.85, 1490^)
Publicly owned	1.09 (1.39, 93)	1.26* (2.44, 98)	0.17 (0.18, 160^)
Privately owned	2.74*** (7.80, 719)	1.89*** (8.12, 1051)	-0.86*** (-2.03, 1312^)

t statistics and number of observations in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

^ Satterthwaite's degrees of freedom

6.3 Method of payment

In order to investigate how the method of payment affects the announcement returns we categorize the transactions according to four different payment methods (cash, cash & shares, shares and other). Out of the sample of 1961 acquisitions, Zephyr only provides the payment method for 1205 of the transactions, which means that the calculations are based on a smaller sample. Table 7 shows how the announcement returns to the shareholders of the bidding company are affected by the choice of payment method. The results are quite remarkable since all the announcement returns are significant and the acquisitions settled with cash yield the highest returns of 4,96%. These results are contrary to the findings of Franks et al (1988),

Brown and Ryngaert (1991) and Travlos (1987) in regards of the signaling theory. Their studies report a strong signaling effect for US and UK bidding companies. The use of equity as a payment method yielded lower announcement returns compared to the deals settled with cash. Since we expected that the announcement returns received by the shareholders of the Nordic bidding firms to become lower when acquisitions was settled with equity compared to cash, we reject the third hypothesis. We find these significant results as a clear implication that the use of equity as payment method does not act as a signal to the market that the shares of the bidding firm are over-valued. The announcement returns to the shareholders of the bidding companies, which are presented in table 6, are in line with the findings of Goergen and Renneboog (2004) who also reject the signaling effect for their European sample. In their 5-day event window they reported significant announcement returns for cash bids of 0,90% while equity settled transactions yielded 2,57%. The Nordic bidding firms in our sample yield announcement returns for cash bids of 1,55% and equity settled transactions yielded 4,96%.

Table 6: Announcement returns by method of payment

The table presents the mean announcement returns received by the shareholders of the bidding company depending on the method of payment used for acquiring the target company. The 1205 transactions where the payment method has been registered in Zephyr are used for the calculations. The transactions are divided into four different payment methods and the cumulative abnormal returns are calculated during the three-day announcement window. The payment method “other” consist of dozens various combinations between convertible bonds, stock swaps, loans, etc. The announcement returns received by the shareholders of the bidding company are higher when equity is part of the deal settlement. When the acquisition is settled with cash the mean announcement returns to the shareholders of the bidding company is 1,55%. When the deal is settled solely with equity the mean announcement returns rises to 4,96%.

<u>Cash</u>	<u>Cash & shares</u>	<u>Shares</u>	<u>Other</u>
1.55***	3.06***	4.96***	2.27***
(4.32, 381)	(5.62, 215)	(5.51, 240)	(5.43, 369)

t statistics and number of observations are presented in the parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The announcement returns received by the shareholders of the bidding company depending on the method of payment are further examined in order to reveal more information about the signaling effect. A sub-categorization by ownership and origin of the target is presented in table 8. There are no indications that the origin of the target should change the conclusion regarding the signaling theory. Equity deals yield higher announcement returns to the

shareholders of the bidding company regardless if the acquisition is domestic or cross-border. However, the results from table 7 indicate that cash settlements yields higher announcement returns for domestic acquisitions compared to cross-border acquisitions. A possible explanation for this could be that foreign target companies are frequently not accepting equity as payment for the acquisitions Guaghan (2002). This could partly explain why there is no signaling effect for the cross-border transaction in our sample. The positive signal of using cash in the settlement would diminish if the choice of payment method were enforced.

Table 7: Announcement returns by method of payment
Sub-categorization by ownership and origin of the target company

The table presents the mean announcement returns received by the shareholders of the bidding company. The 1,205 transactions where the payment method has been registered in Zephyr are used for the calculations. The acquisitions are sub-categorized according ownership and origin of the target company. The ownership structure of the acquired target is either private or public. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country. The calculations are based on four different payment methods used for acquiring the target company. The payment method “other” consist of dozens various combinations between convertible bonds, stock swaps, loans, etc. The cumulative abnormal returns are calculated during the three-day announcement window. The announcement returns received by the shareholders of the bidding company are higher when equity is part of the deal settlement. This holds regardless of the origin of the target company. The announcement returns received by the shareholders of the bidding company are higher for acquisitions of privately owned target companies compared to publicly held companies. The announcement returns for acquisitions of publicly owned target companies are not significant.

	<u>Cash</u>	<u>Cash and Shares</u>	<u>Shares</u>	<u>Other</u>
Privately owned	1.74*** (4.04, 303)	3.11*** (5.48, 199)	5.98*** (5.55, 192)	2.27*** (5.29, 356)
Publicly owned	0.81 (1.57, 78)	2.40 (1.22, 16)	0.89 (0.76, 48)	2.43 (1.25, 13)
Domestic acquisition	2.30** (3.30, 101)	2.98*** (4.10, 120)	4.78*** (4.30, 161)	3.03*** (3.58, 141)
Cross-border acquisition	1.28** (3.06, 280)	3.17*** (3.83, 95)	5.32*** (3.45, 79)	1.80*** (4.21, 228)

t statistics and number of observations are presented in the parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

6.4 Industry diversification

Industry diversification is considered to have occurred if the acquired firm does not share the same two digits SIC-code as the bidding company. The industry classifications for the companies have been collected from either DataStream or Zephyr. The descriptive statistics of the dataset regarding the industry classification is presented in table 18 in the appendix. Our results in table 8 show that the announcement returns to the shareholders of the bidding company are significant and on average higher when acquiring a firm outside the core business. From the announcement returns based on the entire sample we find that acquiring a firm in the same industry yields announcement returns of 1,91%. When acquiring a target company outside the core-business the mean announcement returns rises to 2,42%. This pattern also holds when testing for acquisitions of domestic and cross-border targets. These findings are in line with Moeller et al (2004) and Matsusaka (1993). Compared to the findings of Douka et al (2001), who reports higher announcement returns for acquisition in line with the core business, our findings are contradictory. Since Douka et al (2001) study the Swedish market, which is highly represented by our sample, these different results raises concern. The results are therefore cross-checked by creating a similar sub-sample of Swedish acquisitions from the first merger wave 1997-2003. The Swedish sub-sample consists of 184 domestic acquisitions where the target company is in line with the core business of the acquirer and 113 domestic industry diversifying acquisitions. This sub-sample yield different result compared to the entire sample of Nordic bidding companies. When Swedish firms expand according to their core line of business the announcement returns to the shareholders of the bidding company increases. The results for the Swedish sub-sample are now in line with the findings of Douka et al (2001). This indicates that the bidder shareholders gains from industry diversification are strongly affected by the time range and country characteristic. We hypothesized that acquisitions in line with the core business would yield higher announcement returns to the shareholders of the bidding company. This hypothesis holds for the Swedish sub-sample but is rejected for the full sample. The announcement returns from the Swedish sub-sample are presented in table 15 in the appendix.

Table 8: Announcement return by industry diversification

The table presents the mean announcement returns received by the shareholders of the bidding company depending if the acquisition is industry diversifying or not. Same industry implies that the target company and the acquirer share the same two digits SIC-code. Different industry implies that the acquisition is not in line with the core industry and the target company and the acquirer do not share the two digits SIC-code. The cumulative abnormal returns are calculated during the three-day announcement window. The announcement returns are calculated based on the full sample, solely domestic acquisitions and solely cross-border acquisitions. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country. The mean announcement returns received by the shareholders of the bidding company when acquiring a firm in line with the core business is 1,91%. The mean announcement returns received by the shareholders of the bidding company when acquiring a firm, which is, not line with the core business are 2,42%. The shareholders of the Nordic bidding companies are on average better off when acquiring a firm, which is not in line with the core business of the bidding company.

	<u>Full sample</u>	<u>Domestic acquisition</u>	<u>Cross-border acquisition</u>
Same industry	1.91*** (7.95, 1128)	2.24*** (5.15, 418)	1.72*** (6.05, 710)
Different industry	2.42*** (8.40, 833)	2.89*** (5.97, 394)	2.01*** (6.03, 439)

T statistics and number of observations are presented in the parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

6.5 Relative deal size

The variable relative deal value is generated by dividing the deal value of the transaction by the enterprise value of the bidding company. Although the dataset solely consists of acquisitions where the acquirer attains control of the target company, not all acquisitions results in obtaining all the shares. The transactions are evenly sorted into six relative deal size range brackets and the announcement returns for the range brackets are presented in table 9. The table clearly indicates that relative deal size is positively correlated with announcement returns to the shareholders of the bidding company. When the relative deal value is increasing, the announcement returns to the shareholders of the bidding company become significantly higher. This holds for both domestic and cross-border acquisitions. The stated hypothesis, that the announcement returns to the shareholders of the bidding company would be positively correlated with relative deal value, is considered to be accurate. These finding are in line with studies conducted by Loderer and Martin (1990), Eckbo and Thorburn (2000) and Floreani and Rigamonti (2001). Since these authors were examining different markets we can assume that the effect of the relative deal size is not dependent on geographical location

of the bidder or the target company. However, there are additional results in table 9 that requires attention. The mean announcement returns received by the shareholders of the bidding company are 5,2% when the relative deal values are over 25%. The announcement returns are in the same range as the announcement returns received by the shareholder of bidding companies, which settled the deals using equity. This implies that there might be a correlation between equity deals and high relative deal sizes. This makes sense from an economical point of view where high relative deal values could be associated with higher risk. Increased risk would lower the possibilities of raising debt and increases the likelihood of equity settled deals. We continue the analysis by further investigating the existence of correlation between equity and relative deal value.

Table 9: Announcement returns by relative deal size

The table presents the mean announcement returns received by the shareholders of the bidding company. The cumulative abnormal returns are calculated during the three-day announcement window and divided into brackets according the relative deal value of the acquisition. The value of the relative deal size is generated by dividing the deal value of the transaction with the market value of the bidding company. The announcement returns are calculated based on the full sample, only domestic acquisitions and only cross-border acquisitions. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country. The relative deal value is positively correlated with the announcement returns to the shareholders of the bidding company. When the relative deal value is increasing, the announcement returns to the shareholders of the bidding company become significantly higher. The mean announcement returns received by the shareholders of bidding company with a relative deal value over 25% is 5,25%.

<u>Relative deal value</u>	<u>Full sample</u>	<u>Domestic acquisition</u>	<u>Cross-border acquisition</u>
>0.25	5.25*** (8.20, 400)	5.22*** (5.89, 220)	5.29*** (5.72, 180)
< 0.25 - 0.1	2.66*** (6.04, 335)	2.73*** (3.62, 161)	2.59*** (5.37, 174)
< 0.1 - 0.05	2.03*** (5.06, 272)	2.64*** (4.07, 99)	1.69** (3.30, 173)
< 0.05 - 0.02	1.02** (2.84, 319)	1.35* (2.61, 125)	0.81 (1.65, 194)
< 0.02 - 0.005	0.73** (2.62, 339)	0.51 (0.94, 120)	0.86** (2.69, 219)
< 0.005	0.20 (0.89, 296)	-0.074 (-0.17, 87)	0.31 (1.23, 209)

T statistics and number of observations are presented in the parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

In Table 10 the acquisitions are sorted according to relative deal size range brackets and categorized according the payment method used for settling the deal. The sample is only based on the 1205 transactions where the payment method has been reported. Yet, we see a clear pattern that equity is more commonly used in deals were the value of the target is relatively large. It will therefore be useful to cross-check our results with a cross-sectional regression. A cross-sectional regression will allow us to examine if the high announcement returns received by the shareholder of the bidding company comes from equity bids, relative deal size or both.

Table 10. Correlation between relative deal value and payment method

The table presents the correlation between the relative deal value and the use of shares in the payment method. The percentage values are based on the 1,205 acquisitions where the payment method has been reported. All the transactions in the sample have been divided into 6 range brackets according to the relative deal value. The column “Shares” indicates the proportion of the deals that have been settled by using solely shares as a payment method for the acquisition. The column “Cash & shares” indicate the proportion of the deals that have been settled by using a combination of cash and shares as a payment method for the acquisition. The column “Shares included in the payment” is the sum of “Shares” and “Cash & shares”. This column indicates the proportion of the deals where shares have been included in the payment. Equity is included in the settlement of 40,3% of the acquisitions where relative deal value has been over 25%.

<u>Relative deal value</u>	<u>Shares</u>	<u>Cash & shares</u>	<u>Shares included in the payment method</u>
>0.25	23,8%	16,5%	40,3%
<0.25-0.1	12,5%	17,6%	30,1%
<0.1-0.05	8,1%	14,3%	22,4%
<0.05-0.02	12,5%	8,2%	20,7%
<0.02-0.005	7,1%	5,9%	13,0%
<0.005	5,7%	1,7%	7,4%

6.6 Cross-sectional regression

By conducting a cross-sectional analysis we want to examine whether the cross-border effect holds after controlling factors that are expected to affect the announcement returns to the shareholders of the bidding company. These are factors such as payment method, target origin and industry diversification. We run three different cross-sectional regressions based on the acquisitions in our sample. The first regression considers the entire sample. The second regression only considers the transactions where the target company is domestic, meaning that both the acquirer and the acquisition have the same origin. The third regression only considers cross-border acquisitions, meaning that the acquirer and the target company do not have the same origin. The cumulative abnormal return is the dependent variable in all regression models. Several dummy variables are created in order to cross-check previous assumptions and these dummies take on a value of either 1 or 0. NORDIC TARGET indicates if the acquired firm is originated in the Nordic or not. The DOMESTIC variable indicates if the acquirer and the target company originate from the same country. CASH, CASH&SHARES, and SHARES are dummy variables that indicate which payment method were used when the target company was acquired. The variable PRIVATE indicates if the acquired company is privately held. SAME INDUSTRY indicates if the acquirer and the target company share the two digits SIC code used for the industry classification. RELATIVE DEAL VALUE is a quantitative variable that indicates the proportion of the acquisition deal value compared to the enterprise value of the bidding company. MTBV is a quantitative variable, which indicate the market value of the bidding company compared to its financial value.

The cross-sectional regressions in table 11 show that the most significant variables affecting the announcement returns for the shareholders of the bidding company are in line with previous assumptions regarding the effect of payment method, ownership structure and relative deal value. When running the cross-sectional regression for the entire sample the variable SHARES returns a coefficient that is positive and highly significant. This indicates that acquisitions paid with shares yield on average higher announcement returns to the shareholders of the bidding company compared to other payment methods. The coefficient for the variable CASH&SHARES is smaller yet still positive and significant. These findings validate our previous discussed results regarding the impact of equity as a payment method. The announcements returns received by the shareholders of the bidding firm are higher if the

deal is settled with equity compared to cash. The variable RELATIVE DEAL SIZE indicates that for both domestic and cross-border acquisitions the relative size of the target significantly affects announcement returns to the shareholders of the bidding company. The regressions support our previous discussed findings that large relative deals yield higher announcement returns to the shareholders of the bidding company compared to small relative deals.

The coefficient for the variable PRIVATE is also significant and positive for the cross-sectional regression of the entire sample. This indicates that acquiring a target company that is privately held should increase the announcement returns to the shareholders of the bidding company. The outcome of the regression regarding the ownership structure is in line with our previous assumption that acquisitions of private targets yield higher announcement returns to the shareholders of the bidding company. The results are strengthening the belief that the liquidity theory holds for private targets. High announcement returns to the bidder shareholders are likely to be explained by low bid premiums due to smaller competition of privately held targets.

The coefficient of the variable SAME INDUSTRY is negative for both domestic and cross-border acquisitions. This was expected since the results for the entire sample were indicating that acquisitions within the same industry would yield lower announcement returns to the shareholders of the bidding company. However, the results were contradicting to the findings of Douka et al (2001) and the analysis of the smaller Swedish sample revealed different results compared to the entire sample. The fact that the neither of the coefficients in our regressions shows significant results might be explained by sensitivity in the time range and the sample selection. We see the results of the regressions as an indication that we cannot present clear findings how industry diversification is affecting the announcement return for the Nordic acquirers.

The values of the adjusted R^2 are in the regressions between 4,6% and 6,6%. This indicate that the variables themselves only explain up to 6,6% of the total variation of the announcement returns. Moeller and Schlingemann (2005) and Fuller et al (2002) conducted cross-sectional regressions using similar variables and the adjusted R^2 values in their studies were in the range of 4% - 4,8% and 3,5% - 7,5%. This indicates that adjusted R^2 values in our study are not expected to be significantly higher.

The variable MTBV is not significant in any of the regressions and the coefficients are small. This indicates that market to book value do not significantly affect the announcement returns received by the shareholders of the bidding firm.

Table 11: Cross-sectional regression

The table presents three cross-sectional regressions that were run based on the transactions in the sample. The announcement returns to the shareholders of the bidding companies are the dependent variable in all three regressions. The first regression is based on the entire sample with exception of transactions that do not present all the values needed to run the regression. Second regression is run based on the domestic acquisitions where both the target company and the acquirer originate for the same country. The third regression is run based on the cross-border acquisitions where the target company and the acquirer do not originate from the same country. The regression variables are described in section 6.6.

	<u>Full sample</u>	<u>Domestic acquisitions</u>	<u>Cross-border acquisitions</u>
NORDIC TARGET	-0.033 (-0.07)		-0.12 (-0.27)
DOMESTIC	-0.042 (-0.08)		
CASH	0.42 (0.92)	1.45 (1.52)	0.012 (0.02)
CASH&SHARES	1.22* (2.12)	1.21 (1.37)	1.43 (1.84)
SHARES	3.20*** (5.49)	3.02*** (3.54)	3.88*** (4.54)
PRIVATE	2.04*** (3.33)	2.93** (2.83)	1.27 (1.69)
SAME INDUSTRY	-0.56 (-1.58)	-0.84 (-1.38)	-0.33 (-0.77)
RELATIVE DEAL SIZE	3.68*** (7.93)	3.36*** (4.44)	3.97*** (6.78)
MTBV	0.019 (1.11)	0.048 (0.73)	0.014 (0.86)
Intercept	-0.77 (-1.09)	-1.59 (-1.40)	-0.17 (-0.21)
Observations	1859	761	1098
Adjusted R^2	0.0578	0.0465	0.0662

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

7. Concluding remarks

7.1 Conclusion

This study examines the short term announcement returns of 1961 acquisitions made by Nordic firms during 1997-2012. The mean announcement returns received by the shareholders of the Nordic bidding companies are significantly positive for acquisitions of both domestic and cross-border companies. The Nordic market rewards the shareholders of the bidding company with mean cumulative abnormal returns of 2,55% during the 3-day announcement window for domestic acquisitions. The announcement returns are considerably higher compared to previous studies conducted on the US and UK markets.

This study also reveal is a significant negative cross-border effect of 0,72% for Nordic acquirers. The cross-border effect holds for acquisitions of private firms but there does not exist a significant effect for publicly held target companies. Uncertainties that arise in a valuation process of a foreign private target could explain these results. A foreign acquirer does not have the same possibilities to attain information about a private target as a domestic acquirer. Inaccurate valuation of the foreign private target is expected to lower the announcement returns to the shareholders of the bidding firm. Publicly held companies are required to disclose more financial information which leads to more equal conditions for foreign and domestic acquirers to value a public target.

When examining domestic acquisitions and cross-border acquisitions separately, we find that private acquisitions on average yield higher announcement returns to the shareholders of the bidding firm compared to public acquisitions. These results are expected to be an outcome of a liquidity effect. The bid premiums for private targets are lower compared to public targets due to a smaller competition for private targets. Lower bid premiums are likely to be transferred to the shareholders of the bidding company who receives higher announcement returns.

The analysis reveals that the payment method used in the settlement of the deal has a strong impact on the announcement returns. When Nordic firms use cash for acquiring targets they generate mean announcement returns of 1,55%. If equity is a part of the settlement the announcement returns received by the shareholders of the bidding company raises to 4,96%. The cross-sectional regressions support these findings and imply that the signaling effect does

not hold for Nordic acquirers. The use of equity as payment method do not act as a signal to the market that the shares of the Nordic bidding firm are over-valued This reveals a notable difference between Nordic acquirers and acquirers that originate from the UK or US. Previous research of the UK and US market is consistent and equity bids act as a signal of an over-valued share price that transfers into a loss for the shareholders of the bidding company during the announcement window.

The relative deal size of the companies acquired by Nordic firms is positively correlated with the announcement returns received by the shareholders of the bidding firm. The announcement returns are significantly increasing when the relative deal size of the target becomes larger. It is likely that the increased announcement returns received by the shareholders of the bidding company are explained by lower bid premiums. With access to the announcement returns received by the shareholders of the target company it would be possible to validate this assumption. However, this research is limited to the announcement returns to the shareholders of the bidding company. Therefor it is not possible to verify a shift between the gains of the bidder and target shareholders return.

We also examine the announcement returns from a perspective of industry diversification. The shareholders of the bidding company gain on average when a Nordic firm acquires a target, which is not in line with its core business. This holds for both domestic and cross-border acquisitions but the results should be interpreted with caution. The cross-sectional regressions do not show statistical significance for these findings and the results are sensitive from a time perspective. By choosing different merger waves and creating sub-samples we see that the time period and the origin of the acquirer affect the outcome.

The statement that acquisitions made by Nordic companies generate positive announcement returns should be considered from the perspective of positive synergy effects. The results are found for a short term window surrounding the announcement of the acquisition. The findings do not predict or exclude the possibility of a negative drift of the shareholders gains in a post-acquisition perspective. The claim that acquisitions are value enhancing for the shareholders on average should be viewed both from the statistical perspective whether the results are significant but also from the economical perspective whether the wealth change is substantial. Should significant small percentage announcement returns to the shareholders of the bidding firm be something to take into consideration? The answer would be “absolutely”. Returns to the shareholders of a few percentages during a 3-day announcement window

should raise both concern and excitement for financial investors who can capitalize from these kinds of occasions.

This thesis show that both the origin of the bidding and target company impact the announcement returns received by the acquirer's shareholders. Other factors that are revealed to affect the announcement returns received by the shareholders of Nordic bidding companies are payment method, relative deal value and industry diversification. The Nordic market is still unexplored in the quantitative research field of acquisition and hopefully this thesis will contribute by acting as a point of reference for future research.

7.2 Limitations and critical valuation.

The dataset used in the thesis is mainly based on information provided by DataStream and Zephyr's databases. Therefore we need to trust that these sources provide accurate information. However, the sources are considered reliable and are frequently used for academic research and by financial institutions. Limitation of access to other datasets excludes us the opportunity to cross-check some of the data. Occasional verification has been done using secondary sources to validate share prices, market values, announcement dates and index movements. All the examined transactions by secondary sources have been proven to be accurate. The possibilities to cross-check the results from the analysis are small due to limited studies conducted on the Nordic market. A sub-sample analysis was conducted in order to be able to compare our results to a Swedish study. This is not a certain way of proving that the dataset is accurate but generating results that are not contradictory can be regarded as positive. If the database had included transactions with acquiring companies originated outside the Nordic, it would have been possible to cross-check more results with previous research.

Analyzing the shareholders return of the target companies could have helped us understand some of our findings. Higher returns to the shareholders of the bidding company might be explained by lower returns to the shareholders of the target company. The announcement returns to the shareholders of the acquired company were in this study not taken into consideration due to limited access to financial data.

One could assume that domestic bidders would have superior knowledge of the domestic market compared to foreign bidders and therefore better exploit the available synergy effects that could arise from an acquisition. However, to validate these kinds of assumptions one would need organizational information regarding the governance, financing, and investment opportunities for companies. In many cases this would be considered as private information to companies. This makes it difficult to compile and incorporate such data in a large quantitative analysis.

7.3 Further research

Since the research of the Nordic market is not yet fully explored, there are numerous of interesting areas to further investigate regarding the field of acquisitions. Firstly, we see that Nordic acquirers have significant positive returns, which differ from other studies conducted on the announcement returns to the shareholders of the bidding firm in UK and US. This indicates that there is additional research that would help us to understand the underlying causes behind our findings. Competition is a factor considered to raise the premium for a target company. Less potential buyers for larger firms should yield lower bid premiums for the large target companies. Investigating if there is a smaller competition for acquiring firms in the Nordic market compared to the UK and US market could yield interesting results. This might explain why the shareholders of Nordic bidding companies receive higher announcement returns compared to UK and US bidders. Conducting a research with a smaller sample would allow the researcher to gather more specific details regarding the competition of the target firm and generate more in-depth results regarding this topic.

The announcement returns received by the target shareholders could also be added to the research in order to explain the announcement returns to the shareholders of the Nordic acquirers. It would create a possibility to examine the relation between the gains of target shareholders and the bidder shareholders. Are the shareholders' wealth gain generated due to lower bid premiums of the takeover or is there even a loss for the shareholders of the target company? Furthermore, it would be valuable to see how these results change in a long term perspective and to see if a negative drift follows the short term positive announcement returns over time.

Further research could be conducted in order to investigate if the absolute deal value affects the shareholder wealth. In our study we only examine the relative deal value and we do not consider the absolute deal value. According to management theories, enormous deals can lead to managerial hubris where publicity is a force behind the acquisition. This hubris could lead to inaccurate valuation of the acquisition and lower the gain of the bidding company's shareholders. Absolute deal values could capture the effect of these enormous deals in a better way compared to relative deal. It is also possible that the choice of financial advisor will affect the premium paid to the acquired target. Large target companies might lead to a more thorough valuation conducted by the bidding company. The bidder might choose to hire more reputable financial advisors for large acquisitions and further research could reveal if this affects the premium paid to the target companies.

8. References

8.1 Academic references

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8.2 Databases

Thomson Financial: DataStream

Zephyr / Bureau van Dijk Electronic Publishing

9. Appendix

9.1 Descriptive tables

Table 12: Choice of payment method by country

The table presents the descriptive statistics of the choice of payment method sorted by bidder country origin. The statistics are based on the 1205 transactions where the choice of payment method was registered in Zephyr database. The frequency of payment method is presented by percentages. The total number of acquisitions of each country is also presented.

	<u>Cash</u>	<u>Shares</u>	<u>Cash & shares</u>	<u>Other</u>	<u>N</u>
Denmark	42%	24%	16%	18%	123
Finland	30%	24%	14%	32%	223
Iceland	43%	17%	17%	23%	30
Norway	27%	16%	26%	30%	288
Sweden	32%	19%	15%	34%	541
Total	32%	20%	18%	30%	1205

Table 13: List of local indices used as market benchmark

The table presents the list of local indices used as a market benchmark when calculating the announcement returns.

<u>Country</u>	<u>Market benchmark</u>
Denmark	OMX COPENHAGEN BMARK (OMXCB) - PRICE INDEX
Finland	OMX HELSINKI - PRICE INDEX
Iceland	OMX ICELAND - PRICE INDEX
Norway	OSLO SE OBX - PRICE INDEX
Sweden	OMX AFFARSVARLDENS GENERAL - PRICE INDEX

Table 14: Announcement returns and cross-border effect by origin of the bidding company

The table presents the mean announcement returns received by the shareholders of the bidding company. 1961 acquisitions have been divided into domestic and cross-border acquisitions. The sample is further sub-categorized according to the origin of the bidding company. The cumulative abnormal returns are calculated during the three-day announcement window. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country. The cross-border effect is calculated by the difference between the mean announcement returns of the domestic acquisitions and the cross-border acquisitions. A two-sample Satterthwaite's t-test is conducted in order to examine the significance of the cross-border effect. The mean announcement returns received by the shareholder of Swedish bidding companies are 2,52% for domestic acquisitions and 2,14% for cross-border acquisitions. Finland has the only significant negative cross-border effect of 2,44%.

<u>Origin of the bidding company</u>	<u>Domestic acquisition</u>	<u>Cross-border acquisition</u>	<u>Cross-border effect</u>
Denmark	3.36** (3.11, 88)	1.77** (3.16, 145)	-1.58 (-1.29, 135^)
Finland	3.25*** (3.72, 160)	0.81 (1.89, 220)	-2.44*** (-2.51, 234^)
Iceland	-0.16 (-0.10, 6)	3.64** (3.44, 39)	3.80 (2.01, 10^)
Norway	1.80*** (3.67, 206)	1.85*** (3.59, 228)	0.05 (0.08, 432^)
Sweden	2.52*** (5.09, 352)	2.14*** (6.28, 517)	-0.39 (-0.64, 660^)

t statistics and number of observations in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^ Satterthwaite's degrees of freedom

Table 15: Announcement returns for Swedish bidder firms

The table presents the announcement returns received by the shareholders of the bidding company for the different merger waves that occurred during the period of 1997-2012. The cumulative abnormal returns are calculated during the three-day announcement window. The announcement returns are sorted according to industry diversification. Same industry implies that the target company and the acquirer share the same two digits SIC-code. Different industry implies that the acquisition is not in line with the core industry and the target company and the acquirer do not share the two digits SIC-code.

	Merger wave 1 1997-2003	Merger wave 2 2004-2008	Merger wave 3 2009-2012
Same industry	2.43** (3.22, 184)	1.78*** (3.41, 207)	2.37*** (4.11, 113)
Different industry	2.02*** (3.74, 113)	2.76*** (3.73, 141)	2.65** (2.69, 111)

t statistics and number of observations in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

Table 16: Announcement returns by acquisitions cycles

The table presents the announcement returns received by the shareholders of the bidding company for the different merger waves that occurred during the period of 1997. The cumulative abnormal returns are calculated during the three-day announcement window. The announcement returns are sorted according to origin of the target company. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country.

	Full sample	Domestic acquisitions	Cross-border acquisitions
Full time range 1997-2012	2.13*** (11.51, 1961)	2.55*** (7.87, 812)	1.83*** (8.44, 1149)
Merger wave 1 1997-2003	1.92*** (6.58, 727)	2.46*** (5.37, 282)	1.59*** (4.19, 445)
Merger wave 2 2004-2008	2.24*** (8.27, 870)	2.56*** (5.593, 362)	2.02*** (6.11, 508)
Merger wave 3 2009-2012	2.27*** (4.70, 364)	2.70** (2.85, 168)	1.90*** (4.99, 196)

t statistics and number of observations in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

Table 17: Announcement returns by ownership and country

The table presents the mean announcement returns received by the shareholders of the bidding company. 1961 acquisitions have been divided into domestic and cross-border acquisitions. The sample is further sub-categorized according the origin of the bidding company and ownership structure. The ownership structure of the target company is either publicly owned (i.e. stock listed) or privately owned. The cumulative abnormal returns are calculated during the three-day announcement window. Domestic acquisitions imply that the target company and the acquirer originate from the same country. Cross-border acquisitions imply that the target company and the acquirer do not originate from the same country.

	Domestic acquisitions		Cross-border acquisitions	
	<u>Publicly owned</u>	<u>Privately owned</u>	<u>Publicly owned</u>	<u>Privately owned</u>
Denmark	2.66 (2.03, 16)	3.51** (2.73, 72)	0.86 (0.56, 15)	1.88** (3.13, 130)
Finland	1.73 (0.82, 9)	3.34*** (3.64, 151)	0.78 (0.76, 18)	0.81 (1.77, 202)
Iceland	-1.98 (-0.62, 2)	0.75 (0.40, 4)	3.18 (1.40, 8)	3.77** (3.10, 31)
Norway	-0.98 (-1.07, 27)	2.22*** (4.11, 179)	0.42 (0.49, 13)	1.94*** (3.57, 215)
Sweden	1.89 (1.20, 39)	2.60*** (4.98, 313)	1.49 (1.83, 44)	2.20*** (6.03, 473)

t statistics and number of observations in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 18: Descriptive statistics of the industry of bidders and targets

The table presents the descriptive statistics of the industry classification according to the two-digit SIC codes. The 25 most frequent industry classifications held by the bidding and target companies are presented. The statistics are presented by quantity of transactions and percentages of the entire sample. The statistics of the distribution is based on the number of transactions and not the individual bidding company. Therefore frequent bidding companies will be represented numerous times.

<u>Two-digits SIC description</u>	Bidding companies		Target companies	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
BUSINESS SERVICES	527	26,9%	481	24,7%
ENGINEERING & MANAGEMENT SERVICES	118	6,0%	131	6,7%
WHOLESALE TRADE-DURABLE GOODS	98	5,0%	44	2,3%
COMMUNICATION	96	4,9%	102	5,2%
INDUSTRIAL MACHINERY AND EQUIPMENT	87	4,4%	127	6,5%
REAL ESTATE	72	3,7%	65	3,3%
ELECTRONIC & OTHER ELECTRIC EQUIPMENT	66	3,4%	100	5,1%
PAPER AND ALLIED PRODUCTS	65	3,3%	73	3,7%
FOOD AND KINDRED PRODUCTS	58	3,0%	71	3,6%
INSTRUMENTS AND RELATED PRODUCTS	57	2,9%	59	3,0%
ELECTRIC, GAS, AND SANITARY SERVICES	47	2,4%	32	1,6%
CHEMICALS AND ALLIED PRODUCTS	45	2,3%	46	2,4%
DEPOSITORY INSTITUTIONS	42	2,1%	60	3,1%
FABRICATED METAL PRODUCTS	38	1,9%	33	1,7%
WHOLESALE TRADE-NONDURABLE GOODS	36	1,8%	21	1,1%
WATER TRANSPORTATION	33	1,7%	34	1,7%
HOLDING AND OTHER INVESTMENT OFFICES	32	1,6%	73	3,7%
PRINTING AND PUBLISHING	31	1,6%	24	1,2%
TRANSPORTATION EQUIPMENT	30	1,5%	31	1,6%
OIL AND GAS EXTRACTION	29	1,5%	30	1,5%
HOTELS AND OTHER LODGING PLACES	25	1,3%	24	1,2%
RUBBER AND MISC. PLASTICS PRODUCTS	24	1,2%	23	1,2%
FISHING, HUNTING, AND TRAPPING	21	1,1%	15	0,8%
PRIMARY METAL INDUSTRIES	20	1,0%	32	1,6%
HEALTH SERVICES	20	1,0%	16	0,8%