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SWEDISH BIDDER´S PERFORMANCE FROM TAKEOVERS

- A quantitative event study comparing domestic and cross-border targets

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Abstract

We examine Swedish bidder's shareholder return on a takeover announcement based on a short-period event study. Further, the bidder return is examined based on whether the target is domestic or cross-border. Previous research is contradictory regarding the overall performance, which caused our attention to investigate whether the record differs with another dataset and geographical scope. Moreover, previous studies that have distinguished cross-border- and domestic takeovers indicate that domestic takeovers outperform cross-border takeovers. Our results reveal that Swedish bidders gain a 2,3% significant positive three-day average cumulative abnormal return (CAR). Further, the domestic takeovers outperform the cross-border takeovers with 4%. However, we found no significant difference in the CAR between the domestic and cross-border bidders when controlling for deal characteristics. Our regression analysis shows that size effect and payment type are contributory factors to our result. We reveal that the Swedish market appears to have unique characteristics that potentially explain why our result is contradictory to previous groundwork. Finally, we are two of the first authors that examined the overall, cross-border, and domestic bidder stock performance with a fully Swedish dataset.

Keywords

Swedish takeover market
Cross-border acquisition
Bidder´s return

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1. Introduction

1.1 Background

Rationale firms across the world seek for growth opportunities and maximization of shareholder value (Frank, et al., 2019; Berk & Demarzo, 2017). Instead of growing organic by for instance attracting new customers or developing new products, mergers and acquisitions enable firms to enter a new path (Ahuja, et al., 2017). Mergers and acquisitions occur because the targeted company is considered to have the potential to perform better but the existing management fails to utilize it (Cefis & Rigamonti, 2013).

The development of the global economy has enabled firms to go international and acquire cross-border firms, and 88% of all take-overs made by Swedish firms have been executed on foreign companies (Bloomberg , 2020). Instead of for instance using joint ventures or agencies to expand business overseas to distribute products, managers may choose a takeover because of controllability, branding and financial motives (Parment, et al., 2016; Durate & Garcia-Canal, 2004). Major take-overs throughout the past 20 years include Telia´s acquisition of the Finnish communication firm Sonera in 2002 (USDmm 9500) and SSAB and their Canadian acquisition of Evraz Inc in 2007.

There are several motives for a public-traded firm to enter the M&A market and acquire another firm. On a high level, the main goal is value maximation for stakeholders. Ross (2010) states that by arranging a takeover, the value of the target together with the acquirer can be higher than the sum of two individually firms because of the synergy effect. On a low level, reasons to acquire might differ from firm to firm. Previous research within the area mentions, for example, hypotheses within economies of scale, diversification and tax effects (Larsson & Wallenberg, 2002; Piesse, Lin, Chang Kuo, & Few Lee, 2005; Motis, 2007). However, previous studies have shown that a lot of takeovers are subject to failure for shareholders of an acquirer firm (Straub, 2007). Moreover, cross-border bidders tend to perform lower returns relatively bidders acquiring domestic firms (Aw & Chatterjee, 2004). A study conducted on a sample of US firms between 1985-1995 conveys for one percentage lower abnormal stock return for cross border bidders then domestic bidders around announcement (Moeller & Schlingemann, 2005a).

1.2 Problem discussion

According to Straub (2007), various authors have earlier tried to measure and explain what factors influence the bidder's short-term return of a takeover. However, the author argues that the majority of these are limited, contradictory or complementary in their character. When researching acquisition´s outcome, one usually uses parameters that measure the bidder's stock performance, which is later controlled for various variables such as, payment method, relative size, cultural differences, industry affiliation, et cetera (Moeller, et al., 2004; MacKinlay, 1997; Fuller, et al., 2002). These parameters usually point out different characteristics of the firms. The design of the dataset, the characteristics of the two firms, and the control variables can be factors that explains why the results in former studies on general acquisitions and cross-border acquisitions differ.

Previous studies examining the general short-term bidder return have been contradictory (Straub, 2007; Alexandridis, et al., 2017). Further, among others, studies made on the UK market has shown that a cross-border acquisition tends to perform badly relatively to a domestic acquisition (Aw & Chatterjee, 2004). Although the vast majority of the cross-border takeovers performs relatively lower returns, a study on the Chinese market shows the opposite (Tao, et al., 2017).

Hence, questions arise about why companies are choosing to do cross-border takeovers and expose shareholders to risk despite their relatively poor record according to previous groundworks. This together with the fact that studies on overall takeover performance have been contradictory, causes our attention to examine whether the record differs with another data set and another geographical scope.

Throughout the discipline and previous research, we have seen a lack of focus that evaluate the Swedish market. The Swedish market is relatively minor and might differ by the reason of for instance a small currency and other components that are important to take into account. Besides, regulations and access to capital may influence the ownership of the firm. According to Baker & Riddick (2012), US firms are in general more heterogeneous in ownership and can, therefore, act dissimilar to non-US firms as per the agency model theory. Swedish firms, in turn, are homogeneous in structure. Furthermore, Norback, et al. (2009) argues that cross-border takeovers tend to perform slightly worse regarding efficiency compared to domestic takeovers. The explanation to these findings could according to the authors be tax advantages for the cross-border acquirer, which in theory allows a firm being less effective but profitable. Moreover, the collectivism and strong social contract associated

with Sweden unlike the individualism in for instance the USA (Lubatkin, et al., 2005) continues to explicate the reason of why letting the groundwork originate from the Swedish market.

We think it is of interest to broaden the discourse and examine whether these characteristics affect the stock return of the bidder in the Swedish market, or if it is in line with earlier research made in the takeover field. Therefore, we intend to make one of the first contributions to investigate overall performance and geographical differences impact on an acquisition in Sweden.

1.3 Purpose and research questions

The main purpose is to describe the Swedish listed bidder's takeover announcement share return and if it is affected whether the targeted company is domestic or cross-border.

To fulfil the purpose of this thesis we have formulated two research questions with the first concretized into *"Are Swedish acquisition value-creating or not?"* and is aimed to describe the bidder's shareholder return. The fundamental value of a takeover announcement will be immediately reflected in the share price and thus, we define the value-creating as the short term cumulative abnormal return from the stock market reaction. Since we are using share prices for our evaluation, the scope of our study only includes public-traded bidders. Further, to distinguish and examine if the bidder´s return differs whether the origin of the target, the second question was concretized into *"Do bidder´s gain differ between domestic and cross-border acquisitions?".* The procedure for these two questions will follow (MacKinlay, 1997) event study approach but will be conducted in separated sets with all deals respectively domestic and cross-border targets.

The goal is to find out whether the Cumulative abnormal return (CAR) for the bidder reacts positively or negatively and variate between a domestic and cross-border takeover in a short-run period. Furthermore, the purpose and the research question will be derived from CAR calculations and later controlled by multivariate regression analysis. In our regression, we will use control variables, common elements for event studies in the discipline, to explain the results and enable us to control for factors, seemed to be critical and affect the outcome in previous studies.

2. Literature review

In this following part, the review begins discussing value creation from a takeover. Later we discuss characteristics of cross-border and domestic takeovers. Further, we discuss other theoretical elements besides the origin of the involved firms. These factors can according to earlier literature affect the outcome and could help explain how various elements have an impact on the overall and of a cross-border or domestic take over. Lastly, the review discusses how takeover performance can be measured.

2.1 The value creation from a takeover

This paper is focusing on the value creation from a takeover in terms of shareholder returns. The value creation can be observed from abnormal returns of the stock which reflect the changes in future cash flows and expected synergies from the transaction (Campa & Hernando, 2004). According to Campa & Hernando (2004), shareholder return is the most convenient and efficient estimation of the value creation of the takeover announcement since it is easy to observe.

Moeller, et al. (2005b) found that the bidder's shareholder in average loses 12 cents on a dollar spent around the announcement spent, in an article focusing on the US market. Further, this finding is in line with the article Moeller, et al (2004). In Boubaker & Hamza, (2014) article, a study within Europe where the UK market has been within the scope, shows significant value destruction for the bidder's shareholders. Moreover, a study that has been focusing on takeover in the financial sector also shows that the overall bidder shareholder experiences value destruction around announcement (Becher, 2000). However, in Goergen & Renneboog (2003) article that has been examined the value creation of large European takeovers, found zero or positive significant value creation of 0,7%. Contradictory compared to earlier research cited above, recent research shows a significant positive value creation for bidders' shareholders (Alexandridis, et al., 2017).

2.2 The implications of the deal-specific characteristics to the bidder's return

2.2.1 Characteristics of domestic and cross-border takeovers

Domestic and cross-border takeovers are in many ways similar since they share the same foundation, to take control of another firm. However, because cross-border takeovers are

international, they have unique challenges and opportunities compared to domestic transactions. International expansion could give rise to the access of new geographical markets, as well as products, However, countries have different economic systems, regulatory and cultures among many factors, that could create a more complex process for a cross-border acquirer.

With integrated capital markets, cross-border investment increases (Moeller & Schlingemann, 2005a). This because the integration of capital markets gives rise to an expansion of potential investment opportunities, which in theory could increase the probability of financial benefits and synergy effects for cross-border takeovers (Moeller & Schlingemann, 2005a). There is also a possibility that the international capital markets are not integrated which is often referred to as international segmented markets. This phenomenon means that investors across the world do not have the same access to raise capital, as well as the prices and premium and information within the markets differ (Berk & Demarzo, 2017). This could potentially mean that some investors, typically in developing countries have a disadvantage compared to others. The implication of this is that a domestic and foreign investor could have a dissimilar weighted average cost of capital WACC, and therefore value a takeover bid different.

Cross-border takeovers have qualities that domestic takeovers lack. For example, it makes possibilities regarding risk management, due to diversification of risk (Moeller & Schlingemann, 2005a). However, Moeller & Schlingemann found a negative relationship between global diversification and bidders stock return. Further, takeover legislation and regulations may differ, as well as operational legislation such as minimum wages, which affect the relative wealth gain between domestic and cross-border acquisitions (Goergen & Renneboog, 2004). These factors indicate that there are potential gains in acquiring a foreign firm. The attractiveness of a country for a foreign firm is according to Lall & Streeten (1976) the conditions of the country in terms of economic and political factors. In a similar way firms, that are globally diversified could reduce their risk diversification by acquiring a domestic target.

Besides the positive impact, there are also disadvantages with integrated capital markets regarding takeovers. The fact that the potential investment opportunities are raising, also means that it does so for all firms, which could create a more competitive market for corporate takeovers. When several players are striving to take over a company, their risk of an overpayment is likely to increase, potentially exceed the synergy effect associated with

the transaction (Moeller & Schlingemann, 2005a). Besides, if the cost of cross-border acquisitions is decreasing in emerging and not fully integrated markets, there is a possibility of an increase in non-efficient takeovers, that is based on hubris or agency problems. This could cause cultural conflicts and reduce return for the bidder's shareholder (Moeller & Schlingemann, 2005a). Further, Eckbo & Thornburn (2000) argues that political and legal processes could be a disadvantage for cross-border acquirers compared to domestic. Processes like governmental approval for cross-border takeovers before acquiring a firm could increase the cost of acquiring, as well as reduce the bargaining power if it is delaying the process.

Another factor that differs between domestic and cross-border acquisitions is that the two countries could have different tax levels. High tax level countries tend to allocate a higher frequency of foreign direct investment in which acquisitions stand for a substantial amount of money invested (Swenson, 1994). The reason for this is that cross-border acquires could take advantage of the tax differences, by offsetting costs (Manzon, et al., 1994; Auerbach & Reishus, 1986). The current corporate tax levels of Sweden 21,4% is in comparison to the rest of the world relatively low, the OECD average 2020 is 23,1% and North America is 26,7% (KPMG, u.d.). Sweden´s corporate tax level can be a factor that is contributing to creating unique conditions for the market of Swedish cross-border and domestic takeovers.

Besides, Sweden has generally a high concentration of ownership compared to other countries which are determined by homogenous shareholders. This could have implications for the takeover market, as studies show a positive correlation between high ownership concentration and short-term bidder return (Bhaumik & Selarka, 2012).

2.2.2 Ability to integrate two parties

The success of a takeover on an operational level depends on how well the two organizations adapt to each other, creating the desirable synergies that in most cases the takeover decision relies on (Vasilaki, et al., 2016). The management plays an important role in the operational adaptation and transition and is required to create good conditions regarding organizational/corporate cultures, structures, management systems, and processes to be able to create value from the take over (Vasilaki, et al., 2016). However, there are difficulties for the management when executing these procedures, particularly when it comes to cross-border acquisitions. The takeover will be perceived differently by individuals and groups since the two organizations have cultural distance, different corporate culture, strategic flexibility and knowledge during the integration of the take over (Vasilaki, et al.,

2016). This implies that firms who have cultural similarities tend to adopt and absorb attempts in strategic integration in a better way than firms who have a cultural distance between them (Cartwright, u.d.). Hence, a domestic takeover would have a potential advantage in the integration process.

When a firm acquires another there is often some sort of cultural distance between the two. Cross-border acquisitions, however, tend to have more of a cultural distance compared to domestic. Studies have shown that there is a negative correlation between cultural distance and takeover bidder performance, which is explained with the cost of integration (Stahl & Voigt, 2004). Although, the cross-border effect on the performance of a bidder´s stock may not always have an impact since regions differ around the world. European cultures may, for instance, differ from Asia´s but do not necessarily differ from Africa. This could be a factor that on an aggregated level when comparing the two groups, affect cross-border bidder's return more.

2.2.3 Overpayment

Diaz et.al (2013) describes the overpayment hypothesis, which suggests there is a relationship between the overpayment and negative effects on the bidder's shareholder return. This implies that when a firm overpays, the expected present value of the synergy effects of the takeover is too low relative to the payment, with a negative expected value as a result of the transaction (Diaz, et al., 2009). When two firms having competitive bidding, the firm that wins is likely the one who overestimate the value of the firm that is being targeted (Varaiya & Ferris, 1987). Cross-border takeovers as earlier mentioned, tends to perform worse than domestic takeover (Moeller, et al., 2004; Aw & Chatterjee, 2004). The fact that the cross-border tend to be subject to a lower CAR compared to a domestic acquirer, could mean that the cross-border takeovers more often overvalue the target, and therefore to a greater extend perform an overpayment. Some articles give support of such case where the authors argue that cross-border acquirers pay a higher premium than domestic (Seth, et al., 2002; Mateev & Andonov, 2018). The explanation could be that cross-border acquirers are less sensitive for overpayment, as well as differences in corporate governance structure (Seth, et al., 2002; Mateev & Andonov, 2018).

Earlier studies have tried to point out reasons why firms make an overpayment, which is higher than the synergies and therefore destroys value. There are among others three explanations of why firms take such decisions (Diaz, et al., 2013).

(1) Hybris, which refers to an overestimation of the future profits or benefits that come with the takeover. (2) Competition, due to other firms that also acquire the targeted company at the same time. (3) Agency problems, which refers to activities from the management, such as empire-building at the cost of the shareholder (Diaz, et al., 2013). Agency problems as described above may occur depending on the ownership of the management. If the CEO is a large stakeholder, the manager has more incentives to act in a way that benefits other shareholders rather than personal benefits (Berk & Demarzo, 2017). Moreover, mismanagement and later on a potential overpayment could also appear because of an unexperienced CEO or if the decision process is more likely to be overly centralized with a few key people involved.

2.2.4 Payment method and bidder performance

The payment method is a factor that former research has pointed out affecting the bidder's return around the takeover announcement (Moeller, et al., 2004). Earlier groundworks have described that stock as a payment method has performed significantly worse around the announcement, than those transactions that have been using cash (Danbolt, 2004; Cheng & Chan, 1995; Gregory & Donohoe, 2014). The authors argue that the usage of stock as payment has a negative signalling effect on the market. Generally, when the management of an acquiring firm views the firm´s stock as overvalued, they tend to choose stock as payment method. When it is perceived as undervalued, management tends to prefer cash. According to Gregory & Donohoe (2014) the targeted firm tends to not accept stock in higher frequency if the acquirer is a cross-border firm. Moreover, because cash tends to perform better than stock, and the fact that cross-border takeovers commonly use cash, it is important to control for payment method when evaluating bidder performance.

2.2.5 Size effect

In the article Moeller et. Al (2004), the authors argue that positive abnormal returns are positively correlated with smaller acquirers and that larger acquirers do not have the same positive return. Shareholders of a smaller firm earn two percentage higher returns (Moeller, et al., 2004). This theory can be seemed to be in line with the agency theory that states that smaller firms with homogenous ownership and control, may act in a more beneficial way for the shareholders than a larger complex firm. Furthermore, size matters when looking at the relative size of the bid value (Moeller, et al., 2004). Previous groundworks have found a positive relationship between the bidders return and relative size of the deal (Moeller, et al.,

2004; Asquith, et al., 1983). In Moeller, et al (2004) article, the positive relationship was found with an average relative size of 0,1185% in the dataset.

The relative size can be derived from the ratio of deal value- to market capitalization of the acquirer and the bigger the relative size is, the bigger the impact of the takeover (Fuller, et al., 2002). Moreover, the size of the bidder firm can affect the take-over process since larger firms do have regulatory issues and complex structures to handle which in turn can cause consequences for the return according to Moeller, et al., (2004) in terms of for instance transformation of a cross-border acquired firm. The theories above concerning relative size is also backed up by Hogholm (2016) and conveys that there is a positive relationship between return and relative size.

2.2.6 Industry relatedness

Lim & Lee (2016) conveys in a study conducted on data between 1985 and 2008 that industry relatedness is a crucial factor and that cross-border acquisitions with high relatedness tend to perform positive rather than non-related deals (Lim & Lee, 2016). Lim & Lee (2016) continue to argue that the perceived risk is lower for a related industry takeover due to knowledge and low level of information asymmetry and thus expect high levels of returns. Moreover, (Moeller, et al., 2004) argues that diversification comes with negative relationship to overall CAR performance.

Industries differ from each other in nature. Services firms are driven by human capital rather than manufacturing firms, mainly dependent on capital intensive machine works and facilities. Besides, various industries are more cyclical than others, which in turn would lead to separateness in valuation and performance. A takeover, regardless of the diversification level requires effective and smooth integration of resources and major differences and complexness between industries structure can affect the performance. Cefis & Rigamonti (2013) and Chatterjee, et al. (1992) are in line with previously stated paper and claim that if the acquisition is made within the same industry, the outcome tends to be more positive than if the companies did not operate in the same industry, because it is easier to identify and interpret the value of the firm during the due diligence process. Penrose (1959) and later research within a resource-based view deemed that is important to stick on existing resources and capabilities when expanding business (Cefis & Rigamonti, 2013).

2.3 Measure takeover performance

There is an ongoing debate within the discipline of economics on how the measurement of takeovers is best conducted (Olimpia, 2009; Moeller & Schlingemann, 2005a). However, there are some similarities between authors that have been publishing research on takeover performance based on market-related measures (Das & Kapil, 2012). Firms are organizations that have a purpose and goal, commonly by authors described to maximize the shareholder value (Frank et al., 2019; Berk & Demarzo, 2017). Therefore, market-related measures such as shareholder return are well-motivated as an indicator of the bidder's performance when investigating the differences in cross-border and domestic acquisitions.

The evaluation of the M&A based on market values is complex because of the influence of other factors. The factors referred to could be, among others, overall systematic risk, unexpected external events and abnormal returns, not correlated with the takeover itself. One commonly used methodology to isolate the impact of the M&A on a firm's market value is an event study approach (Das & Kapil, 2012). In this approach, an estimation period is used to estimate the normal behaviour of securities. The actual return of the stock, and the normal return, is then used to measure the excessive or abnormal return (AR) of a security-related to a specific event at a given time (MacKinlay, 1997). In this way, the performance of a specific event could be analyzed and evaluated based on the return of the securities. Moreover, MacKinlay (1997) conveys that to obtain theoretical insights about the AR and the characteristics of the event, it can be examined by doing cross-sectional regression models. These models from MacKinlay (1996) will later be presented in detail in the methodology section.

There are benefits associated with the use of market values compared to other methodology such as the usage of book values. One factor is that the calculations are forward-looking because of the usage of the present value of future cashflows estimating the share price and- or the cost of capital, depending on the available information (Berk & Demarzo, 2017). Another is that because of the competitiveness in the market there is no superior information between investors, given that all or almost all information is publicly available to the investors. In that case, the market is efficient, which means that the prices perfectly reflect the performance of the firm (Berk & Demarzo, 2017). For example, the market could have another valuation that differs from the acquirer regarding the value of the targeted firm. Or there could potentially be a future risk of miss management, integration failures et cetera. All available information will be taken into account and be reflected in the acquires share price, which with support of the efficient market hypothesis could be used to evaluate future performance of an acquisition (Berk & Demarzo, 2017). There are according to Naseer &

Tariq (2015) evidence that the market is efficient, or at least semi-efficient, which means that all public information is reflected in the prices. However, there are in most cases some market imperfections, in reality, affecting the stock prices, such as taxes, agency cost, and adverse selection, a classic economic theory first described by George A. Akerlof (Berk & Demarzo, 2017).

Despite the existence of market imperfections, the usage of stock prices is a well-established and accurate way of estimating performance in companies since securities are fairly priced (Richard, et al., 2009). The implication for this thesis is that the market valuation, expectations, and thus pricing, will be used to determine the acquisition's performance.

3 Methodology

3.1 Choice of methodology

The choice of methodology depends on the structure of the research question, purpose, and the information collection needed to fulfil the first two (Bryman & Bell, 2011). Further, the author's course of action, when handling the data is also a factor that affects the choice of methodology. The design of our study, especially regarding the formulation of the research questions, as well as the fulfilment of purpose, with a background of business administration economic methodology literature, implies that a quantitative research approach is well-motivated.

A quantitative method is characterized by a deductive approach and by using observed and gathered data, answer a research question or hypothesis (Bryman & Bell, 2011). The study aims to evaluate Swedish bidders' gains and if there is a difference in performance between cross-border and domestic takeovers. To be able to answer such a question, the quantitative data is in our case is based on historical stock market data.

Since there is a lot of existing research on acquisitions especially in the US market (see e.g. (Aw & Chatterjee, 2004; Swenson, 1994)), thus it can be seen as more of a replicating study in its design.

3.2 Research approach

Normally there is according to the literature in economic research methodology two different abstraction levels which the researcher could either apply separately or combined (Bryman & Bell, 2011). Deductive research approaches have already existing theories as a point of departure. This approach has a top-down structure formulating the research question, purpose and using data to evaluate and analyze the problem to be able to falsify or verify the theories (Bryman & Bell, 2011). Our study has influences of a deductive approach since economic theories such as the efficient market hypothesis (Berk & Demarzo, 2017) have influenced the process and formulation of the research question, purpose and hypothesis. These theories are later used to draw conclusions and analyze the empirical findings which are in line with the description of a deductive research approach.

An inductive approach uses a bottom-up structure, having the data collected as a point of departure. In this approach, the data is used to find common patterns, which could be used to build models and conclusions (Bryman & Bell, 2011). Further, the theoretical framework is built based on the empirical findings, which enables the study of a research object without theoretical support at the very beginning. This paper also has inductive influences since we have searched for further theoretical explanations where the existing literature failed to explain the empirical findings. When the findings are not in line with the existing theoretical framework, there is a need to broaden the theoretical framework to explain the phenomena that occur in the dataset.

The third commonly used approach is an abductive research approach also called an iterative approach. This could be described as a combination of the two earlier described approaches which implies that we have moved between the two abstraction levels during the research process (Bryman & Bell, 2011). Since the approach have elements of both inductive and deductive and are moving back and forth between those, it could be said that an abductive research approach is used in this paper.

3.3 Event study

Our valuation model is based on using market values when calculating the outcome of a takeover, which is in line with the literature on the M&A field (King, et al., 2008; Laamanen & Keil, 2008). We are using a simple event study approach when calculating the financial outcome of a takeover.

The argument behind the choice to use an event study approach is that it enables the measurement of the value of the firm due to a specific event (MacKinlay, 1997). This study relies on the assumption that there is rationality in the market, which means that prices reflect all available information and future expectations. The design of our study will follow MacKinlay´s, (1997) article, which is a guide for how to construct and carry out an event study within the econometrics field.

3.3.1 Estimating abnormal return

To be able to evaluate the impact of the acquisition given a specific time τ, abnormal return is used. τ =0 at announcement day, τ -1 and τ +1 equals the trading day before- and after announcement respectively.

The abnormal return is the actual return minus the normal return during the event period. Normal return in this context means the expected return without any special events during the event period. For a firm i and the event day τ the abnormal return is calculated with the following formula. (MacKinlay, 1997)

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau}|X_\tau)$$

Equation 1

$AR_{i\tau}$ is the abnormal return, $R_{i\tau}$ is the actual return and $\mathrm{E}(R_{i\tau}\lfloor X_\tau)$ is the normal or expected return for the period τ. There are two ways to estimate the normal return according to MacKinlay (1997). The constant mean return- and the market model. For this thesis, the market model is used, which is assuming a linear relationship between the return of the security i and the market return. Further, to be able to estimate how security normally behaves, an estimation period is needed. The estimation period and the event period have been separated with seven days to avoid that the acquisition has an impact on the normal return (MacKinlay, 1997). The estimation period length, from now on referred to as L_1, is set to 215 days.

With the previously presented parameters, the abnormal return could be calculated (MacKinlay, 1997). The following paragraphs are aimed to describe the design testing of our hypothesis, in which the abnormal returns are used.

3.3.2 Estimating the normal return with the market model

"The market model" is a statistical tool, which is used to relate the return of a stock, with the return of the whole market, so-called the market portfolio (MacKinlay, 1997). The definition of the market model is a linear equation, and for each stock i the market model is

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$
$$E(\varepsilon_{it} = 0) \qquad \text{var}(\varepsilon_{it}) = \sigma^2_{\varepsilon_i}$$

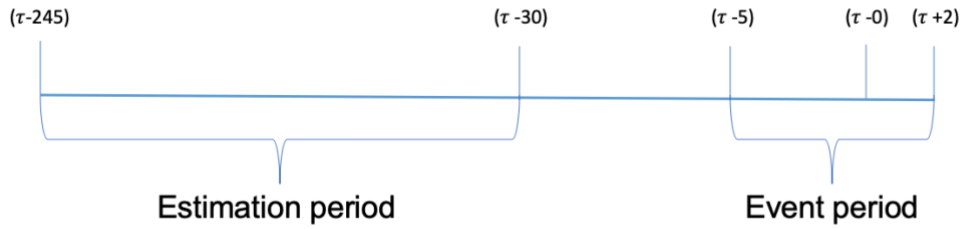
Equation 2

$R_{i\tau}$ is the return of a stock in the period τ and R_{mt} is the market portfolio return in the period τ. ε_{it} is the zero mean disturbance term. α_i $(intercept)$, β_i $(slope)$ and σ_ε^2 are the parameters in the market model which is calculated with the data in the estimation period (MacKinlay, 1997). As the market portfolio, the all-share OMX Stockholm index has been used in this thesis. We are aware of that the SP&500 or MSCI world index could potentially have been more representative of the market portfolio but due to the time of this thesis, it has been more accessible to use the OMX Stockholm all-share index, since all of the acquirer's stock have the same non-trading days. This, in turn, makes it easier to sort and work with the data. However, the chosen index is well diversified, and we argue that it is representative enough to been used as the market portfolio.

The timeline of our study contains three parts. (1) the estimation period L_1 which consists of 215 days, (2) a gap between the estimation period and the event period so we can eliminate the risk for correlation between estimate period and event period which is 25 days, and (3) the event period, which runs between five days prior the announcement until two days after.

Commonly when conducting event studies, one uses a short event period. Most often ranging within an interval of 2-5 days prior announcement and 1-5 days post announcement (Alexandridis, et al., 2017; Aw & Chatterjee, 2004; Mateev & Andonov, 2018; Moeller & Schlingemann, 2005a; Tao, et al., 2017). The fact that our time horizon is in line with existing literature on event study design justifies our choice. Further, the usage of five days prior announcement enables us to hedge for information leakage that according to MacKinlay (1997) can occur. And two days post-announcement is sufficient for a semi efficient market to adapt to the new information, since the market directly reflects all available information (Berk & Demarzo, 2017). Moreover, Kothari & Warner (1997) argues that it is hard to obtain an unbiased result over a long period event study that gives focus to the relationship between the sample mean cumulative abnormal return and the standard deviation, which together with the efficient market hypothesis gives a support of our choice of using a short event window.

Figure 1 - Event study timeline description



With the parameters from the market model, the estimation- and event period, we can calculate the Abnormal return for every day τ in the event period which later is used to measure the impact of the takeovers.

To reject our hypothesis, in the case where abnormal returns are equal to zero, the event period has no impact on the distribution of abnormal returns, means that there is an underlying assumption. This tells us that the abnormal returns should be evenly spread in a normal distribution, with a zero conditional mean and conditional variance. The following formula is used to calculate the Abnormal return variance. (MacKinlay, 1997)

$$\sigma^2(AR_{i\tau}) = \sigma^2_{\varepsilon_i} + \frac{1}{L_1}\left[1 + \frac{(R_{m\tau} - \hat{\mu}_m)^2}{\hat{\sigma}^{\,2}_{m}}\right].$$

Equation 3

The formula has two components, the disturbance variance from the market model estimation. As well as sampling error that adds more variance when calculating the α_i and β_i (MacKinlay, 1997). Since our estimation period is set to 215 days, the second part in the formula is close to 0 because of the $\frac{1}{L_1}$. Therefore, is this part of the equation is erased due to a long estimation period.

The next step is to aggregate the abnormal returns for each period τ and each security (MacKinlay, 1997). The following formula is used

$$\overline{AR}_\tau = \frac{1}{N}\sum_{i=1}^{N} AR_{i\tau}$$

Equation 4

N refers to the number of acquisitions that are part of the specific group being explored. The Abnormal return for each stock is summed up within each period τ, which adds up to the aggregated cumulative abnormal return for each τ. By multiplicate the abnormal returns with $\frac{1}{N}$ we get the sample aggregated abnormal returns for each period τ. (MacKinlay, 1997)

The sample abnormal return variance is calculated in the same way as follows.

$$\text{var}(\overline{AR}_\tau) = \frac{1}{N^2}\sum_{i=1}^{N}\sigma^2_{\varepsilon_i}.$$

Equation 5

Using the sample abnormal returns, we can aggregate the returns over the total event period, which is called the sample average cumulative abnormal return (CAR). This measure could be used to draw conclusions and assumptions on an overall level during the whole event period. The following formula is used to calculate the sample average aggregated CAR. (MacKinlay, 1997)

$$\overline{CAR}(\tau_1,\tau_2) = \sum_{\tau=\tau_1}^{\tau_2}\overline{AR}_\tau,$$

Equation 6

3.3.3 Testing significance and level of confidence

To be able to test the null hypothesis we also need the variance of the sample average CAR, which is summed up similarly as above with the following formula. (MacKinlay, 1997)

$$\text{var}(\overline{CAR}(\tau_1,\tau_2)) = \sum_{\tau=\tau_1}^{\tau_2}\text{var}\,(\overline{AR}_\tau).$$

Equation 7

The null hypothesis is now tested with the following formula (MacKinlay, 1997).

$$\theta_1 = \frac{\overline{CAR}(\tau_1,\tau_2)}{\text{var}(\overline{CAR}(\tau_1,\tau_2))^{1/2}} \sim N(0,1).$$

Equation 8

The results from the equation above test whether the sample average CAR is significantly different from zero or not. The results can be within different confidence intervals. A result

that is <1.645 indicates that there is a 95% confidence, and <1,29 indicates the confidence of 90%.

We will run multiple calculations to be able to answer the underlying research questions. First, we will test the overall dataset, to test whether the whole sample is significant or not, as well as if there was a negative or positive CAR. Later we divide the sample into the origin criteria, to calculate the CAR for cross-border and domestic takeover and test the significance of the results.

3.4 Regression model

McKinlay (1997) argues that an ordinary least square (OLS) regression analysis has to be carried out to obtain relationship and theoretical insights between AR and potential interpretive variables for an event study. This paper contains two multiple regressions with CAR as the dependent variable for our paper´s two event windows (-5,+2) and (-1,+1) and the aim is to find out whether the origin variable affects the AR or not. The OLS regression model is constructed as follows and we test for various variables impact.

One least square regression model:

$$CAR_\tau = \beta_0 + \beta_1 \times Domestic + \beta_2 \times Cash + \beta_3 \times Stock + \beta_4 \times Relative\ size + \beta_5 \times Market\ cap + \beta_6 \times Within\ industry$$

The independent variable origin works as a dummy variable. If it is a domestic takeover, the dummy equals 1 and 0 if it is a cross-border takeover. Further, the following control variables are included;

- A relative size which is obtained from the ratio of the deal size to bidder's market capitalization one-day prior announcement
- The natural logarithm of the bidder's market capitalization
- Payment method as a dummy variable for cash and stock
- Industry relatedness as a dummy variable for within or cross-industry

3.5 Data

3.5.1 Data collection

The data used in this paper is collected from secondary sources. In the very beginning of the thesis, a literature scanning was first conducted to be able to create a wide view of the topic. Further, to be able to analyze the data and draw a conclusion about how the various factors

of the takeover affect the outcome, a theoretical framework is built. The economic theories used in the theoretical framework, are chosen based on their relevance and ability to contribute to the research question. The data is mainly collected from peer-review scientific articles and conventional economic literature, which assures that the sources used are of high academic quality (Bryman & Bell, 2011).

The stock prices used to calculate the abnormal return are collected from the Thomson Reuters DataStream database. Information about the takeover that is needed regarding dates, deal size, targeted firm, the acquirer was collected from SP Capital IQ. Additionally, when first determined the whole sample, the screening function in SP Capital IQ was used to filter the total amount of takeovers that was completed within our limitations.

3.5.2 Limitations and data description

We have taken into account the following limitations.

- Takeovers completed between January 2000-2020
- The acquirer must be Swedish and listed
- The deal value must not be undisclosed
- Only takeovers of a majority stake
- Only deals displayed with market capitalization one day before the event
- Exclude PE-, investment group and real estate firms

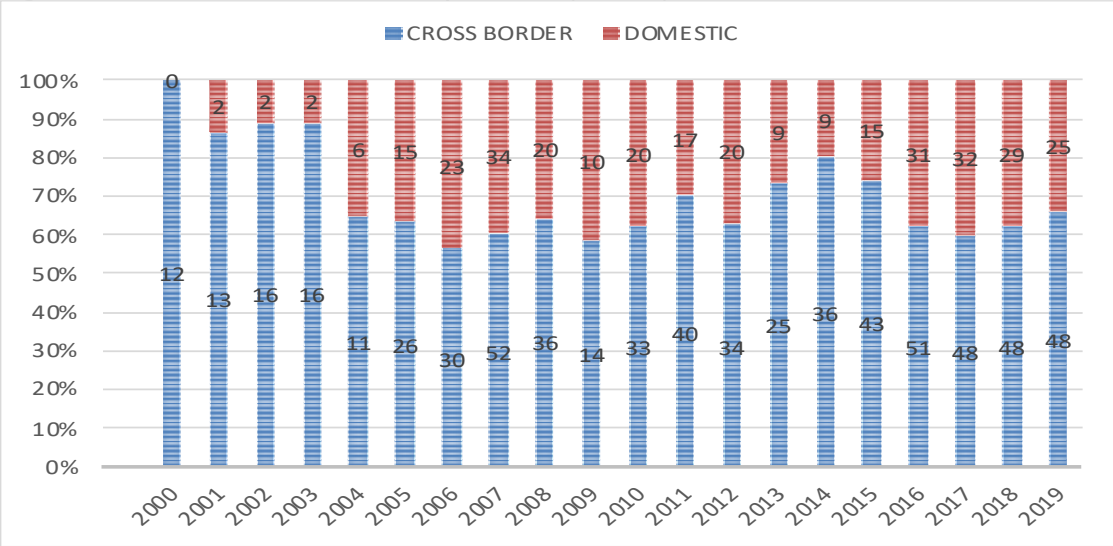
The timespan for this evidence report is set between the years 2000 and 2020. The frame is objectively chosen and aimed to cover data over different M&A waves and trends. Further, since the paper contains several limitations, a timespan with 20 years was necessary to obtain enough data that can fulfil the research question.

The choice of only evaluating publicly traded Swedish acquirers is necessary because of the design of the study and since we believe the use of stock prices is one of the better measurement tools available. Therefore, the stock prices are of fundamental value to be able to evaluate the outcome and implement an event study. Further, only majority takeovers are included with takeovers (acquiring >50% of the total firm) to have proportions that can fit our study. To control for size effect only deals with a public market capitalization of the bidder one day before the announcement and deal size that not were undisclosed had to be taken into account. These limitations were crucial for our regression model.

Private equity firms, investment groups, and real estate firms have been removed from the data set. The reason for this is that a takeover is a part of their fundamental business operations and growth. The motives for acquiring another firm differs in some regards compared to the other takeovers being completed in the market. We believe that because of the difference between the two kinds of takeovers, the outcome of these two could not be said to be representative to one and another and could therefore adversely affect the result.

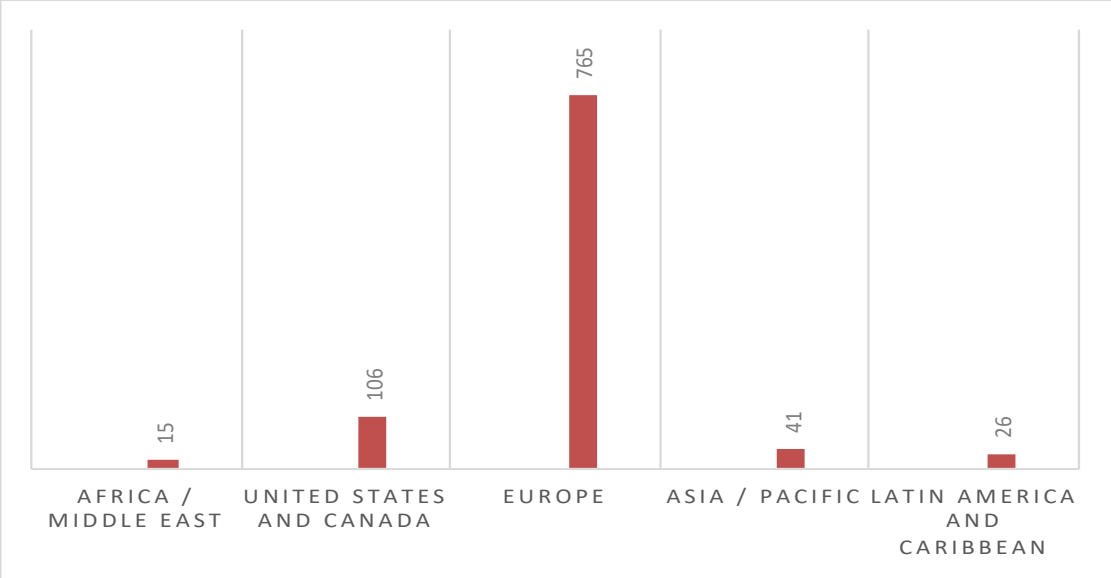
We are aware that these limitations potentially harm the generalizability since the sample represent a smaller proportion of the population. However, the results are becoming more robust and reliable regarding the measurement. The raw dataset included 2568 deals which later had to be narrowed down due to unavailable historical stock data of the bidder in the Thomson Reuters database which left us with a total dataset of 953 deals, divided into 632 cross-border and 321 domestic deals.

Figure 2 - Swedish listed firm's acquisitions (N=953)



From the given distribution, we can observe a pattern with cross-border takeovers in the majority over domestic takeovers. The most active year of transactions is 2007 where 86 deal was announced, and it differs from instance after the tech bubble in the early '00s. Further, takeover deals have accelerated throughout the years but fluctuate. From the figure above, deals during the latest five years have risen and are now in the same levels as before the financial crisis 2008-2009. Moreover, the ratio between cross-border and domestic acquisitions is again more even and not that big. It appears that Swedish firms are positive to enter the takeover market and that the proportion of domestic targets has increased.

Figure 3 - Distribution of Swedish listed firms' acquisitions targets regions



Europe is the dominant target region with 765 deals followed by the states with 106 deals and lastly three smaller regions with 41, 26 and 15 deals each.

3.5.3 Deal specific characteristics

Within the research on takeovers, different authors have been trying to explain what factors and how these affect shareholders return around the announcement of a takeover. According to former literature, these factors could affect the value of the bidder's shareholders. In our theoretical framework, we have been discussing the characteristics that will be used in this paper to control our results, as well as they potentially could add further explanations. The variables that we have chosen to include in our paper is the origin (cross-border or domestic), payment type, industry (cross-industry or within the industry), the market capitalization of the bidder, and relative size. These characteristics will be used in our cross-sectional regression model and are aimed to contribute to further explanations on how the abnormal returns relate to the characteristics of the deal.

In table 1, it shows our whole data set´s distribution of characteristics. We have chosen to divide the origin into cross-border and domestic. The payment type is divided into three categories cash Stock and combined. The industry classification is separated into cross-sectional and within the same industry. Further, the last three categories deal value market capitalization and relative size (Deal value divided by market capitalization) have been divided into 5 categories each, which is going from small-big. Table 2 and Table 3 are categorized in the same way but shows the descriptive sample categories for cross-border and domestic takeovers respectively. Table 2 will present cross-border takeovers, and table 3 will present domestic takeovers.

Table 1 - Deal specific characteristics overall in USDm

		Number	Percentage
All Deals		953	
Origin	Domestic	321	34%
	Cross-border	632	66%
Payment type	Cash	731	77%
	Stock	61	6%
	Combination	161	17%
Industry	Cross-industry	268	28%
	Within industry	685	72%
Deal value	Less Than 5 m	338	35%
	5 to 10 m	121	13%
	10 to 50 m	275	29%
	50 to 100 m	86	9%
	More than 100m	133	14%
Market Capitalization	Less than 150 m	327	34%
	150 to 500 m	176	18%
	500 to 1000 m	125	13%
	1 to 5 billion	199	21%
	More than 5 billion	126	13%
Relative size	0% to 0,5%	195	20%
	0,5% to 5%	353	37%
	5% to 20%	228	24%
	20% to 50%	101	11%
	More than 50%	76	8%

Table 2 - Deal specific characteristics Cross-border in USDm

		Number	Percentage
All Deals		632	
Payment type	Cash	532	84%
	Stock	19	3%
	Combination	81	13%
Industry	Cross-industry	161	25%
	Within industry	471	75%
Deal value	Less Than 5 m	159	25%
	5 to 10 m	85	13%
	10 to 50 m	212	34%
	50 to 100 m	65	10%
	More than 100m	111	18%
Market Capitalization	Less than 150 m	142	22%
	150 to 500 m	117	19%
	500 to 1000 m	92	15%
	1 to 5 billion	174	28%
	More than 5 billion	107	17%
Relative size	0% to 0,5%	144	23%
	0,5% to 5%	240	38%
	5% to 20%	146	23%
	20% to 50%	63	10%
	More than 50%	39	6%

Table 3 - Deal specific characteristics Domestic in USDm

		Number	Percentage
All Deals		321	
Payment type	Cash	199	62%
	Stock	42	13%
	Combination	80	25%
Industry	Cross-industry	107	33%
	Within industry	214	67%
Deal value	Less Than 5 m	179	56%
	7 to 10 m	36	11%
	12 to 50 m	63	20%
	52 to 100 m	21	7%
	More than 100m	22	7%
Market Capitalization	Less than 150 m	185	58%
	152 to 500 m	59	18%
	502 to 1000 m	33	10%
	3 to 5 billion	25	8%
	More than 5 billion	19	6%
Relative size	0% to 0,5%	51	16%
	0,5% to 5%	113	35%
	5% to 20%	82	26%
	20% to 50%	38	12%
	More than 50%	37	12%

3.6 Validity and reliability

Bryman & Bell (2011) argues that reliability and validity are two important concepts to take into account when doing research. Validity means if the measurement shows what you plan to show in advance and reliability, in turn, measures the authenticity of the paper.

Reliability is divided into three concepts. The first is called stability and determines whether the measure varies over time and if one result follows another result made on another sample. Furthermore, the next concept is about internal reliability. The measure talks about how well different observations are reliable and related to other observations. By being evident and structured through the approach used and in the report as a whole, we aim to make it easy to carry out a replica study. Bryman & Bell (2011) name this approach Test-retest. Our dataset contains takeover deals 20 years back in history and cover several M&A waves, and given our limitations, we have data that has not been selected based on subjective judgment.

The last measure is called Internal Assessment Reliability and is about consistency in subjective judgements and coding in data management. This thus becomes relevant in our quantitative study and evaluation. Databases from well-known firms such as Standard and Poor's is used to divide the acquired companies into different industries. Later on, during the analysis and when interpreting and drawing conclusions, subjective decisions will occur which are inevitable to reach originality.

Validity in this paper can be discussed based on face validity and criterion validity. Face validity tells how well the measure reflects the actual outcome and criterion validity of the outcome to be considered as correct as previous studies with the same method and aim (Bryman & Bell, 2011). By using only conventional models adjusted to a certain extent to fit the approach and aim, and replicating previous studies, we plan to reach a significantly high level of validity for the event study.

4 Empirical findings and analysis

In the next chapter, we present our empirical findings and the regression analysis, based on the average CAR. First, the results from the overall performance are presented and discussed, which respond to our question "Are Swedish acquisitions value-creating or not?". Next, we present and discuss cross-border takeovers and domestic takeover respectively. These results respond to our second research question "Do bidder´s gain differ between domestic and cross-border acquisitions?".

4.1 Swedish bidder´s takeover performance

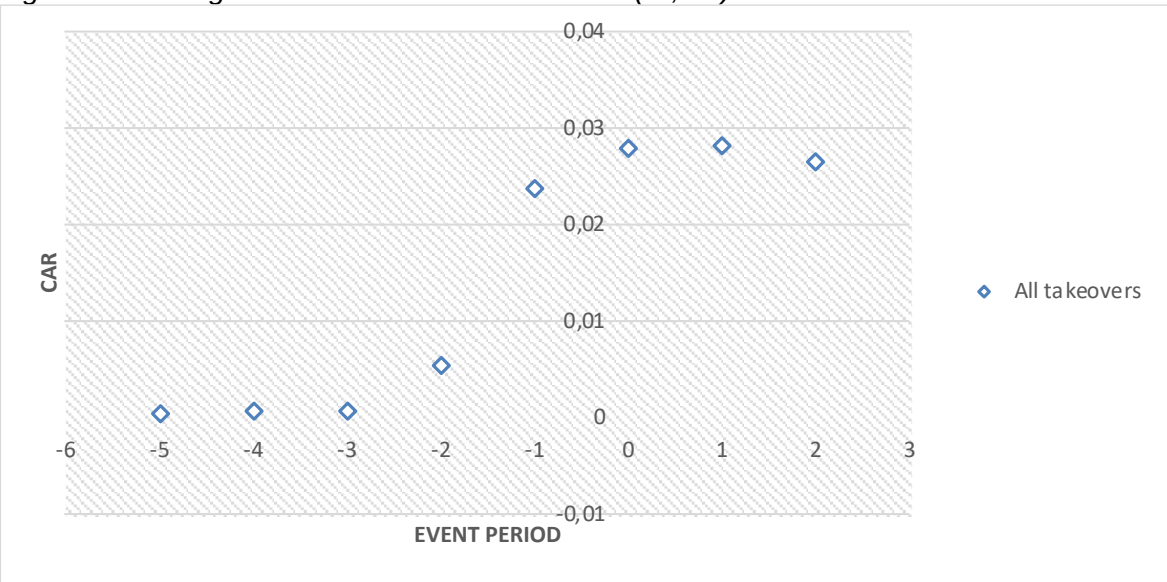
Table 4 shows a summary of the average CAR for our data sample. We present the result in two different announcement windows, which runs between five days prior the announcement and two days after announcement (τ-5 to τ+2), and one-day prior the announcement and one day after the announcement (τ -1 to τ +1). The result for all transactions in our dataset shows that the CAR for (τ-5 to τ+2) is 2,064% which is significant at a 1% level of confidence. The shorter window (τ-1 to τ+1) shows a CAR of 1,963%, which also is significant at a 1% level. Our result is in line with presently research in Alexandridis, et al. (2017) and Goergen & Renneboog, (2003) findings, which show a positive significant abnormal return for bidders shareholders from a takeover announcement.

Table 4 - Average Cumulative Abnormal Return for entire sample N=953. T-test is displayed for significance

Event window	**(-5,+2)**	**(-1,+1)**
Announcement bidder CAR (N=953)	0,026411	0,022981
T-Stat	10,443080***	14,849110***
*** at 1% level		
** at 5% level		

The timeline of CAR in figure 4 reveals a CAR that already before announcement accelerates. However, it wanes and starts to decrease already in τ+2.

Figure 4 - Average Cumulative Abnormal Return (-5, +2)



Below in table 6, we present the results of our cross-sectional regression model. The regression model relates the average CAR to different deal characteristics, earlier discussed in the theoretical framework and methodology chapter.

In table 6, the model generates highly significant and positive intercepts for CAR in both event windows. (τ-5 to τ+2) reveals a coefficient of 0,066 and (τ-1 to τ+1) a coefficient of 0,044. Furthermore, we discover dissimilarities between the two windows when looking at the origin and industry relatedness. In (τ-5 to τ+2), the origin variable for domestic acquisitions insignificantly generates a positive relationship of 0,0008 and in (τ-1 to τ+1), it generates an insignificant negative relationship. Industry rela dness with the measure using within the industry, reveals a significant negative relationship in period (τ-5 to τ +2) but an insignificant positive one in (τ-1 to τ+1). Payment type in both windows shows similar patterns and where the pure cash payment presents significant positive relationships. Size effect divided into relativeness and absolute size further shows consistent patterns across the windows. Relative size is positively related and absolute size is negatively related. Both with a high significance level in the two periods.

First, looking at figure 4, it seems to appear an information leakage which could explain the rise before the takeover announcement. According to the efficient market theory, prices should reflect all available information (Berk & Demarzo, 2017 (Campa & Hernando, 2004)). The movements in figure 4 are in line with the efficient market hypothesis since they do not

fluctuate after the up step and instead remain trading post announcement with the new existing information.

In table 4, we can see that the significant positive abnormal return emerges at announcement day and the day before. This is in line with the results of (Moeller & Schlingemann, 2005; Alexandridis, et al., 2017). The results indicate the existence of positive sample abnormal returns due to the announcement of a takeover that is significantly different from zero. Further, the regression model gives more support for our univariate t-test since the intercept indicates on a positive abnormal return of 6,6% (τ-5 to τ+2) and 4,4% (τ-1 to τ+1), given that all other variables are equal to zero.

However, as we have mentioned earlier, research within acquisitions is contradictory in the findings regarding the bidder's shareholder return. Several studies point out a direction that acquisitions would result in a negative abnormal return for the bidder's shareholder (Straub, 2007; Moeller, et al., 2005b; Moeller, et al., 2004; Boubaker & Hamza, 2014; Becher, 2000). A potential explanation of the differences between our study and former studies could be found in the content of the dataset. Many studies conducted in the takeover field examine bigger markets, such as the UK or US market. We have chosen to study the Swedish takeover market which has other characteristics, differently to other markets that have been researched in earlier studies. According to Bhaumik & Selarka (2012), there is a positive significant correlation between bidder return and concentration of ownership. Since Swedish firms generally have a high concentration of ownership, agency problem such as wasteful investments and overpayments could have been avoided for the deals in our data set to a greater extent. We believe this contributes and partly explain why the Swedish takeovers tend to create higher bidder gains, compared to other studies that evaluate acquirers in other countries.

Further, the deal-specific characteristics in table 1 show that the dataset contains a majority of deals where the acquirer´s market capitalization size have been in the lower segment <150 million. According to earlier studies, there is a negative relationship between the size of the acquirer´s and the bidder´s return (Moeller, et al., 2004). This finding is also supported in our regression analysis in table 6 where market cap size has a strong significant negative relationship to our average CAR. Further, the regression analysis in table 6 reveals that the relative size shows a highly significant and positive relationship to CAR. Again, this result is in line with existing groundworks examining the relative size effect (Asquith, et al., 1983; Fuller, et al., 2002; Hogholm, 2016). However, if the size- and relative size effect is

exhaustive to solely explain the differences between our overall significant positive return and other studies that have shown a negative abnormal return is hard to tell. However, our dataset distribution contains an average deal size of 14,86% which is higher than (Moeller, et al., 2004) 11,85%. This implies that our relative size effect has a bigger impact and therefore affect the result more positive.

Another theoretical explanation of the higher abnormal return for Swedish bidders could potentially be the integration of the two firms. There is evidence of a correlation between the ability of two firms to adapt to each other, and the probability of a positive outcome of a takeover (Vasilaki, et al., 2016). The Swedish corporate culture is generally known for collectivism, strong social contracts and flat organizational structures (Lubatkin, et al., 2005). These are characteristics that are different from most of the other countries, and potentially the Swedish corporate culture, management systems and structures have resources that enable a more sophisticated adoption to other cultures or structures.

Further, takeover- and operational legislation differ between countries, which could create differences in the relative wealth gain between acquirers depending on the circumstances (Goergen & Renneboog, 2004). Sweden has relatively high taxes and social fees compared to the rest of the world. Moreover, Eckbo & Thornburn (2000) argues that political and legal processes of the takeover could generate high costs and be time-consuming, which create disadvantages for cross-border takeovers. When looking at the geographical distribution of the Swedish takeovers in figure 2, we see that the majority of the takeovers is within the European borders. The European Union has international trade agreements and is subject to the same regulations which facilitate cross-border acquisitions. In comparison with bidders with zero or weak trade unions, this could be a factor that reduces some of the regulations and expenses, explaining some of our findings regarding the Swedish bidders' high CAR.

4.2 Bidder´s performance of Cross-border and domestic takeovers

When evaluating the bidder return of cross-border and domestic takeovers, we divide the sample into two groups. The cross-border takeovers consisted of 632 transactions and the domestic group 321 transactions. The CAR has been calculated separately for each group and table 5 shows the CAR and level of significance for the two event windows (τ-5 to τ+2) and (τ-1 to τ+1). In table 5, we can see that the cross-border takeover indicates of a CAR of 2,064% for the (τ-5 to τ+2), with a 1% level of confidence. The shorter window (τ-1 to τ+1) shows a cross-border bidder CAR of 1,963%, with a 1% level of confidence. The domestic bidder CAR in the event window (τ-5 to τ+2) shows 3,772%, with a 1% level of confidence.

For the shorter period (τ-1 to τ+1) the domestic bidder CAR shows 6,026%, also with a 1% level of confidence.

According to our results, for both domestic and cross-border takeovers, bidders shareholder gain a positive return around the announcement of the takeover. Further, the results show that domestic takeovers outperform cross-border takeovers in the (τ-5 to τ+2) period with 1,132%. For the shorter event window (τ-1 to τ+1), we once again see a higher CAR for the domestic with a difference of 4,063%. Our results indicate that the cross-border takeover bidders shareholder return is outperformed compared to domestic in both periods. However, the result needs to be controlled for other variables that potentially could explain the differences in CAR.

Table 5 - Average Cumulative Abnormal Return Domestic and Cross-border. N=953. T-test is displayed for significance

Event window	**(-5, +2)**	**(-1, +1)**
Cross-Border bidder Average CAR (n=632)	0,020641	0,019630
T-Stat	7,741130 ***	12,022690 ***
Domestic bidder Average CAR (n=321)	0,037724	0,060255
T-Stat	7,035890 ***	18,351441 ***
*** at 1% level		
** at 5% level		

Separating the timeline into domestic and cross-border, we can in figure 5 obtain similar movements as in figure 4. However, cross-border takeovers stay under the domestic takeover´s CAR during the complete event window.

Figure 5 - Average Cumulative Abnormal Return (-5, +2) Domestic and Cross-border

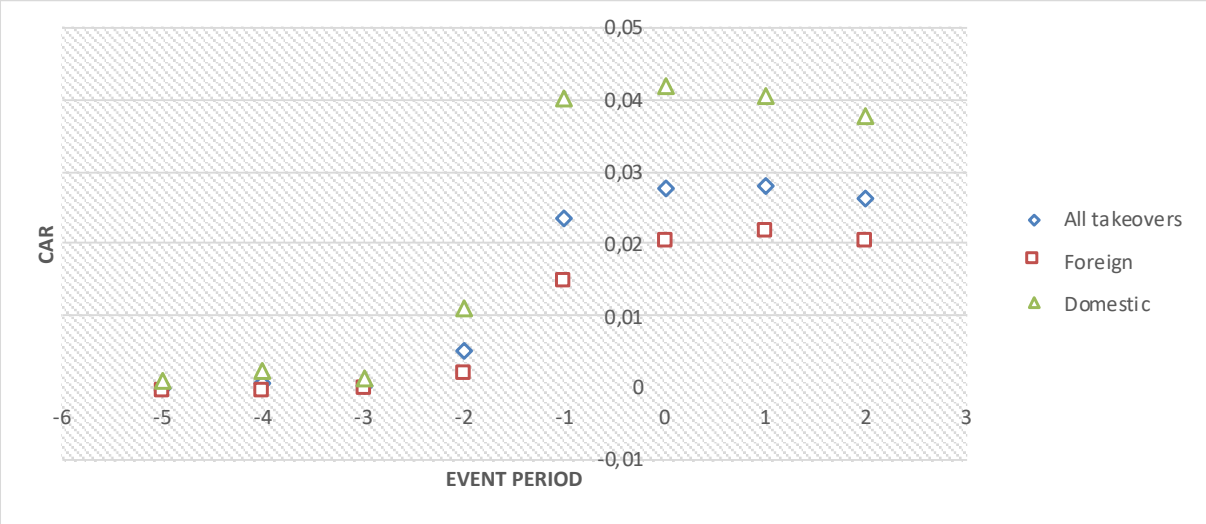


Table 6 - Multiple regression analysis

	CAR (-5,+2)		CAR (-1,+1)	
	β	T-Stat	β	T-Stat
Intercept	0,066161	5,038611***	0,044406	4,537880***
Domestic	0,000896	0,129476	-0,001927	-0,355988
Within industry	-0,008731	-1,301347*	0,000925	0,176164
Cash payment	0,017821	2,074475***	0,016021	2,384065***
Stock payment	-0,015444	-1,102575	-0,008936	-0,815523
Relative size	0,062453	6,601946***	0,056283	7,605851***
Market cap	-0,009275	-5,683150***	-0,006840	-5,357183***
Number of deals	953		953	
F-Value	19,704038		20,811957	
R-Square	0,111089		0,116607	

*** at 1% level
** at 5% level
* at 10% level

When looking at the regression outcome in table 6, the dummy variable for the domestic takeover doesn't generate significant results to be able to interpret the findings even if domestic targets outperform cross-borders according to our CAR calculations. However, in the following section, we discuss previous studies´ sample distributions compared with this paper´s and further use the control variables and other theoretical elements. This method enables us to separate and analyze the Swedish market with previous studies geographical scope concerning how Sweden´s characteristics differ to describe our findings.

Further, when analyzing our average CAR in relationship with the regression model in table 6, relative size could be an explanatory variable that results in a higher return for the domestic bidder shareholder. Our regression model shows a significant positive correlation between the CAR and the relative size between the deal and the bidder. This finding is in line with the literature on the takeover market (Asquith, et al., 1983; Moeller, et al., 2004; Fuller, et al., 2002). In the descriptive statistics in table 2 and 3, we can see that 24% of the domestic and 16% of the cross-border takeovers respectively have a relative size above 20% or more. Thus, the relative size may be a partial explanation of why we see that domestic acquisitions generate a higher return to the bidder's shareholders. The acquirer´s market capitalization distribution of the two set further clarifies the findings of domestic outperformance against cross-borders. Table 2 and 3 reveals that 58% of the acquirers in the domestic set belongs to the category "small size" since their market cap was one day before the takeover announcement below 150 million. The same for the category cross-border was only 22%. Table 6 states that market capitalization stands for a significant negative impact of -0,009 and -0,006 on the CAR. With previous author´s theories in mind (see e.g. Moeller et al. (2004), a large number of small size firms in our dataset conclude our finding.

Moreover, according to our regression analysis in table 6, the cross-industry takeovers in period (τ -5, τ +2) tend to have a positive relationship with bidder´s CAR. This discovery contradicts several previous groundworks that convey that cross-border acquisitions perform negatively to domestic ones. Lim & Lee (2016), Cefis & Rigamonti (2013) and Chatterjee, et al. (1992) argue all that industry relatedness is a crucial factor and that risk and asymmetry information issues can be avoided when doing a domestic takeover. Potentially, this could appear as it may be the Swedish market perceives industrial diversification as something appreciated and therefore trading the stock on the takeover information. The short-run model reveals a positive relationship to CAR but the significance, in this case, is too low. In the long-period model, the significance reaches 10% of confidence which could, therefore, serve as an indicator for the above statement. However, our finding cannot fully bridge industry relatedness to the cumulative abnormal returns.

When controlling the average CAR for the payment type, we see in our regression model that there was a significant correlation with cash as a method of payment. This was expected since earlier studies have come to the same conclusion (Danbolt, 2004; Cheng & Chan, 1995; Gregory & Donohoe, 2014). Further, according to Gregory & Donohoe (2014), cross-border takeovers tend to more often use cash as a payment type. This is also consistent with

our dataset as we can see in table 2 and 3 that 84% of the cross-border and 62% domestic takeover respectively used cash as a method of payment. The fact that cross-border takeovers are over-represented relative to domestic to use cash, and that our model shows a positive relationship between the usage of cash as a method of payment, related to the fact that cross-border generates a less positive average CAR, is a bit contradictory. We conclude that other factors such as market capitalization and relative size could potentially have a stronger effect, as well as there could be other theoretical explanations that could partly account for our findings.

Anyhow, we observe that our control variables have a high explanatory value of the results in our study which implies that the origin variable is not affecting the bidder´s return in the same way previous studies have been pointed out (Aw & Chatterjee, 2004; Tao, et al., 2017; Moeller & Schlingemann, 2005a). Moreover, the regression in Table 6 generates an R square that cannot explain all of the variances in the takeover return. This captures our attention to exhaustive the discussion and analyzes several other complementary theoretical explanations why Swedish cross-border bidders seem to perform better than cross-border bidders from other countries.

First, the cultural distance between a cross-border acquirer and the target is generally bigger than a domestic takeover. Other studies have argued that there is a negative correlation between cultural distance and the bidders return around announcement (Stahl & Voigt, 2004). The reason for this is that there is a higher cost of integration between two organizations with cultural distance. This factor could be a potential explanation of why the market tends to have a slightly less positive valuation of cross-border takeover acquirer relative to a domestic. However, as we see our results in our regression model, the results are contradictory compared to previous studies regarding the domestic and cross-border factors influence on the CAR (Moeller & Schlingemann, 2005a; Aw & Chatterjee, 2004). As we have been discussed earlier in the overall analysis of our dataset, the Swedish market has a corporate culture known for collectivism and strong social contract Lubatkin, et al. (2005), as well as a flat organizational structure, which could explain that the Swedish cross-border bidders gain a higher return compared to other countries.

According to (Moeller & Schlingemann, 2005), integrated capital markets could potentially increase the competitiveness on the market for corporate control. Further, this could increase the risk of overpayment. This is applicable for both domestic and cross-border takeovers and would affect the bidders short term return. However, there is reason to believe that cross-

border takeovers are subject to this phenomenon more often. There is earlier research arguing that cross-border takeovers pay a higher premium on an aggregated level compared to domestic takeovers (Seth, et al., 2002; Mateev & Andonov, 2018). This could support such an argument. Contrary, integrated capital markets also expand the potential investment opportunities, which could increase the potential of obtaining financial benefits such as synergy effects from cross-border takeovers. Further, if the market for corporate control is less competitive due to not integrated capital- and slack in emerging markets, according to Moeller & Schlingemann (2005), there could be an increased chance of non-efficient takeovers based on agency problems or hubris. When we analyze figure 2, we see that the Swedish cross-border takeovers in our dataset have been mostly within the European border. This implies that a large majority of the takeovers were between countries that have integrated capital markets. This may be a factor that differs from previous studies. Potentially, Swedish companies tend to buy other foreign companies within Europe to a greater extent. This in turns could lead to reduced agency costs and more successful synergy effects compared to cross-border bidders in other countries.

Moeller & Schlingemann (2005) argues that cross-border takeovers should enable acquirers a well-diversified risk portfolio. Nevertheless, they also convey that diversification does not have a positive relation to abnormal returns after a takeover announcement. This applies to both the origin and industry relatedness factor. However, it is further not stated how much a risk diversification comes with an increase of operational expenses which could be critical in the evaluation. Markets and prerequisites differ from each other. Sweden is a minor market with a small currency and is dependent on a global economy. It is by definition wealth gaining as a Swedish firm to organize diversified in several terms such as geographically to minimalize risk which could describe why diversification seems to be a more critical factor than other markets and countries.

Moreover, according to KPMG (u.d), Sweden has a relatively low corporate tax rate and can, therefore, distinctively benefit from a cross-border acquisition according to theories from (Auerbach & Reishus, 1986). Lower tax rates create by definition higher earnings after tax which will affect shareholders of firms acquiring in Sweden positively.

To summarize our analysis, we have found that domestic takeovers outperform cross-border takeovers regarding the average CAR. However, when controlling for other variables the origin variable is non-significant. Still, our findings show a higher sample CAR for the domestic bidders' shareholders, which is in line with the majority of the existing literature.

Moreover, this analysis has not discussed elements that are linked to the behaviours of the individual investor. We cannot, for instance, exclude market movements affected by short-period bullish or bear trends in specific industries which are not covered in this paper. Though this chapter we have been discussing how the various factors affect and relate to the average CAR for both types of takeovers. Further, we have been examined various characteristics and factors that could be exclusive for the Swedish market. Our analyze is that there is a reason to believe that our regression model does not explain all the variance which implies that there could be a difference between the two. The bidder return difference between domestic and cross-border takeovers in Sweden could potentially be described from the characteristics of the two types and not depending on if they are domestics or cross-borders. Hence, with previous groundworks in mind and the distribution of our dataset, there is a reason to believe when evaluating the Swedish market that the two groups tend to have certain characteristics. These characteristics also seem to differ between countries which creates differences in the average cumulative abnormal return.

5 Conclusions

In this paper we have conducted an event study to examine whether Swedish bidders gain a positive return after a takeover announcement. Further, we tested if there is a difference for bidder's shareholders depending on if the target is domestic or cross-border. The raw dataset first contained 2568 deals which later was narrowed down to fulfil our limitations and design of the study. The final dataset contained 953 deals between the years 2000 and 2020, where 632 was cross-border and 321 domestics. The fact that we have been excluding 60% of the total amount of takeover during the period, means that the generalizability of the study is reduced. However, we argue that our result has a reasonable generalization value since a substantial proportion of the population still is included in our dataset. Our empirical findings showed an overall significant positive CAR of 2,6% (τ -5 to τ +2) and 2,3% (τ -1 to τ +1) for Swedish bidders. Moreover, the results indicated that the domestic takeovers outperform cross-border takeovers with 1,13% (τ -5, τ +2) and 4% (τ -1, τ +1).
When controlling for other variables, the results remain robust for the overall performance, but for the origin, the regression shows a non-significant result. Our analysis of the overall results shows that the characteristics of the Swedish bidders differ compared to bidders from other countries, which could explain the contradiction of our result with previous studies. A high concentration of ownership, legalizations, small market capitalization, high relative deal size, and management structure influenced by collectivism and strong social contract are factors we found, which could create a unique condition for Swedish bidders to gain from a takeover.

In our analysis of the cross-border and domestic takeovers, we found that earlier theoretical explanations which we used as control variables affect the bidder's return. However, we have also been discussing other theoretical explanations that could further contribute to exhaustive the analysis. Both domestic and cross-border takeovers gained an average significant positive bidder return around the announcement. The cross-border takeover gained 2,1% (τ -5 to τ +2) and 1,96% (τ -1 to τ +1) and domestic 3,8% (τ -5 to τ +2), 6% (τ -1 to τ +1). Our evidence shows that the characteristics of the deals such as relative deal size, market capitalization and payment method have a high explanatory value. Moreover, the majority of the studies prove that domestic takeovers gain higher return compared to cross-border takeovers (Straub, 2007; Chatterjee, et al., 1992; Moeller & Schlingemann, 2005a). However, in our analysis, we have been discussing that the Swedish market has other characteristics, not covered in our regression model, such as once again management structure, corporate tax rate, diversification precipitation, cultural distance and integration of capital markets, which could affect the performance and therefore explain our result. Previous papers have shown a negative relationship between CAR and a takeover. Although our result is insignificantly to fully explain the relationship between the origin and CAR, it contradicts earlier studies within the area. Sweden has characteristics, dissimilar to other markets that affect Swedish bidders return differently. Moreover, the distribution of these characteristics may also differ between countries and therefore serve as evidence to this result.

As a conclusion, we found a significant overall positive return responding to our first research question. Further, we cannot conclude that there is a significant difference in bidders' return between domestic and cross-border targets as an answer to our second question.

5.1 Contributions and suggestions for future research

We have contributed with one of the first researches of Swedish bidders' stock return on a takeover announcement. However, we have not been able to generate a significant result on the cross-border and domestic takeover gains for the bidders. We would find it interesting that future replicating studies in the subject include more elements to gain a significant result and fully exhaust the phenomenon. We have identified several factors that could potentially be unique for the Swedish takeover market. These factors could be used as control variables, and potentially further help explain the Swedish cross-border and domestic bidder return.

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