

Master's Thesis

The Impact of Mergers and Acquisitions on Acquirers' Financial Performance: Evidence from Nordic Markets

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ABSTRACT

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Mergers and acquisitions (M&As) are arguably vital events for companies and the economy in general. The global M&A market has grown tremendously over the last few decades. Despite a substantial amount of research, the evidence on the benefits of M&As to acquirers' is not completely clear. The purpose of this thesis is to examine the M&A phenomenon in depth and to provide valuable information from the perspective of less studied but growing Nordic M&A markets. For this purpose, we examine the short-term stock price reactions of Nordic acquirers to their M&A announcements and the impact of M&As on their long-term accounting-based performance. In addition, we analyze whether these performance metrics are sensitive to different deal characteristics. The final sample consists of 241 M&A transactions made by Nordic listed companies in 2000–2015. The short-term window event study method is used to examine the share price reaction on and around the deal announcement day, and the accounting study method is used to examine the long-term accounting-based performance.

The results show that M&A announcements cause a significantly positive stock price reaction for the acquiring firms in Nordic markets. The results of the accounting study show a significant decline in the accounting-based performance following the M&A transactions. The results weakly support that the decline in the long-term accounting performance is lower in M&A transactions paid in cash compared to deals paid in shares or a combination of cash and shares. Otherwise, the results do not show significant differences in stock or accounting-based reactions between different deal characteristics. Significantly positive stock price reactions indicate that the market viewed M&A transactions as value-creating events. However, market expectations were not reflected in the long-term accounting-based performance improvements of the acquirers. This indicates that either market participants failed in their evaluations of potential synergies or the acquirer companies were unable to realize those synergies.

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Fuusiot ja yrityskaupat ovat kiistatta elintärkeitä tapahtumia sekä yrityksille että taloudelle yleisesti. Maailmanlaajuiset yritysjärjestelymarkkinat ovat kasvaneet valtavasti viime vuosikymmenien aikana. Aihealueen suuresta tutkimusmäärästä huolimatta aiemmat tutkimukset eivät ole osoittaneet selkeitä löydöksiä yrityskauppojen hyödyistä yritysostajille. Tämän tutkielman tarkoituksena on tutkia yritysjärjestelyjen ilmiötä syvällisesti ja tarjota arvokasta tietoa vähemmän tutkituilta, mutta kasvavilta Pohjoismaiden yritysjärjestelymarkkinoilta. Tätä varten tutkitaan yritysostajien lyhyen aikavälin osakekurssireaktiota ostotarjouksien julkistamiseen sekä yrityskauppojen vaikutusta ostajan pitkän aikavälin kirjanpitolohjaiseen suorituskykyyn. Lisäksi tutkitaan, onko yrityskauppojen erilaisilla ominaispiirteillä vaikutuksia kyseisiin suorituskykykymittareihin. Tutkimuksen aineisto koostuu 241 pohjoismaisten pörssiyritysten yrityskaupasta vuosilta 2000–2015. Osakekurssireaktiota tutkitaan tapahtumatutkimusmenetelmän avulla. Kirjanpitolohjaisen suorituskyvyn kehittymistä tutkitaan vertaamalla suorituskykykymittareiden arvoja ennen ja jälkeen yrityskaupan.

Tulokset osoittavat, että ostotarjouksien julkistamiset aiheuttavat tilastollisesti merkitsevän positiivisen osakekurssireaktion pohjoismaisille yritysostajille, mutta yrityskauppojen vaikutus ostajien pitkän aikavälin kirjanpitolohjaiseen suorituskykyyn on puolestaan negatiivinen tilastollisesti merkitsevällä tasolla. Tulokset osoittavat heikkoja viitteitä, että kirjanpitolohjaisen suorituskyvyn heikkeneminen on maltillisempaa käteisellä maksetuilla yrityskaupoilla verrattuna osakkeilla tai käteisen ja osakkeiden yhdistelmällä maksettuihin kauppoihin. Muilta osin tulokset eivät osoittaneet merkittäviä eroja kurssireaktioissa tai kirjanpitolohjaisen suorituskyvyn kehittämisessä yrityskauppojen eri ominaispiirteiden välillä. Positiiviset kurssireaktiot kertovat, että markkinat näkivät yrityskaupat arvoa luovina tapahtumina. Markkinoiden odotukset eivät kuitenkaan heijastuneet ostajien kirjanpitolohjaisen suorituskyvyn kehittymiseen. Tämä viittaa siihen, että joko markkinat epäonnistuivat arvioissaan kauppojen potentiaalisista synergioista tai yritysostajat eivät onnistuneet toimissaan saavuttamaan potentiaalisia synergioita.

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1 INTRODUCTION

This first section introduces the topic of the study. It describes the research background and motivation for this thesis and sets the research objective and research questions. In addition, we briefly present the methodology, data, and limitations of the research. And finally, it illustrates the structure of the study.

The basic rule in business is to either grow or die. Growing firms are taking market share from rivals, generate economic benefits, and create gains for shareholders. Firms that do not grow have a tendency to stagnate, lose market share and clients, and eventually destroy the wealth of their shareholders. Mergers and acquisitions (M&As) have a crucial part on both sides of this cycle. M&As provide rapid growth opportunities, reward business owners for their contributions, and ensure that weaker firms are more rapidly swallowed from the market. M&As are a crucial component of a well-functioning economy and, above all, an important way for businesses to generate returns to investors and owners. (Sherman and Hart 2006) According to Fuller, Netter, and Stegemoller (2002), M&As are among the most crucial events in corporate finance for companies and for the economy in general.

1.1 Research background and motivation

The M&A market has undergone a massive boom over the last few decades, globalization being the main driver of this growth. More integrated and liberalized global markets with lowered trade restrictions and entry barriers have opened a broad spectrum of opportunities for companies. On the other hand, the level of competition has risen to a whole new degree, which has increased the pressure on companies to constantly grow to remain competitive. Thanos and Papadakis (2012) state that M&As are arguably the most common form of growth for companies.

We can observe the significant growth of M&A activity in Figure 1, which shows the total number and value of M&A transactions worldwide from 1985 to 2019. It is a well-known and researched phenomenon that M&As tend to occur in waves that peak just before economic recessions. We can see from the graph that the burst of the dot.com bubble ended the so-called fifth M&A wave in the early 2000s. The fifth wave was a truly international one, as M&A activity increased remarkably in Europe, Asia, as well as in Central and South America, in addition to the United States (Gaughan 2015). The M&A market recovered fairly quickly from the dot.com bubble burst and reached new records for the total value and

number of transactions in 2007, just before the financial crisis. This time, especially in Europe, the recovery from the financial crisis was more sluggish, mainly due to the Greek debt problem in 2009, which later escalated into the European debt crisis.

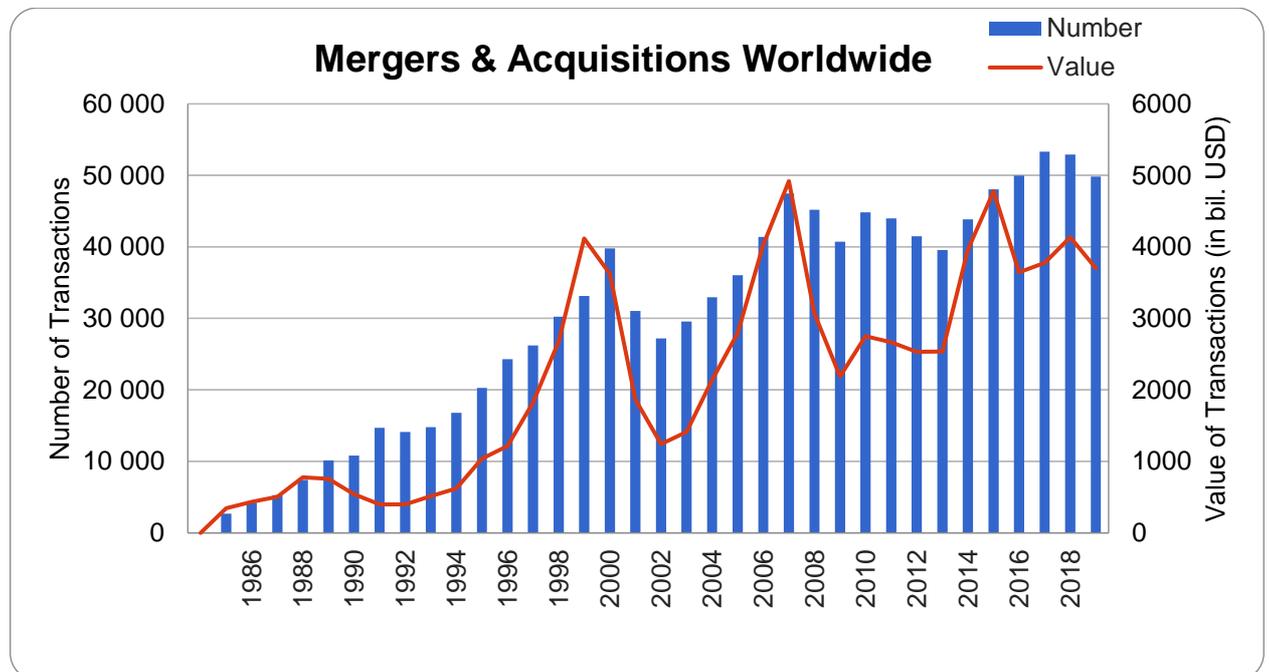


Figure 1: Value and number of worldwide M&A transactions (Institute for Mergers, Acquisitions and Alliances 2020)

Considering all the previous setbacks, the challenging regulatory environment in the M&A market, and more recent incidents behind rising uncertainty, such as Brexit, tensions between the United States and China, Russia-West tensions, trade wars, and nuclear programs of North Korea and Iran, M&A activity has remained relatively high. At the end of 2019, the total value of transactions was \$3701 billion, while the total number of transactions was 49 849, which is higher than the peak just before the financial crisis. One of the main factors influencing the economy and the M&A activity in 2020 has been the rapid spread of COVID-19. While it is difficult to predict exactly how the COVID-19 will affect M&A activity in the long-term, its significant short-term effects are already evident. However, even if the number of M&As decreases in the next few years, it is certain that this strategy will remain extremely important for numerous corporations.

M&A performance is a theme that has been thoroughly addressed in the M&A literature since the 1960s. (Das and Kapil 2012). The huge rise in the total value and number of M&A transactions has driven even more interest towards this phenomenon among researchers

from various fields, such as finance, organizational behavior, economics, accounting, and strategic management. Especially the impact of M&As on company performance has been under survey. Researchers have typically examined the stock price reactions of companies involved in M&As around the deal announcements, post-M&A accounting-based operating performance improvements, and the impact of different characteristics of the deal on these performance metrics.

One of the lasting paradoxes associated with the activity in the M&A markets has been the increased tendency of firms and managers to conduct M&As despite ample findings of the poor performance of the acquirers following M&As. One explanation for this is that the current knowledge and understanding of various stages of the complex phenomenon of M&As might be insufficient. For example, managers may perceive M&As as a good growth option at the pre-M&A stage, but the implementation is poor at the post-M&A stage. (Weber, Tarba and Öberg 2014) Despite the popularity and immense amount of research, there are still some issues on which the existing M&A literature is not unanimous, and we need more research to obtain a more comprehensive understanding of this important and complex phenomenon. The objective of this thesis is to provide the reader with valuable information about this phenomenon and to examine the topic from the perspective of less studied but growing Nordic M&A markets.

Evidence of comprehensive summaries of previous studies shows that the combined returns for bidder and target shareholders are positive at the announcement of takeovers. Target company shareholders earn significant short-term returns following a takeover and gain a major part of the combined gains. (Jensen and Ruback 1983; Jarrell, Brickley and Netter 1988; Andrade, Mitchell and Stafford 2001; Bruner 2002; Martynova and Renneboog 2008) When meta-analyses based on prior empirical studies by King, Dalton, Daily, and Covin (2004) and Datta (1992) support these findings, the evidence is rather clear that value is created at the deal announcements and the target shareholders experience short-term benefits from takeovers.

However, the evidence is less clear about the benefits for the acquiring companies and their shareholders. This gives a great motivation to explore the topic further, and therefore this thesis approaches the topic from the perspective of acquiring companies. Bruner (2002) showed that the findings of bidder shareholder returns from 41 studies he reviewed distribute rather evenly: a third of the studies report value creation, one-third report destruction of value, while one-third report value conservation. Martynova and Renneboog

(2008) also reported that the evidence from 60 prior studies they reviewed is mixed. In their comprehensive summary of previous studies, Tuch and O'Sullivan (2007) concluded that, in the short-term, M&As have at best an insignificant effect on the wealth of the acquiring company's shareholders, while long-run returns are overwhelmingly negative.

Findings on the long-term post-M&A accounting-based performance improvements of bidder companies are also rather conflicting. Some of the previous papers have reported a significant decline in accounting-based performance following a takeover (Dickerson, Gibson and Tsakalotos 1997; Yeh and Hoshino 2002), on the other hand, others have documented significant improvements in post-M&A operating performance (Healy, Palepu and Ruback 1992; Rahman and Limmack 2004; Heron and Lie 2002; Powell and Stark 2005), while for example, Ghosh (2001) reported statistically insignificant changes in operating performance following M&As. Contradictory findings are confirmed by Tuch and O'Sullivan (2007), who showed that the evidence from previous studies that employed accounting-based performance measures is contradictory.

The relatively conflicting evidence on acquirers' post-M&A performance has motivated researchers to examine whether the performance metrics are sensitive to various types of deal-level characteristics. Some of the most commonly studied factors have been the geographical location of the target firm in relation to the acquirer (domestic versus cross-border deals), means of payment (cash, stock, or hybrid), and industry relatedness between the target and the acquirer (related versus unrelated deals). Most of the previous evidence seems to suggest that cash offers often lead to superior post-M&A performance compared to other forms of payment (Tuch and O'Sullivan 2007; Ghosh 2001), domestic M&As perform better than cross-border M&As (Conn, Cosh, Guest and Hughes 2005; Moeller and Schlingemann 2005), and performance in deals between companies with related lines of business is superior compared to unrelated acquisitions (Martynova and Renneboog 2008; Bruner 2002). However, previous empirical evidence of the impact of these characteristics is not completely unanimous. In their notable research, King et al. (2004) showed that characteristics, such as the form of payment, industry relatedness, and prior acquisition experience have no impact on the post-M&A performance. Tuch and O'Sullivan (2007) concluded that the evidence from prior research on the benefits of related acquisitions is mixed. According to Martynova and Renneboog (2008), based on the papers they reviewed, US studies unanimously agree that M&As paid in cash outperformed those paid in equity and yield better returns to the bidder shareholders. However, the European studies they reviewed provide somewhat opposite results.

Das and Kapil (2012) argue that the academic community is not unanimous on whether takeovers provide any real benefits to bidder corporations. Meckl and Röhrle (2016) state that the results of their meta-analysis of more recent studies confirm the findings from prior studies that generally takeovers do not have a positive effect on the performance of the acquiring firm. King et al. (2004) found that takeovers either have an insignificant or modest negative impact on the financial performance of the acquirer. Yet, M&A activity has been booming, which raises questions about the motives behind M&A transactions or possible deficiencies in previous research.

Previous empirical research is still mainly focused on either the US or the UK market. Growing M&A activity in Europe has to some extent increased the volume of research examining the Continental European M&A market. However, the academic field has given even less attention to the Nordic M&A market, even though M&A activity has grown significantly also in the Nordic region (Segerstrom 2018). In 2019, more than 1000 M&A transactions worth of €77 billion were made in the Nordic region (Pedersen 2020). The contradictory findings of previous studies and the lack of research from the Nordic region are relevant reasons to investigate the topic more from the perspective of Nordic acquiring firms.

1.2 Research objectives and questions

The purpose of this thesis is to examine the short-term stock price reactions of Nordic acquiring companies following their bid announcements, and changes in their long-term accounting-based performance after the takeovers. If we find significant impacts, we further analyze how some of the most commonly studied deal characteristics affect these performance metrics by comparing whether the performance differs significantly between different characteristics of the deal. Based on the theoretical background and previous M&A research the following research questions are formed:

- *Do M&A announcements cause a significant stock price reaction for the acquiring firms in Nordic markets?*
- *Do M&As have a significant impact on the long-term accounting-based performance of Nordic acquirers?*
- *Is there a significant difference in stock or accounting-based reaction between domestic and cross-border deals, related and unrelated deals, and transactions paid in cash, stock, or a combination of cash and stock?*

1.3 Research methods, data, and limitations

The empirical research of this thesis is conducted as a quantitative study. The short-term window event study method is used to examine the share price reaction of Nordic acquiring companies on and around the deal announcement day, and the accounting study method is used to examine the changes in long-term accounting-based performance. These two are the most commonly used methods to study the short- and long-term impacts of M&As (Zollo and Meier 2008; Cording, Christmann and Weigelt 2010). The impact of different deal characteristics is examined by dividing the sample into sub-samples and examining the performance results in different categories.

The data for the research covers M&As made by Nordic companies, announced and completed between 2000 and 2015. Due to lack of data, Iceland is excluded from the study, and in this thesis, the Nordic region countries comprise of Denmark, Norway, Sweden, and Finland. The sample consists only of M&As made by publicly listed firms, as the stock and accounting information needed for the empirical study are often unavailable or incomplete for private companies. In addition, the sample includes only deals with a transaction value of at least one million euros and in which the bidder acquired 100% of the target company's shares. In this way, we can expect the M&A transaction to have a sufficiently significant impact on the value and operations of the bidder company. In order to prevent any possible effects of confounding events, M&A transactions are excluded from the sample if the acquirer had been involved in any other M&As within three years after completion of the deal.

1.4 Structure of the study

This thesis is structured into six sections. Section 1 offers a general introduction and overview of the study. It describes the economic importance of M&As, research background and motivation, research objective, research questions, and briefly present the methodology, data, and limitations of the research. Section 2 presents the theoretical background of M&As by first describing the basic forms of acquisitions, different types of M&As, and various stages of the M&A process. Next, it presents the historical merger waves and the theories behind them. Finally, it presents the theories of M&A motives. Section 3 describes the main findings from previous studies. Section 4 presents the data and methodological approach used in the empirical analysis of the thesis. In addition, it describes the formation of hypotheses. Section 5 reports and interprets the results of the

study. Finally, Section 6 summarizes the whole thesis, draws conclusions, and provides ideas for future research possibilities.

2 THEORETICAL BACKGROUND OF MERGERS AND ACQUISITIONS

Before analyzing the short-term stock-market-based and the long-term accounting-based performance of Nordic acquirers, we look over the theoretical background of M&As to gain a better understanding of the underlying dynamics of these transactions. Throughout this study, different terms such as takeover, acquisition, and merger are used to refer to a transaction in which one firm called acquirer, buyer or bidder intends to purchase control of another firm called a target. Gaughan (2015) argues that some of the terms in the M&A literature are occasionally used interchangeably. On a general level, the difference in meaning between the terms may not seem important, because the end result is typically the same: two or more firms that used to have separate ownership are now operating under the same roof, often trying to achieve some financial or strategic goal. However, depending on the type of the transaction, the tax, financial, strategic, and cultural impacts of the deal may differ significantly. (Sherman and Hart 2006) In order to obtain a better overall understanding of this complex phenomenon, it is important to understand the differences between the terms, and in this section, we define some of the key terminologies. We begin the section by describing alternative forms of acquisitions and different types of M&As. Then, we discuss the various stages of the M&A process and present an integrated model for value creation in the M&A process. Next, we present the historical mergers waves and the theories behind them. And finally, we discuss the theories of M&A motives.

2.1 Basic forms of acquisitions and key terminology

In the widest context, corporate operations involving contraction or expansion of a company's activities or changes in its financial structure or assets are known as corporate restructuring (Gitman 2009). Khan and Jain (2007) state that M&As are some of the most common forms of corporate restructuring. According to Ross, Westerfield, and Jaffe (2013), acquisitions have three basic forms:

- Merger or consolidation.
- Acquisition of assets.
- Acquisition of stock.

2.1.1 Mergers and consolidations

A merger is defined as a combination of two or more enterprises in which the purchasing firm absorbs the assets and liabilities of the selling enterprise(s). After the merger, the purchasing firm might be a substantially different enterprise, but it holds its original identity, while the absorbed company ceases to exist as a separate business unit. (Sherman and Hart 2006; Ross et al. 2013) The basic form of a merger is called a forward merger, or occasionally also called a direct or statutory merger (Gaughan 2015). According to DePamphilis (2013), a subsidiary merger refers to a situation in which the merger takes place between the subsidiary of the acquirer and the target company.

A merger most commonly refers to a situation where two firms join together, by making an agreement that one firm will purchase the common stock of another company in exchange for its own shares. In some cases, cash or other forms of payment are used, but in general, arrangements are made through the exchange of shares. (Sherman and Hart 2006; Ross et al. 2013) In contrast, consolidation refers to a situation where two or more companies form a completely new organization. This new organization typically absorbs the assets and liabilities of the original firms behind the formation and their prior legal existence ceases. (Gitman 2009; Ross et al. 2013)

Due to the similar nature of consolidations and mergers, the term merger is often used to refer to both. Because of its legally straightforward process, mergers tend to incur lower costs compared to other forms of acquisitions. Another advantage is that there is no need to transfer the title of each individual asset of the absorbed company to the acquiring company. However, the merger requires the voting approval of the shareholders of each company, which may increase the uncertainty of the deal. In order to be approved, normally two-thirds of the shareholders must support the merger. Furthermore, with appraisal rights, shareholders of the acquired company may demand the acquirer to buy their shares at a fair value. It is not uncommon that the acquirer and the shareholders of the acquired company disagree on the fair value, which may result in expensive legal proceedings. Another downside is that the acquiring company directly accepts all the liabilities of the acquired firm and thus exposes its assets to the liabilities of the target company. (Ross et al. 2013; Gaughan 2015)

2.1.2 Acquisition of assets

The second basic form of acquisitions is an acquisition of assets, in which the acquiring firm buys the assets of the target firm instead of its stock. In an acquisition of assets deal, the assets transferred from the seller to the purchaser becomes additional assets of the acquirer in the hope and assumption that financial and strategic benefits of the trade will increase the value of these assets the purchase price in the future, thus increasing the wealth of the shareholders. (Sherman and Hart 2006)

An advantage for the acquiring firm in an acquisition of assets is that the acquirer does not have to assume all the liabilities of the target firm, like in the case of mergers and stock acquisitions. The advantage of reducing liability exposure is one of the reasons why the acquiring firm may prefer this form of acquisition. Another advantage is that the buyer is not required to pay for the assets it does not want and can select only those assets it is interested in. Potential tax benefits are another advantage of an asset transaction. The acquiring firm might be able to realize an asset basis step-up that may arise from raising the value of the purchased assets to fair market value, which may differ from the values at which the assets have been carried at the balance sheet of the seller. This value increase allows the acquirer to enjoy more depreciation in the future, which may lower their taxable income. (Gaughan 2015)

The acquisition of assets strategy is typical when the acquirer seeks to achieve ownership of assets held by a financially distressed firm but do not want to purchase the whole company due to the poor financial condition of the corporation. Asset acquisition strategy can also be used for purpose of gradually acquiring control of a target firm. In this situation, the process usually involves acquiring control over the key assets that are essential to the ongoing business operation of the firm. The use of an acquisition of assets may also be a sensible option when the target firm rejects buyout offers and the chances of getting enough support and equity from the target shareholders are slim. (Corporate Finance Institute 2020) A formal vote of the target's shareholders is needed in the acquisition of assets. The benefit here is that acquirers are not left with minority shareholders, unlike what often may happen in the acquisition of stock. However, an asset transaction requires the transfer of the title of all individual assets acquired, which can be expensive. (Ross et al. 2013) To be able to sell the assets, the target may be required to secure third-party consents. This might be needed when there are certain clauses involved in the financial contracts made when the seller purchased the assets. It also could be necessary when the seller has several agreements

associated with non-assignment or non-transfer clauses. To complete the acquisition of assets transaction, the seller must obtain the consent of the relevant parties. The more parties are involved, the more complex the deal will become. If the complexity significantly affects the deal, an asset acquisition may become less practical, and other forms of acquisition should be considered. (Gaughan 2015)

2.1.3 Acquisition of stock

An acquisition of stock is the third basic form of acquisitions, in which a bidder company purchases the voting stock of a target company in exchange for cash, equity, or other securities. The process may begin as a private offer from the acquirer's management to the management of the target firm. At some point, the offer is taken directly to the shareholders of the target company, usually through a tender offer, which is a public offer to purchase the target's shares. The offer is made by the acquirer company directly to the target's shareholders and it is communicated through public announcements. If not satisfied with the offer, the target shareholders may reject it. It is not uncommon that a minority of shareholders will hold out in a tender offer, thereby the acquirer is not able to completely absorb the target company. (Ross et al. 2013)

One of the benefits of a stock deal is that there are no conveyance issues, as might be the case with the acquisition of assets transaction if the above-mentioned contractual restrictions are involved in the transfer of assets. One advantage the stock acquisition has over a merger is that there are no appraisal rights with a stock deal. The form of stock acquisition has the same drawback as with a merger that the acquirer might have to accept certain liabilities it is not interested in. Another disadvantage of the acquisition of stock is that when the goal of the acquirer is to fully absorb the target, all the target shareholders must approve the acquisition. If some of the shareholders restrict the acquisition, the full absorption of the target company cannot be completed. In such cases, the companies have to pursue a merger. When the shareholder base of the target firm is relatively small, it may be more practical to acquire the stock because fewer shareholders need to accept the transaction. However, when dealing with large publicly listed firms with a massive shareholder base that is broadly distributed, a merger is typically a more sensible option. (Gaughan 2015)

2.1.4 Takeovers

The takeover is an imprecise and general term that refers to a situation of transferring control of a corporation from one group of shareholders to another. Takeovers can take place through acquisitions, going-private transactions, and proxy contests. Because the latter two are not part of the primary focus of the analysis of this thesis, we define them only briefly. In going-private transactions, usually a small group or a single acquirer purchases all of the equity of a publicly-traded company, and the stocks are no longer traded in the marketplace. A proxy contest refers to a case where a group of shareholders attempts to vote out the present management or board of directors (Corporate Finance Institute 2020). If the takeover is achieved through acquisition, it will follow one of the three basic forms of acquisitions outlined above, which are the main focus of the analysis of this study. (Ross et al. 2013)

Takeover can occur on either a friendly or hostile basis. Normally, after the target firm has been identified, the acquiring firm initiates discussions. If the management of the target company is satisfied with the proposal of the acquiring firm, it may support the deal and recommend that the shareholders accept it. If the shareholders accept the acquisition, the acquirer purchases the equity of the target company in exchange for cash, its own shares, or other securities. This type of deal is referred to as a friendly takeover. (Gitman 2009)

If the proposed acquisition is not supported by the management of the target company, it may fight against the actions of the acquirer. If this is the case, the acquiring firm may try to obtain control over the target company by purchasing sufficient shares of the target corporation from the securities markets. This is normally done through the tender offer, which as described earlier, is a formal offer addressed directly to the shareholders of the target firm to buy a given number of shares at a certain price. Typically, a significant premium is offered over the current market price, to give a greater incentive for the target's shareholders to sell their shares. This type of unfriendly transaction, without the approval of the target's management, is known as a hostile takeover. Obviously, hostile takeovers are more challenging to implement since the management of the target company acts to prevent rather than facilitate the transaction. Nevertheless, hostile deals can sometimes be successful. (Gitman 2009)

2.2 Different types of mergers and acquisitions

According to Buono and Bowditch (2003), financial analysts typically classify mergers and acquisitions from the economic perspective into five alternative types as horizontal, vertical, conglomerate, congeneric, or market-extension corporate combinations depending on the business operations of the target firm. In horizontal business combinations, the acquirer and the target company are direct competitors operating in the same industry at the same stage of the production process. The motivation is usually to strengthen the competitive position by increasing market share and/or scalability.

In a vertical integration the target company is a customer or a supplier of the acquirer that operates in the same industry, but at a different stage of the production chain. For example, either closer to the source of materials (backward integration) or closer to the final consumer (forward integration). The primary motive is usually to gain more control of the supply chain process and limit reliance on any other companies, which may lead to reduced costs and increased productivity and efficiency. (Pike and Neale 2009)

Conglomerate M&As refer to a situation where the acquirer and the target company are operating in different industries and are involved in distinct, unrelated business activities. Motivations behind conglomerate M&As are typically diversification and cross-selling opportunities. The main advantage of conglomerate integration is its ability to reduce risk by combining companies with different seasonal or cyclical patterns of sales and earnings. (Ross et al. 2013)

The congeneric merger also often referred to as product-extension merger is achieved by acquiring a company that is in the same general industry but is neither in the same exact line of business or a direct competitor nor a supplier or customer. Target company offers different but related products or services to a similar kind of customer base. An advantage of a congeneric integration is the possibility to use the same sales and distribution channels to reach customers of both businesses. (Gitman 2009) According to Buono and Bowditch (2003), in a market-extension merger, the target company offers the same products or services but sells them in different geographical markets. The objective in the market-extension M&As is typically rapid expansion into a wider market to gain a larger customer base.

2.3 M&A process

M&As are complex transactions that involve several possible pitfalls and problems. Acquirers never plan to enter into a bad deal, but as pointed in the introduction, the empirical evidence on the benefits of M&As for acquiring companies seem to be questionable. Many of the problems stem from a lack of appropriate planning, an unreasonably aggressive timetable to closing the deal, a failure to adequately analyze potential post-closing integration issues, or, worst of all, the potential synergies that were supposed to be achieved turn out to be illusory (Sherman and Hart 2006). Simplified, the term synergy refers to the phenomenon that the whole will be greater than the sum of its parts, usually presented as $(2 + 2 = 5)$. In the context of M&A theory, this translates into the ability of a business combination to operate more profitable than the individual original companies that are combined (Gaughan 2015). Different kinds of synergies related to M&As are discussed in detail in Section 2.5.1. In order to avoid potential problems, it is essential to approach the M&A process through different stages. According to Weber et al. (2014), the M&A process can be classified into the following three main interconnected stages: (1) planning and strategic management, (2) negotiation, due diligence, and agreement, and (3) implementation and post-acquisition integration.

However, before going into different stages, every acquirer is required to develop an internal working team and find a group of professional external consultants, such as accountants, lawyers, valuation experts, investment bankers, and in some situations insurance or employee benefits experts. This internal working team should include members from the departments of strategic planning, sales and marketing, finance, and operations. Increasing shareholder wealth through successful acquisitions requires constant interaction and cohesive thinking between the team members throughout the various stages of the takeover process. (Sherman and Hart 2006)

According to Weber et al. (2014), it is important to focus on the linkage between the three stages. For instance, the implementation and negotiation stages must be taken into account already at the planning stage. The negotiations may also offer useful information about the strategies of the acquired firm, financial estimates, and implementation process. This information is useful at the planning stage, which in turn ultimately influences the negotiation and implementation processes. Figure 2 presents an integrated model for value creation in the M&A process, which explains the stages of the process, the connection between the stages, and the steps of the M&A process. For example, the model suggests that cultural

differences should be analyzed in the early stages of planning, as opposed to the stream of post-M&A research and many practitioners who tend to focus on the role of cultural differences after the deal has been signed. This analysis not only serves the post-acquisition integration stage, but also all the other pre-acquisition phases, such as screening, financial and strategic evaluation, negotiation, final payment, and agreement details. Likewise, synergy analysis supports all other phases, and feedback from the negotiation phase helps the reassessment of cultural and synergy factors, which are used as inputs for such planning steps as screening, integration planning, and financial and strategic evaluations. (Weber et al. 2014)

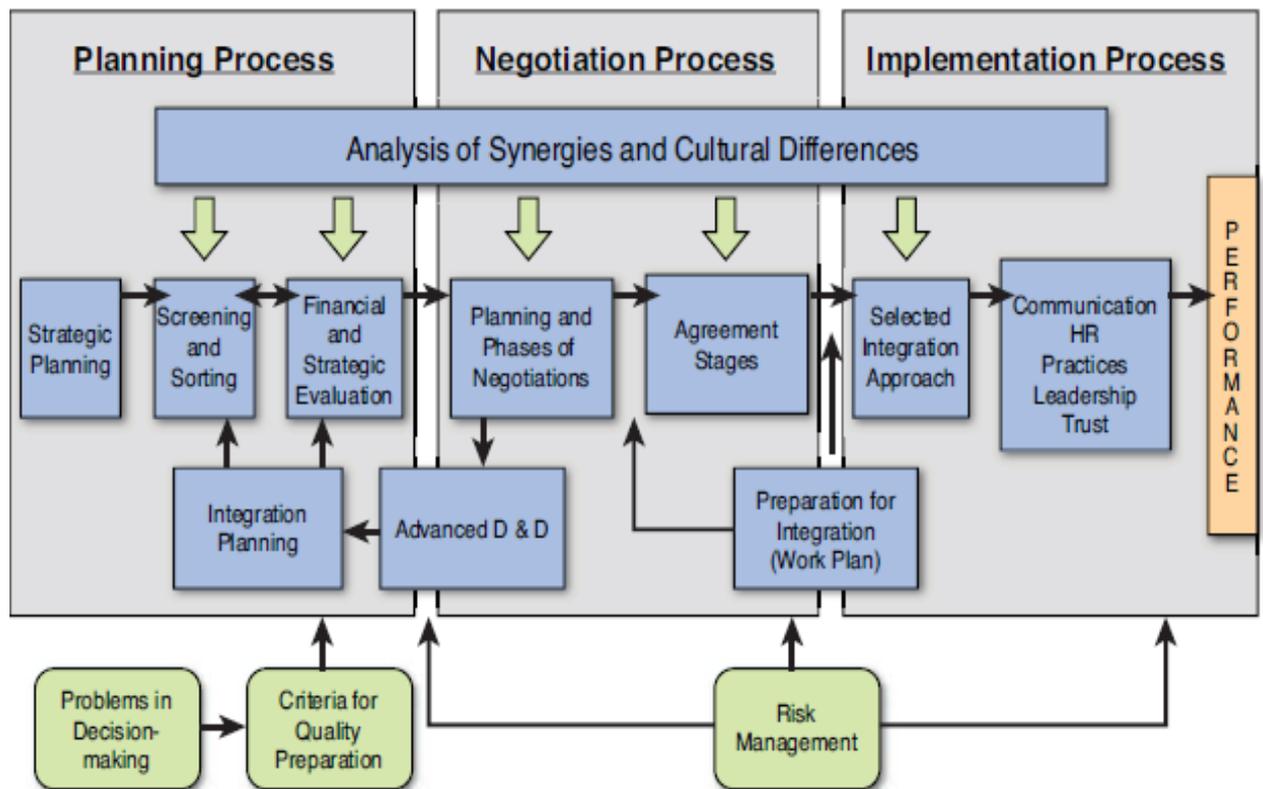


Figure 2: Model of value creation in M&A (Weber et al. 2014)

2.3.1 Stage 1. Planning and strategic management

In the planning stage, management sets its financial and strategic objectives, determines strategic options, and clarifies the paths, how the M&A strategy can help accomplish both financial and strategic objectives. So, the needs and benefits of the takeover are determined in advance for such strategic goals as expanding or increasing product lines, technologies, and services, entering into a new industry or new regional markets, or entering into sources of distribution or supply. In addition, one should determine the financial objectives, such as

improving cashflows, EBITDA, revenues, or other goals. The strategy and objectives serve as a basis for the criteria when selecting the target firm and build the foundation for the takeover plan, for instance determining the objectives of the takeover (improving competitive advantages, increasing market share, expanding into a new industry, acquiring additional competitive abilities, establishing a foothold in the global market, and so on), characterizing the target firm (competitiveness, technology, size, and domain), and specifying the type of potential M&As (competitor, supplier, vendor of complementary products, and customer). (Weber et al. 2014)

Screening and sorting out strategic alternatives are essential, even if the team and the management think they have found the very best potential target firm for the takeover. Alternatives can give a good estimation for the value of the target firm and for other key issues not directly related to the price, which help in negotiations. After identifying the various alternatives, the criteria to rank them can be, for example, the degree of synergy with each acquisition, the barriers to capturing this synergy (for example, because of the cultural differences), the complexity to integrate the two organizations, the transfer of knowledge, and of course financial value and the costs of the takeover. Screening and ranking are therefore influenced not only by strategic objectives, which are usually the primary focus of many practitioners during the early phases of the acquisition but also by the integration planning process and challenges of implementation. (Weber et al. 2014)

Weber et al. (2014) state that the model emphasizes the importance of obtaining a strategic estimate in addition to a financial estimate of the value of the target firm. The strategic estimate emphasizes, for example, the synergy potential of the acquisition, its contribution to business strategy and pre-defined strategic objectives, the implementation method of the acquisition by planning the upcoming integration of the companies, and more. For the screening and ranking process, the strategic estimate is essential. In some situations, the ultimate price may be higher than proposed by the financial estimate, but the premium price is justified on the basis of the strategic estimate. The contrary situation is also possible, and the negotiations may result in a lower price compared to the price based on the financial estimate, but the strategic estimate and potential challenges in the implementation discovered at the integration planning stage propose to abandon this acquisition alternative. Thus, it is essential to plan the integration and estimate the risks and costs associated with the integration before the deal is signed. Usually, the integration planning and transition process begin after the deal has been signed, but this is too late. Early planning of the future integration provides important information, which should be part of the negotiation process

and influence the decision whether to acquire the target firm and if so, influence different parts of the agreement, such as price and payments. (Weber et al. 2014)

2.3.2 Stage 2. Negotiation, due diligence, and agreement

When approaching the target company, it is important to focus on preliminary discussions by creating trust and personal chemistry, and a mutual basis for creating value on both sides. For example, analyzing differences in cultures may be helpful during the negotiation phase. Information on cultural variations, obtained from the analysis during the planning phase can be helpful when explaining the benefits of the deal. Many studies confirm that deals have fallen through because the cultures of the two organizations were significantly different. In addition, important implementation phases should be discussed before the agreement is signed, to get a better understanding of the true potential of the rest of the synergic advantages and predicted challenges, and to gain a greater understanding of differences in management styles and cultural differences. Furthermore, the information accumulated during the negotiation phase serves as input in reassessing the previous strategic and financial estimates and the costs related to the takeover. (Weber et al. 2014)

The process of inspecting the acquired firm must be thorough and comprehensive in order to confirm assumptions made in the evaluation process, identify sources for the value of the firm, and minimize surprises after the deal has been signed. Due diligence typically includes examinations in the accountancy and legal fields, but these are not enough. For example, intangible assets are often overlooked in the due diligence process, leading to inadequate focus on intangible issues, such as human capital and cultural differences during post-acquisition integration, which increases the risk of poor acquisition performance. Extensive due diligence covers all company domains of activity and functions, as well as includes an examination of the country in which the firm is operating, and its laws. In addition, a comprehensive inspection should extensively cover different aspects of human resources, such as talents and leadership skills of top executives, and look into other key domains including the composition of the board of directors and the image that the public, stockholders, analysts, suppliers, clients, and others have of the firm. Finally, the due diligence should examine the unique benefits of the deal and not just the benefits and drawbacks of the target firm, and emphasize the synergy and other strategic benefits arising from the deal. (Weber et al. 2014)

2.3.3 Stage 3. Integrating the organizations

The value of M&As is created after the deal is signed through the integration of the two organizations. At this final stage, it is essential to understand that each merger and acquisition is unique, and the integrated model for value creation in the M&A process requires evaluation, analysis, and decisions based on the best integration strategy for each takeover. Different levels of speed and intensity can be used in the integration process of the two companies. The goals of the integration (the potential synergies) and the extent to which the companies are possible to integrate (the implementation of the potential synergies) determine the appropriate levels. Due to its complexity and length, the integration process requires substantial planning, and most of the planning should be carried out before signing the deal. Otherwise, the integration could take a long time, the costs can be high, and the acquisition might fail to reach its objectives. (Weber et al. 2014) According to Weber et al. (2014), the integration planning should include at least the following steps:

- Defining the integration strategy, transition management structure.
- Communication strategy, modification of the corporate culture of the organization.
- The handling of consequences of differences in organizational and managerial and cultures.
- Precise analysis of human capital and the retention of key people, covering all human resources issues such as staffing, training, rewarding, benefits, and promotions.

The integration of two organizations requires a proper team leader who carries the responsibility of leading the whole integration process. With the executive team, the leader leads through a coordinating body that, for example, sets guidelines that are in line with the strategy, makes investment decisions, reviews analyzes and findings, and oversees the implementation of integration plans. Cultural differences, removal of autonomy from the top managers of the acquired company, and uncertainty surrounding the M&A process lead to stress, tension, and negative attitudes. Without professional intervention and effective communication, negative attitudes and stress may lead to a lower collaboration of the management of the acquired firm and decreased commitment to successfully complete the integration process. (Weber et al. 2014)

All value creation in the takeover process depends on the ability of the business combination to successfully integrate their operations to exploit the potential synergies. Integration strategies differ primarily in the emphasis placed on two key factors: the potential for synergy and the required implementation efforts to realize potential synergies. Thus, when choosing integration approaches, the acquirer must evaluate the potential synergy in the takeover, survey its own corporate and national culture dimensions and characteristics, and finally define the corporate and national cultural differences between the two companies. Systematic and continuous evaluation and development of the process are essential factors in the success of the takeover. Techniques, templates, and measures for assessment and control in four different areas should be specified in advance: financial performance, integration measures, operational measures, and cultural change measures. These indexes and measures allow managers to evaluate the progression and help in making the necessary changes when the performance is below defined standards. (Weber et al. 2014)

2.4 The M&A phenomenon

Morresi and Pezzi (2014) argue that the theoretical foundation of M&As is based on three well-known theories: neoclassical theory, redistribution theory, and behavioral theory. The neoclassical theory argues that the only condition that triggers M&A transactions is when the expected value of a new business combination is higher than the sum of the values of the individual companies before the transaction. Therefore M&A transactions should be investments with positive net present value (NPV) and beneficial for the shareholders. The neoclassical theory claims that the value comes from the synergy gains. For example, M&As can help to reallocate and utilize the assets of companies more efficiently, if the optimal use of assets has not yet been achieved. If all of the assets are exploited optimally, there would be no need for M&As. In such hypothetical situations, external shocks, such as technological, economic, and regulatory shocks will make the existing combinations of assets no longer optimal. (Morresi and Pezzi 2014) The neoclassical theory argues that the triggering factor of takeovers is the occurrence of these external shocks that transforms the structure of the industry and creates space to improve the value of the present assets (Mitchell and Mulherin 1996).

The redistribution theory shares the assumption that M&A transactions are beneficial for the shareholders. On the other hand, unlike the neoclassical theory, it claims that shareholder wealth effects are not stemming from synergies but rather from transfers of

wealth at the expense of some of the stakeholders of the company, such as customers, government, employees, pension funds, and bondholders. (Morresi and Pezzi 2014)

Finally, according to the behavioral theory, M&A transactions are not driven by the attempt to achieve potential synergies but rather by behavior-related reasons, such as stock market misvaluations, empire-building, and managerial hubris (Morresi and Pezzi 2014). Of these theories, the two most important competing and researched theories that attempt to explain why M&As tend to cluster in waves are the neoclassical hypothesis and the behavioral hypothesis (DePamphilis 2013; Gaughan 2015). According to Martynova and Renneboog (2008), it is crucial to understand why and when M&A waves occur when looking for an answer to the question of whether or not M&A transactions will create or destroy value.

2.4.1 The wave effect of M&As

It is a well-recognized and researched phenomenon that M&As tend to occur in waves. In addition, the evidence shows that there is also strong industry-specific clustering within a wave (Mitchell and Mulherin 1996). Although the phenomenon has driven a lot of interest among researchers, Harford (2005) states that there is no consensus as to why M&A waves occur. He argues that the potential explanations can be broadly classified into two categories: neoclassical hypothesis and behavioral hypothesis.

Two fundamental assumptions of neoclassical economics are that managers always maximize shareholder wealth and capital markets are effective (Gugler, Mueller and Weichselbaumer 2012). The neoclassical hypothesis argues that M&A waves occur as a result of corporations' efficiency-improving responses to technological, regulatory, and economic shocks (Mitchell and Mulherin 1996). Technological shocks may occur in many ways because technological developments may lead to drastic changes in the existing industries and even create new industries. Regulatory shocks may occur by eliminating regulatory barriers that may have prevented the business combinations. The economic shock occurs in the form of an economic expansion, which encourages businesses to expand in order to meet the rapidly increasing aggregate demand in the economy. Takeovers are a more rapid form of expansion compared to organic, internal growth. (Gaughan 2015)

According to Martynova and Renneboog (2008), numerous empirical papers have linked the cyclical patterns of M&A activity to macroeconomic business cycles and the papers analyzing M&A activity at the industry level have been the most successful in explaining

M&A fluctuations. Shleifer and Vishny (2003) argue that even though the neoclassical hypothesis of mergers provides a fair amount of explanatory power, it is incomplete. They state that by focusing only on industry-specific shocks, it fails to explain aggregate M&A waves unless a variety of industries experience shocks simultaneously. They also criticize the neoclassical hypothesis for ignoring whether cash or equity is used as means of payment. Furthermore, they claim that the evidence is not convincing on the key assumption of the neoclassical hypothesis that M&As increase profitability and they propose the behavioral hypothesis as a better alternative to explain why M&A waves occur.

The behavioral hypothesis is mainly based on the misvaluation hypothesis and suggests that managers take advantage of temporarily overvalued stock to purchase assets of lower-valued companies. For takeovers to cluster in waves, this hypothesis requires that the valuations of many companies measured by their market-to-book or price-to-earnings ratios compared to other companies must rise simultaneously. Managers who believe their equity is overvalued acquire targets whose stock is presumably less overvalued. Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004) examined the behavioral hypothesis in depth. The core assumptions of their models are that the financial markets are inefficient, thus some companies are incorrectly valued, while executives are completely rational, understand, and take advantage of the market misvaluation. Shleifer and Vishny (2003) argue that M&A activity tends to cluster because a lot of companies become temporarily overvalued during bull markets, and managers of bidder companies use the opportunity to exchange their overvalued stock for real assets of less overvalued targets. Managers of target companies are assumed to maximize their own private short-term interests, and thus accept these bids, even if it would harm shareholders in the long run. Rhodes-Kropf and Viswanathan (2004) came to similar conclusions, but they argue that target managers accept bidder's temporarily overvalued shares because they overestimate the potential synergies as a consequence of market-wide overvaluation. Several more recent empirical papers confirm that long-term fluctuations in market valuations and the volume of M&A activity are positively correlated (Dong, Hirshleifer, Richardson and Teoh 2006; Andrade et al. 2001; Ang and Cheng 2006; Daniel, Hirshleifer and Subrahmanyam 1998). However, it is less clear whether high valuations lead to greater M&A activity or whether increased takeover activity boosts market valuations. (DePamphilis 2009)

When comparing neoclassical and behavioral hypotheses of merger waves, Harford (2005) is more supportive for the neoclassical hypothesis. However, he argues that economic, regulatory, and technological shocks alone are usually not enough to create an M&A wave.

He studied 35 industry-specific M&A waves that happened during the period 1981–2000 and concluded that these external shocks drive industry M&A waves, but whether the shock leads to an M&A wave depends on whether there is sufficient overall capital liquidity. He points out that M&A waves require both an economic reason for transactions and sufficient overall capital liquidity (relatively low transaction costs) to create huge transaction volumes. In addition, he claims that the effect of this macro-level capital liquidity element causes industry-specific M&A waves to cluster in time, even without the industry shocks. This was evident especially during the sixth merger wave between 2003 and 2008 when the low cost of capital played an important role. The next section takes a closer look at the historical merger waves and their features.

According to Martynova and Renneboog (2008), the theories on M&A waves can be broadly categorized into four groups. In addition to the two theories mentioned above, they state that also self-interested and irrational managerial decisions, such as agency problems and managerial hubris can lead to M&A clustering. As pointed earlier, these kinds of behavior-related reasons behind M&A transactions can be classified as part of the behavioral theories. Previous empirical research shows that a large percentage of M&As are harmful to corporate value. Agency problems and managerial hubris are often viewed as part of the potential explanations behind these value-destroying M&As. Typically, some external forces, such as industrial shocks or booming financial markets are required to trigger an M&A wave, but the empirical literature shows that self-interested and irrational managerial decisions are part of the key motivations behind the M&A transactions. We review these kinds of motivations in more detail in Section 2.5, where we present the theories of M&A motives.

2.4.2 Historical merger waves

So far, the academic literature has identified six completed merger waves (Alexandridis, Mavrovitis and Travlos 2012; Gaughan 2015), and some economists argue that we are currently experiencing the seventh M&A wave (Cretin, Dieudonné and Bouacha 2015). The first two merger waves were mainly a US phenomenon, whereas the fifth one was already a truly global phenomenon (Martynova and Renneboog 2008).

According to Gaughan (2015), the first merger wave occurred in the US markets after the 1883 depression, during the years 1897 to 1904. Factors such as radical technological changes, economic expansion, industrial process innovations, growth of industrial stock

trading on the NYSE, and new state legislation on incorporations boosted M&As during this period. The first M&A wave is characterized in the large part by horizontal business combinations of industrial production. Stigler (1950) characterized this period as “merging to form monopolies” because, during this period, many giant corporations that captured most of the market share in their industries were created through mergers. (Martynova and Renneboog 2008) Gauhan (2015) states that economic factors caused the first M&A wave to end. First, the collapse of the shipbuilding trust in the early 1900s. The second and most significant factor was the 1904 stock market crash, followed by the 1907 banking panic.

As a result of the First World War, M&A activity remained at a modest level until the late 1910s. The second M&A wave started to evolve during the war in 1916 and lasted until 1929. The economic boom after the war provided plenty of investment capital for the securities markets, which fueled M&A activity. Stigler (1950) describes the second takeover wave as a step toward oligopolies because, at the end of this wave, markets were not dominated anymore by one large company but rather by two or more firms. This change was driven by more effective enforcement of antimonopoly law following the 1904 Northern Securities decision and the 1914 Clayton Antitrust Act. The stock market crash in 1929 and the consequent economic depression led to the collapse of the second takeover wave. (Martynova and Renneboog 2008; Gaughan 2015)

World War II and the global economic depression in the 1930s prevented the emergence of a new M&A wave for a few decades. M&A activity started to increase again in the 1950s (Martynova and Renneboog 2008). Growth was very rapid after 1965 and peaked in 1968, which is why some authors document the third merger wave for the period of 1965–1969 (DePamphilis 2013; Kumar and Sharma 2019). M&A activity reached a historically high level during the third wave, and due to a large number of mergers among unrelated firms during the period, it is often characterized as a wave of conglomerate mergers. The third merger wave ended in 1973 when the oil crisis drove the global economy into recession. (Gauhan 2015)

The fourth wave began in 1981, by the time the stock market had recovered from the previous economic downturn. As the primary motive for the fourth merger wave, the academic literature suggests that the companies were forced to reorganize their businesses because the conglomerate business combinations created during the past merger wave had become inefficient. (Martynova and Renneboog 2008) Different features compared to previous waves were the rise of hostile takeovers, dominant financing source changed from

equity to debt, and larger deals became more common. Between 1974 and 1986, the number of transactions worth at least \$100 million increased more than 23 times, which was a big difference from the previous wave, in which the M&As of small and medium-sized companies predominated. As with all previous waves, the fourth merger wave ended when M&A activity plunged after the stock market crash, this time in 1987. (Gaughan 2015)

The fifth merger wave can be considered starting in 1993. It emerged alongside booming economic and financial markets, driven by a combination of the growing economic globalization, information technology revolution, global trend towards privatization, and the trade barrier reductions (DePamphilis 2013). The main feature of this wave was its truly international nature, as M&A activity grew significantly in Europe, Asia, as well as in Central and South America, in addition to the United States. The European M&A market reached almost the level of the United States in the 1990s. The number of cross-border acquisitions increased considerably due to globalization. The main motive for M&As was to participate in globalized markets through rapid growth. However, unlike the deals of the previous wave, initial M&A transactions of the 1990s highlighted strategy rather than just rapid financial benefits. Once again, deals were more often financed by equity, which led to less heavily leveraged combinations. Large megamergers were also present during the fifth wave, but hostile takeovers decreased in the US and UK. However, hostile takeover activity increased in Continental Europe. The fifth takeover wave crashed in 2000 when the stock market collapsed after the burst of the dot-com bubble. (Martynova and Renneboog 2008; Gaughan 2015)

M&A activity surged up again in 2003, approximately two years after the 9/11 terrorist attacks, marking the start of the sixth merger wave. The sixth merger wave was characterized by private equity investors purchasing firms mainly for financial purposes. (Lasher 2016) Historically low interest rates fueled the economy, which boosted M&A activity, but also offered a significant boost for the private equity sector, which took a major role in the M&A market. Once again, compared to the previous waves, new records were made in the total number and value of transactions. This wave included many cross-border transactions and a modest number of hostile takeovers (Martynova and Renneboog 2008). Not surprisingly, the sixth wave came to an end when M&A activity crashed due to the 2008 financial crisis and subsequent recession. (Gaughan 2015)

M&A activity increased slowly after the financial crisis until taking a dramatic rise in 2014. The upward trend continued in 2015 and M&A activity reached almost its all-time high level, recorded in 2007 just before the financial crisis. This time, mainly driven by developments in the financial sector and increased restructuring activities in the telecommunications, information technology, and life sciences sectors (McCarthy and Dolfsma 2013). Lasher (2016) states that it is becoming increasingly clear that we are heading into a seventh merger wave. Cretin, Dieudonné, and Bouacha (2015) also think that the rapid increase of M&A activity in 2014 is marking the beginning of the seventh merger wave. However, although the number of M&A transactions globally has remained relatively high, the total value of transactions has slightly decreased from 2015, and the rapid spread of COVID-19 will further slow down M&A activity.

As presented, each merger wave has its own characteristics and differences compared to its predecessors. However, waves also share some interesting similarities. Each wave seems to emerge when the economy starts to show signs of recovery and get boosted further in times when stock markets are booming, and credit expansion is rapid. In addition, it is noteworthy that all waves have ended with a stock market crash. Furthermore, Industrial, technological, and regulatory shocks seem to occur before M&A waves.

2.5 Theories of M&A motives

In Section 2.4.1, we discussed from a macro-level perspective, the hypotheses provided by the M&A literature for why M&As tend to cluster in waves. This section approaches the motives of M&As from a firm-level perspective. The purpose of any business is to maximize the value of its shareholders and the goals of M&As should support this purpose. However, a number of M&As struggle to achieve their goals. Yet, the volume of M&As has increased significantly in recent decades, which raises a question about the motives behind these M&A transactions. Academics have done a great amount of research about the motives of corporations involved in M&A transactions. As these underlying motives have a significant effect on the success of the deal, this section provides insight into the fundamental theories of M&A motives.

Trautwein (1990) argues that most researchers are unanimous that there are several different motives behind M&As. In his article Trautwein (1990) surveyed the theories of M&A motives and classified them into seven different groups, which are presented in Figure 3. The theories are further classified into three different categories: M&A as rational choice,

M&A as process outcome, and M&A as a macroeconomic phenomenon. The efficiency theory argues that takeovers are planned and conducted to obtain three kinds of synergies: financial, operational, and managerial. According to the monopoly theory, M&As are planned and conducted to obtain market power. Conglomerate and horizontal deals can enable companies to simultaneously restrict competition in more than one market, deter potential entrants from the markets, and cross-subsidize products. The raider theory can be considered as a third possible explanation of the M&A motives. A raider is a person or a party that attempts to purchase majority stake ownership in a firm that is considered undervalued, often trying to profit by selling the target's shares at a higher price than originally paid (Gaughan 2015). Holderness and Sheehan (1985) interpret this term to refer to an individual who causes transfers of wealth from the stockholders of the firms he or she bids for. According to the valuation theory, M&As are planned and conducted by executives who have better information about the value of the target company than the stock market. Managers of acquiring companies may have unique information about potential benefits to be derived from a business combination with the target. Or they may have spotted an undervalued firm that just waiting to be sold. The empire building theory argues that M&As are planned and carried out by managers who maximize their own benefit rather than acting in the best interest of their shareholders. Process theory which is a sixth theory of the M&A motives states that M&A actions are caused and influenced by one or more of the following processes: the limited capacity of individuals to process information, organizational routines, and political games played between subunits and outsiders of an organization. According to the disturbance theory, M&As are not caused by the direct interest of managers or other stakeholders of the companies but are essentially the result of macroeconomic disturbances. These disturbances cause shifts in individual expectations and raise the degree of overall uncertainty. Former non-owners of assets now put a greater value on these assets than the current owners and vice versa. The valuation, empire-building, and process theories have the strongest degree of plausibility. The existing evidence for these theories is favorable, although very limited. (Trautwein 1990)

M&A as rational choice	Focus on shareholders' interests	Net gains through synergies	Efficiency theory
		Wealth transfers from customers	Monopoly theory
		Wealth transfers from target's shareholders	Raider theory
		Net gains through private information	Valuation theory
	Focus on managers' interests	Empire-building theory	
M&A as process outcome			Process theory
M&A as macroeconomic phenomenon			Disturbance theory

Figure 3: Trautwein's view on the motives of M&As (Trautwein 1990)

Another way commonly used in the M&A literature is to classify the theories of M&A motives as either value-increasing or non-value increasing motives, or sometimes called as value maximizing and non-value maximizing motives (Nguyen, Yung and Sun 2012; Bhabra and Huang 2013; Leepsa and Mishra 2016). Because these underlying M&A motives greatly impact the outcome of the M&A transaction, some of the most common value-increasing and non-value increasing theories of M&A motives identified in the existing literature are discussed next in more detail, some of which are already familiar from the classification of Trautwein (1990). According to Nguyen, Yung, and Sun (2012), in practice, it is very difficult to categorize the motives behind M&A transactions since value-increasing and non-value increasing motives may coexist. They showed that about 80% of M&As from their sample of 3520 acquisitions have multiple motives.

2.5.1 Value-increasing theories of M&A motives

Value-increasing theories of M&A motives have their roots in the neoclassical theory discussed earlier in this section. Value-increasing theories argue that the motives behind M&As are driven by the goal of shareholder wealth maximization. In the context of M&As, one potential way to increase the wealth of shareholders is through synergies which, when realized, improve a company's business operations, and create new value, unlike a situation of mere redistribution of wealth. This may happen, for example, through economies of scale

or scope, or through opportunities of cross-selling. Different types of synergies are discussed in more detail next when presenting the efficiency theory. The second value-increasing theory discussed in this section is the monopoly theory, also known as the market power theory. Even though from a societal point of view, it represents a redistribution of wealth or even destruction of value due to a deadweight loss. However, increased monopoly power typically improves the performance of the acquiring company and the wealth of its shareholders. The third value-increasing theory we present approaches value creation through the replacement of inefficient management and is known as the market for corporate control theory.

Efficiency theory

The efficiency theory is one of the most commonly used arguments in regard to the motivation of M&A transactions since it is linked to the existence of synergies (Ali-Yrkkö 2002). According to Kumar and Sharma (2019), synergy potential is by far the most significant factor to motivate M&A transactions. Potential synergies are seen as a way to improve the value of the firm and thus benefit its shareholders.

We briefly described above that according to Trautwein (1990), the efficiency theory argues that M&As are planned and conducted to obtain financial, operational, and managerial synergies. There are different approaches to classifying synergy types. According to Gaughan (2015), operating synergies and financial synergies are the two main types of synergies. He further divides operating synergies into two forms: cost reductions and revenue enhancements. Cost-reducing operating synergies typically come either as a result of economies of scale or economies of scope. Economies of scale refer to a decrease in per-unit costs arising from an increase in scale or size of a firm's operations, such as through a business combination. Economies of scale achieved through M&As may stem, for example, from better joint coordination and sharing of assets and operations of previously independent business entities, such as more practical investments in capital goods and elimination of overlapping. The combined company may get the manufacturing process more efficient. Furthermore, some staff positions may no longer be necessary in the combined company, which may result in cost savings by eliminating some highly paid salaries, for example, continuing with only one CFO. Another way in which efficiency can be obtained in this context is through a greater bargaining power across the whole value chain process, for example, in production and manufacturing, transportation, and distribution (Kumar and Sharma 2019).

Economies of scope describe cost savings that result from a decrease in the average total cost of production when a variety of products or services are produced together rather than separately. For example, when using the same facilities and equipment to manufacture multiple products. This may be the case, for example, when a company increases the range of goods or services it produces through M&As. In addition, through M&As companies are often able to share some expenses, such as for research and development. According to Kumar and Sharma (2019), economies of scope are an essential way to achieve synergies through the use of the complementary abilities of both firms. In their example, in the case of production, one firm may be more skilled in technology, while another firm may have a more skilled workforce. By combining these firms, production costs for the combined business entity may decrease with the production efficiency obtained as a result of a better use of technology overall. Authors continue that this is commonly known as the sharing of production know-how, which can help to reduce costs and increase profits. Gaughan (2015) describes economies of scope as the capability of a company to use a set of inputs to generate a wider range of outputs or services. In summary, economies of scale are defined in terms of volume-based efficiencies, while economies of scope are defined in terms of diversity-related factors. Other cost savings may arise, for example, from acquiring ownership of a patent for which a license fee has previously been paid.

Revenue-enhancing operating synergies, on the other hand, are based on the assumption that the two businesses combined can generate more revenue than the sum of their individual revenues. This revenue-enhancing operating synergy often stems from resource complementarities that arise when a firm with specific operating expertise is combined with a firm with a different kind of expertise, to create an organization with expertise in multiple areas (Graham, Smart, Adam and Gunasingham 2017). Through M&As companies may gain access to a wider range of products and services that they can sell to a wider customer base and usually with improved distribution and marketing channels. Cross-selling opportunities might also emerge when the M&A transaction provides access to new geographic or demographic markets (Graham et al. 2017). While access to new patents can save costs, it can also increase revenue if a company is able to create more profitable products that generate higher revenue.

Gaughan (2015) lists the sources of revenue-enhancing synergies as follows: greater pricing power, potential growth from new or faster-growing markets, and a combination of functional strengths. A merger or acquisition of businesses can result in increased pricing or buying power. Typically, this is achievable only in deals where the businesses operate in

the same industry. Achievability depends on the level of competition in the industry and relevant geographic markets, and the size of companies involved in the transaction. According to Gaughan (2015), some empirical studies have indicated that the profits from horizontal M&As can be attributed to improvements in efficiency rather than increased market power. Corporate growth can be sluggish in mature markets and firms must fight harder to obtain successful growth. This could mean that large corporations must invest more and more to boost their market share, or in some cases even merely to maintain what they already have. However, by entering into faster-growing markets, such as emerging markets, these corporations can more easily achieve significant growth increases. When several firms struggle to grow in their present mature marketplace and face rapidly decreasing returns, entering into new more quickly growing markets may be the best path to realize meaningful growth. As a good real-life example of the combination of functional strengths, Gaughan (2015) mentions M&As in the pharmaceutical industry between firms with valuable R&D on something the industry has been trying to develop, and large multinational pharmaceutical firms with strong manufacturing capability, good quality control, as well as global marketing and distribution capabilities. (Gaughan 2015)

Managerial synergies are often considered to be part of the operating synergies (Pidun 2019). According to Trautwein (1990), managerial synergies are realized when the management of a bidder firm has superior planning and monitoring capabilities that benefit the performance of a target company. Ansoff (1965) describes managerial synergies as an opportunity to leverage existing abilities, experiences, and knowledge to tackle strategic, organizational, or operational issues that are similar to issues that another unit has faced in the past.

Financial synergy emerges from the increased efficiency of financial activities and it is mainly associated with the potential to lower the cost of capital through M&As. One way to achieve this is through a lower level of systematic risk. The combination of companies could reduce the level of risk if their streams of cash flows are not perfectly correlated. If the M&A transaction decreases the volatility of the cash flows, capital suppliers may find the business less risky. Considering the fact that large fluctuations up and down in the cash flows of the combined company are usually less likely, the risk of bankruptcy is also likely to be lower. (Gaughan 2015) In addition, debt capacity is typically higher, with more stable and more predictable cash flows.

As stated earlier, M&As may result in cost savings resulting from economies of scale. Furthermore, acquisitions can also lead to financial economies of scale in the form of lower transaction and flotation costs (Levy and Sarnat 1970). A bigger firm has certain benefits in financial markets that may reduce its cost of capital. It has better access to financial markets and the costs of raising capital are typically lower, presumably because it is considered to be less risky compared to a smaller company. One way to obtain financial synergies is through establishing an internal capital market, that may operate on superior information and thus allocate capital more efficiently (Trautwein 1990). This is supported by empirical research showing that diversified firms typically have better access to capital markets and better credit quality (Dimitrov and Tice 2006). Another and more common way to achieve financial synergy is when a firm with large cash holdings and financial resources but without high-return projects, purchases a target firm with a lack of cash but with certain high-return projects which it is unable to finance. Such M&A transactions may be beneficial for both companies. (Gaughan 2015) In addition, financial synergies can be realized through potential tax benefits. For example, by exploiting the diversity of existing tax regulations and using net operating losses to protect revenue, or by increasing charges of depreciations. Weber et al. (2014) argue that pursuing synergy is one of the primary motivations mentioned to explain M&A activity. Furthermore, numerous empirical studies provide strong evidence that supports the efficiency motive (Berkovitch and Narayanan 1993; Fee and Thomas 2004; Shahrur 2005).

Monopoly theory

The monopoly theory is built on the concept that when there are fewer market participants, competitive forces are reduced and collusion between key rivals is increased. Collusion reduces market competitiveness and is a way for companies to use increased market power to make higher profits at the expense of consumers and suppliers, for example by setting prices above competitive levels, or by putting pressure on suppliers with few alternatives by offering them very small profit margins. Thus, as pointed earlier, according to the monopoly theory, M&As are planned and executed to achieve greater market power (Trautwein 1990) and compared to the efficiency theory, it represents wealth redistribution rather than efficiency gains. Market power can be described as a company's capability to control the price, supply, and quality of its products as a result of the scale of its operations. (Piesse, Lee, Lin and Kuo 2006). According to Gaughan (2015), there are three different sources of market power: market share, barriers to entry, and product differentiation.

Acquisition of a rival corporation increases the market power of the acquirer. It may allow the acquirer to maintain or raise the prices of its products or services, which improves its margins. The elimination of rivals and market capacity is therefore a major motive for M&A transactions. Typically, three situations induce M&A transactions that seek to raise market power. First, when a fall in demand leads to excess capacity and hence the danger of price-cutting competition. In this situation, through M&A transactions, companies might be able to secure a better competitive position, which allows them to maintain or increase prices. Secondly, when the entry barriers are low, and the prospects of international competition threaten an overcapacity and current price levels. Thirdly, when tightening of legislation make certain types of alliances between firms illegal. Then M&As might become a great option. Therefore, through horizontal M&As, competitors and capacity can be taken out of the market and the outcome is increased market power, prices, and margins for the remaining participants. (Weber et al. 2014)

However, Trautwein (1990) points out that also conglomerate deals might help increasing market power and lists three situations. First, a corporation may cross-subsidize its products and use profits from one marketplace, for example, to continue a battle for market share in another marketplace. Secondly, a company may try to restrict competition in different markets at the same time. Tacit collusion with rivals it faces in those markets is one way to do so. Thirdly, a firm may seek to deter potential market entrants. One way to achieve this is through a concentric takeover by the leader of the market. As stated earlier, the first M&A wave is known for its horizontal M&As, which generally led to an almost monopolistic market structure. The pursuit of market power has been a goal for companies also later on and still is. However, antitrust legislation has tightened worldwide to protect markets against unfair concentration and loss of competition.

The empirical evidence seems to support the efficiency theory slightly better when compared to the monopoly theory. However, when discussing the value-increasing theories of M&A motives, we have to bring up the monopoly theory. The empirical evidence is contradictory, leaning a bit more towards the non-supportive side. Early broad-based studies by Stillman (1983), Jensen and Ruback (1983), and Eckbo (1983, 1985), provide no support for the monopoly theory. Akdoğu (2009) came to the same conclusion in his industry-specific study when examining horizontal takeovers in the telecommunication industry. Furthermore, the results of studies outside US markets by Eckbo (1992) and Aktas, de Bodt, and Roll (2007) either provide no support for the monopoly theory. According to Gaughan (2015), when looking at the different studies that are international, industry-specific, and

broad-based, it seems to be rather evident that there is only little support for the view that companies engage in M&A transactions to collude and gain monopoly power. He continues that this does not mean it never happens. It simply means that this is not the case in general. However, there are also contradictory findings and evidence that support the monopoly theory (Gugler, Mueller, Yurtoglu and Zulehner 2003; Kim and Singal 1993), and according to Weber et al. (2014), achieving market power is one of the principal motives of M&A transactions.

The market for corporate control theory

The third value-increasing theory originally described by Manne (1965) is the market for corporate control theory. According to this theory, M&As can help to achieve and increase economic value by improving the operating performance achieved by more efficient and more effective management over the resources of a firm. Typically, managers of bidder companies believe that the assets of the target company are not efficiently managed and thus fight for the right to manage those assets. The current incompetent management team is fired and replaced by a value-maximizing management team following the takeover. Thus, companies with underperforming managers are threatened to become targets of takeovers (Jensen 1998), which should provide a spur to improve the performance. On the other hand, the acquirer's management at the same time believes that economic gains can be realized by replacing the current ineffective management with more efficient people. (Kumar and Sharma 2019; Ali-Yrkkö 2002) The market for corporate control theory differs from the efficiency theory in a way that the value creation is not primarily based on the existence of synergies and to the exploitation of shared expertise between the companies, but rather on the superior capabilities of the acquirer's management to efficiently utilize the assets of the target company. In addition, takeovers are more often made through hostile takeovers because the inefficient management of the target company is understandably reluctant to resign and replace itself, and therefore resist the takeover.

According to the market for corporate control theory, inefficiently managed corporations are acquired at prices which ensures that the owners of the acquirer company do not suffer any losses. If a bid with a premium exceeds the market price, it is justified by the fact that it should be recoverable from the increased cash flows generated by the more efficient use of assets. To this extent, M&A activity is viewed by authors such as Jensen (1984) as a healthy expression of the functioning of the market system, potentially benefiting all participants. (Pike and Neale 2009)

Once again, the empirical evidence from previous studies is rather contradictory. According to Cannella and Hambrick (1993), the removal of managers from the target company harms post-M&A performance. The most detrimental effects seem to come from the departure of top executives, such as CEOs, Presidents, and Chairmen. The authors state that their research showed that managers from acquired companies are an intrinsic part of the resource base of the acquired company and their retention is an essential determinant of post-M&A performance. On the other hand, Jensen and Ruback (1983) argue that the evidence of their study supports the market for corporate control theory.

2.5.2 Non-value-increasing theories of M&A motives

Non-value-increasing or value-destroying theories of M&A motives have their roots in behavioral theory. The empirical research on M&A performance is extensive, but the findings are inconsistent as to whether the takeovers create value for the acquirer shareholders or destroy it. M&A literature generally assumes that the outcomes may differ over time and depend on various factors, such as characteristics of the takeover, but the general view is that often corporate takeovers are value destructive for the shareholders of acquiring companies, which raises questions about the motives behind M&A transactions. The purpose of this section is to provide the reader with information on the typical motives behind such M&A transactions by presenting some of the most common non-value increasing theories of M&A motives: agency theory, misvaluation theory, and the hubris hypothesis of corporate takeovers.

Agency theory

An agency problem describes a situation where there is a conflict of interest between the shareholders (principals) and management (agents) of the company (Jensen and Meckling 1976). These conflicts arise because shareholders seek to maximize the value of the company, while management might seek to maximize their own personal objectives rather than maximizing the value of the corporation. The root cause of this problem is our modern corporate structure, where ownership and management are separated. The agency theory argues that the motives behind M&A transactions are based primarily on the self-interest of bidders' management rather than on shareholder wealth maximization (Sharma and Ho 2002). These selfish motives may be driven by managements' personal objectives, such as raising their own salaries, job security, power, status, or ego. The empire-building theory discussed previously can be considered as one form of an agency problem. According to this theory, the typical motive of managers is to increase the size of their corporations and

takeovers provide a faster way of growth compared to internal, organic growth. A larger company is usually able to offer better benefits to management. Managers' personal compensations might be related to sales figures or other size-based metrics, which encourages them to increase the size of the company beyond an optimal level, even if it is unprofitable and unhealthy for the company in the long run. According to Kahl, Gorton, and Rosen (2009), managers may want to increase the size of their corporation through takeovers as a defensive means to reduce the probability that their own company is taken over. They argue that these takeovers, although might be unprofitable deals, may enable them to preserve their private benefits of control. Some managers also have an interest in the power and status associated with the position of running a larger enterprise.

According to Jensen's (1986), free-cash-flow hypothesis, managers have a tendency to maximize their own utility by intentionally investing the company's free cash flows for their own empire-building purposes rather than returning the funds back to shareholders. Payouts to shareholders decrease the funds under managers' control without providing any direct personal benefits, which in turn might be achieved by growing the company. This may lead to a situation where managers engage in poor M&A transactions, even with negative NPV, after running out of profitable alternatives. According to Jensen (1986), the agency problem is especially severe for companies with high free cash flow. Numerous previous empirical papers show that acquirers with excess cash flows tend to destroy value through overbidding. For example, Harford (1999) demonstrated that the abnormal share price reaction to M&A announcements by cash-rich acquirers is negative and decreases with the amount of free cash flow carried by the acquirer. According to Shleifer and Vishny (1989), some managers execute M&A transactions to increase the dependence of the company on their knowledge and skills, although such takeovers may reduce the value of the company. Amihud and Lev (1981) found that manager-controlled companies typically make more conglomerate M&As compared to owner-controlled companies. They argue that managers seek to reduce the risk of losing their job or professional reputation through diversification from conglomerate deals. Schmidt and Fowler (1990) found that top executives experience significant increases in their cash compensations following M&As. They argue that these increases are not related to the performance of the company but rather to factors of self-utility, such as empire building and management dependency.

Overall, from the perspective of the acquiring corporation, these different forms of agency problems are based on the fact that managers of bidder companies are maximizing their own wealth and benefits instead of maximizing the wealth of the shareholders. A substantial

amount of empirical evidence shows that M&A transactions driven by these kinds of motives are value-destroying transactions for the acquiring companies (Firth 1979; Malatesta 1983). Solutions to reduce agency problems include factors, such as full transparency requirements, restrictions on the actions and capabilities of the agent, and incentives that encourage executives to act in the best interest of the shareholders.

Misvaluation theory

In section 2.4.1, we already briefly discussed the misvaluation theory. The presumption of market efficiency has traditionally overshadowed this theory. The efficient market hypothesis (EMH) is an investment theory primarily based on the concepts presented by Fama (1970). According to Fama (1970), a market is called “efficient” if market prices always fully reflect all available information. Basically, EMH refers to a hypothesis that share prices reflect all available information. Therefore, it is virtually impossible to beat the market consistently. EMH states that shares are always traded at their fair market value on exchanges and therefore it is impossible for investors to find undervalued stocks or sell stocks at inflated prices. Although there is significant empirical evidence that asset prices reflect their true economic value over time, there is growing evidence that temporarily the asset prices may not reflect their true underlying economic value. The dot-com bubble in the late 1990s is a good example of market inefficiencies. These market inefficiencies obviously affect investor decisions on individual stock purchases, but they also affect significantly the M&A market. (DePamphilis 2009)

Theories by Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004) predict that misvaluation has significant effects on M&A activity. According to Dong et al. (2006), these effects arise from the bidders’ attempts to profit by purchasing undervalued targets for cash at price below fundamental valuation, or by using their overvalued equity to buy less overvalued targets. This theory assumes that financial markets are inefficient, thus some firms are incorrectly valued. Managers are completely rational, recognize these market inefficiencies, and take advantage of them, in part of their takeover decisions. This theory is in a way the opposite of the hubris hypothesis of takeovers by Roll (1986), in which financial markets are rational, but managers of companies are not. The misvaluation theory helps to explain who acquires whom, the choice of the means of payment, the valuation consequences of takeovers, and M&A waves. Equity as a payment method is specifically used by overvalued acquirer companies, who expect negative long-run returns on their equity but attempt to make those returns less negative. (Shleifer and Vishny 2003)

Corporate managers have their own internal evaluations of the value of their companies. Because they know more than outside investors, economists refer to this as “information asymmetry”, and these better-informed evaluations may differ from market prices (Bruner 2004a).

Rhodes-Kropf, Robinson, and Viswanathan (2005) found strong support for the theories of Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004), which predict that misvaluation drives M&As. Furthermore, Ang and Cheng (2006) provided direct empirical evidence that stock overvaluation is an important motive for companies to engage in M&As. Ang and Cheng (2006) argue that shareholders of stock acquirers, whose overvaluation is greater than the premium adjusted overvaluation of the target company, make sustained wealth gains from one day prior to the M&A announcement up to three years after the deal completion when compared with similarly overvalued non-acquiring companies. However, when the acquirer’s overvaluation is not greater than their target’s premium adjusted overvaluation, they reported significantly lower negative returns in four different holding periods. Fu, Lin, and Officer (2013) showed that overvalued bidders typically significantly overpay for the target companies they buy, and more importantly, these takeovers do not seem to achieve the necessary synergy gains. They reported that the overvalued bidders suffer from significantly worse stock returns during the next five years after the takeovers compared to control companies that do not engage in takeovers. Furthermore, they showed that the overvalued bidders also experience a significant decline in operating performance, which is not observed with the control companies over the same period. They concluded that the shareholders of overvalued acquirers would in fact be better off without the takeover, even if the correction of overvaluation is taken into account.

Moeller, Schlingemann, and Stulz (2005) reported that between 1998 and 2001, during a three-day period around the deal announcement, acquirer shareholders lost a total of \$240 billion, mainly in takeovers by acquirers that seem to be overvalued (high market-to-book). Dong et al. (2006) showed that acquirers are usually more highly valued compared to their targets, and more highly valued acquirers are more likely to use shares and less likely to use cash as a means of payment, they are also ready to pay more relative to the market price of the target company and realize lower announcement-period returns. Gu and Lev (2011) concluded that overvalued bidders systematically make worse M&A decisions compared to non-overvalued bidders. Jensen (2005) argues that the evidence is consistent with his claim that overvalued acquirers make acquisitions to con the market into believing that the deal is going to create the value that the market expects, and are able to fool it for

a certain period of time by creating an illusion of growth. When the market realizes the illusion of high value and growth, the value of the company decreases dramatically because all the overvaluation will disappear along with the value of the core business which has been comprised by efforts to avoid discovery.

Hubris

The hubris hypothesis of takeovers presented by Roll (1986) argues that plenty of takeovers that decrease the wealth of bidder company shareholders occur because overconfident managers of these acquiring companies overestimate the potential gains of the business combination. This leads to a situation where the acquiring companies infected by hubris simply pay too much for the target companies. However, unlike the agency theory which argues that managers intentionally seek to maximize their own wealth and utility, instead of maximizing the wealth of shareholders, the hubris hypothesis does not share this assumption. Managers of bidding companies may believe that they are acting in the best interest of their shareholders and undertake M&A transactions assuming that their valuations are accurate, but mistakenly end up overestimating the price of the target company. Hubris might arise from overconfidence gained from previous successful M&A transactions or, on the other hand, if the bidder manager believes that she or he has learned from her or his own past mistakes. However as discussed earlier in Section 2.3 when describing the M&A process, it is essential to realize that each merger and acquisition is unique. Although some companies participate in multiple M&As, on average, an individual corporate manager has the opportunity to make only a few acquisition bids during her or his career. When this rare situation occurs, the manager may convince herself or himself that the valuation is correct, and the market may not reflect the full economic value of the business combination. (Roll 1986)

Competition between bidders may also cause the winner to overpay due to hubris. Senior executives tend to be highly competitive and occasionally self-important. The urge not to lose can lead to a bidding war which can increase the purchase price of an M&A transaction significantly above the actual economic value of the target company. Hubris is a factor that contributes to the so-called winner's curse. In an auction situation where there are several bidders, a wide spectrum of bids for a target firm is likely to take place. Because of the difficulty that all participants face in evaluating the true economic value of the target firm and due to the competitive nature of an auction environment, the winning bid is typically significantly higher than the target firm's expected value. The winner is cursed in the sense

that she or he often pays more than the target firm is worth and may end up regretting it. (DePamphilis 2009)

The hubris hypothesis argues that strong-form market efficiency holds. It assumes that financial markets are efficient in that the asset prices reflect all of the information about individual companies and the market provides the best indicator of the value of the companies. According to Gaughan (2015), many disagree on this. In turn, most of the other explanations for the M&A phenomenon rely on market inefficiencies, at least on a temporary basis. Either financial markets are ignorant of relevant information possessed by acquiring companies, or the product markets are organized inefficiently so that, at least temporarily, opportunities arise for potential synergies, monopolies, or tax savings. (Roll 1986)

Roll (1986) admits that perfect strong-form efficiency is unlikely, but he argues that the concept should serve as a frictionless ideal, a comparison benchmark by which other degrees of efficiencies are measured. He claims that the proper role of the hubris hypothesis is to serve as a null against which other hypotheses of corporate takeovers should be compared. The hubris hypothesis predicts that, around a takeover, (a) the combined value of the bidder and target companies should slightly decrease, (b) the value of the bidding company should fall, and (c) the value of the target company should increase. The empirical evidence shows that in some studies the measured combined value increases while in others it decreases. (Roll 1986)

According to Gaughan (2015), early research of the hubris hypothesis sought to observe if the deal announcements cause the reactions mentioned above. He states that a large number of the early studies have found evidence for some or all of these effects and supports the hubris hypothesis as an explanation for many M&As. For example, Dodd (1980) and Eger (1983) reported statistically significant negative returns to the bidder shareholders after the deal announcement.

Some of the more recent studies have also found evidence that supports the hubris hypothesis but when approaching it differently. Hayward and Hambrick (1997) found that four indicators of CEO hubris are closely linked to the size of premiums paid: the recent organizational success of the acquiring firm, recent media praise for the manager, a measure of the manager's self-importance, and a composite factor of these variable. The correlation between CEO hubris and premiums is further strengthened when the board has a large number of inside directors and when the CEO is also the chairman of the board.

Authors reported that on average, shareholders of the acquiring corporations experience wealth losses after M&As, and the greater the level of managerial hubris and takeover premiums, the greater the losses of the shareholders.

Malmendier and Tate (2008) examined the manager overconfidence in 394 M&A transactions by large firms. They used CEOs' personal over-investment in their firm and their media portrayal as proxies for managerial overconfidence. They found that if the CEO is classified as overconfident, the likelihood that they make an acquisition was 65% higher. In addition, they reported that the market reaction at the deal announcement (-90 basis points) is significantly more negative compared to non-overconfident CEOs (-12 basis points). Seth, Song, and Pettit (2000) used the same shareholder wealth effects mentioned earlier and concluded that hubris plays a significant part in their sample of M&A transactions.

Moeller, Schlingemann, and Stultz (2004) showed that large companies offer greater acquisition premiums compared to small companies and the dollar return of large companies for acquisitions is significantly negative. They concluded that their findings are therefore consistent with the hubris hypothesis playing a bigger role in the decisions of large companies. Berkovitch and Naraynan (1993) argue that there is strong evidence indicating that numerous acquisitions are motivated by hubris. Goergen and Renneboog (2004) reported that in approximately one-third of their research sample on large European M&As in the 1990s, poor decision making on takeover bids may occur largely because of managerial hubris.

3 REVIEW OF THE PREVIOUS EMPIRICAL STUDIES

The M&A phenomenon has been drawing scientific curiosity for decades, and we can arguably state it is one of the most extensively studied topics in financial economics. M&As are typically amongst the largest monetary transactions and most important events of any organization, often involving a major restructuring of the companies involved and affecting various stakeholders. Not to mention the wider societal impacts through employment effects, changes in the degree of competition, and strategic ownership, as well as the potential efficiency gains and their impact on overall economic welfare. Considering all of the above, it is not surprising that the M&A phenomenon has aroused tremendous interest among researchers in various fields, such as finance, economics, accounting, strategic management, and organizational behavior. M&A performance is a theme that has been thoroughly addressed in the M&A literature since the 1960s (Das and Kapil 2012), and increased M&A activity has triggered even more interest in this topic. Bruner (2002) distinguishes between four approaches to evaluate the performance of M&As that are generally used in the M&A field:

- Event studies. This method is a stock-market-based approach that examines abnormal returns to shareholders. It can be applied to assess either the short-term or long-term shareholder wealth effects of M&As. Since the 1970s, short-term event studies have arguably been the most dominant research approach.
- Accounting studies. These studies examine long-term operating performance by analyzing the reported financial results prior to and subsequent to a takeover to observe how the accounting-based performance measures have changed. The focus of these types of studies typically ranges across measures, such as return on equity or assets, net income, liquidity, earnings per share, and leverage of the company.
- Surveys of executives. These studies present a sample of managers with a standardized questionnaire and aggregate across the results to yield generalizations from the sample.
- Clinical studies. This type of research focuses on an in-depth analysis of a single M&A transaction or small sample. This research approach is inductive. The researchers usually induce new insights by digging deeper into the details and fact-based background of specific M&A transactions. Often these new insights arise from field interviews with managers and knowledgeable observers.

The first two are the main research approaches used in the field to analyze M&A performance (Bruner 2004b). Therefore, in this section, we focus to review relevant prior studies that employed either the event study or accounting study method, or both, and we also use these methods in the empirical analysis of this thesis. These methods are discussed in depth in Section 4.

Zollo and Meier (2008) conducted a review of the empirical research in the M&A field by analyzing 88 studies published in top management and finance journals between 1970 and 2006. The results showed that the largest group 41% of the total studies employed the short-term window event study method, while 28% used long-term accounting-based measures, and 19% used the long-term window event study method. Cording (2010) surveyed 104 empirical studies in the management and finance journals and reported that 92% of the studies employed either the event study or accounting study method, or both.

The impacts of M&As can be assessed from the perspective of the bidder or the target company, or alternatively, from the perspective of the combined entity (Martynova and Renneboog 2008). Previous studies have found contradictory evidence on the benefits of M&As to acquiring companies and their shareholders. Therefore, the empirical analysis of this thesis is conducted from the perspective of acquiring companies, and this section focuses primarily on reviewing previous literature that shares this perspective. The relatively conflicting evidence on acquirers' post-acquisition performance has motivated researchers to examine the impact of the different deal characteristics on the performance of M&As. Some of the most commonly studied characteristics are also included in the empirical analysis of this thesis, and in this section, we also review the findings of previous studies related to these characteristics. Due to the considerable amount of empirical research, it is not possible to go through even all of the very important studies within the limited framework of this thesis. We focus to review the most relevant studies, including comprehensive summaries and meta-analyses of previous studies in order to provide the best possible understanding of the findings from previous empirical research. We begin this section by reviewing the main findings from event studies. In order to provide a comprehensive overview of the findings, we first briefly present some of the main findings from the perspective of the combined and target companies. Then we proceed to review the findings from the perspective of acquirers which is the primary focus of this thesis. Next, we review the main findings of accounting studies. And finally, we present the findings of the effects of different deal characteristics on the performance of M&As.

3.1 Event studies

Based on previous M&A studies published from the 1970s to early 2000s, five different comprehensive summaries of prior M&A research all concluded that the evidence indicates that, on average, the combined returns of the acquirer and target shareholders are positive and statistically significant at the announcement of takeovers. Shareholders of the target companies gain significant short-term returns following a takeover and receive the majority of the gains. (Jensen and Ruback 1983; Jarrell et al. 1988; Andrade et al. 2001; Bruner 2002; Martynova and Renneboog 2008) The results of meta-analyses based on previous empirical studies by Datta (1992) and King et al. (2004) support these findings.

Bruner (2002) states that from his sample of 20 reviewed studies, almost all report positive combined returns, 11 of the 20 being statistically significant, with returns ranging from 0.14% to 11.3%. He argues that the size difference between acquirer and target might cause challenges for measuring the combined gains. The acquirer is typically considerably larger, thus the dollar value of a small percentage loss for the acquirer shareholders could exceed the dollar value of even a large percentage gain to the shareholders of a smaller target company. Numerous studies have taken this into account by constructing a portfolio of the acquirer and target companies and examining either the absolute dollar value of returns or the weighted average returns. (Bruner 2002) In their research, Andrade et al. (2001) examined mergers from 1973 to 1998 and show that the combined average announcement period abnormal returns over the three-day event window are quite similar across decades, ranging from 1.4% to 2.6%, with the average of 1.8% that is statistically significant at the 5% level.

According to Jensen and Ruback (1983), target companies experience short-term abnormal stock price changes of 30% in tender offers and 20% in mergers. Datta et al. (1992) reported average shareholder gains of 21.8% for the target companies in the month of the deal announcement. According to Martynova and Renneboog (2008), the empirical literature is unanimous in its conclusion that M&As are expected to create value for the target and acquirer shareholders combined (in terms of the announcement abnormal returns), with most of the value created accruing to the shareholders of the target corporations.

However, the findings on returns to bidder shareholders are less straightforward and consistent. To a large extent, the empirical evidence on the wealth effects for acquiring companies is mixed and according to Das and Kapil (2012), the academic community is

divided on whether takeovers provide any real benefits to acquirers. Jensen and Ruback (1983) reviewed 13 studies published between 1997 and 1983 that examine the stock price reaction around the announcement of takeovers. Their survey provides a comprehensive summary of evidence related to tender offers and mergers in the US market from 1956 to 1980. Authors reported that in successful tender offers, the abnormal returns to bidder firms are significantly positive and range from 2.4% to 6.7%, with a weighted average return of 3.8%. In mergers, the evidence on bidder returns is mixed and therefore more difficult to interpret. On the whole, their evidence suggests that the returns to bidder firms in mergers are approximately zero. Authors concluded that the evidence seems to indicate that M&As generate positive gains, that shareholders of target companies benefit and that bidder shareholders do not lose.

Jarrell et al. (1988) described that their paper can be considered an update to the study of Jensen and Ruback (1983), with a focus on more recent empirical studies that cover takeovers made in the 1980s. Their sample covers successful tender offers of 440 NYSE and AMEX bidders from 1962 to 1985. For the entire sample period authors reported that, on average, bidders realize small but statistically significant gains of approximately 1 to 2 percent around the deal announcement. During the 1960s bidders realized positive excess returns of 4.95% in an event window of 10 days before up to 20 days after the bid announcement and a lower, but still statistically significant, positive average excess returns of 2.2% over the 1970s. However, evidence from 159 cases during the 1980s shows statistically insignificant losses to acquirers.

In their meta-analysis, Datta et al. (1992) examined a total of 41 empirical studies published in major journals that employ the event study method to estimate the effects of M&As on the stock prices of target and bidder firms in the US market. Based on 75 observations, their main analysis show that, on average, bidders realize statistically insignificant gains of 0.388%, in the month of the merger announcement.

Andrade et al. (2001) presented further evidence by providing updated findings also from the 1990s. They analyzed the announcement period average abnormal stock price reaction of 3688 completed deals for both bidders and targets, as well as for the bidder and target combined. Their paper includes observations from 1973 to 1998 and focuses on M&As where both the acquirer and the target are publicly traded US-based corporations. In their evaluation, the authors employed two commonly used event windows. First, one day before to one day after the announcement, and secondly, a longer window beginning 20 days

before the announcement and ending at the close of the deal. Authors reported the average abnormal return of -0.7% for bidders over the shorter, three-day event window, and -3.8% over the longer event window, both statistically insignificant. For the target companies, they reported 16.0% over the shorter event window, and 23.8% over the longer one, both statistically significant. Authors state that because the negative results to bidders are statistically insignificant, it is hard to claim that they are losers in M&A transactions, but they clearly are not big winners like the shareholders of target companies. They concluded that the results of their study conducted with an updated database are in line with the earlier review papers of evidence on M&As by Jensen and Ruback (1983) and Jarrell et al. (1998), that M&As create value for the shareholders of the combined companies, with the majority of the gains accruing to the target shareholders.

Bruner (2002) summarized the evidence from 130 studies published between 1971 and 2001, including various research approaches to detect the performance of M&As. Findings of 41 short-term window event studies of returns to acquirer shareholders are distributed rather evenly. 20 studies show negative returns with 13 of these significantly negative returns. The negative returns range from one to three percent. 24 studies show positive returns with 17 of the 24 significantly positive. Briefly, about one-third of the studies (13) report value destruction, while about one-third report value conservation (14), and approximately one-third report value creation (17).

The study by King et al. (2004) consists of several meta-analyses of post-M&A performance. Their research is based on 93 empirical studies published between 1921 and 2002, which more than doubles the number of studies analyzed compared to the previous meta-analysis by Datta et al. (1992). King et al. (2004) analyzed the abnormal stock returns of mainly US firms over several event windows. Only at day 0, which is the deal announcement day, the abnormal returns to acquiring companies are slightly positive and significant ($r = 0.09$), as reflected in meta-analytic corrected r population estimates. The result is based on 28 016 observations. The corresponding result for target companies is considerably higher ($r = 0.70$), also statistically significant. In subsequent event windows (day +1 and later) the returns to acquiring companies are either statistically insignificant or negative.

Tuch and O'Sullivan (2007) presented a review of empirical research on the impact of acquisitions on corporate performance. Their sample of short-run event studies analyzed includes a total of 16 studies published between 1980 and 2006. The event period over

which the performance of acquiring firms is measured in these studies varies considerably. Some studies measure the performance as much as four months before the deal announcement, while some studies examine the performance up to three months after the bid announcement. However, despite the selected event window, the overall evidence suggests little if any positive returns for the acquiring company shareholders. Only the early studies by Asquith, Bruner, and Mullins (1983) with US sample and Franks and Harris (1989) with a UK sample show significant positive returns to acquirers. However, it should be noted that these studies included takeovers in the 1950s and the 1960s when M&As appear to have been more beneficial to shareholders of bidder companies. The remaining studies they analyzed from the US and UK markets show either insignificant or significantly negative returns to acquirers around the deal announcements. However, some of the more recent studies in their sample show that evidence from other countries tends to be more positive compared to findings reported for the US and UK. For example, Campa and Hernando (2004) document insignificant gains for takeovers in Continental Europe, while Ben-Amar and Andre (2006) document positive announcement returns for publicly listed Canadian acquirers.

As part of their comprehensive study, Martynova and Renneboog (2008) reviewed the previous empirical evidence on the performance of M&As across different takeover waves. Based on 65 prior studies, they reported that the evidence on the wealth effects around takeover announcements for the acquirer shareholders is mixed. They showed that, on average, acquirer shareholders realize abnormal returns around bid announcements, which are statistically indistinguishable from zero. The results are mainly based on samples from the US and UK, but Martynova and Renneboog (2008) also reviewed some studies from Europe and Asia.

In their meta-analysis, Meckl and Röhrle (2016) used only studies published from the year 2004 onwards to provide an overview of the findings of the performance of M&As from more recent studies. In total, they examined 55 399 transactions between 1950 and 2010 from 33 previous studies. Most of the studies in their meta-analysis measure the cumulative abnormal returns (CARs) to bidder shareholders over a three-day event window around the deal announcement. The results showed that less than half (47.6%) of the sample M&A transactions worldwide realize positive announcement returns to bidder shareholders. With this result being highly significant ($p < 0.001$), they concluded that the evidence of their study confirms the findings from prior studies that generally takeovers do not have a positive effect on the performance of the acquiring firm.

Overall, the evidence from previous short-term window event studies shows that there is a substantial difference between the abnormal returns to bidders and targets. Unlike for the target shareholders, there is no clear value creation for the bidder shareholders in the sense of earning returns significantly in excess of the opportunity cost of capital. Based on this, M&As are often seen as failures from the acquirers' point of view. According to Bruner (2002), this line of logic is behind statements that 60–70% of all M&A transactions “fail” and he criticizes that the popular definition of failure is too extreme. He argues that economics teaches that investors should be satisfied if they receive a return equal to their cost of the lost opportunity, in other words, their required return. The reality seems to be that most M&A transactions at least compensate investors for their opportunity cost. Thus, the average, benchmark-adjusted return to corporate investment in M&As is close to zero, as in the competitive markets we would expect in any form of corporate investments. Although returns to bidders are on average small, close to zero, there is a wide variation in returns, which means that many bidders should prepare for disappointment while trying to be one of the winning companies. (Bruner 2004b)

Additionally, there are several challenges in evaluating bidder returns. First, targets might be small relative to the acquirer, so even good takeovers could have little impact on the share price of the acquirer. Second, the share price response to the M&A transaction can only represent the surprise element of the transaction. If the acquirer is known to participate in the takeover strategy, the share price response to any acquisition announcement will only reflect how the market perceives that takeover to differ from the anticipated takeover. Third, if the target resists the acquisition, it could take a long time to complete the takeover process. Thus, the uncertain outcome of the event makes it hard to isolate the market's perception of the bid. (Fuller et al. 2002)

Bruner (2004b) states that M&As are not homogenous and underlines the importance of taking into account the individual differences between deals when assessing the success or failure of an M&A transaction. We discussed earlier that managers might have a complex set of motives for takeovers. Short-term shareholder returns might not be the primary motive when managers try to build capabilities that can help achieve greater returns in the long run. Therefore, it is essential to examine the performance also over the longer run, preferably also through accounting-based measures, to get a broader and more holistic view of the performance of M&As. The next section presents previous empirical evidence from the accounting studies.

When observing evidence from long-term window event studies, in which the event windows are extended over several months up to several years after the M&A announcement, the results are not very promising for bidders. According to Martynova and Renneboog (2008), even more controversy is added when analyzing the long-term stock price performance. Based on their comprehensive review of prior empirical evidence from studies published between 1972 and 2007, they reported that acquirers experience a substantial decline in their stock price performance over the first five years subsequent to the M&A transaction. Meta-analyses by King et al. (2004) showed that the abnormal returns to acquiring firms over three different long-term event windows range from -0.06 to -0.10, as reflected in meta-analytic corrected r population estimates, all statistically significant at the 1% level. As part of their research Tuch and O'Sullivan (2007) also reviewed prior empirical evidence from the long-run event studies. Their review included 14 different studies published from 1980 to 2006, some of which are not included in the study of Martynova and Renneboog (2008). Some of the more recent studies they reviewed show that M&As generate either negative or insignificant abnormal returns for bidders in the long run, but overall, their long-run performance analysis show overwhelmingly negative returns for the acquirers.

Martynova and Renneboog (2008) and Tuch and O Sullivan (2007) both emphasize the fact that long-run window event studies may be subject to methodological problems. Lyon, Barber, and Tsai, (1999) state that "the analysis of long-run abnormal returns is treacherous." Kothari and Warner (2004) also question the reliability of long-term methods and highlight the contrast with short-term methods, which they find relatively straightforward and trouble-free. As a result, they argue that one can have more confidence and place more weight on the results of the short-run tests than long-run tests, which is why the long-term event study method is excluded from the empirical analysis of this thesis. The strengths and weaknesses of the event study and accounting study methodologies are discussed further in Section 4.4.

3.2 Accounting studies

Most of the previous empirical research on M&A performance has focused on the use of stock-market-based data. The vulnerability of accounting data to management manipulation through earnings management and accounting policy changes serve as a possible explanation. Accounting-based performance measures are also more difficult to compare.

Nevertheless, many researchers favor the use of accounting data when trying to evaluate the long-term effects of takeovers on operating performance, arguing that any benefits resulting from M&As will eventually appear in the accounting records of the firm. (Tuch and O'Sullivan 2007)

The use of accounting-based performance metrics has increased dramatically in the M&A literature since the 1980s, and authors like Bruner (2004b) consider accounting studies as one of the main research approaches along with event studies to measure the performance of M&As. Accounting studies usually consists of a comparison of accounting-based measures before and after M&A transaction, typically over a period of several years. There is a wide range of different accounting-based measures used by researchers. Thanos and Papadakis (2012) categorized three broad approaches of accounting-based measures (cash flows, growth measures, and financial ratios) that are widely used in the M&A literature to measure various aspects of financial performance, such as effectiveness, efficiency, and profitability. According to Martynova and Renneboog (2008), examples of such metrics include: return on assets or equity, net income, EPS, sales, profit margins, corporate liquidity, number of employees, leverage, and others.

As part of his research, Bruner (2002) also summarized the previous empirical evidence from accounting studies. He analyzed 13 accounting studies published between 1977 and 2001 that employ measures, such as returns on equity, assets, and capital, growth rates, and profit margins. Two of the studies report significantly negative post-M&A performance, while three studies report significantly positive performance, and the rest of the studies are in the non-significant middle ground.

In their study, King et al. (2004) also examined previous findings from accounting studies, mainly from the US market. Based on a total of 52 studies and 47 460 observations utilized in four different meta-analyzes, they showed that the effects of M&As on the accounting-based financial performance of acquiring corporations are either insignificant or negative when the financial performance is examined through return on assets, equity, and sales.

Tuch and O'Sullivan (2007) also reviewed the evidence from 10 accounting studies published between 1977 and 2005, mainly with the samples from the US and UK. They state that research is still evolving in this field, and the results are hard to compare because the methods still vary considerably. Overall, however, when conventional accounting

measures are used, they argue that the results are somewhat mixed without clear findings of improved post-M&A performance of the acquiring companies.

Similarly, Martynova and Renneboog (2008) reported that the previous empirical evidence from accounting studies is rather contradictory. They reviewed a total of 26 papers published from 1980 to 2007. In addition to studies with samples just from the US or UK, they also reviewed studies with evidence from Europe and Japan. They reported that from 26 studies 14 show a post-M&A decline in the operating returns of merged companies (e.g. Ravenscraft and Scherer 1987), seven studies report insignificant changes in profitability (e.g. Odagiri and Hase 1989), while five studies show a significantly positive increase in post-M&A operating performance (e.g. Carline, Linn and Yadav 2002). According to Martynova and Renneboog (2008), the picture is even more blurred when post-M&A corporate growth is examined. They also argue that, in general, studies that show a decline in post-M&A profitability use earnings-based measures, while studies that show takeover gains employ cash flow-based performance measures. In their studies, Ravenscraft and Scherer (1987, 1989) used both measures and showed that the differences in benchmarks are responsible for these contradictory findings.

Meeks (1977) conducted one of the earliest accounting studies in the M&A field. He examined the combined firm post-M&A performance of 233 M&A transactions in the UK market during 1964–1972 and find that profitability improve in the year of the bid but decline in each of the following five years. More specifically, he reported significantly positive abnormal profits of 0.114% in the merger year, significantly negative abnormal profits that range between -0.035% and -0.109% over the following five years, and insignificant returns after this over the next two years.

Healy et al. (1992) examined the post-merger operating performance of the 50 largest US mergers between 1979 and 1984. They used industry performance as a benchmark and employ an intercept model to measure the abnormal operating performance, in which they regress the post-merger industry-adjusted performance on a combined acquirer and target pre-merger industry-adjusted performance. Over the five post-merger years, the annual median operating cash flow return on the actual market value of assets for the sample firms is 2.8%, statistically significant, and about 16% higher than the returns of their industries. Overall, they concluded that merged companies show significant improvements in asset productivity relative to their industries, resulting in higher operating cash flow returns. These improvements in post-merger cash flows do not come at the expense of long-term

performance, since sample companies maintain their rates of capital expenditure and R&D relative to their industries after the merger.

Numerous other studies have later followed the approach of Healy et al. (1992). For example, Linn and Switzer (2001), used a parallel approach by examining industry-adjusted operating cash flows of 413 US M&As between 1967 and 1987, but instead of the intercept model, they use the change model in which improvements are estimated as the difference between post- and pre-M&A performances. They reported significantly positive industry-adjusted median annual operating cash flows of 1.81% for the sample firms.

Ghosh (2001) considers the study of Healy et al. (1992) as one of the most notable studies that analyze changes in operating performance around M&As, but he criticizes it for an inappropriate benchmark. He argues that performance results with benchmarks that only control for the industry performance are likely to be biased because acquiring companies undertake M&As following a period of superior performance and are typically larger than industry-median companies, and therefore benchmarks that also control for size and pre-M&A performance should be used. Ghosh (2001) examined 315 US M&As during the period 1981 through 1995. Using the change model with industry-adjusted and industry, size, and pre-performance-adjusted benchmarks he reported statistically insignificant operating performance improvements for the sample firms. Ghosh (2001) further demonstrated that when he used the Healy et al. (1992) regression-based methodology and industry-adjusted benchmark for his sample he find statistically significant estimates of annual median operating performance improvements of 2.4%, which are close to the 2.8% reported by Healy et al. (1992).

Powell and Stark (2005) noted that Ghosh (2001), however, do not report the regression-based results using benchmarks controlling for size and pre-performance and decided to examine this and other issues in their own study. They used both aforementioned methods, different definitions of operating performance, various deflators, and both aforementioned benchmarks for expected performance and applied them to a sample of 191 M&As made by UK industrial firms between 1985 and 1993. Overall, their results showed the existence of improvements in the post-takeover operating performance of acquiring companies. Estimates of post-takeover performance improvements are generally higher when a regression-based method is used compared to a change model. Using a benchmark of expected performance that controls for industry, size, and pre-performance do not significantly alter the conclusions of the study that M&As create real improvements in

operating performance for acquiring companies relative to using a benchmark that controls only for industry. In fact, the estimated performance improvements are always higher when using benchmarks that control for industry, size, and pre-performance, compared to benchmarks that only control for industry performance.

Martynova, Oosting, and Renneboog (2007) examined the long-term profitability of 155 European M&As completed between 1997 and 2001. They reported that the profitability of the combined corporation decreases significantly after the M&A transaction. However, this decrease became insignificant after controlling for industry, size, and pre-event performance of the peer companies. They also showed that, in general, the improvement in profitability after M&As is higher when using the intercept model compared to the change model.

Sharma and Ho (2002) provided evidence from the Australian market by examining the post-acquisition operating performance of 36 acquisitions between Australian public companies during the period 1986 to 1991. Using matched firms to control for industry and economy-wide factors, they reported that based on four cash flow and four accrual performance metrics, takeovers do not lead to significant improvements in corporate post-M&A operating performance.

3.3 The impact of deal characteristics on M&A performance

The comparatively conflicting evidence on acquirers' post-acquisition performance has motivated researchers to examine whether the post-acquisition performance is sensitive to various types of deal characteristics. Some of the most commonly studied characteristics are the means of payment (cash, stock, or hybrid), the geographical location of the target firm in relation to the acquirer (domestic versus cross-border deals), and industry relatedness between the target and the acquirer (related versus unrelated deals). The following sections present the main findings from previous studies related to these characteristics.

3.3.1 Method of payment

Tuch and O'Sullivan (2007) reviewed the findings of ten studies published between 1987 and 2006 that provided evidence from the US and UK. Overall, they concluded that the available evidence suggests that acquisitions paid in cash perform better than equity bids.

They argue that the prior evidence is fairly consistent that cash transactions are related to better performance in both the short-term (Dong et al. 2006; Draper and Paudyal 1999; Travlos 1987; Walker 2000) and the long-term (Linn and Switzer 2001; Loughran and Vijh 1997). One explanation for this might be that acquiring firms make a decision on their mode of payment, depending on whether they expect higher or lower performance in the future. As discussed in Section 2.5.2, acquirers typically pay in cash if they think their shares are undervalued and if they believe their shares are overvalued, they often use equity. Cash offers may serve as a signal to the market that the management of the acquiring company expects an increase in corporate value over the post-M&A period (Myers and Majluf 1984). Deals paid in shares will result in a dilution of the share price due to an increase in the number of shares outstanding, while the value of the company remains the same until the expected synergies take effect. (Tuch and O'Sullivan 2007)

According to Martynova and Renneboog (2008), based on the papers they reviewed; US studies unanimously agree that the announcements of M&A transactions that are financed with equity lead to significantly negative abnormal returns for the acquirer shareholders and that these M&As significantly underperform takeovers paid in cash. However, European studies they reviewed provide somewhat opposite findings; takeovers financed with equity result in positive and sometimes significant returns for the acquirer shareholders. Furthermore, Goergen and Renneboog (2004) reported that returns to the acquirer shareholders in all-equity M&A transactions significantly exceed those in all-cash deals. DePamphilis (2013) argues that this may be because of the existence of large-block shareholders, whose active monitoring tends to improve post-acquisition performance, and such shareholders are less common in the US.

Travlos (1987) examined the share price performance of 160 US acquirers between 1972 and 1981. He reported statistically significant negative abnormal returns of -0.69% at the deal announcement day for bidding firms that use common stock financing. For cash offers, the corresponding abnormal returns are 0.29%, and statistically insignificant. According to Bruner (2004b), several prior studies have reported that the stock-based M&A transactions are related to negative returns to acquirer shareholders at deal announcements, whereas cash bids are neutral or slightly positive. Fuller et al. (2002) state that similar findings are reported by Fishman (1989), Brown and Ryngaert (1991), and Martin (1996), who all showed that acquirers making cash offers experience higher abnormal returns at the announcements of the takeovers compared to those making all-equity offers.

In their meta-analysis, Datta et al. (1992) found that both acquirer and target shareholders are worse off in stock-financed deals. Bidders suffer losses of -2.738%, while targets suffer -5.606% losses around the deal announcement, both statistically significant. Corresponding results in cash financed deals are 0.909% for the bidders and 3.159% for the targets, both statistically insignificant. Meta-analyses by King et al. (2004) showed insignificant results, suggesting that the method of payment does not have an impact on post-acquisition performance.

Eckbo, Giammarino, and Heinkel (1990) reported that the announcement-month abnormal stock returns for bidders in Canada are, on average, greatest in hybrid offers, using a mix of cash and stock as a means of payment. Average abnormal returns to bidders in mixed offers are 5.68% and 2.72% in all-stock offers, both statistically significant. All-cash offers on average led to statistically insignificant gains of 1.43% for the bidders. Similarly, Eckbo and Thornburn (2000) reported the greatest average abnormal returns on hybrid offers, again for the Canadian bidders.

Linn and Switzer (2001) examined the impact of the chosen payment method on the post-merger operating performance of 413 US business combinations. Their results indicated that the change in the operating performance is significantly greater when the acquiring company offers cash as compared to stock offers. Ghosh (2001) reported similar findings.

However, Healy et al. (1992) and Heron and Lie (2002) did not find a significant relationship between the payment method and post-M&A operating performance in the US market. Similar insignificant findings are reported by Sharma and Ho (2002) in the Australian market, Powell and Stark (2005) in the UK market, and Martynova et al. (2007) from a sample of European M&As.

3.3.2 Domestic versus cross-border M&As

Moeller and Schlingemann (2005) examined how cross-border takeovers differ from domestic deals from the perspective of US acquirers based on stock and operating performance measures. For a sample of 4430 acquisitions from 1985 to 1995, they reported that US companies acquiring cross-border targets experience approximately 1% lower stock returns at the announcements of M&As and also lower improvements in their operating performance measures compared to companies acquiring domestic targets, both findings are statistically significant.

Eckbo and Thorburn (2000) found somewhat similar results when examining more than 1800 domestic and cross-border acquisitions in Canada between 1964 and 1983. All of the foreign bidders in their sample are US companies listed on the NYSE. They reported significantly positive average announcement period abnormal returns for Canadian domestic acquirers, while abnormal returns for US foreign acquirers are indistinguishable from zero. Domestic acquirers also show superior performance based on pre- and post-acquisition abnormal accounting performance measures.

Conn et al. (2005) examined the announcement and post-M&A stock returns of UK bidders in over 4000 acquisitions of domestic, cross-border, public, and private targets between 1984 and 1998. They reported significantly positive CARs of 0.68% and 0.33% for domestic takeovers and cross-border takeovers over a three-day event window (-1, +1) around the bid announcement. Overall, they concluded that cross-border takeovers result in a lower announcement and long-run returns compared to domestic takeovers.

Similarly, Aw and Chatterjee (2004) studied the performance of UK acquirers in domestic and cross-border M&As. They examined CARs between a period of six months and two years after the announcement of the bid for a sample of 79 M&As during 1991–1996. Consistent with previous studies, they found that acquirers of domestic targets have superior or at least less negative CARs compared to acquirers of international targets. From a sample of European takeovers, Campa and Hernando (2004) also reported that shareholders of acquiring companies seem to benefit more in domestic M&A transactions compared to cross-border deals. However, their empirical analysis was based on a sample of 262 M&As over a relatively short period from 1998 to 2000, and for the most part, their results are statistically insignificant.

In contrast, Hazelkorn, Zenner, and Shivdasani (2004) found that US bidders perform better in cross-border acquisitions than in domestic acquisitions. The 144 acquisitions of cross-border targets in their sample led to median short-term excess returns of 0.8% for bidders, compared to -0.6% for domestic targets. Similarly, in their meta-analysis with a worldwide sample, Meckl and Röhrle (2016) reported that cross-border M&A transactions more often lead to a positive announcement period stock market reaction for bidder shareholders compared to domestic takeovers.

Martynova et al. (2007) showed that based on accounting-based measures the profitability of the business combination increase by 0.5% following domestic acquisitions and decrease by 1.8% following cross-border M&A transactions. They note that even though the difference in changes in operating performance is not statistically significant, it is economically notable.

3.3.3 Related versus unrelated M&As

According to Martynova and Renneboog (2008), several studies they reviewed show that those firms that acquired targets from the same industry experience significantly higher CAARs compared to those that acquire targets from unrelated industries. Bruner (2002) argues that, based on previous studies, unrelated M&A transactions tend to be associated with worse performance compared to deals between related firms. In their meta-analysis, Datta et al. (1992) showed that in the month of the deal announcement, bidder shareholders realize significantly positive average shareholder gains of 1.789% in related M&As, while the corresponding result in conglomerate deals are -0.950% and insignificant.

For a sample of 2419 deals from 28 European countries during the fifth takeover wave (1993–2001), Martynova and Renneboog (2011) reported that acquiring companies experience significantly higher abnormal returns at the announcement of takeover with targets from their core industry compared to diversifying M&As (0.63% versus 0.36%). Walker (2000) examined 278 US acquisitions between 1980 and 1996 and find that the bidder shareholders experience insignificant cumulative market-adjusted returns of 0.02% around the deal announcement date in related takeovers, while the corresponding result in unrelated acquisitions is -1.60% and significant.

In contrast, when examining 215 horizontal and 562 non-horizontal bids made by Canadian firms between 1964 and 1983, Eckbo (1986) found that CAARs over the month of the bid announcement triggered by conglomerate M&As outperform those triggered by industry-related bids (1.27% versus 0.89%), both significant. Matsusaka (1993) reported somewhat similar findings from a sample of 199 US acquisitions. He showed significantly positive market-adjusted returns of 1.2% for bidder shareholders over the announcement period in unrelated takeovers, while the corresponding result in related deals is statistically indistinguishable from zero. However, for the most part, both studies refer to the M&As during the conglomerate wave, which may affect the results. On the other hand, Hubbard and Palia (1999) reported significantly positive announcement period mean abnormal

returns of 1.62% in related and insignificant returns in unrelated M&As when examining 392 US bidder companies during the conglomerate merger wave in the 1960s.

For the accounting-based measures and with US samples, Healy et al. (1992) and Heron and Lie (2002) reported significantly greater operating performance improvements when target companies are from the same industry as the acquirer. In contrast, Ghosh (2001) found significantly worse post-acquisition cash flow improvements in related acquisitions for US firms. In turn, several studies have reported statistically insignificant differences in post-acquisition accounting-based performance improvements between related and diversifying M&As (Linn and Switzer 2001; Martynova et al. 2007; Powell and Stark 2005; Sharma and Ho 2002).

4 DATA AND METHODOLOGY

This section first describes the data selection and presents the final sample of the study. After this, we present the methodological approach and the statistical tests used in the empirical analysis of the thesis. The short-term window event study method is used to examine the share price reaction of Nordic acquiring companies on and around the deal announcement day, and the accounting study method is used to examine the changes in their long-term accounting-based performance. We also discuss the strengths and weaknesses of these methods. And at the end of the section, we present the hypotheses of the study.

4.1 Data

The data for the research is collected from Thomson ONE database and covers M&As made by Nordic companies, announced and completed between 2000 and 2015. Due to lack of data, Iceland is excluded from the study, and in this thesis, the Nordic region countries comprise of Denmark, Norway, Sweden, and Finland. The Thomson One database provides relevant information for the research, such as names, nations, four-digit Standardized Industrial Classification (SIC) codes of the acquirer and target companies, and whether they are publicly listed firms. Additionally, it provides information on the announcement and closing dates of deals and their values, the percentage of shares acquired and owned after the deal, and the payment method of the transaction.

Following Agrawal, Jaffe, and Mandelker (1992), deals are defined as related if the acquirer and its target are in the same industry, as measured by their four-digit SIC codes, while all other M&A transactions are classified as unrelated deals. The sample consists only of M&A transactions made by publicly listed companies, as the share price and accounting data required for the empirical analysis are often unavailable or incomplete for private firms. Following (Ghosh 2001) all leveraged, and management buyouts are excluded from the sample. Furthermore, only deals with a transaction value of at least one million euros and in which the bidder acquired 100% of the shares of the target company are included in the sample. In this way, we can expect the takeover to have a sufficiently significant impact on the value and operations of the bidder firm. In addition, deals in which either the acquirer or the target is a financial institution such as (bank, pension fund, mutual fund, or unit trust) or real estate firm are removed from the sample, because the nature of the business and accounting and regulatory requirements in these industries typically differ significantly from

others, making it difficult to compare them with other firms. In order to prevent any possible effects of confounding events, M&A transactions are removed from the sample if the acquirer had been involved in any other M&As within three years after completion of the deal.

Stock and accounting data of acquiring companies required for the empirical analysis is collected from Thomson Reuters Datastream. For the purpose of the event study method, daily stock total return data of acquirer firms and relevant market indices are required from 250 days before to 10 days after the deal announcement day. OMX Stockholm, OMX Helsinki, OMX Copenhagen or Oslo exchange all-share indices are used as a proxy for the market returns depending on the nationality of the acquirer. Accounting-based data of acquirers are required for the return on equity (ROE), return on assets (ROA), earnings per share (EPS), and net profit margin (NPM) for three years before and three years after the deal closing date. After removing clear outliers, the final sample consists of 241 M&A transactions. Sufficient accounting-based data on these 241 transactions were available for ROE, ROA, EPS, and NPM in 192, 201, 149, and 182 transactions, respectively. Table 1 presents some characteristics of the final sample. During our 15-year investigation period, most of the sample takeover announcements were made in 2004–2007, before the financial crisis and when the market started to show signs of recovery after the burst of the dot-com bubble. Most of the takeovers in the sample were made by Swedish acquirers and least by Danish companies. The majority of the transactions were paid in cash, while deals paid in stock or a combination of cash and stock were almost evenly distributed. More than half of the takeovers in the sample are cross-border M&As. In addition, the final sample includes more unrelated takeovers than deals between companies from the same industry. The distribution of the sample M&A transactions based on deal characteristics between ROE, ROA, EPS, and NPM is shown in Table 4 in Section 5.2.

Table 1: Sample characteristics

	<u>Number of takeovers</u>	<u>Percent</u>
Panel A: Year of M&A Announcements		
2000–2003	29	12.03%
2004–2007	86	35.69%
2008–2011	63	26.14%
2012–2015	63	26.14%
Total	241	100%
Panel B: Acquirer Nation		
Sweden	101	41.91%
Norway	69	28.63%
Finland	52	21.58%
Denmark	19	7.88%
Total	241	100%
Panel C: Deal Characteristics		
<u>Payment Method</u>		
Cash only	143	59.34%
Stock only	48	19.92%
Cash and stock (hybrid)	50	20.75%
Total	241	100%
<u>Geographical Scope</u>		
Domestic takeovers	95	39.42%
Cross-border takeovers	146	60.58%
Total	241	100%
<u>Industry Relatedness</u>		
Related takeovers	85	35.27%
Unrelated takeovers	156	64.73%
Total	241	100%

4.2 Event study method

Economists are often asked to evaluate the effects of an economic event on the value of a company. On the surface, this may seem like a challenging task, but the evaluation can be made rather easily using an event study method. Utilizing financial market data, this method measures the effect of a particular event on the value of a company. The usefulness of the event study stems from the fact that given rationality in the marketplace, the impact of an event will be immediately reflected in the security prices. (MacKinlay 1997) Indeed, the event study method is also widely applied in examining the stock market efficiency, which we discussed in Section 2.5.2.

The event study has various applications. In the fields of finance and accounting, event studies have been applied to numerous company-specific and economy-wide events. Some examples include announcements of M&As, earnings announcements, dividend and stock split announcements, CEO turnovers, issues of new debt or equity, and announcements of macroeconomic variables such as the trade deficit. The focus in most of the applications is to measure the impact of an event on the price of a specific class of securities of the company, usually on the share price. (MacKinlay 1997) In this thesis, we focus on measuring the short-term impact of the announcements of M&As on the share prices of the acquiring companies.

Event studies have a fairly long history. Probably the first published study is the one by Dolley (1933), which examined the price impact of stock splits. The degree of sophistication of event studies increased over the decades from the early 1930s until the late 1960s. In the late 1960s, seminal studies by Ball and Brown (1968) and Fama, Fisher, Jensen, and Roll (1969) presented the methodology which is essentially the same as that which is in use today. Even though after these pioneering studies, various modifications have been developed. (MacKinlay 1997)

According to Bruner (2002), short-term event studies have undeniably dominated the field of M&A performance research since the 1970s. The purpose is to assess whether there is an abnormal share price reaction associated with the announcements of M&As. The existence of at least a semi-strong form of market efficiency is a precondition in these types of studies. Fama (1970) defines a semi-strong form of market efficiency as a market where security prices fully reflect all publicly available information and the historical data of past prices. This means that the future expectations of investors are reflected in stock prices at the announcement of the M&A transaction.

4.2.1 Procedure for an event study

MacKinlay (1997) states that although there is no unique structure defined for the event study, there is a general guideline for the process of the study. The initial task is to define the scope of events that will be analyzed and the time period of interest. The second step is to identify those companies whose market value may be affected. The next stage is to determine the event window in which the impact of the event is assumed to be detectable. In theory, the correct moment is the first public announcement of the event, and typically

the event window is extended around the announcement to include the periods surrounding the event in the study.

In this thesis, the impact of the announcement of M&As is examined on the announcement day and in three different event windows surrounding the announcement day. Following, for example, Vaihekoski (2004), the longest selected window is a 21-day event window (-10, +10), beginning ten days before and ending 10 days after the announcement. The second one is an 11-day window (-5, +5), as suggested, for example, by Brown and Warner (1985). In addition, a three-day window (-1, +1) is included, which according to Andrade et al. (2001), is commonly used. Finally, the effect is also examined on the announcement day (Day 0).

According to MacKinlay (1997), shorter event windows provide more powerful test statistics. Shorter event windows also reduce the probability of confounding events that may affect stock prices. However, relatively short but slightly longer event windows might help us capture possible stock market reactions that occur either earlier or later than anticipated. For example, possible information leaks related to the deal before the actual deal announcement may lead to stock market anticipation about the content of the forthcoming announcement. On the other hand, the market may need some time to fully understand the likely effect of the announcement on the stock price.

Evaluating the impact of the event requires the measurement of the abnormal return. The price performance of a security can only be considered "abnormal" relative to a certain benchmark. Therefore, we need to define a model that generates "normal" returns before we can measure the abnormal returns. (Brown and Warner 1980) In this thesis, a widely applied market model is used. According to MacKinlay (1997), the market model represents a potential improvement over the constant mean return model, which is another widely used model. He argues that the market model reduces the variance of the abnormal returns which can lead to increased ability to detect event effects.

Next, it is necessary to specify an estimation window that is used as a period for modeling the normal returns prior to the event that are not related to the event. Generally, the event window itself is not included in the estimation window to prevent the event from affecting the normal performance model parameter estimates. MacKinlay (1997) Following MacKinlay (1997) for each announcement a 250-trading-day period is used as the

estimation window, which according to Vaihekoski (2004), is often used in event studies. The event windows and estimation window used in this thesis are illustrated in Figure 4.

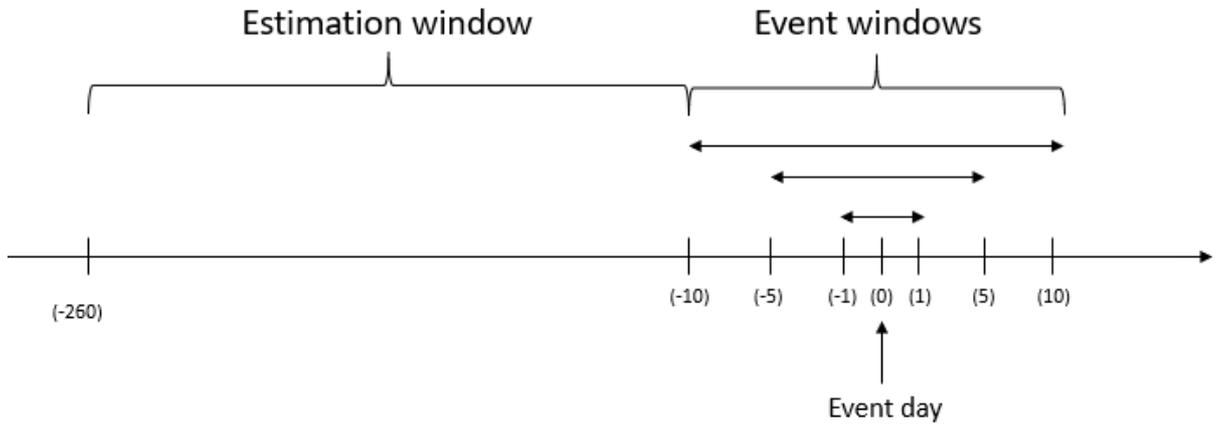


Figure 4: Estimation window and event windows

We start the calculations by computing daily stock returns for the sample firms. We take the natural logarithm (\ln) to improve the normality distribution (Vaihekoski 2004). Daily logarithmic returns are calculated as follows:

$$R_t = \ln \left(\frac{P_t}{P_{t-1}} \right) \quad (1)$$

Where R_{it} is the logarithmic return of stock i in period t , P_{it} represent the price of the stock i in period t , while $P_{i(t-1)}$ is the price of the stock i in period $t - 1$. The same approach is employed to calculate the daily market returns for market indexes used in the market model. Since the sample consists of firms listed in different Nordic countries, the stock index used as a market portfolio depends on where the observed firm is listed. MacKinlay (1997) describes the market model as a statistical model that relates the return of any given security to the return of the market portfolio. According to MacKinlay (1997), for any security i the market model can be defined as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (2)$$

Where R_{it} is the return of the stock i in period t , R_{mt} is the return of the reference market portfolio in period t , ε_{it} is the zero mean error term, α_i is the intercept term and β_i represents the systematic risk of the stock i . The parameters α and β are estimated through an OLS regression over the 250 days estimation window. These parameters are used to model the normal return, which is defined as the expected return without conditioning on the event

taking place (MacKinlay 1997). The abnormal return (AR_{it}) represents the difference between the actual return and the expected return of stock i on day t :

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad (3)$$

We ensure that the OLS regressions used in the event study and the accounting study fulfill the assumptions that the residuals are normally distributed, homoscedastic, and independent. The Jarque-Bera test is used to check the normal distribution of the residuals, the White test is employed to verify the homoscedasticity, and the presence of autocorrelation in the residuals is tested with the Durbin-Watson test.

Cumulative abnormal return (CAR) is used to measure the total impact of an event on a particular event window, which is simply the sum of the individual abnormal returns over the analyzed event window starting at t_1 and ending at t_2 , formally calculated as follows:

$$CAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (4)$$

In order to draw overall inferences, the abnormal returns for each event are aggregated to analyze the stock market reaction across the whole sample. AAR_t represents the average abnormal return of the whole sample on day t . Given N events, the AAR_t is calculated as follows:

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (5)$$

The test statistic for testing the significance of AAR_t over a single day of our event window days is calculated using a cross-sectional test. This way we can observe in which particular event days the reaction is greatest, potential leakage of information before the deal announcements, and how quickly the market incorporate new information. The test statistic is calculated as follows:

$$t_{AAR_t} = \sqrt{N} \frac{AAR_t}{S_{AAR_t}} \quad (6)$$

Where s_{AAR_t} is the standard deviation across firms at time t :

$$S^2_{AAR_t} = \frac{1}{N-1} \sum_{i=1}^N (AR_{it} - AAR_t)^2 \quad (7)$$

Finally, the cumulative average abnormal return (CAAR) is used to measure the average cumulative effect of the whole sample on a particular event window. CAARs are calculated as follows:

$$CAAR = \frac{1}{n} \sum_{i=1}^n CAR(t_1, t_2) \quad (8)$$

Following Vaihekoski (2004), the J_1 test statistic for testing the significance of CAARs over different event windows that utilizes cross-sectional variances is calculated as follows:

$$J_1 \frac{CAR(t_1, t_2)}{\sqrt{\sigma^2(t_1, t_2)}} \sim N(0,1) \quad (9)$$

The variance in the denominator is calculated as follows:

$$\begin{aligned} \sigma^2(t_1, t_2) &= \frac{1}{N^2} \sum_{i=1}^N (t_2 - t_1 + 1) \sigma_i^2(t_1, t_2) \\ &= (t_2 - t_1 + 1) \sigma_i^2(t_1, t_2) \end{aligned} \quad (10)$$

The null hypothesis and the alternative hypothesis are defined as follows:

- H_0 : $CAAR(t_1, t_2) = 0$, the cumulative average abnormal return is equal to zero.
- H_a : $CAAR(t_1, t_2) \neq 0$, the cumulative average abnormal return is not equal to zero.

The impact of different deal characteristics is examined by dividing the sample into sub-samples based on different characteristics. When we compare the results between two different groups, an Independent Samples t-test is used to test whether the difference between means is statistically significant. In the case of different payment methods, when comparing the results between three different groups, one-way ANOVA model is used to determine whether the difference between group means is statistically significant.

4.3 Accounting study method

As previously discussed, the accounting study method examines long-term operating performance by analyzing the financial results before, and after takeovers (Bruner 2002). The objective is to assess the changes in the accounting-based performance measures caused by the takeover. This is done by comparing the pre-acquisition performance with the post-acquisition performance.

According to Tahnos and Papakis (2012), there is no consensus on the correct time period that a researcher should choose to evaluate the performance implications of participating in M&As. Following (Ghosh 2001; Sharma and Ho 2002; Martynova et al. 2007) the performance is evaluated over three years before (-3 to -1) and three years after (+1 to +3) the deal closing date. In line with other prior studies, the year in which the bid takes place (year 0) is excluded from the analysis to avoid any distortions resulting from different accounting methods and one-time acquisition costs incurred during that year, which may have a significant impact on the performance figures, making it difficult to compare them with results of other years (Healy et al. 1992).

When we measure the changes in the accounting-based performance of acquirers after their M&A transactions, the realized change in performance is compared with the benchmark performance of non-acquiring peer companies. Following Martynova et al. (2007), we match the sample companies with non-acquiring companies based on industry, size, and pre-acquisition performance to examine whether acquiring firms outperform their non-acquiring peers. This is done by subtracting the performance ratio of the non-acquiring peer company from the corresponding performance ratio of the acquirer company.

The non-acquiring peer companies are identified from the pool of all firms registered in the Thomson Reuters Datastream with the same 4-digit standard industrial classification (SIC) code as our sample firm in the year before the takeover. This list of companies is further filtered to the list of companies that fall within the same size quartile as the acquiring company, measured by total assets. From this list, the firm with an EBITDA-to-assets ratio that is closest to the ratio of our analyzed acquirer firm is selected as a non-acquiring peer company. We ensure that the selected non-acquiring peers were not engaged in M&A transactions over the period studied. (Martynova et al. 2007)

Following (Sharma and Ho 2002; Jallow, Masazing and Basit 2017) the performance measures applied in this thesis are: return on equity (ROE), return on assets (ROA), earnings per share (EPS), and net profit margin (NPM). These performance measures are commonly used in prior accounting studies and reflect different aspects of financial performance. Following Powell and Stark (2005) and Martynova et al. (2007), the performance improvements caused by acquisitions are estimated by using the change model and the intercept model to determine whether and how the choice of the model affects the results.

The change model is commonly used in accounting studies. The first step is to determine the raw performance ratios for each acquirer over the three years before and after the M&A transactions. For each year, the performance ratio is adjusted by subtracting the relevant benchmark performance from the raw performance measures of the acquiring companies. In this thesis, the acquirer performance is adjusted by subtracting the performance ratio of the non-acquiring peer company matched by industry, size, and pre-acquisition performance from the corresponding performance ratio of the acquirer company. The change model calculates the change in the selected performance ratio for each company whereby the mean benchmark adjusted performance ratio of three years before the takeover is compared to the mean benchmark adjusted performance ratio over three years after the takeover (Martynova et al. 2007). The procedure is illustrated in Figure 5. A Paired sample t-test is used to determine whether the mean benchmark adjusted post-acquisition performance differs from the mean benchmark adjusted pre-acquisition performance at a statistically significant level.

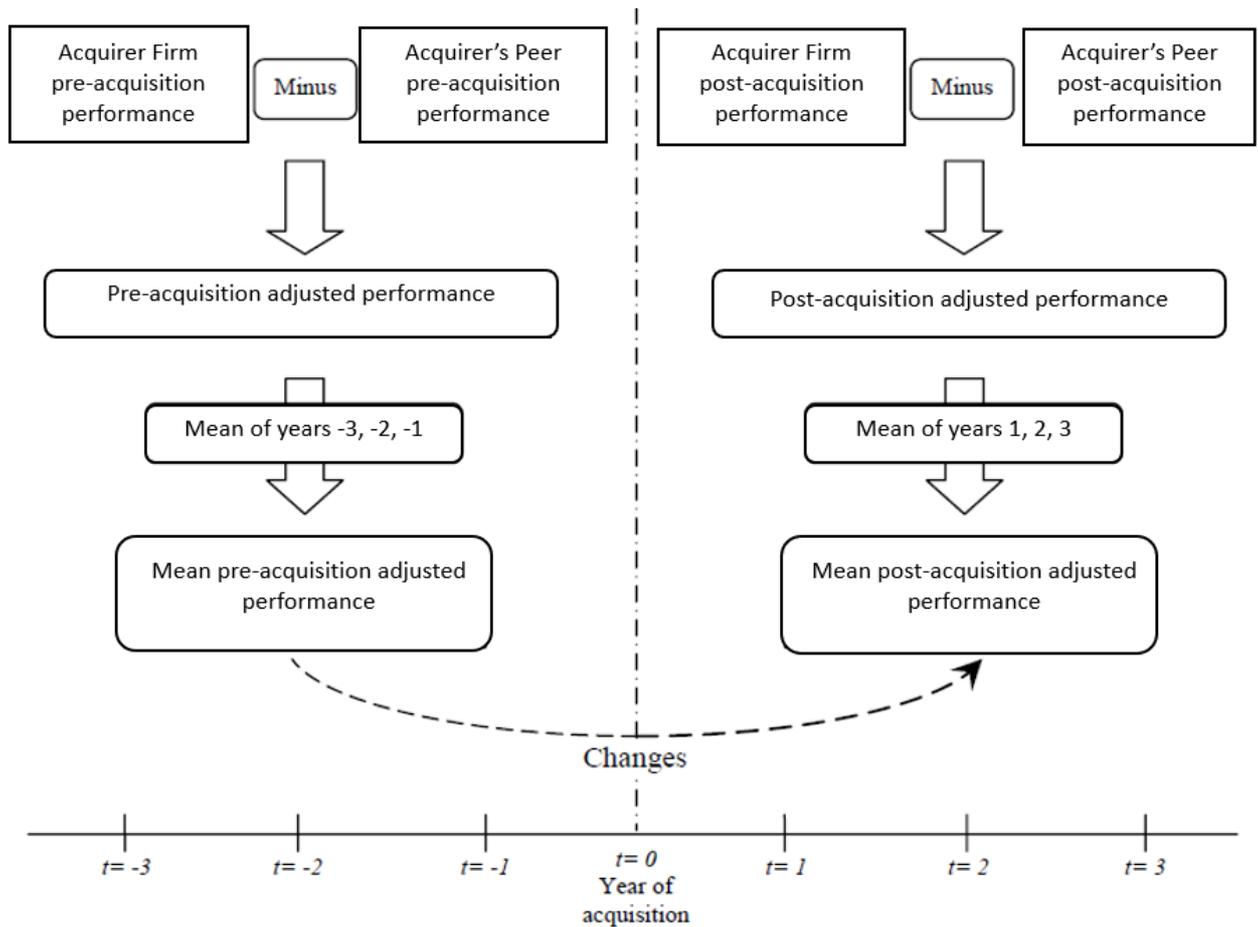


Figure 5: Method employed to measure changes in accounting-based performance of acquirer firms (Martynova et al. 2007)

The second model used to conduct the accounting study is the intercept model, which is a regression-based approach. The variables used in the intercept model are the same as in the change model. The intercept model estimates the average change in the accounting-based performance measure for the sample of takeovers employed from the following regression:

$$Adj.OP_i^{(post)} = \alpha + \beta Adj.OP_i^{(pre)} + \varepsilon_i \quad (11)$$

Where $Adj.OP_i^{(post)}$ and $Adj.OP_i^{(pre)}$ are the mean control firm adjusted post- and pre-acquisition accounting-based performance measures for acquisition i . The slope coefficient (β) reflects a relation between pre- and post-takeover performance, while average performance changes arising from acquisitions are captured by the intercept (α). A standard t-test is used to test the statistical significance of changes.

Changes in operating performance are further examined with the change model in different sub-samples to test whether the operating performance differs significantly between different deal characteristics. As in the event study, depending on how many groups are compared, either the independent samples t-test or the one-way ANOVA model is used to test whether the difference between group means is statistically significant.

4.4 Strengths and weaknesses of event study and accounting study methods

Both of these main research methods used to analyze the performance of M&As have their strengths and weaknesses that are good to be aware of. According to Kothari and Warner (2004), the short-term event study method is relatively straightforward and trouble-free. Event studies give a direct measure of value creation for the shareholders. Because, in theory, share prices represent the present value of expected future cash flows, event studies provide a forward-looking measure of value creation, which Bruner (2002) considers as an advantage over backward-looking accounting studies. On the other hand, one of the weaknesses of event studies is the requirement for significant assumptions about the proper functioning of the stock market, such as rationality, efficiency, and the absence of arbitrage restrictions. However, previous studies suggest that, on average and over time, these assumptions are not unreasonable for most stocks. (Bruner 2002)

Accounting-based performance metrics utilize the information in the annual financial statements and thereby measure the actual realized performance. This can be seen as an advantage over other approaches of evaluating the performance of M&As, such as compared to CARs, which measure expectations of future performance. Another strength of accounting-based metrics is that by utilizing various measures, they can measure different aspects of the M&A performance. Thus, by utilizing various accounting-based measures, we can get a more integrated view of the performance of M&As. Furthermore, as mentioned previously, one of the main motives behind M&As is to explore and exploit potential synergies between the companies involved in the M&A transaction. Potential synergies if existent will be reflected in long-term accounting-based performance improvements. Therefore, accounting-based measures can help researchers to evaluate the realization of synergies. (Thanos and Papadakis 2012)

However, utilizing only accounting-based metrics when evaluating the performance of M&As involves some major limitations. For instance, non-financial performance is not

captured through accounting-based measures. In addition, compared to the use of stock-market-based data, accounting information is more prone to management manipulations through earnings management and accounting policy changes. In addition, the wide variety of different accounting-based metrics reported in the literature sometimes makes comparisons between the studies a challenging task. (Tuch and O'Sullivan 2007) Furthermore, the reliability of the measures depends significantly on the quality of the annual financial statements. In some emerging markets such as China, objective accounting-based data have often been described as unreliable. Additionally, differences in accounting standards across countries raise serious concerns over the comparability of accounting data, which is why the use of accounting-based metrics should be treated with great caution in cross-national studies and in studies with samples of cross-border M&As. (Thanos and Papadakis 2012) However, the Nordic region countries are similar in many respects, which simplifies the comparison of their corporate actions. For example, they have very similar legal systems. In addition, Finland, Denmark, and Sweden belong to the European Union (EU), while Norway is part of the European Economic Area (EEA), which integrates it into the internal market, which is governed by the same basic rules. According to Agami and Monsen (1995), the Nordic region countries share a high degree of accounting standards harmonization among themselves. Finally, due to the longer evaluation period, accounting studies are more vulnerable to confounding events that may affect the results than short-term event studies. Nevertheless, the use of different methods provides a more comprehensive view of the performance of M&As. However, it is essential to understand the possible limitations and biases of different methods and data samples when drawing general conclusions.

4.5 Hypotheses

Based on the combination of previously presented theoretical background and prior empirical evidence, two main hypotheses are formed. In addition, three sub-hypotheses are formed for both of the main hypotheses, which will be tested if the main hypothesis is rejected. Most of the previous studies on M&A performance have focused on analyzing the stock price reactions following bid announcements. The event study method is used to test whether the announcements of M&As cause a stock price reaction for the acquiring companies in the sample. Following Mackinlay (1997), the first hypothesis is formed as:

H_1 : M&A announcements do not cause a significant short-term stock price reaction for the acquiring firms in Nordic markets.

In order to obtain a more comprehensive view of the performance of Nordic acquirers following the announcements of their M&As, we also examine the post-M&A operating performance improvements through accounting-based performance measures. This allows us to evaluate different aspects of performance over the longer term. The accounting study method is used to test the second hypothesis which is formed as:

H_2 : M&As do not have a significant impact on the long-term accounting-based performance of Nordic acquirers.

The relatively conflicting evidence on acquirers' post-acquisition performance has motivated researchers to examine the impact of the different deal-level characteristics on the performance of M&As. There is reasonably consistent evidence that M&A transactions paid in cash are associated with a superior post-announcement period performance when compared to other payment methods in both the short and long term. One explanation for this might be that acquirers choose their form of payment depending on whether they expect higher or lower performance in the future. Hence, as discussed in Section 2.5.2, acquirers will typically use cash if they think their shares are undervalued, and if they believe their shares are overvalued, they will often use equity. Cash offers may serve as a signal to the market that the management of the acquiring company expects an increase in corporate value over the post-M&A period. (Tuch and O'Sullivan 2007)

Most of the previous evidence seems to suggest that domestic takeovers perform better than cross-border deals. One reason for this may be the differences in regulatory, political, cultural, and economic environments that might cause challenges for the acquirers and result in difficulties to manage the post-M&A process, leading to challenges in achieving potential synergies. (Martynova et al. 2007).

In addition, it is often claimed that unrelated takeovers are less likely to succeed because the acquirer's management is unfamiliar with the target industry (Agrawal et al. 1992). The likelihood of detecting potential synergies and being able to exploit them is higher when operating in familiar territory (Bruner 2004b). Related M&A transactions may also provide corporate control advantages, as it is typically more challenging to assess the performance of executives in diversified corporate structures (Tuch and O'Sullivan 2007). This leads to our sub-hypotheses, which will be tested only if the corresponding main hypothesis is rejected.

If H_1 is rejected the following sub-hypotheses will be tested:

$H_{1.1}$: The short-term share price performance of Nordic acquirers is significantly greater in transactions paid in cash compared to deals paid in equity or a combination of cash and equity.

$H_{1.2}$: The short-term share price performance of Nordic acquirers is significantly greater in domestic M&As compared to cross-border M&As.

$H_{1.3}$: The short-term share price performance of Nordic acquirers is significantly greater in related M&As compared to unrelated M&As.

If H_2 is rejected the following sub-hypotheses will be tested:

$H_{2.1}$: The long-term accounting-based performance of Nordic acquirers is significantly greater in M&A transactions paid in cash compared to deals paid in equity or a combination of cash and equity.

$H_{2.2}$: The long-term accounting-based performance of Nordic acquirers is significantly greater in domestic M&As compared to cross-border M&As.

$H_{2.3}$: The long-term accounting-based performance of Nordic acquirers is significantly greater in related M&As compared to unrelated M&As.

5 RESULTS

This section presents the empirical findings of the thesis. The first part of the section focuses on analyzing whether M&A announcements cause a significant stock price reaction for the acquiring firms in the Nordic markets and whether the possible reactions differ significantly between different deal characteristics. The latter part concentrates to analyze the long-term accounting-based performance of Nordic acquirers following their M&As. In addition, we compare whether accounting-based performance differs significantly between different deal characteristics. And finally, we interpret the results with reference to previous studies. In the previous section, we have described in more depth the methodological approach and the statistical tests used in the empirical analysis of the thesis. The findings of previous empirical studies are discussed in more detail in Section 3, which is useful to review in order to gain a better understanding of the results of this thesis in relation to previous findings.

5.1 Event study results

Table 2 presents the average abnormal returns (AARs) for the full sample from day -10 to day +10. From the table, we can see that based on AARs we did not find any significant evidence of information leakage before the announcements of M&As. In addition, we can observe that the greatest reaction was clearly on the announcement day with a significantly positive AAR of 1.99%. AARs declined rapidly after the deal announcement day but were still significantly positive at the following day +1. The results show that the market incorporated new information quickly, indicating that there is weak evidence in favor of semi-strong market efficiency.

Table 2: AARs for the full sample

Day	AAR	t-statistic	p-value
-10	0.20 %	0.95	0.345
-9	0.03 %	0.12	0.906
-8	0.16 %	0.74	0.457
-7	-0.05 %	-0.22	0.828
-6	0.08 %	0.37	0.709
-5	0.11 %	0.53	0.600
-4	-0.16 %	-0.76	0.451
-3	-0.06 %	-0.28	0.778
-2	0.01 %	0.07	0.945
-1	0.28 %	1.34	0.182
0	1.99 %	9.35***	0.000
1	0.53 %	2.51**	0.013
2	0.11 %	0.52	0.603
3	0.05 %	0.24	0.808
4	-0.27 %	-1.28	0.203
5	-0.31 %	-1.44	0.152
6	-0.18 %	-0.85	0.394
7	0.25 %	1.20	0.231
8	0.26 %	1.21	0.226
9	-0.38 %	-1.78*	0.077
10	0.10 %	0.48	0.628

*** / ** / *: Significant at 1% / 5% / 10%, using a two-tailed test

Table 3 presents the event study results and reports the cumulative average abnormal returns (CAARs) for event windows (0, 0), (-1, +1), (-5, +5), and (-10, +10) for the full sample of bidders. Figure 6 below presents the trend of AARs and CAARs for the full sample in a graphical form. The results for the full sample show that the acquirer shareholders earn significantly positive CAARs in all four event windows, ranging from 1.99% to 2.77%. Thus, there appears to be sufficient evidence to reject the hypothesis H_1 that M&A announcements do not cause a significant short-term stock price reaction for the acquiring firms in Nordic markets.

Table 3: Event study results for the full sample

Event window	N	CAAR	J1
(0, 0)	241	1.99%	9.35***
(-1, +1)	241	2.80%	7.62***
(-5, +5)	241	2.30%	3.26***
(-10, +10)	241	2.77%	2.84***

*** / ** / *: Significant at 1% / 5% / 10%, using a two-tailed test

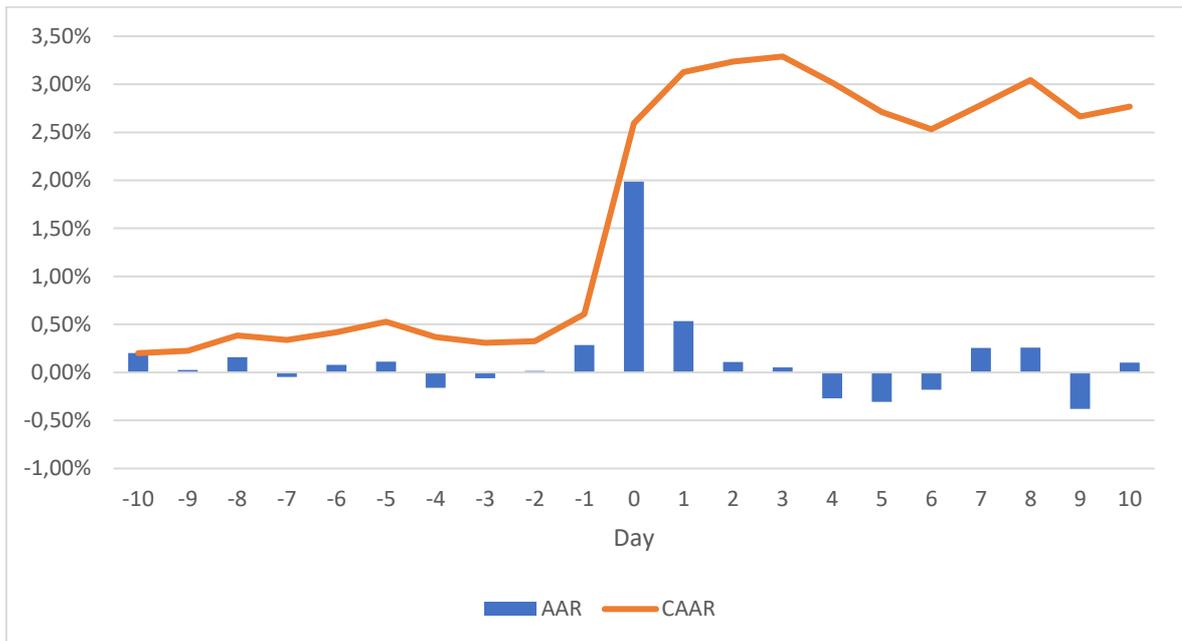


Figure 6: Trend of CAARs and AARs from day -10 to +10

Table 4 presents the comparison of the event study results between different deal characteristics. In Panel A we report the results based on the payment method of the deal. Acquirer shareholders gain positive and mostly statistically significant CAARs in all event windows, regardless of the payment method. Only in the longest 21-day window, the best performance appears to be in all-cash offers with significantly positive CAARs of 3.41%. However, the difference compared to stock and hybrid offers is not statistically significant in this event window. One-way ANOVA test indicates that the difference in CAARs between different payment methods is statistically significant at the 10% level only in the three-day event window with the highest CAARs in hybrid offers. Based on the results, there is sufficient evidence to reject the sub-hypothesis $H_{1.1}$ that the short-term share price performance of Nordic acquirers is significantly greater in transactions paid in cash compared to deals paid in equity or a combination of cash and equity.

In Panel B we report the results for domestic and cross-border acquisitions. Based on CAARs, cross-border acquisitions show better performance than domestic acquisitions in all event windows, with CAARs ranging from 2.10% to 3.78%, all statistically significant at the 1% level. However, the results of the t-test show that the difference in CAARs between domestic and cross-border acquisitions is not statistically significant in any of the event windows. Based on the results, the sub-hypothesis $H_{1.2}$ that the short-term share price performance of Nordic acquirers is significantly greater in domestic M&As compared to cross-border M&As should be rejected.

Finally, in Panel C we report the results for related and unrelated acquisitions. CAARs in unrelated takeovers range from 2.02% to 3.01%, all statistically significant at the 1% level. In three of the event windows, CAARs are higher compared to related takeovers. However, the t-statistic for the difference in CAARs between related and unrelated acquisitions is not statistically significant in any of the event windows. Based on the results, there appears to be sufficient evidence to reject the sub-hypothesis $H_{1.3}$ that the short-term share price performance of Nordic acquirers is significantly greater in related M&As compared to unrelated M&As.

Table 4: Event study results (comparison between deal characteristics)

Panel A: Payment method

Event window	Cash			Stock			Hybrid			F-statistic for diff. in means
	N	CAAR	J1	N	CAAR	J1	N	CAAR	J1	F-statistic
(0, 0)	143	1.42%	6.59***	48	3.25%	5.37***	50	2.38%	4.15***	2.11
(-1, +1)	143	2.14%	5.72***	48	2.84%	2.70***	50	4.66%	4.70***	2.51*
(-5, +5)	143	1.95%	2.71***	48	3.96%	1.97**	50	1.70%	0.89	0.56
(-10, +10)	143	3.41%	3.44***	48	1.23%	0.44	50	2.43%	0.93	0.44

Panel B: Domestic versus cross-border acquisitions

Event window	Domestic			Cross-border			t-statistic for diff. in means
	N	CAAR	J1	N	CAAR	J1	t-statistic
(0, 0)	95	1.81%	4.36***	146	2.10%	9.39***	-0.39
(-1, +1)	95	2.80%	3.89***	146	2.81%	7.24***	-0.00
(-5, +5)	95	1.37%	0.99	146	2.90%	3.91***	-0.88
(-10, +10)	95	1.22%	0.64	146	3.78%	3.68***	-1.33

Panel C: Related versus unrelated acquisitions

Event window	Related			Unrelated			t-statistic for diff. in means
	N	CAAR	J1	N	CAAR	J1	t-statistic
(0, 0)	85	1.92%	5.28***	156	2.02%	7.73***	-0.13
(-1, +1)	85	3.24%	5.13***	156	2.57%	5.67***	0.75
(-5, +5)	85	1.62%	1.34	156	2.67%	3.07***	-0.62
(-10, +10)	85	2.33%	1.39	156	3.01%	2.51**	0.35

*** / ** / *: Significant at 1% / 5% / 10%, using a two-tailed test

5.2 Accounting study results

Table 5 presents the accounting study results for the full sample and reports the control firm adjusted performances based on return on equity (ROE), return on assets (ROA), earnings per share (EPS), and net profit margin (NPM). Panel A reports the results for the change model. The results show a significant decline in performance after the M&A transactions in all four performance measures. As described in Section 4.3, the control firm adjusted performance is calculated by subtracting the performance ratio of a non-acquiring peer company from the corresponding performance ratio of the acquirer company. We can observe that the acquirer firms performed slightly better than the peer companies during the pre-acquisition period. However, the difference is greater during the post-acquisition period, when the peer companies clearly outperformed the acquirer firms. Based on the results of the t-tests, the difference between the means of pre- and post-acquisition performance is statistically significant at the 1% level for all four performance measures.

In Panel B we report the regression-based results using the intercept model. The change in performance is captured by the α (intercept), which is significantly negative for all four performance measures. However, the β (slope coefficient), which reflects a relation between pre- and post-acquisition performance is insignificant for all of the performance measures. R-Squared values are remarkably low, but this appears to be the case in many other studies as well (Healy et al. 1992; Powel and Stark 2005, Martynova et al. 2007). In addition, the F-statistic is not significant in any of the regressions, and based on the p-values of F-statistics it can be argued that there is a quite strong probability that the results may be by chance, especially for ROE, EPS, and NPM.

According to Powel and Stark (2005) and Ghosh (2001), the intercept model generally gives higher estimates of the performance improvements compared to the change model. We can observe that also the results of the present study for ROE and EPS are less negative compared to the corresponding results of the change model.

Overall, based on the results, there appears to be sufficient evidence to reject the hypothesis H_2 that M&As do not have a significant impact on the long-term accounting-based performance of Nordic acquirers.

Table 5: Accounting study results

Panel A: Full sample (Change model)				
	ROE	ROA	EPS	NPM
N	192	201	149	182
<u>Pre-acquisition performance (years -3 to -1)</u>				
Mean annual control firm adjusted performance	1.65%	0.12%	0.08 €	0.08%
<u>Post-acquisition performance (years +1 to +3)</u>				
Mean annual control firm adjusted performance	-5.41%	-4.57%	-0.23 €	-3.51%
<u>Difference of means</u>				
Δ control firm adjusted performance	-7.06%	-4.69%	-0.31 €	-3.59%
t-statistic	-5.58***	-7.52***	-4.32***	-5.28***
Panel B: Full sample (Intercept model)				
<u>Regression-based results for control firm adjusted performance</u>				
	ROE	ROA	EPS	NPM
N	192	201	149	182
α (intercept)	-5.42	-4.76	-0.23	-3.53
t-statistic	-6.20***	-7.49***	-4.46***	-5.17***
β (slope coefficient)	0.01	1.62	0.03	0.22
t-statistic	0.13	1.60	0.38	0.31
F-statistic	0.02	2.55	0.14	0.09
p-value for F-statistic	0.89	0.11	0.70	0.76
R ²	0.000	0.013	0.001	0.001

*** / ** / *: Significant at 1% / 5% / 10%, using a two-tailed test

In Table 6, we compare the accounting-based performance between different deal characteristics. Panel A reports the results based on the payment method of the deal. For the most part, we can observe a significant decline in performance during the post-acquisition period, regardless of the method of payment. Cash bids show the lowest decline in ROA, EPS, and NPM. For ROA and NPM, the difference is significant at the 1% level compared to stock and hybrid deals. Therefore, there appears to be insufficient evidence to reject the sub-hypothesis $H_{2.1}$ that the long-term accounting-based performance of Nordic acquirers is significantly greater in M&A transactions paid in cash compared to deals paid in equity or a combination of cash and equity. With two of the performance indicators

showing significantly lower performance decline in M&A transactions paid in cash, the hypothesis $H_{2.1}$ is weakly supported and accepted, but with caution.

Table 6: Accounting study results (comparison between deal characteristics)

Panel A: Payment method					
		ROE	ROA	EPS	NPM
<u>Cash</u>	N	114	118	89	113
Pre-acquisition control firm adjusted performance, Mean (1)		4.23%	0.09%	0.09 €	0.09%
Post-acquisition control firm adjusted performance, Mean (2)		-3.58%	-2.79%	-0.12 €	-2.06%
t-statistic for diff. in Means (1) and (2)		-6.16***	-5.04***	-2.26**	-3.41***
Δ Performance, Mean (3)		-7.81%	-2.88%	-0.21 €	-2.15%
<u>Stock</u>	N	40	40	28	31
Pre-acquisition control firm adjusted performance, Mean (1)		-3.85%	0.22%	0.09 €	-0.14%
Post-acquisition control firm adjusted performance, Mean (2)		-10.19%	-6.11%	-0.42 €	-8.83%
t-statistic for diff. in Means (1) and (2)		-1.51	-4.14***	-2.64**	-3.52***
Δ Performance, Mean (4)		-6.34%	-6.33%	-0.51 €	-8.69%
<u>Hybrid</u>	N	38	43	32	38
Pre-acquisition control firm adjusted performance, Mean (1)		-0.26%	0.10%	0.03 €	0.22%
Post-acquisition control firm adjusted performance, Mean (2)		-5.85%	-8.02%	-0.36 €	-3.48%
t-statistic for diff. in Means (1) and (2)		-2.06**	-4.29***	-3.35***	-2.35**
Δ Performance, Mean (5)		-5.58%	-8.12%	-0.39 €	-3.70%
F-statistic for diff. in Means (3), (4), and (5)		0.27	6.76***	1.66	6.58***
Panel B: Domestic versus cross-border acquisitions					
<u>Domestic</u>	N	79	83	59	76
Pre-acquisition control firm adjusted performance, Mean (1)		3.17%	0.16%	0.04 €	0.03%
Post-acquisition control firm adjusted performance, Mean (2)		-7.08%	-4.99%	-0.36 €	-4.21%
t-statistic for diff. in (1) and (2)		-4.90***	-5.34***	-4.11***	-3.27***
Δ Performance, Mean (3)		-10.25%	-5.15%	-0.40 €	-4.24%
<u>Cross-border</u>	N	113	118	90	106
Pre-acquisition control firm adjusted performance, Mean (1)		0.59%	0.09%	0.10 €	0.11%
Post-acquisition control firm adjusted performance, Mean (2)		-4.24%	-4.27%	-0.14 €	-3.00%
t-statistic for diff. in Means (1) and (2)		-3.11***	-5.32***	-2.47**	-4.40***
Δ Performance, Mean (4)		-4.83%	-4.36%	-0.24 €	-3.11%
t-statistic for diff. in Means (3) and (4)		-2.08**	-0.63	-1.17	-0.76

*** / ** / *: Significant at 1% / 5% / 10%, using a two-tailed test

Table 6 (Continued)

Panel C: Related versus unrelated acquisitions					
		ROE	ROA	EPS	NPM
<u>Related</u>	N	71	72	49	62
Pre-acquisition control firm adjusted performance, Mean (1)		2.22%	0.14%	0.01 €	0.19%
Post-acquisition control firm adjusted performance, Mean (2)		-7.09%	-4.16%	-0.32 €	-4.53%
t-statistic for diff. in Means (1) and (2)		-3.86***	-4.74***	-3.47***	-3.37***
Δ Performance, Mean (3)		-9.31%	-4.29%	-0.33 €	-4.72%
<u>Unrelated</u>	N	121	129	100	120
Pre-acquisition control firm adjusted performance, Mean (1)		1.32%	0.11%	0.11 €	0.02%
Post-acquisition control firm adjusted performance, Mean (2)		-4.42%	-4.80%	-0.18 €	-2.98%
t-statistic for diff. in Means (1) and (2)		-4.06***	-5.90***	-3.10***	-4.10***
Δ Performance, Mean (4)		-5.74%	-4.91%	-0.29 €	-3.00%
t-statistic for diff. in Means (3) and (4)		-1.27	0.50	-0.24	-1.09

*** / ** / *: Significant at 1% / 5% / 10%, using a two-tailed test

In Panel B of Table 6, we present the results for domestic and cross-border acquisitions. Both groups show a significant decline in all four performance measures. The decline appears to be greater in domestic deals. However, only for ROE, the difference between domestic and cross-border acquisitions is statistically significant. Based on the results, the sub-hypothesis $H_{2.2}$ that the long-term accounting-based performance of Nordic acquirers is significantly greater in domestic M&As compared to cross-border M&As should be rejected.

Finally, in Panel C we report the results for related and unrelated acquisitions. The decline in performance is statistically significant in all four performance measures for both related and unrelated acquisitions. The decline is greater in related acquisitions for ROE, EPS, and NPM. However, the difference in performance change between related and unrelated deals is not significant in any of the performance measures. Overall, there appears to be sufficient evidence to reject the sub-hypothesis $H_{2.3}$ that the long-term accounting-based performance of Nordic acquirers is significantly greater in related M&As compared to unrelated M&As.

5.3 Discussion of results

Overall, the results of the event study showed significantly positive CAARs in all four event windows ranging from 1.99% to 2.77% for the full sample of Nordic acquirers. For the samples of European M&As, both Martynova and Renneboog (2011) and Goergen and Renneboog (2004) also reported significantly positive CAARs to the acquirer shareholders. Martynova and Renneboog (2011) used three similar event windows as employed in this thesis. For the deal announcement day, they reported CAARs of 0.53%, for event window (-1, +1) they showed CAARs of 0.72%, and for event window (-5, +5) they reported CAARs of 0.79%, all statistically significant. In their study, Goergen and Renneboog (2004) used two short-term event windows. For event window (-1, 0) they reported CAARs of 0.70% and for event window (-2, +2) they showed CAARs of 1.18%, both significant at the 1% level. Both studies examined European M&As during 1993–2000, which is showing in their quite similar results.

In their comprehensive summaries of previous studies Bruner (2002), Tuch and O'Sullivan (2007), and Martynova and Renneboog (2008) all concluded that based on prior short-term event studies, average gains to the acquirer shareholders are indistinguishable from zero. Compared to these findings, which represent a huge part of previous empirical evidence, the results of the present study are clearly more positive.

During the investigation period of the present study from 2000 to 2015, the interest rates have been on a remarkably low level, which for its part has driven funds to stock markets and boosted the stock prices. Except for the greater declines resulting from the financial crisis and the European debt crisis, the Nordic stock markets have been enjoying for the most part an upward trend. This may have been reflected to some extent in the more positive results of the present study compared to previous studies that have examined the performance of M&As over earlier investigation periods. Nevertheless, based on the significantly positive share price reactions, it is clear that investors saw the M&A transactions of Nordic acquirers as value-creating events, expecting synergistic gains from these business combinations.

However, market expectations were not reflected in the long-term accounting-based performance improvements of the acquirers. The results of the accounting study provided devastating results. Compared to non-acquiring peer companies, the accounting-based performance of Nordic acquirers declined significantly in all four different performance

measures used in the accounting study. Significant declines in accounting-based performance following takeovers have also been reported, for example, by Meeks (1977), Yeh and Hoshino (2002), Ravenscraft and Scherer (1987), and Dickerson et al. (1997). On the other hand, the accounting study results of the present study are conflicting with the findings by Healy et al. (1992), Rahman and Limmack (2004), Heron and Lie (2002), and Powell and Stark (2005), who all reported significant improvements in accounting-based performance measures after takeovers.

Overall, the results indicate that either investors failed in their evaluations of potential synergies that were expected to arise from the takeovers, or the Nordic acquirer companies were unable to realize and exploit those synergies. If the acquirer firms failed to realize potential synergies, we could raise questions about the true motivations behind the M&A transactions. Takeovers may have been driven by non-value increasing motives, rather than value-increasing motives. On the other hand, the M&A process from planning to implementation could have been poorly executed. Managers of Nordic acquiring companies could have been benefited from paying more attention to the proper preparation and execution of the various stages of the M&A process. Or even improve their knowledge of the different stages of the process and their understanding of the connection between the stages.

The results weakly supported that the decline in the long-term accounting performance was lower in M&A transactions paid in cash compared to deals paid in shares or a combination of cash and shares. This finding is consistent with Linn and Switzer (2001), who reported that the change in accounting-based performance is significantly greater when the acquiring company uses cash instead of shares as a payment method for the transaction. Furthermore, also Ghosh (2001) reported a significant increase in cash flows following takeovers paid in cash, while stock-offers show a decline in cash flows. However, for example, Healy et al. (1992) and Heron and Lie (2002) did not find a significant relationship between the payment method and post-M&A operating performance for M&As in the US market. Similar insignificant findings are reported by Sharma and Ho (2002) in the Australian market, Powell and Stark (2005) in the UK market, and Martynova et al. (2007) from a sample of European M&As. In other respects, we did not find any significant differences in stock or accounting-based reactions between different deal characteristics.

6 SUMMARY AND CONCLUSIONS

M&As are arguably vital events, both for corporations and the economy in general. The global M&A market has grown significantly over the past few decades and the phenomenon is a widely studied topic among researchers. Despite a substantial amount of research, the evidence on the benefits of M&As to the acquirer firms is not completely clear, which provided great motivation to further examine the topic. In this thesis, we studied the performance of M&As from the perspective of acquiring firms in the Nordic markets. For this purpose, we examined the short-term stock price reaction of Nordic acquirers following their M&A announcements and changes in their long-term accounting-based performance after the completion of M&A transactions. In addition, we analyzed whether these performance metrics were sensitive to some of the most commonly studied deal-level characteristics. Based on the theoretical background and previous M&A research the following three research questions were formed:

- *Do M&A announcements cause a significant stock price reaction for the acquiring firms in Nordic markets?*
- *Do M&As have a significant impact on the long-term accounting-based performance of Nordic acquirers?*
- *Is there a significant difference in stock or accounting-based reaction between domestic and cross-border deals, related and unrelated deals, and transactions paid in cash, stock, or a combination of cash and stock?*

We approached these research questions by first presenting the theoretical background of M&As, by discussing the basic forms of acquisitions, different types of M&As, the model for value creation in the M&A process, the wave effect of M&As, and the historical merger waves. After this, we discussed the theories of M&A motives by presenting the value-increasing and non-value increasing motives.

Before analyzing the M&A performance of Nordic acquirers, we made a comprehensive review of the findings of previous empirical studies. The relatively conflicting evidence on acquirers' post-M&A performance has motivated researchers to examine whether different deal-level characteristics affect the performance of M&As, and this was also examined in the present study.

The final sample of the study includes 241 M&A transactions announced and completed between 2000 and 2015. The short-term window event study method was used to answer the first research question, while the accounting study method was used to answer the second research question. These are the most commonly used methods to study the short- and long-term impacts of M&As (Zollo and Meier 2008; Cording et al. 2010). In the event study method, the performance was measured by estimating the cumulative average abnormal stock returns of acquirers on and around the deal announcement day. The accounting-based performance was measured by evaluating the change in performance of acquirers' return on equity, return on assets, earnings per share, and net profit margin ratios. This was done by comparing the three-year average annual performance before the takeover to the corresponding three-year average annual performance after the takeover. In addition, the performance of acquirers was adjusted with the corresponding performance ratios of non-acquiring peer firms.

The results of the event study showed a significantly positive stock price reaction in all four event windows, providing a clear answer to the first research question that M&A announcements did indeed cause a significantly positive stock price reaction for the acquiring firms in the Nordic markets. However, this was not reflected in the acquirers' long-term accounting-based performance improvements. The results of the accounting study showed a significant decline after the takeover in all four performance metrics, offering a clear answer to the second research question that M&As had a significantly negative impact on the long-term accounting-based performance of Nordic acquirers. The results weakly supported that the decline in the long-term accounting performance was lower in M&A transactions paid in cash compared to deals paid in shares or a combination of cash and shares. In other respects, we did not find any significant differences in stock or accounting-based reactions between different deal characteristics.

Significantly positive stock price reactions indicate that the market viewed M&A transactions as value-creating events. However, market expectations were not reflected in the long-term accounting-based performance improvements of the acquirers. This indicates that either market participants failed in their evaluations of potential synergies or the acquirer companies were unable to realize those synergies. If the acquirer firms failed to realize potential synergies, we could raise questions about the true motivations behind the takeovers, or whether the M&A process from planning to implementation was poorly executed. Based on the results of this study, managers of the acquiring companies could have been benefited from paying more attention to the proper preparation and execution of

the various stages of the M&A process. Or even improve their knowledge of the different stages of the process and their understanding of the connection between the stages.

Previous empirical studies have been conducted primarily with samples from either the US or UK markets. This study provides valuable information from the less studied but growing Nordic M&A markets. If the research could have been broader, it would have been interesting to examine the differences between the Nordic countries in more detail and compare the performance of M&As between the countries.

With only one exception, the results did not show significant differences between different deal characteristics. Therefore, in future studies, it would be interesting to broaden the range of different characteristics that are examined. For example, whether the performance of M&As is significantly affected by the relative size of the target company, acquirers' prior acquisition experience, the use of an investment banker or other external advisors, or by the deal atmosphere (friendly versus hostile takeovers). Future event studies could utilize various event windows, while future accounting studies could consider employing a wider range of different accounting-based measures to obtain an even more comprehensive view of the performance of M&As. In addition, it would be interesting to examine whether the accounting-based performance would differ significantly if evaluated over a longer period. Future research could also place more emphasis on the diversity of motives behind the M&A transactions. For example, taking into account the linkage between motives and performance when choosing the performance measures. Furthermore, future studies could also examine whether the performance of M&As differ significantly depending on which stage of a merger wave the M&A transaction is executed.

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