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# **The Impact of Mergers and Acquisitions on Operating Performance and Stock Market Reaction**

Empirical Analysis of Nordic Firms

School of Accounting and Finance  
Master's Thesis in Finance  
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**ABSTRACT :**

This thesis assesses Nordic mergers and acquisitions and their resultant impact on operational performance and stock market reactions for acquiring companies. This study encompasses a dual methodology, including accounting analysis on post-acquisition operational and financial outcomes, and an event study methodology to investigate short-term reactions of an investor to the announcement of an M&A transaction. The analysis of operational performance is based on five cross-sectional financial metrics evaluated over a multi-year window before and after the transaction. Outcomes will then be compared to a control group of firms that did not undertake M&A during the period, allowing for more rigorous assessment of transaction-specific effects.

Previous research on mergers and acquisitions (M&As) has focused on major markets, particularly the United States and the United Kingdom, often emphasizing stock market reactions. By concentrating on a Nordic context that is relatively neglected, this study contributes substantially to the literature. Most interestingly, it combines both market-based and accounting-based perspectives to offer a broader view of M&A outcomes.

The study's results reveal that while some performance metrics improve post-acquisition, they do not achieve statistical significance and may be due to random changes with no actual gains. Conversely, one primary indicator is the increasing levels of total debt, suggesting that M&A activities are often highly associated with much higher leverage and risk. Additionally, the current ratio declines post-acquisition, indicating a decrease in short-term liquidity. On the contrary, the event study results show that abnormal stock returns for the Nordic market around announcement are statistically significant and positive, suggesting that M&A announcements are generally viewed favorably by investors in the Nordic market.

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**KEYWORDS:** Mergers and acquisition, M&A, merger, acquisition, operating performance, event study, accounting-based study, abnormal return

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**Vaasan Yliopisto****Laskentatoimen ja rahoituksen yksikkö**

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**TIIVISTELMÄ :**

Tämä tutkielma tutkii pohjoismaisten yhtiöiden fuusioiden ja yrityskauppojen vaikutusta yhtiön toiminnan tuloksellisuuteen ja osakemarkkinoiden reaktioihin ostavan yhtiön näkökulmasta. Tutkimus hyödyntää kahta eri tutkimusmenetelmää: kirjanpidollinen analyysi operatiivisten ja taloudellisten tulosten arvioimiseksi, sekä tapahtumatutkimus, jolla pyritään tutkimaan osakemarkkinoiden reaktiota yrityskaupan julkistamisesta. Operatiivisen suorituskyvyn tutkimisessa keskitytään viiteen taloudellisen suorituskyvyn mittariin, joiden seuraamiseen on valittu useamman vuoden kestoinen aikaikkuna ennen yrityskauppaa ja sen jälkeen. Tuloksia verrataan vertailuryhmään, jotka eivät osallistuneet yrityskaupoihin samana ajanjaksona. Osakekurssien reaktiota arvioidaan päivittäisten osakehintojen perustella verraten pörssin keskiarvoon.

Aikaisempi kirjallisuus yrityskaupoista on keskittynyt lähinnä suuriin markkina-alueisiin, etenkin Yhdysvaltoihin ja Yhdistyneeseen Kuningaskuntaan ja keskittynyt tutkimaan osakemarkkinoiden reaktiota. Tämän vuoksi tämä tutkielma keskittyy Pohjoismaihin, joiden tutkiminen on jäänyt vähäiseksi ja yhdistää tutkimuksessa yhtiön taloudellisen näkökulman osakemarkkinoiden reaktioon saadakseen laajemman käsityksen yhtiön pitkän ja lyhyen aikavälin suoriutumisesta.

Tutkimuksen tulokset osoittavat, että vaikka tutkimuksessa käytetyt suorituskyvyn mittarit osoittivat positiivista kehitystä, eivät ne kuitenkaan osoittaneet tilastollista merkitsevyyttä. Velan määrän huomattiin kasvavan yrityskaupan jälkeen, mikä viittaa yrityskauppojen riskisyyteen. Lisäksi myös lyhyen aikavälin maksuvalmiuden huomattiin laskevan, viitaten riskien lisääntymiseen. Osakemarkkinoiden huomattiin reagoivan positiivisesti yrityskaupan julkistamiseen, mikä osoittaa, että pohjoismaissa sijoittajat uskovat yrityskaupan positiiviseen vaikutukseen yrityksen talouteen.

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**AVAINSANAT:** Yritysjärjestelyt, Fuusiot, Yrityssostot, Osakemarkkinat, Osaketuotot, Tapahtumatutkimus, Epänormaalit tuotot,

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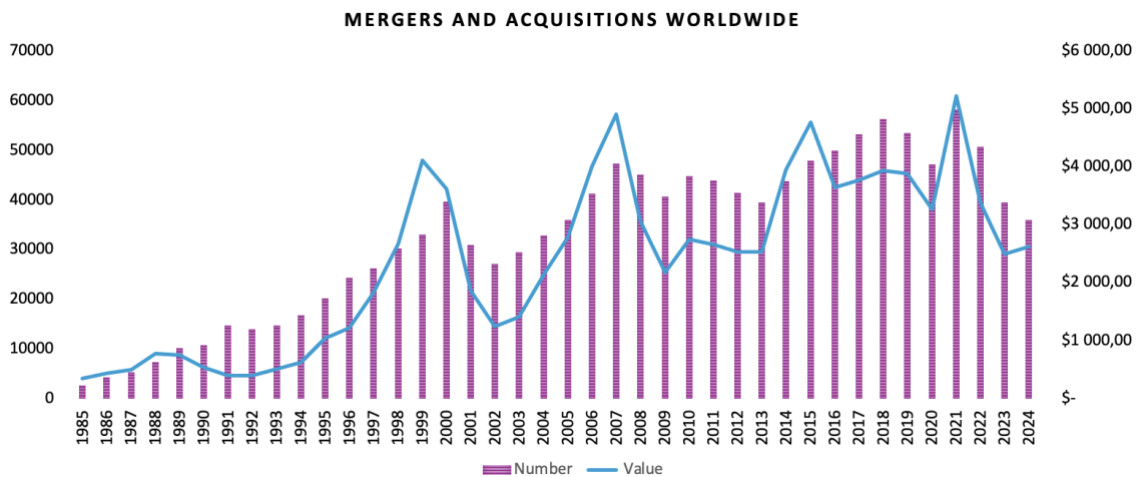
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## 1 Introduction

Frankel, Forman, and Frankel (2017) describe mergers and acquisitions as strategic transactions that involve combining or buying companies, resulting in a change or shift of control in a company. Correspondingly, Cumming, Jindal, Kumar, and Pandey (2023) suggest that mergers and acquisitions are one of the most critical transactions companies engage in during their lifetime. Cumming and others explain that these transactions involve several stakeholders, including buyers, sellers, advisors, and regulators, making them economically large transactions.

According to Renneboog, and Vansteenkiste, (2019), mergers and acquisitions help companies grow faster, enter new markets, sell to new customers basis, increase the range of products, reduce competition, and save costs compared to those relying on organic growth. Similarly, Zhu, Xia, and Zheng (2021) acknowledge that for centuries, mergers and acquisitions have been a crucial vehicle for firm operations and survival. However, because of their high economic importance, Cumming, and others (2023) point out that even though they have the potential to make large profits, they can also cause significant losses.

The economic magnitude and global prevalence of mergers and acquisitions can be illustrated by the volume and value of deals executed worldwide from 1985 to 2024. As shown in Figure 1, both the number of transactions and their total value have varied significantly over time. Kropf and Viswanathan (2004) suggest that this reflects broader economic cycles and shifts in the global financial markets.



**Figure 1.** Mergers and Acquisition from 1985 to 2014 by number and value

Mergers and acquisitions first attracted attention when Manne (1965) published one of the first studies on the subject, quickly becoming a field of interest and extensive research. Since then, a vast amount of research has been done by numerous researchers, though the findings remain mixed and sometimes contradictory. For instance, researchers such as Healy, Palepu, and Ruback (1992), Cornett and Tehranian (1992), and Bauer, Miles, and Nishikawa (2009) find strong evidence of improved operating performance following mergers and acquisitions. On the other hand, others, including Furfine and Rosen (2011), Rao-Nicholson, Salaber, and Cao (2016), find that post-merger financial outcomes can deteriorate, suggesting that M&A success is far from guaranteed.

## 1.1 Purpose of the Study

This thesis examines whether mergers and acquisitions generate value for firms by analyzing both their post-merger operating performance and short-term stock price movements. In addition to evaluating long-term financial outcomes through accounting data, the study also considers abnormal stock returns around the announcement period to capture immediate market reactions. While a significant portion of existing research focuses primarily on short-term shareholder returns, such approaches often fail to determine whether acquisitions generate real economic profits and to identify their

sources. Consequently, this study aims to address these limitations by integrating both short-term market-based evidence and long-term performance measures, providing a more comprehensive and consistent understanding of the economic impact of mergers and acquisitions.

To answer the research question, this study analyzes both the post-merger operating performance and short-term stock price reactions of mergers and acquisitions conducted in the Nordic region, including Denmark, Finland, Iceland, Norway, and Sweden. While the existing literature primarily focuses on M&A transactions in major markets such as the US or the UK, this thesis extends those findings to a less-studied geographical area. By incorporating both long-term operational outcomes and immediate market responses, the study provides a more nuanced understanding of M&A performance in the Nordic context.

The empirical data used in this research is sourced from the DataStream database with the help of the University of Vaasa. To ensure the credibility and relevance of the theoretical foundation, this study relies on high-quality academic literature, limiting reviews to journals rated 4\*, 4, or 3 in the Academic Journal Guide published by the Chartered Association of Business Schools in 2021. This selective approach ensures that the analysis is grounded in rigorous and authoritative research, contributing to the robustness of the study's conclusions.

## **1.2 Hypothesis of the study**

This thesis aims to analyze whether mergers and acquisitions create value for the acquiring company, specifically by examining the long-term operating performance of companies in the Nordic region. Drawing on existing literature and adapting it to the Nordic market context, this thesis explores factors that may impact acquirers' operating performance, including the acquirers' industry, geographical scope, and broader economy-wide changes. To test these hypotheses, this study will employ an accounting-

based methodology, the empirical approach used by Healy, Palepu, and Ruback (1992) in their research.

The first hypothesis examines whether the acquiring firm's overall operating performance improves following the transaction, irrespective of the specific characteristics or structure of the deal. In their study, Healy and others (1992) provide evidence of significant improvements in post-acquisition operating performance. They also observe positive abnormal stock returns, indicating that investors anticipate economic gains from the transaction. Based on these findings, the first hypothesis states as follows:

H1: Post-acquisition profitability improves compared to pre-acquisition profitability

The second hypothesis examines whether mergers and acquisitions within the same industry are more successful post-merger than those operating in different sectors. Sharma and Ho (2004) investigate this in their study, suggesting that mergers in unrelated sectors are less likely to succeed because the acquirer is unfamiliar with the target's industry. However, they find no evidence of better post-merger succession between firms performing in the same industry. Thus, the second hypothesis states as follows:

H2: Mergers and acquisitions transactions within the same industry do not lead to greater improvement in operating performance than those in unrelated industries.

The third hypothesis examines the differences in profitability between domestic and cross-border transactions. This comparison is explored by Georgen and Renneboog (2004) through an analysis of the short-term wealth effects experienced by shareholders. Their findings suggest that domestic transactions tend to yield higher short-term wealth gains compared to cross-border transactions. As previously discussed, this suggests that

investors anticipate better economic gains from domestic transactions. Therefore, the third hypothesis states as follows:

H3: Domestic mergers and acquisitions transactions experience greater improvements in operating performance compared to cross-border transactions.

The fourth hypothesis focuses on measuring the short-term stock price reaction after an announcement concerning a merger or acquisition (M&A). The analysis in this part employs an event study methodology to determine whether such announcements can generate abnormal returns for acquiring firms, subject to statistical significance. Hackbarth and Morellec (2008) noted that the announcements for M&A are usually accompanied by some degree of positive abnormal returns; thus, the fourth hypothesis states as follows:

H4: M&A announcements result in significant positive abnormal returns for acquiring firms during the event window.

### **1.3 Structure of the study**

The structure of this study is organized as follows. Chapter 1 introduces the research topic, outlines the research questions, and presents the hypothesis. Chapter 2 provides the theoretical foundation by exploring the various types of mergers and acquisitions, as well as key theoretical frameworks and historical trends that have shaped M&A activity over time. Chapter 3 examines the merger and acquisition process in detail, from the initial stages through to post-deal integration, and explains how post-acquisition performance is typically assessed. Chapter 4 presents a review of existing literature, highlighting both consistent findings and areas of debate. Chapter 5 describes the data sources and research methodology used in the study. Chapter 6 presents the empirical findings and provides a critical discussion of the results. Finally, Chapter 7 summarizes the key conclusions of the study and offers suggestions for future research.

## 2 Theoretical Background

In their study about the basics of mergers and acquisitions, Frankel and Forman (2017) find a long-term upward trend in both the volume and size of merger and acquisition transactions. Thus, they suggest that over the past few decades, mergers and acquisitions have become increasingly essential parts of the business landscape. Furthermore, Frankel and others point out that these transactions are often viewed as an alternative to the company's organic growth in the modern business landscape. Similarly, Renneboog and Vansteenkiste (2019) suggest that M&A deals enable firms to grow faster than those relying solely on organic growth, making mergers and acquisitions the primary growth strategy for many companies.

Frankel and Forman (2017, Chapter 1) explain mergers and acquisitions as strategic transactions involving the combination or acquisition of companies, resulting in a change or shift of control. In more detail, the sold company may become a subsidiary of the buying company or be absorbed into it. Furthermore, Frankel and others (2017, chapter 7) explain that merger and acquisition deals are often divided into two main categories: asset deals and stock deals. Frankel and others explain that in asset deals, the buyer buys only relevant assets from the target firm, such as machinery, real estate, or other intangible assets. Furthermore, Frankel and others explain that in stock deals, the buyer typically acquires most of, or a part of, the target firm's stock.

This chapter examines the theoretical foundations of mergers and acquisitions, providing a deeper understanding of these transactions. It begins by outlining the various types of takeovers and M&A deals, followed by an overview of the key theories and the historical evolution of mergers and acquisitions.

## 2.1 M&A types

Mergers and acquisitions are often seen as synonyms for each other, but first, it is essential to understand the difference between these two before diving into deeper theories. Although both involve the combination of business entities, their structure and strategic intent can differ significantly. In a merger, according to Frankel and Forman (2017, Chapter 1), two companies combine and form a single company. The companies involved combine their resources and operations to grow by creating synergy, enhancing competitiveness, or expanding into new markets. The underlying rationale is often to achieve mutual benefits that neither firm could attain alone.

In contrast, Frankel and others explain that acquisitions typically involve one company buying the majority or all another company's stock. Normally, the target company is absorbed into the acquiring company; however, in some cases, the target company may continue to operate as a separate entity under its new ownership. Regardless of the structural differences, both mergers and acquisitions aim to achieve strategic growth and operational efficiency. Overall, mergers and acquisitions can be classified into three categories based on the type of M&A: horizontal, vertical, and conglomerate, which will be discussed in more detail below.

The first discussed and the most common merger type is a horizontal merger. As Gaughan (2015, chapter 1) outlines, horizontal merger occurs when two or more competing companies that operate in the same industry and at the same stage of production combine into a single entity. In other words, these companies typically have similar product ranges or offer similar services, making them direct competitors. Moreover, Gaughan suggests that the primary goal of horizontal mergers is to increase the market share of the combined entity, thereby enhancing its market power. Another important goal, according to the authors, is to reduce competition. In this situation, the reduced competition may lead to higher prices and, thus, higher profitability.

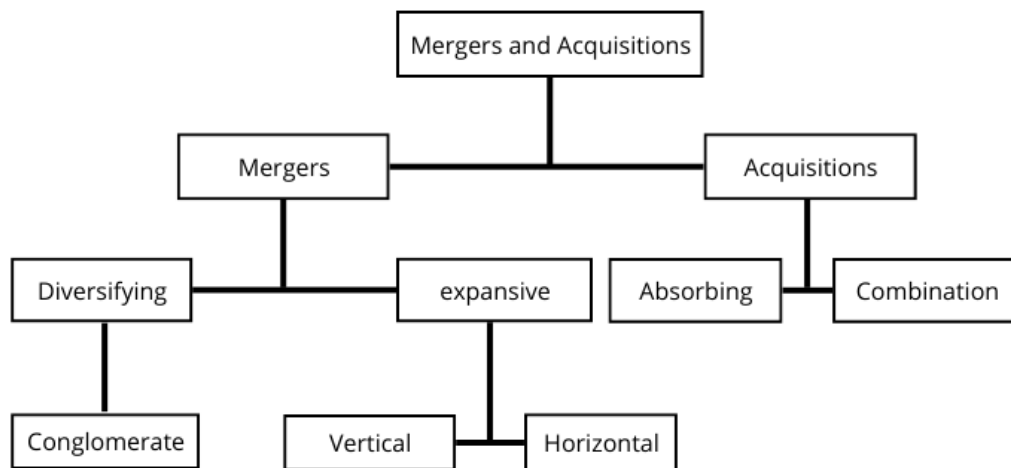
Furthermore, the authors note that merging with a direct competitor may result in significant cost savings.

Vertical mergers, on the other hand, are, according to Gaughan (2015, chapter 1), mergers that occur between companies operating at different stages of a supply chain for a product or service. Unlike in horizontal mergers, where the companies are direct competitors, vertical mergers involve a buyer-seller relationship between the companies. In other words, the companies operate in the same industry, but they are not direct competitors. Gaughan explains that the main goal of vertical mergers is to increase efficiency, reduce costs, secure supply chains, or improve control over the production process.

Lastly, Gaughan (2015, chapter 1) explains that conglomerate mergers occur between companies operating in two different industries or markets. In more detail, unlike in horizontal or vertical mergers, where companies are direct competitors or operate in various stages of the supply chain, companies involved in conglomerate mergers unite firms from different sectors. Gaughan adds that conglomerate mergers aim to diversify operations or enter new industries or markets. Gaughan points out that conglomerate mergers are also a great way to reduce risks. He explains that a downturn in one industry does not necessarily mean the end of the whole company.

In addition to the commonly known horizontal, vertical, and conglomerate mergers, Frankel, and Forman (2017, chapter 1) introduce strategic intents behind mergers and acquisitions, particularly diversifying and expansive acquisitions. According to Frankel and Forman, a diversifying acquisition occurs when a company enters an entirely different industry to reduce dependence on its core business and spread risks, which is closely associated with conglomerate mergers. In contrast, according to Frankel and Forman, expansive acquisition focuses on strengthening the company's position within its existing industry by acquiring a competitor or supplier. This is associated with horizontal and vertical mergers.

In conclusion, while mergers and acquisitions both serve as strategic tools for corporate growth and restructuring, it is essential to understand their characteristics and underlying motivations. The classification into horizontal, vertical, and conglomerate provides a valuable framework for analyzing the nature and objectives of these transactions, as well as their broader economic and competitive implications. To further clarify the different types of mergers and acquisitions, Figure 2 below illustrates how acquisitions can be categorized into absorption and combination, whereas mergers branch into diversifying and expansive acquisitions, ultimately leading to the classification of horizontal, vertical, and conglomerate mergers. This visual representation helps to conceptualize better the structural differences and strategic



purposes underlying various mergers and acquisitions (M&A) transactions.

**Figure 2.** Mergers and acquisition and their subtypes

## 2.2 Types of Takeovers

Ebina, Kumakura, and Nishide (2022) explain that mergers and acquisitions can be categorized into two primary categories: hostile and friendly takeovers. This classification is based on the type of interaction between the acquiring and target

companies. According to Ebina and others, a hostile takeover is a forced takeover where the target's management does not approve of the deal, whereas a friendly takeover, on the other hand, is a mutually agreed-upon transaction.

According to Ebina and others, a hostile takeover occurs when the acquiring company attempts to take over or gain control of the target company without the will or consent of its management. In such cases, according to Ebina and others, the acquiring company bypasses the target company's management entirely and often goes straight to the shareholders or attempts to replace the management to secure the offer's acceptance. Cain, McKeon, and Solomon (2017) further explain that, in hostile takeovers, the acquirer commonly approaches shareholders through a tender offer, proposing to purchase their shares to gain control of the company.

Due to their aggressive nature, Ebina and others find that these hostile takeovers lead to significant costs for the acquiring company. These costs include screening and restructuring costs, investment banking fees, and cultural incompatibility, among many others. In contrast, Schwert (2000) presents a more nuanced perspective on the subject. He suggests that a hostile takeover could serve as a strategic move to prompt managers or shareholders to reconsider their stance on selling. Schwert also finds that hostile takeovers may not have a significant impact on the financial outcomes of the deal.

In contrast, Ebina, Kumakura, and Nishide (2022) explain that the second type of takeover is a friendly takeover. Unlike hostile takeovers, which are often characterized by conflict and resistance, friendly takeovers are, according to Ebina and others, mutually agreed-upon deals between companies. The companies involved in the agreement negotiate cooperatively to find the best solution for each and add value to the combined entity. Furthermore, the authors find that these deals do not incur takeover costs, such as those associated with hostile takeovers, due to the cooperation. Lastly, Ebina and others find that friendly takeovers do not incur the same kind of the costs related with hostile takeovers, as both companies are working together toward a common goal.

## 2.3 M&A Theories

According to Nguyen, Yung, and Sun (2012), the underlying motives behind mergers and acquisitions can be classified into two broad theoretical perspectives: value-increasing theories and value-decreasing theories. These frameworks help to explain why firms engage in mergers and acquisitions and the potential outcomes of such transactions.

Nguyen and others find that value-increasing theories focus on how these transactions can create greater value for shareholders by enhancing the efficiency, competitiveness, and strategic position of the combined firm. Nguyen and others argue that such transactions can create synergies, both operational and financial, that make the newly formed entity more effective and profitable than the individual companies would be on their own. These synergies often arise from cost reductions, revenue enhancements, or improved resource utilization. For instance, according to Nguyen and others, economies of scale can be achieved by streamlining operations or consolidating departments. At the same time, increased market power can provide a stronger bargaining position with suppliers and customers. Additionally, integrating complementary resources or capabilities can enhance innovation, product development, and geographical reach. These benefits, when realized, contribute to improving operational performance and long-term financial growth.

In contrast, according to Nguyen, Yung, and Sun (2012), value-decreasing theories suggest that not all mergers and acquisitions are driven by shareholder value maximization. The authors explain that some mergers and acquisitions transactions are undertaken due to personal benefits or managerial incentives that do not align with the best interests of the firm. These transactions can stem from agency problems, where managers act in their self-interest rather than as stewards of shareholder value. The authors also highlight hubris, where overconfident managers estimate their ability to generate value from an acquisition, leading to overpayment or poor integration. The

authors also find market timing as another factor, where firms may exploit temporary stock price movements to finance acquisitions. These value-decreasing motives can ultimately lead to failed integration, cultural clashes, and unmet expectations, resulting in financial underperformance and a decline in wealth.

### **2.3.1 Value-Increasing Theories**

According to Nguyen, Yung, and Sun (2012), the primary objective of mergers and acquisitions is to improve the overall value of the newly formed entity. The authors argue that increases in the company's value come from the idea that the combined entity will be more valuable than the companies operating separately. Thus, the authors find that the increase in value is often driven by several key factors, including the realization of synergy, increased market power, economies of scale, response to industry shocks, and diversification. These factors, when executed effectively, can lead to improved efficiency, operating performance, and strategic resilience.

According to Nguyen, Yung, and Sun (2012), one of the central mechanisms for value creation in mergers and acquisitions (M&A) is the realization of synergies. They explain that synergies occur when the integration of operations leads to cost savings, productivity improvements, or enhanced performance. Operational synergies, according to Nguyen and others, may involve the consolidation of facilities, the elimination of overlapping functions, and the utilization of shared resources more efficiently. Additionally, the author emphasizes the potential for financial synergies, which may include improved access to capital markets, optimized capital structures, and enhanced utilization of internal funds.

In addition to synergies, Nguyen, Yung, and Sun (2012) find that often mergers often create increased market power and pricing power. They explain that a merged entity may gain greater control over pricing and distribution, leading to less competition, and

the company may be able to charge higher prices, set market trends, and impose entry barriers for new players. This improved competitive position can lead to higher profit margins. Furthermore, the authors explain that the merged company may also gain access to a larger customer base and a more robust brand identity.

Another important factor contributing to value creation is achieving economies of scale. According to Nguyen, Yung, and Sun (2012), larger companies benefit from cost efficiencies that come with increased production capacity and greater purchasing power. When two firms merge, they can spread fixed costs across a larger volume of output, thereby lowering the average cost per unit. Moreover, the authors explain that by purchasing inputs in larger quantities, merged firms can negotiate more favorable prices with suppliers, reducing operational costs even further. These efficiencies often translate into higher margins and enhanced competitiveness, particularly in industries with tight profit constraints.

Nguyen, Yung, and Sun (2012) also draw attention to the ever-changing market environment. They suggest that mergers can help companies respond to industry shocks and disruptions. In sectors facing rapid changes due to technological innovations, deregulation, or shifts in consumer behavior, mergers can be a strategic tool for adaptation. By joining forces, companies may be better positioned to invest in new technologies, restructure operations, or expand into new markets. This adaptability is critical in maintaining relevance and competitiveness in volatile environments.

Finally, the authors emphasize the importance of diversification as a key motivator for mergers and acquisitions. By merging with firms in different industries, sectors, or geographical markets, companies can diversify their revenue streams and reduce their overall business risk. The authors explain that this is particularly beneficial when firms are exposed to cyclical or unpredictable market conditions. Diversification can stabilize cash flows, reduce dependence on a single product or market, and protect the company during downturns in specific sectors. In this way, mergers and acquisitions can serve as

a risk management tool while also creating opportunities for long-term growth and value enhancement.

### **2.3.2 Value Decreasing Theories**

In their study, Nguyen, Yung, and Sun (2012) emphasize that while mergers and acquisitions are often intended to enhance firm value, this is not always the outcome. In some cases, the actions of managers during the transaction process do not align with shareholders' interests, leading to decisions that ultimately destroy rather than create value. Nguyen and others find three main value-decreasing motives for mergers and acquisitions: agency problems, hubris, and market timing.

The first value-decreasing motive, according to Nguyen and others, arises from agency problems, which occur when the managers' goals differ from those of the shareholders. In such situations, managers may pursue mergers and acquisitions not to enhance the company's strategic or operating performance, but rather to serve their interests. For example, they might seek to expand the firm to increase their power, prestige, or compensation, even if the transaction does not align with shareholders' values. Managers may also initiate deals to mitigate their personal employment risks, such as acquiring firms in unrelated industries to diversify the company and protect their positions, even if such moves do not make financial sense. Nguyen and others find that agency-driven decisions often lead to poor integration, wasted resources, and decreased firm value.

The second motive, hubris, is closely linked to managerial overconfidence. Nguyen and others define hubris as a situation in which managers overestimate their ability to identify, acquire, and manage target companies successfully. This psychological bias can cause executives to pursue overpriced deals, leading them to believe they can extract more value from the target than is realistically possible. The authors note that this overconfidence often leads to acquisitions that fail to deliver the expected synergies or

cost savings, frequently resulting in value destruction. Moreover, the authors find that hubris tends to be more prevalent among managers of larger firms, who may have greater access to financial resources and a history of success.

Finally, Nguyen and others find that market timing is the third and last value-decreasing motive for mergers and acquisitions. This refers to the tendency of acquiring firms to initiate M&A deals based on temporary market conditions rather than on a sound assessment of long-term strategic fit or value. For example, Nguyen and others explain that when the acquiring firm's stock is overvalued, managers may use the inflated equity as currency to buy other companies, creating the appearance of value on paper while ignoring the target's fundamental worth. Furthermore, they may mistake short-term market trends as indicators of long-term opportunity. Nguyen and others argue that such acquisitions are inherently risky, as they are based on misjudged valuations. Overpaying for a target firm, especially during market exuberance, often results in weak post-acquisition performance.

## **2.4 Method of Payment**

In their study, Faccio and Masulis (2005) emphasize that the method of payment in mergers and acquisitions plays a pivotal role in shaping the structure, outcomes, and strategic implications of the transaction. They explain that the way the deal is financed can influence not only the valuation and negotiation process but also the financial health, ownership structure, and long-term stability of both the acquiring and target firms. This section examines the most commonly used methods of payment in mergers and acquisition transactions, including cash and stock, and the strategic trade-offs associated with each.

Faccio and Masulis find that cash payments are the most frequently used method of payment in M&A deals, particularly when acquirers have sufficient liquidity or access to financing. The authors explain that in a cash transaction, the acquiring firm pays a fixed

price in monetary terms for the target's shares. This provides certainty and immediacy of payment, making the offer more appealing. However, the authors note that paying entirely in cash can be challenging because companies often face difficulties related to limited cash reserves and liquidity. As a result, many cash offers are financed with debt, which introduces additional risks. An increase in debt levels can strain the firm's balance sheet, elevate interest obligations, and potentially trigger financial distress. Moreover, the authors note that the use of debt may raise concerns among shareholders and lenders regarding the firm's ability to maintain control and service its obligations post-acquisition.

Alternatively, Faccio and Masulis find that many acquiring firms opt to finance the deal through stock-based payments, in which the acquirer offers its own shares in exchange for the target company's shares. This method is desirable when the acquiring company's stock is perceived as overvalued, allowing it to use its equity as a relatively inexpensive currency. Faccio and Masulis point out that one significant advantage of stock financing is that it enables the acquirer to avoid immediate costs and risks associated with increasing debt levels, reducing the threat of financial distress. However, the authors argue that issuing new shares dilutes existing shareholders' ownership and may lead to loss of control, particularly in large transactions where a significant percentage of shares are transferred to the target's shareholders.

According to Faccio and Masulis, in some cases, M&A deals involve a combination of both cash and stock. This approach enables firms to strike a balance between liquidity constraints, tax considerations, control objectives, and investor preferences. Ultimately, the authors note that the choice of payment method is influenced by a range of factors, including market conditions, a firm's financial health, managerial incentives, and the relative bargaining power of the parties involved.

In conclusion, Faccio and Masulis emphasize that the method of payment is more than a procedural detail in M&A transactions; it is also a strategic decision that can

significantly impact the success and sustainability of the deal. Whether firms choose to pay with cash, stock, or a combination of both, this decision reflects a deeper consideration of their financial strategy, control, risk tolerance, and long-term value creation.

## **2.5 M&A Trends Through History**

Throughout the long history of mergers and acquisitions, Gaughan (2015, chapter 2) suggests that six so-called merger waves have occurred, particularly in the US. He explains merger waves as periods when mergers and acquisition activity is heightened, with an increase in the number and value of M&A deals. These heightened periods are followed by a period of significantly fewer mergers and acquisitions deals. Gaughan finds that the waves often begin with a market boost and end due to an economic downturn. These six merger waves occurred in the 1900s, the 1920s, the 1960s, the 1980s, the 1990s, and the latest in the 2000s.

Gaughan (2015, chapter 2) finds that in the neoclassical perspective, merger waves tend to occur due to the combination of economic, regulatory, and technological shocks. He explains that during a financial shock, companies seek to find ways to meet the rapidly growing demand in the economy. This motivates companies to pursue faster growth opportunities, such as mergers and acquisitions, rather than relying solely on organic growth. On the other hand, Gaughan notes that the removal of regulatory barriers can often trigger waves. These barriers previously prevented corporate combinations and now create an appealing environment for new growth opportunities. Lastly, Gaughan suggests that technological shocks can usually eliminate entire industries or create new ones. During a technical shock, mergers and acquisitions can help a company to survive in a rapidly changing environment.

However, this neoclassical explanation is not universally accepted. Ince (2024) argues that a combination of neoclassical and behavioral explanations often drives merger

waves. Ince explains that in the behavioral explanation, managerial actions are usually influenced by psychological biases and market sentiment. For example, during periods of market overvaluation, managers may exploit inflated stock prices to acquire other companies. This aligns with the findings of Rhodes-Kropf and Viswanathan (2004), who argue that merger waves can arise when market valuations deviate systematically from firms' fundamental values. In their model, mergers financed with stock become especially attractive during periods of widespread overvaluation, leading to a rational clustering of mergers and contributing to the wave-like patterns.

Similarly, Duchin and Schmidt (2013) find that managerial oversight tends to weaken during merger waves, leading to self-serving behavior and a higher likelihood of poor-performing mergers. These findings support the behavioral view that merger waves may be fueled not just by rational economic responses but also by financial overvaluation, misaligned incentives, and irrational exuberance. In conclusion, while the neoclassical perspective frames merger waves as logical responses to shifts in the external environment, the behavioral view introduces a critical psychological dimension, emphasizing the role of market sentiment, managerial behavior, and misvaluation in driving the merger activity.

According to Gaughan (2015, Chapter 2), the first merger wave occurred from 1883 to 1904. He explains that the mergers during the first wave were primarily between companies within the same industry, resulting in large monopolies and trusts. The best examples of these monopolies are the creation of U.S. Steel in 1901 by J.P. Morgan and the creation of Standard Oil by John D. Rockefeller. Gaughan explains that soon after the awareness and risks for such entities rose, but the end of the first wave occurred due to financial factors rather than legal restrictions. In the early 1900s, the shipbuilding trust collapsed, followed by the 1904 stock market crash and the 1907 banking panic, which led to the end of the first merger wave.

Gaughan (2015, chapter 2) continues that the second wave occurred between 1916 and 1929. He noticed that whereas the formation of monopolies characterized the first wave, the second wave was characterized by the formation of oligopolies. Furthermore, he finds that the stage for the merger wave was set by the post-World War 1 economic boom. Like during the first wave, Gaughan notes that some of the corporations formed during the second wave, such as General Motors, IBM, and John Deere, are still in operation today. Finally, Gaughan finds that the second wave came to an end due to the 1929 stock market crash, followed by the Great Depression.

The third wave, according to Gaughan (2015, chapter 2), occurred between 1965 and 1969, which, like the second wave, was due to a booming economy. He finds that, unlike the previous waves, during the third wave, most mergers were between companies operating in different industries. In other words, the third wave was driven by diversification and financial innovations. However, like the previous waves, Gaughan finds that the third wave ended in the early 1970s when the economy began to slow down, leading to factors eliminating, stagflation, and a bear market.

Gaughan (2015, Chapter 2) notes that the fourth wave occurred between 1984 and 1989, characterized by hostile takeovers, leveraged buyouts, and international mergers and acquisitions. Again, the wave began with economic recovery and growth but according to Gaughan had unique characteristics like deregulation, new financial innovations, and changes in corporate governance. Gaughan also finds that the fourth wave ended due to the changes in the economic environment. However, the recession in the 1990s was relatively mild compared to those seen before.

According to Gaughan, the fifth wave began in 1992 and was distinct from previous waves with its focus on strategic mergers rather than those driven by financial leverage. He finds that this wave was fueled by a booming stock market, increased globalization, and rapid technological advancement, particularly in the information technology and telecommunications sectors. A notable trend during this period was the prevalence of

stock-for-stock transactions, made attractive by high equity valuations. Unlike earlier waves, Gaughan adds that companies used M&A as a response to lingering economic difficulties, including the early 1990s recession. However, by the early 2000s, the bursting of the dot-com bubble and the 2001 recession significantly reduced M&A activity, marking the end of the fifth wave.

Finally, according to Gaughan, the sixth merger wave, which unfolded in the early 21<sup>st</sup> century, was primarily driven by the low interest rates, an abundance of cheap credit, and strong global liquidity. This environment enabled a new round of debt-financed takeovers, coinciding with the housing boom in the United States. As Gaughan notes, this wave was characterized by a mix of strategic and financial acquisitions, including mega-deals across various industries. However, it came to an end with the onset of the subprime mortgage crisis, which triggered the 2007-2008 global financial crisis. The ensuing tightening of credit markets, the collapse of major financial institutions, and a steep decline in economic confidence led to a sharp drop in M&A activity, marking the end of the sixth merger wave.

### 3 M&A Process

As noted earlier, mergers and acquisitions are inherently complex and strategic projects that involve combining companies, business units, or assets to achieve growth, enhance market share, gain a competitive advantage, or expand into new markets. According to Gaughan (2015) and Miller and Segall (2017), the M&A process involves several interdependent and critical phases, beginning with the formulation of overarching strategic rationale and progressing through target identification, due diligence, negotiations, transaction execution, and ultimately, post-acquisition integration. Each of these stages involves a distinct set of tasks and analytical requirements, demanding both careful planning and effective coordination across multiple stakeholders. These stages will be discussed in greater detail in the sections below.

Welch, Pavićević, Keil, and Laamanen (2020) emphasize that many of the challenges that hinder successful mergers can be traced back to deficiencies in the pre-deal phase, such as poor strategic alignment, inadequate target screening, or insufficient cultural assessment. The authors argue that errors made early in the process often resurface later, especially during the critical phase of post-acquisition integration. Consequently, they highlight the importance of developing a nuanced understanding of the pre-deal stage, as it lays the foundation for the success or failure of the entire transaction. Nevertheless, Welch and others underline that the post-acquisition integration phase remains the most pivotal in determining long-term success, as it is during this period that strategic objectives are operationalized, cultures are merged, and synergies are realized. Both Gaughan (2015) and Miller and Segall (2017) caution that each stage of the M&A process requires a tailored approach, combining thorough analysis, strategic foresight, and disciplined execution to maximize value creation and minimize risk. Oversights at any point in the process can compromise deal outcomes and erode shareholder value.

This chapter aims to provide a comprehensive understanding of the M&A process from its initial stages to the challenges of post-acquisition integration. It outlines the essential

phases of a transaction and examines the strategic considerations that inform decision-making at each step. Furthermore, the chapter discusses the methods used to assess the financial and operational performance of M&A transactions, offering insights into how success is measured in practice. By dissecting each component of the process, this chapter highlights not only the complexity of M&A but also the importance of strategic alignment, execution challenges, and post-deal integration in achieving sustainable results.

### **3.1 Pre-Acquisition Process**

Miller and Segall (2017, chapter 2) begin their analysis of the M&A process by emphasizing the importance of the pre-deal phase, which typically starts with the deal initiation and strategic planning. At this stage, a potential transaction may be triggered in several ways: the target company may voluntarily place itself on the market, or it may be approached by an interested buyer proposing a strategic deal. Additionally, as noted by Welch, Pavićević, Keil, and Laamanen (2020), third parties, such as investment banks, private equity firms, or activist investors, may also play a key role in initiating transactions. These intermediaries may identify synergies or market opportunities that prompt a deal.

Miller and Segall emphasize that this initial phase is centered on defining the strategic intent behind the transaction. This involves clearly outlining the company's motivations for buying or selling, which may include expanding into new markets, acquiring new capabilities, achieving operational efficiencies, or responding to competitive pressure. Miller and Segall continue that as a part of this strategic assessment, the acquiring company undertakes a thorough review of its current market position, competitive landscape, and long-term objectives, aligning the proposed deal with its overall corporate vision and growth strategy.

Once the decision to pursue a transaction has been made, the next critical step, according to Miller and Segall, is identifying and selecting the target. This process begins by compiling a list of potential targets based on key criteria, including industry alignment, size, market presence, financial health, strategic fit, and growth potential. Welch and others explain that to create a list of potential targets, the buyer employs various methods, including market screening, internal lists, and advice from external networks. Once identified, Welch and others note that the acquirers may use several approaches to develop this list, including market screening, internal databases, and recommendations from professional networks and external advisors. Following the initial list, a more detailed assessment is carried out to evaluate each candidate's strategic value, operational strengths, research and development capabilities, and resource base. Furthermore, external factors such as cultural compatibility, geographic presence, and regulatory environment may heavily influence the target selection process.

Once a suitable target has been identified, according to Miller and Segall, the next phase involves valuation and financial analysis, which typically begins before formal negotiations but continues through the transaction. Miller and others find that various valuation techniques are used to estimate the target's fair market value, including discounted cash flow analysis, comparable company analysis, and precedent transaction analysis. These methods help the acquirer determine a realistic price range and formulate a sound offer. Welch and others highlight that the method of payment, whether cash, stock, or a combination, is also determined during this phase. The chosen method of payment is influenced not only by the buyer's financial position but also by how the market is likely to interpret and respond to the deal.

According to Miller and Segall, following the valuation, the process moves into the negotiation phase, where both parties engage in detailed discussion to determine the terms and structure of the transaction. They explain that this stage often begins with informal contact between the buyer and the target, facilitated by financial advisors or

investment banks. Once initial interest is confirmed, the buyer typically submits a non-binding letter of intent or an initial offer. From there, both parties negotiate the finer details, including pricing, conditions, and integration planning. Welch and others note that this bidding and negotiation phase is critical as it sets the tone for the eventual success of the deal. Misalignment at this point can lead to delays, renegotiations, or even deal abandonment.

After negotiations are complete and terms are agreed upon, the transaction, according to Welch and others, enters the deal announcement phase, which concludes the confidential or private portion of the pre-deal process. Welch and others emphasize that this announcement can have a significant impact on market perceptions, investor reactions, and employee morale. The final step of the pre-deal phase, according to Miller and Segall, is the closing of the deal. At this stage, all legal and financial documents are formalized, necessary regulatory approvals are obtained, and the transaction is finalized. Depending on the outcome of due diligence and final agreement terms, the deal may be officially completed or, in some cases, abandoned due to unforeseen risks or changing strategic priorities.

### **3.2 Post-Acquisition Process**

While the signing and closing of an M&A deal may mark a formal milestone in the transaction, Cooper and Finkelstein (2015) emphasize that this is not the end of the M&A process but instead marks the beginning of the most critical and demanding phase, the post-acquisition integration. They argue that this stage involves the complex task of bringing together the operations, systems, cultures, and people of the merging entities in a cohesive and effective manner. Post-acquisition integration refers to the coordinated set of activities designed to solidify the two organizations into a unified entity that can deliver on the strategic objectives established in the pre-deal phase. According to Cooper and Finkelstein, the ultimate success or failure of an acquisition is

often determined during this phase, as it is here that projected synergies are either realized or lost.

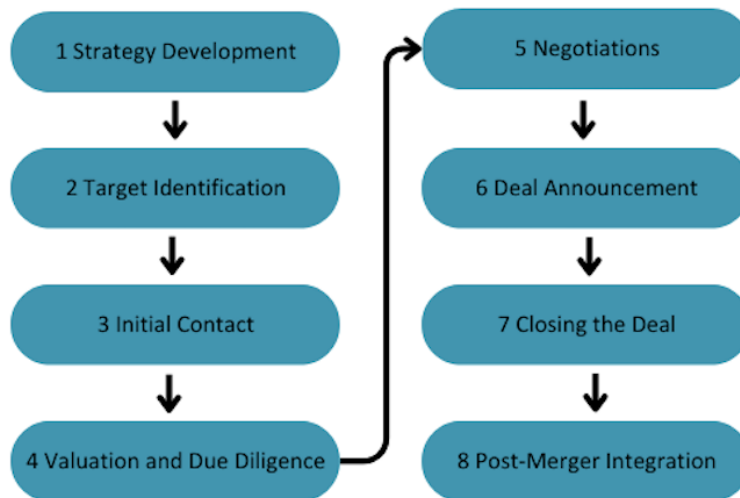
Cooper and Finkelstein explain that integration is multifaceted, encompassing the alignment of organizational structures, IT infrastructure, human resources, and company culture. Achieving harmony across these domains requires not only detailed planning but also adaptive execution. Cooper and Finkelstein highlight that strong leadership, transparent communication, and consistent monitoring are essential throughout the integration period. Without these elements, the merged entity is likely to face operational disruptions, cultural clashes, and reduced employee morale, all of which can quickly derail even the most promising deal.

Recognizing the importance of post-acquisition integration, Frankel and Forman (2017) argue that integration planning should not be deferred until after the deal is signed. Instead, it should be initiated early in the pre-deal phase, with clear goals, responsibilities, and contingency plans. Early planning ensures that potential integration challenges are identified and addressed in advance, which allows for a smoother transition post-closing. They also emphasize the importance of estimating both the costs and benefits of integration as part of the decision-making process. This ensures that the financial and strategic logic behind the deal remains sound when confronted with the complexities of implementation.

Renneboog and Vansteenkiste (2019) further stress that one of the most overlooked yet vital components of successful integration is corporate culture. They argue that when companies merge, differences in values, communication style, and management practices can create significant friction. Culture clashes may result in resistance among employees, increased turnover, and a decline in productivity, all of which can undermine the merger's objectives. However, according to Renneboog and Vansteenkiste, when cultural differences are anticipated and managed through thoughtful planning and open dialogue, the integration proves to be more efficient and less prone to disruptions.

To ensure that the merger delivers on its promises, Frankel, and Forman (2017) advocate for ongoing performance monitoring during and after the integration phase. Through regulatory evaluation, key performance monitoring indicators, and comparison to the original deal objectives, firms can determine whether the merger is on track or if strategic adjustments are required. Frankel and Forman emphasize that this continuous feedback loop enables proactive management, allowing companies to correct course when necessary and reinforce areas of success, thereby increasing the likelihood of long-term value creation.

To provide a clearer view of how mergers and acquisitions unfold, Figure 3 below outlines the key stages of the M&A process. It begins with strategy development, where the acquiring company defines its business objectives and outlines the rationale for pursuing a deal. This is followed by the identification of target companies, in which potential acquisition candidates are listed based on strategic and financial criteria. Once a suitable target is identified, the process proceeds to the valuation and due diligence phase, where the acquirer assesses the target's economic health, operational capabilities, and legal standing. Upon completion, negotiations are conducted to finalize terms, followed by the deal announcement and formal closing. The final and arguably most crucial stage is post-acquisition integration, where the operational and cultural alignment of the two firms takes place to realize the full value of the deal.



**Figure 3.** Mergers and acquisitions process phases

### 3.3 M&A Performance Measures

According to Rao-Nicholson and others (2016), post-acquisition performance is a critical area of focus in M&A research and practice, as it assesses whether the strategic goal of the deal has been successfully achieved. Measuring post-acquisition performance involves the use of multiple metrics and analytical approaches to determine the financial, operational, and market-related outcomes of the newly formed entity. Rao-Nicholson and others note that several performance measures have been employed in academic and professional literature to assess the impact of mergers, reflecting the widespread expectations that such transactions should result in enhanced operating performance. These improvements may include increased profitability, higher shareholder value, operational efficiencies, and improved market positions. Rao-Nicholson and others also emphasize that using multiple performance indicators offers a more robust and comprehensive understanding of post-acquisition outcomes, as no single metric can fully capture the complexities involved in merger integration.

However, Alhenawi and Stilwell (2017) caution that an overreliance on short-term performance indicators may lead to a distorted or incomplete picture of a merger's success. Many integration benefits, such as synergies, cost savings, and process efficiencies, tend to unfold over time. As such, short-term metrics may reflect transitional costs or integration hurdles, rather than long-term strategic gains. Therefore, they advocate for a balanced evaluation framework that incorporates both immediate operating performance and long-term indicators of value creation and sustainability.

Previous literature generally classifies post-acquisition performance into two main categories: market-based performance and accounting-based performance. According to Mariani (2017, Chapter 1), market performance is primarily measured from the perspective of shareholders and investors, focusing on changes in stock prices and market returns. A commonly used tool in this category is the Cumulative Abnormal Return (CAR), as described by Mariani, which evaluates changes in stock price relative to a benchmark during the announcement and post-announcement periods. On the other hand, Mariani explains that accounting-based performance provides insights into the internal operational and financial effectiveness of the merged entity. As Mariani explains, this category encompasses metrics such as Return on Assets (ROA), Return on Equity (ROE), and Return on Capital (ROC), all of which evaluate how efficiently a company utilizes its resources to generate profits. These measures help determine whether the merger has improved the company's capacity to manage its assets, equity, and capital in a way that enhances value creation.

### **3.3.1 Market Performance**

According to Mariani (2017, chapter 1), the measurement of shareholder return is one of the most widely studied and significant areas within mergers and acquisitions research. This topic focuses primarily on how financial markets perceive the potential value creation or destruction associated with the deal, typically by examining stock price reactions around the time of the merger announcement. These reactions are interpreted

as real-time reflections of investor sentiment and expectations. Mariani explains that market-based evaluation offers insights into whether shareholders believe the merger will generate synergies and enhance long-term value or, conversely, dilute value and introduce risk. A key method used in this context is the Cumulative Abnormal Return (CAR), which serves as a benchmark for gauging the market's immediate response to merger-related news.

Mariani explains that CAR is calculated by measuring the difference between the actual return on a company's stock and the expected return, which is often predicted using models such as the Capital Asset Pricing Model (CAPM) or a relevant market index. These models attempt to capture the return that would typically be expected based on historical trends and market conditions, thereby isolating the portion of the return that is attributable specifically to the merger event. According to Mariani, if the CAR is positive, it suggests that the market perceived the deal favourably and anticipates value creation. Conversely, a negative CAR implies scepticism or concern about the transaction's potential benefits, signalling that investors may expect the merger to destroy value or face integration challenges.

In addition to CAR, Mariani Highlights Tobin's Q ratio as a valuable metric for assessing market expectations around M&A activity. Mariani defines Tobin's Q as the ratio of a firm's market value of assets to their replacement cost, serving as a forward-looking indicator of investment attractiveness. A high Q ratio, according to Mariani, reflects positive investor expectations, suggesting that the firm's assets are perceived as highly productive or strategically valuable, often interpreted as a vote of confidence in the merger. A declining Q ratio, on the other hand, may indicate market doubts about the firm's prospects or the anticipated benefits of the transaction. Supporting this view, Bodie, Kane, and Marcus (YEAR) explain that Tobin's Q not only offers insight into firm valuation but also acts as a predictor of future stock returns, making it a relevant tool for investors analysing the long-term strategic impact of mergers.

Mariani also introduces mixed performance measures as an additional lens through which to evaluate post-acquisition performance. These metrics combine market-based elements, such as share price, with accounting-based figures, including earnings or cash flow, to create a more holistic perspective. For instance, commonly used ratios like Price-to-Earnings (P/E), Price-to-EBIT, and Price-to-EBITDA reflect both investor expectations and internal operating performance. Mariani argues that such mixed indicators are beneficial in assessing the financial efficiency of the newly combined firm, as they capture how well the market believes the company can convert earnings or operating profit into shareholder value.

### **3.3.2 Accounting-Based Performance**

According to Mariani, unlike market-based performance, which reflects investor sentiment and stock market reactions, accounting-based performance focuses on assessing the actual operating and financial performance of the merged entity. This approach involves analysing the profitability, efficiency, and resource utilization of the combined firm over time, typically by comparing key financial ratios from several years before and after the merger. Mariani notes that accounting-based measures offer a more concrete and objective view of merger outcomes, as they rely on audited financial statements rather than market perception. This enables the evaluation of whether the intended operational synergies and cost efficiencies have been realized. Importantly, Mariani emphasizes that long-term value creation and synergy realization are often best captured through accounting-based performance indicators, making them a vital component in post-acquisition assessment.

A wide range of financial metrics has been used in the literature to evaluate accounting-based performance, with Return on Assets (ROA) being one of the most commonly employed, according to Mariani. Bodie, Kane, and Marcus (2023, chapter 19) define ROA as a measure of how efficiently a company uses its total assets to generate earnings before interest and taxes (EBIT). It is calculated by dividing EBIT by total assets. According

to Bodie and others, a higher ROA reflects better asset utilization and operational efficiency, while a lower ROA may indicate underperformance or ineffective asset management. According to Minnick, Unai, and Young (2011), a successful merger should ideally increase Return on Assets (ROA), indicating that the combined entity is managing its resources more effectively than the companies did before the transaction.

In addition to ROA, Mariani explains that Return on Equity (ROE) is another widely used measure for evaluating post-acquisition performance. As said by Bodie and others, ROE assesses a company's ability to generate profit using shareholders' equity and is calculated by dividing net income by total shareholders' equity. Expressed as a percentage, ROE indicates how much profit is made for each dollar of equity invested. A higher return on equity (ROE) generally reflects strong management performance and effective capital utilization. According to Mariani, it is particularly relevant in M&A analysis because it reveals whether the merger has enhanced the acquirer's capacity to deliver value to equity holders.

While ROA and ROE are commonly highlighted, Mariani finds that Return on Capital (ROC) is also a significant accounting-based metric used in M&A analysis. According to Bodie and others, ROC evaluates how effectively a company employs both debt and equity capital to generate returns. According to Bodie and others, it is calculated by dividing earnings before interest and taxes (EBIT) by long-term capital, which includes both shareholders' equity and long-term debt. A higher ROC suggests stronger operational efficiency and better capital allocation across the merged organization. Because mergers often alter capital structures and financing arrangements, ROC can be beneficial for understanding how these changes influence overall operating performance.

Furthermore, Mariani and Bodie et al. have identified several additional financial metrics, both market performance and accounting-based, that are crucial for assessing post-acquisition performance. These metrics provide a deeper insight into various aspects of a company's financial health. Some of these essential metrics are introduced in Table 1 below.

ROI	Return on Investments. Profitability of an Investment
P/E Ratio	Price-to-Earnings, value of current share price relative to its earnings per share
P/B Ratio	Price-to-Book, market value compared to book value
Free Cash Flow (FCF)	Measure for financial flexibility
Debt-to-Equity Ratio	Financial leverage. Compares total liabilities to shareholders' equity
Current Ratio	Measures company's ability short term obligations with current assets
Working Capital	The difference between current assets and current liabilities
Earnings Per Share (EPS)	Net income attributable to each share

**Table 1.** Key performance measures

### 3.3.3 Non-traditional Performance Metrics

In addition to traditional performance metrics, such as market and accounting-based measures, recent research has increasingly focused on the importance of non-financial drivers in determining the long-term success of mergers and acquisitions. According to Mariani (2017), while financial indicators like Return on Assets (ROA) and Cumulative Abnormal Returns (CAR) provide valuable insights into immediate performance, they often fail to capture the organizational, strategic, and stakeholder-related complexities that influence merger outcomes over time. Consequently, Mariani explains that operating performance remains crucial, but a more comprehensive assessment of M&A success must include a broader set of qualitative and strategic indicators.

Mariani identifies several key non-financial drivers that play a critical role in post-acquisition performance, including managerial assessments, divestment strategies, cultural integration, and customer satisfaction. Managerial assessments provide an internal evaluation of how well the integration aligns with strategic goals. These evaluations can reveal whether operational synergies are being realized, whether

leadership structures are functioning effectively, and whether post-merger initiatives are progressing as planned. Additionally, Mariani highlights that divestment, or the sale of underperforming or non-core assets following an acquisition, may serve as a strategic tool to refocus organizational priorities and improve overall efficiency.

Another crucial factor emphasized by Mariani is cultural integration. Differences in organizational culture between merging firms are frequently cited as a leading cause of post-acquisition failure. Successful cultural integration facilitates smoother communication, stronger employee engagement, and improved collaboration between previously separate teams. Conversely, unmanaged cultural clashes can result in misaligned values, internal conflict, and increased turnover. Finally, customer satisfaction is presented as a vital external indicator of success. Retaining customer loyalty and maintaining service quality after a merger are critical to sustaining revenue streams and ensuring long-term value creation.

Supporting these insights, Lawrence, Nguyen, and Upadhyay (2024) examine the role of corporate governance in M&A outcomes, with a specific focus on the impact of board independence. Their findings suggest that acquirers led by an independent chairperson experience significantly higher cumulative abnormal returns around the announcement of a merger, compared to those with a non-independent chair. This suggests that independent leadership may offer more objective oversight and help prevent value-destroying decisions during the deal-making process.

In a related study, Tang, Xu, Hsu, and Lin (2024) examine the influence of Environmental, Social, and Governance (ESG) factors on M&A performance. They find that mergers between firms with aligned ESG profiles tend to produce better integration outcomes and long-term performance. Similar ESG commitments between firms may foster greater strategic compatibility, cultural cohesion, and stakeholder trust—all of which contribute to smoother transitions and more sustainable value creation. These findings underscore the growing significance of ESG compatibility as a non-financial factor in determining the

success of mergers, particularly as investors and regulators intensify their scrutiny of corporate sustainability practices.

Taken together, these studies underscore that successful M&A execution depends not only on financial planning and performance but also on strategic alignment, governance quality, cultural fit, and stakeholder satisfaction. Future research and practical assessments of M&A performance would benefit from integrating these non-financial dimensions into their evaluation frameworks.

## 4 Literature review

Since the groundbreaking work of Henry Manne (1965), M&A activity has been widely studied, but its implications for long-term financial performance are ambiguous. The early work by Manne focused on the release of mergers and acquisitions (M&As) for corporate governance, resource allocation, market efficiency, and generally the consolidations that occurred within industries. Drawing from this, Healy, Palepu, and Ruback (1992), Cornett and Tehranian (1992), and Bauer, Miles, and Nishikawa (2009) found beneficial effects, including enhanced operating cash, reduced financing costs, greater asset utilization, and higher financial stability. Other studies, such as Minnick, Unal, and Yang (2011), also reported positive effects of powerful manager incentives on performance.

But the narrative of value creation is not supported by all evidence. Ghosh (2001), Sharma and Ho (2002), and Furfine and Rosen (2011) found mixed or adverse effects, which were sometimes instrumental in some instances, depending on the deal type, management practice, or degree of integration. Similarly, Rao-Nicholson, Salaber, and Cao (2016) indicated differences, and observed that M&As in a financial crisis is likely to lead to better results. In general, the literature is unanimous on the impact of market-driven and managerial-led factors, as well as deal characteristics, on M&A performance. This chapter offers a historical perspective on the literature, beginning with the earliest research findings and concluding with the latest studies.

In 1965, Henry Manne published a seminal study that fundamentally shaped the academic discourse on mergers and acquisitions. His research stands out as one of the earliest comprehensive examinations of the subject, with a particular focus on corporate governance, market dynamics, and the implications for competition law. Manne's analysis underscores the significant relationship between mergers and the allocation of resources within markets, ultimately linking these processes to questions of efficiency. Crucially, his findings suggest that mergers occurring within the same industry are especially effective at promoting a more efficient allocation of resources. This, in turn,

tends to enhance operating performance by fostering gains in productivity, profitability, and managerial effectiveness across various sectors. Manne's work, therefore, established a foundation for understanding how mergers influence corporate performance and market outcomes from both a theoretical and practical perspective.

Furthermore, Healy, Palepu, and Ruback (1992) conducted an in-depth analysis of the 50 most prominent mergers and acquisitions in the United States between 1979 and 1983, building on earlier research in the field. Their examination of various performance measures revealed notable improvements in key indicators, particularly operating cash flows and asset productivity. Interestingly, the study also found a strong positive link between increases in post-acquisition operating cash flows and abnormal stock returns. This association suggests that the observed financial improvements aligned with market expectations regarding the economic benefits of these mergers. Collectively, their findings reinforce the view that mergers and acquisitions can enhance firm value and operational performance.

Cornett and Tehranian (1992) direct their analysis toward the banking industry, specifically examining the performance of major bank mergers that took place between 1982 and 1987. Their research reveals that banks involved in these mergers generally outperform the broader sector. This finding aligns closely with the results of Healy, Palepu, and Ruback (1992), who reported similar outcomes in their study. Notably, Cornett and Tehranian identify a significant association between abnormal stock returns observed around the merger announcement and subsequent performance metrics. This suggests that investors can anticipate improvements in bank performance following the completion of merger and acquisition activities.

Ghosh (2001) critically examines the assumption that corporate acquisitions inherently enhance the operating performance of acquiring firms. The study uses operating cash flow as the primary metric and finds little evidence of significant improvement in overall post-acquisition performance. Interestingly, the research highlights that the method of

payment is a key factor: acquisitions financed with cash tend to yield better operating results than those financed with stock. These findings underscore the complexity of mergers and acquisitions, suggesting that deal structure, particularly the payment method, plays a crucial role in determining post-acquisition outcomes.

In their study, Shrama and Ho (2002) sought to investigate whether corporate acquisitions by Australian firms lead to improved operating performance. They analyzed 36 acquisitions from 1986 to 1991, using accounting-based metrics like return on assets, operating cash flow, and profit margins to compare company performance before and after the deals. Their results indicate that, while there may be a slight improvement in performance immediately following an acquisition, this effect does not last. Over the long run, there is generally no significant gain; sometimes, performance even stalls or declines. The study finds no substantial evidence of improved operating efficiency following acquisitions, possibly due to factors such as overvaluation or the challenges of integrating different companies.

Rahman and Limmac (2004) analyzed Malaysian firms that engaged in acquisitions between 1988 and 1992, examining a sample of 94 acquiring companies. They assessed operating performance, focusing on key metrics such as operating cash flow, return on sales, and asset turnover, both before and after the acquisitions. Their findings suggest that these firms experienced notable improvements in long-term operating performance post-acquisition. The positive effects were especially pronounced when the acquired companies had previously been privately owned and when there were no immediate changes in the management teams of the target firms. Overall, the study highlights that acquisitions can yield favourable operating outcomes, offering potential benefits to both the broader economy and the shareholders of acquiring companies.

Ronan, Powell, and Andrew (2005) investigate whether operating performance in UK firms improves after corporate takeovers, focusing on acquisitions between 1985 and 1993. Their results suggest that, on average, acquiring firms experience only modest

improvements post-acquisition, rather than dramatic gains. They also report that performance tends to improve more when the acquirer and target are in related industries or when the target's CEO is replaced. Interestingly, the method of payment, whether cash or shares, does not appear to have a significant impact on outcomes.

Bauer, Miles, and Nishikawa (2009) examine the motivations and consequences of mergers and acquisitions within the credit union industry, analysing data from 1995 to 2003, which includes 2,230 mergers. Their research demonstrates that these mergers are linked to improvements across various financial indicators, particularly in the areas of savings and lending rates. Credit unions that have merged appear to be able to offer more competitive rates to their members, reflecting enhanced operational performance following the merger. Additionally, the authors argue that such consolidations contribute to greater financial stability across the industry by lowering the overall risk of default.

Tuch and O'Sullivan (2007) provide a thorough examination of empirical research on the actual outcomes for firms following acquisition sprees. The evidence? All over the map. Some studies show boosts in efficiency and profitability post-acquisition, while others point to a drop in operational or financial performance, not exactly the universal win some might expect. The authors highlight that a lot hinges on factors such as the method of payment, whether the firms' strategies align, and even the state of the economy when the deal is finalized. Bottom line: the impact of acquisitions is complicated and depends heavily on context.

Minnick, Unal, and Yang (2011) examined 178 Bank Holding Company mergers between 1990 and 2005, distinguishing their study by focusing specifically on performance-based CEO compensation. Their main argument is that when CEO pay is more closely tied to performance, merger decisions are more likely to enhance firm value. Their findings indicate that announcements of mergers accompanied by higher performance-based compensation led to positive reactions in both stock and bond markets. This suggests

that investors anticipate these mergers will generate future value, provided CEOs have significant performance incentives. Ultimately, the researchers conclude that these market expectations are justified. Banks offering greater performance-based compensation to their CEOs experience a substantially larger improvement in operating performance, measured by return on assets (ROA), after mergers and acquisitions. This evidence strengthens the case for aligning CEO pay with firm performance in the context of M&A activity.

However, not all studies find positive results of mergers and acquisitions. For instance, Furfine and Rosen (2011) examine how these transactions affect the default risk of acquiring firms, using data from North American companies between 1993 and 2006. While conventional wisdom suggests that mergers and acquisitions should reduce default risk through greater asset diversification, the authors find that this expectation often falls short. In particular, they highlight that firms with highly compensated CEOs tend to engage in riskier behavior, likely driven by personal incentives, which can heighten the risk of default. Such actions may undermine the company's long-term financial stability, suggesting that the outcomes of mergers and acquisitions are more complex and potentially riskier than commonly assumed.

Similarly, Rao-Nicholson, Salaber, and Cao (2016) investigate the effects of mergers and acquisitions on firm performance within the ASEAN region, analyzing data from 57 transactions between 2001 and 2012. Their findings point to a consistent decline in both return on assets and adjusted operational performance over the three years following an acquisition. This trend suggests that firms often face significant challenges in achieving the expected benefits of such transactions. Notably, the study identifies an exception: mergers and acquisitions completed during the financial crisis period appear to outperform those conducted either before or after the crisis. The authors argue that economic downturns may create conditions that enhance the success of these transactions, challenging the assumption that all periods produce similar outcomes for post-merger performance.

Alhenawi and Stilwell (2017) investigate whether firms with strong pre-acquisition fundamentals, specifically higher liquidity and lower debt, experience greater long-term success in mergers and acquisitions. Focusing on U.S. transactions from 1998 to 2010, their study reveals that financially robust acquirers, particularly those targeting distressed firms, tend to generate higher post-acquisition value. The authors highlight that variables such as the target's performance, deal size, and payment method significantly shape deal outcomes. Notably, they observe that acquirers typically recover initial value losses within three years, while long-term benefits are largely contingent upon the pre-deal condition of both the acquirer and the target.

Table 2 below provides an overview of significant academic research examining the effects of mergers and acquisitions, as discussed earlier in the literature review. The table covers a variety of studies, noting their respective markets, timeframes, and the performance metrics they analysed. Some investigations report positive outcomes, such as improved stock prices or better accounting results, while others find either negative or mixed impacts, especially concerning operational performance. The range of studies spans regions such as the US, Australia, the UK, and Asia, employing a mix of benchmarks including ROA, ROE, CAR, and Tobin's Q. Ultimately, the findings underscore just how complex and context-specific M&A results can be. While there's potential for value creation, it's far from a sure thing and really depends on the details of each transaction.

<b>Author</b>	<b>Market</b>	<b>Time Period</b>	<b>Sample</b>	<b>Performance Measure</b>	<b>Findings</b>
Henry Manne, 1965	US	N/A	N/A	Stock Price	Positive
Healy, Palepu, & Ruback, 1992	US	1979-1983	50 largest M&A's	Accounting data	Positive
Cornett, & Tehranian, 1992	N/A	1982-1987	30 large bank M&A's	ROA, ROE, NIM	Positive
Ghosh, 2001	US	1981-1995	Large acquisitions	Operating performance	Negative
Sharma & Ho, 2002	AU	1986-1991	36 acquisitions	Operating performance	Negative
Rahman & Limmack, 2004	MY	1988-1992	94 acquisitions	Operating performance	Positive
Powell & Stark, 2005	UK	1985-1993	N/A	Operating performance	Positive
Tuch & O'Sullivan, 2007	N/A	N/A	N/A	Accounting data	Mixed
Bauer, Miles, & Nishikawa, 2009	US	1995-2003	2,230 credit union M&A's	CAR	Positive
Minnick, Unal & Young, 2011	US	1990-2005	178 bank holding company M&A's	Board/CEO Compensation	Positive
Furfine, & Rosen, 2011	US	1993-2006	1,194 large M&A's	EDF	Negative
Rao-Nicholson, Salaber, & Cao, 2016	ASEA	2001-2012	57 M&A's	ROA, Sales Margin	Negative
Alhenawi & Stilwell, 2017	US	1998-2010	All M&A's between 1998-2010	Tobin's Q, CARs	Positive

**Table 2.** Previous literature on mergers and acquisitions

## 5 Data and methodology

This chapter begins by explaining the data selection process and introducing the final dataset used in the analysis. It then outlines the research methodology, including a clear description of the statistical test applied to evaluate the impact of M&A transactions on firm performance. Following the approach of previous studies, this thesis adopts an accounting-based methodology, which accounts for industry-wide and economic factors to provide a more accurate assessment of performance changes. The chapter also explains how the performance measures are calculated and how industry medians are used to adjust for external influences.

### 5.1 Data

The data used in this thesis has been retrieved from the DataStream database. The dataset covers the Nordic countries, including Finland, Denmark, Iceland, Norway, and Sweden, with a focus on acquiring companies involved in mergers and acquisitions. These countries were selected due to the lack of previous research and their comparable economic structures, well-developed capital markets, and high levels of cross-border corporate activity, making them suitable for comparative analysis within the context of mergers and acquisitions (M&A).

The DataStream database provides relevant information for research, including the names and nationalities of target and acquiring companies, deal types, and industry classifications. In addition to transaction-level data, the database provides historical accounting information for acquiring companies from 1985 to 2024. This includes key financial metrics necessary for evaluating the development of acquiring firms' operating performance before and after the deal. The key financial metrics examined in this study include Return on Assets (ROA), Return on Equity (ROE), the Current Ratio, Earnings Before Interest and Taxes (EBIT), and Total Debt. These key financial metrics were chosen for their relevance in evaluating the firm's profitability, liquidity, operational

performance, and financial leverage, which are critical dimensions when assessing the outcome of mergers and acquisitions for the acquiring companies.

For the event study analysis, stock price data were also obtained from DataStream to assess the short-term market reactions to the M&A announcements. Daily stock returns of acquiring firms were considered in calculating abnormal returns around the announcement date. By integrating accounting-based measures with market-based measures, the study offers a comprehensive perspective on how M&A transactions impact acquiring firms, both in terms of internal operations and investor perceptions.

The data in this study were selected to include mergers and acquisitions deals that occurred between 2010 and 2022. This period was chosen because it offers a broad and recent enough range to include different economic conditions, market cycles, and relevant data for today's business environment. To study the long-term impact of M&A deals, the data consists only of companies that have available accounting data for 3 years before and after the agreement. This provides evidence of the operating performance of the acquiring company before the deal and how it changes in the following years, capturing the long-term effects of the agreement.

The data compiled in preparation for the event study consisted of another dataset, which included firms with known and precise announcement dates, as well as stock return data surrounding the event. This defines the short-term stock market reactions to the announcement of M&A deals and provides insights into investors' expectations regarding the deal's value at the time of public announcement. Therefore, these two lines of evidence facilitate a holistic understanding of the long-term effects of M&A on operations and the short-term market reaction.

Table 3 below presents some key characteristics of the final sample used in the accounting-based portion of this study. The total sample size is 1,602 M&A deals between 2010 and 2022. During this period, most M&A deals occurred between 2016

and 2018, a period marked by strong economic conditions and historically low interest rates, which encouraged companies to pursue growth through mergers and acquisitions. With 41,95%, Sweden accounts for the largest share of deals in the sample, reflecting its role as the most active and developed market among the Nordic countries. In contrast, Iceland had the fewest recorded deals with 1,19% of all deals, which is expected given its smaller market size and more limited corporate activity compared to the other countries in the region. The geographical comparison of takeovers reveals that over 60% of all deals are domestic, suggesting that companies in Nordic countries perceive domestic takeovers as more attractive than engaging in cross-border transactions. Lastly, transactions between companies within the same industry account for over 70% of all deals, indicating that deals within the same industry are significantly more common than those of different sectors. This shows a strong preference for horizontal deals, suggesting that companies seek to strengthen market position, improve operational efficiency, or achieve synergies.

For the event study analysis, a separate and larger dataset was used, consisting of 3,773 M&A announcements with available stock return data. Within this sample, Sweden again represents the majority with 2,774 deals, followed by Norway with 455, Finland with 441, Denmark with 65, and Iceland with 35. This broader dataset allows for a robust analysis of short-term market reactions to M&A announcements across the Nordic countries, complementing the long-term operational insights provided by the accounting-based approach.

### Sample Characteristics: Accounting-based Study

Year of M&A Deal	Number of takeovers	Percent
2010-2012	442	27,59 %
2013-2015	320	19,98 %
2016-2018	462	28,84 %
2019-2022	378	23,60 %
<b>Total</b>	<b>1602</b>	<b>100,00 %</b>

Acquirer Nation		
Denmark	98	6,12 %
Finland	409	25,53 %
Iceland	19	1,19 %
Norway	404	25,22 %
Sweden	672	41,95 %
<b>Total</b>	<b>1602</b>	<b>100,00 %</b>

Deal Characteristic		
<i>Geographical scope</i>		
Domestic takeover	968	60,42 %
Cross-border takeover	634	39,58 %
<b>Total</b>	<b>1602</b>	<b>100,00 %</b>
<i>Industry relatedness</i>		
Related	1138	71,04 %
Unrelated	464	28,96 %
<b>Total</b>	<b>1602</b>	<b>100,00 %</b>

### Sample Characteristics: Event Study

Acquirer Nation		
Denmark	65	1,73 %
Finland	441	11,73 %
Iceland	35	0,93 %
Norway	445	11,84 %
Sweden	2774	73,78 %
<b>Total</b>	<b>3760</b>	<b>100,00 %</b>

**Table 3.** Data characteristics

The data for the reference group are obtained from the DataStream database. This dataset aligns with the sample data on key dimensions, including period, geographical

coverage, and industry classification, ensuring consistency and comparability of the findings. Due to data availability constraints, particularly for private companies, the reference group consists exclusively of listed companies. To establish appropriate benchmarks, companies are grouped by industry, and the median values of the selected financial indicators are calculated for each combination of industry and year. These industry medians are then used as benchmarks against which the performance of acquiring firms is compared, allowing the study to consider industry-wide trends and to isolate firm-specific effects associated with M&A transactions.

## **5.2 Accounting Study Methodology**

When examining the financial results of acquiring companies before and after an acquisition to assess changes in economic performance, Sharma et al. (2002) and Healy et al. (1992) suggest that accounting-based studies are the most effective method. The accounting study methodology aims to compare the operating performance of the acquiring company from the pre-acquisition period to the post-acquisition period and to determine whether acquiring firms outperform their comparable non-acquiring companies within the same industry. According to Healy and others (1992), this comparison helps to isolate the effects of the acquisition from broader industry trends and economic cycles.

The methodology of previous studies by Ghosh (2001) and Healy et al. (1992) suggests that long-term performance is evaluated over a six-year window covering three years before (-3 to -1) and three years after (+1 to +3) the year of the acquisition. This approach enables a more comprehensive evaluation of how acquisitions impact firm performance over the long term, rather than focusing solely on short-term fluctuations that may not accurately reflect lasting results. As in earlier work by Sharma and Healy, the year in which the deal took place (year 0) is excluded from the analysis due to variations in accounting methods and one-time acquisition costs, which may distort the performance measures and hinder comparability with other years.

According to Healy and others (1992) and Ghosh (2001), after evaluating the performance measures for companies included in the sample, the results need to be adjusted for the performance without the M&A transaction. To define the performance without the M&A, the results need to be compared to a benchmark group of companies operating in the same industry. Previous literature has employed various methods to determine the benchmark group. Sharma and others (2002) define the benchmark by selecting a control firm for each acquiring firm by industry and firm size. Similarly, Ghosh (2001) selects benchmark firms by sector and firm size. On the other hand, Haley and others (1992) use the whole industry as the benchmark. In their study, the benchmark is determined by using the entire industry. In this thesis, benchmark groups are selected by industry.

Figure 4 below describes the framework for evaluating a firm's operating performance before and after an M&A transaction by comparing its performance ratios to industry medians. The timeline is centered around the transaction, marked as time T, with three years preceding (T-3 to T-1) representing the pre-acquisition period, and three years following (T+1 to T+3) representing the post-acquisition period. During each period, the firms' performance ratios are calculated and compared to the corresponding industry median ratio. Subtracting the industry median ratio from the firm's performance shows how the firm is performing compared to its non-acquiring peers. This comparative analysis helps to determine whether the transaction led to an improvement or decline in the firm's relative performance, controlling for industry-wide effects.



**Figure 4.** Performance measure equation

Equation 1 calculates the change in a firm's performance, considering the benchmark group. This formula defines the change of the performance ratio as the difference between the post-acquisition and pre-acquisition performance ratios. More specifically, Equation 2 calculates the post-acquisition performance ratio by subtracting the post-acquisition industry median ratio from the firm's post-acquisition performance ratio. Similarly, Equation 3 determines the pre-acquisition performance ratio, which is determined by subtracting the pre-acquisition industry mean from the firm's pre-acquisition performance ratio. This approach helps isolate the effect of the acquisition itself by controlling for broader industry trends.

The formula is defined as follows:

$$\begin{aligned} \text{Change of performance ratio} & & (1) \\ & = \text{Performance ratio After} - \text{Performance ratio Before} \end{aligned}$$

Where the performance ratio after is defined as follows:

$$\begin{aligned} \text{Performance ratio After} & & (2) \\ & = \text{Post acquisition performance ratio} \\ & - \text{post acquisition industry median ratio} \end{aligned}$$

And where the performance ratio before is defined as follows:

$$\begin{aligned} \text{Performance ratio Before} & & (3) \\ & = \text{Pre acquisition performance ratio} \\ & - \text{pre acquisition industry median ratio} \end{aligned}$$

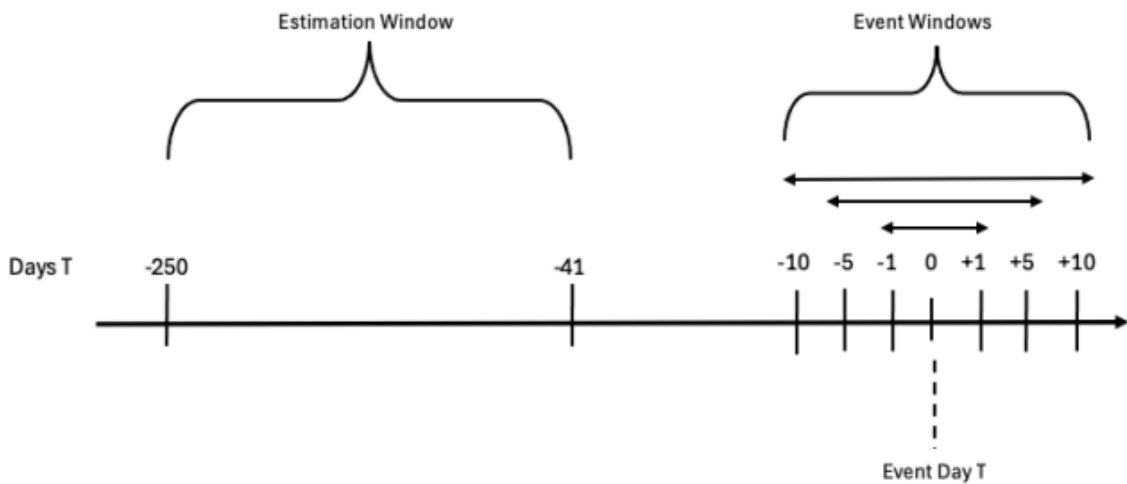
### 5.3 Event Study Methodology

When examining the stock price reactions to M&A announcement MacKinlay (1997), suggests that the event study methodology is the most effective method to capture the markets reactions. The event study methodology is a widely recognized approach in finance, first introduced by Fama, Fisher, Jensen & Roll (1969), where they analyze how stock prices react to new public information. Their study shows that markets are efficient, with stock prices adjusting quickly to new information. Since then, the event study method has become a popular approach to examine whether M&A announcement create or destroy shareholder value.

In his paper, MacKinlay explains that event studies are a useful way to measure how stock prices respond to specific events, such as mergers or earnings announcements. The method involves estimating what a stock's return would have been without the event and comparing it to the actual return to find the abnormal return. These abnormal returns are then analysed to see if the event had a significant impact. MacKinlay highlights that event studies are powerful because they use detailed stock price data and can show how quickly markets react to new information.

MacKinley outlines a four-step method for conducting an event study. Firstly, the event of interest is identified, along with the period surrounding it, known as the event window. In this study, the event of interest is the M&A announcement, where day 0 represents the announcement date. Usually, the event window estimates range from short-term [-1, +1] to long-term [-10, +10]. When the event window is selected, an estimation window must be chosen, which typically spans 120-250 days before the event window. This part calculates the expected return of the stock, assuming the event had not occurred. Lastly, the abnormal returns are calculated, allowing for the analysis of the event's effect on stock prices.

In this study, the estimation window aligns with MacKinlay's (1997) recommendations, spanning 250 trading days before and 41 days before the event window, to minimize the impact of event-related information. Furthermore, this study uses three event windows to capture the market reactions to M&A announcement: a short-term window of [-1, +1] to capture the immediate market reaction and a longer-term window of [-5, +5], and [-10, +10] to capture delayed market reactions afterwards. According to Brown and Warner (1985) and MacKinlay (1997), these windows are commonly used benchmarks in corporate finance, which ensure that any significant variations in stock prices are captured while providing a comprehensive picture of both the immediate and delayed responses. The event windows and estimation window used in this thesis are illustrated below in Figure 5.



**Figure 5.** Description of Estimation Window and Event Window

The first formula in MacKinlay's event study methodology in the market model, which estimates a stock's normal return in the absence of the M&A event. The formula is expressed as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \quad (4)$$

In this equation,  $R_{it}$  is the return of firm  $i$  at time  $t$ , and  $\beta_{mt}$  is the return of the market portfolio at the same time  $t$ . The parameters  $\alpha_i$  and  $\beta_i$  are estimated using regression over a pre-event period. captures the average return not explained by the market, while  $\beta_i$  reflects the sensitivity of the firm's returns to market movements. The error term  $\epsilon_{it}$  represents the portion of the return unexplained by the market and is assumed to be normally distributed with a mean of zero.

The second formula in MacKinlay's event study framework calculates the abnormal return, which measures the difference between a stock's actual return and its expected return based on the market model, where the formula is:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad (5)$$

Where,  $AR_{it}$  the abnormal return for firm  $i$  at time  $t$ ,  $R_{it}$  is the actual observed return, and  $(\alpha_i + \beta_i R_{mt})$  return minus the expected return estimated from the market model. The parameters  $\alpha_i$  and  $\beta_i$ , which are obtained from historical data during a pre-event estimation window. This formula isolates the impact of the event by removing the portion of the return that would be expected based on general market movements, allowing researchers to assess whether the event had a statistically significant effect on the firm's stock price.

The third formula in MacKinlay's event study methodology calculates the Cumulative Abnormal Return, which aggregates the abnormal returns over a specified event window, where the formula is:

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (6)$$

In this equation,  $CAR_i(t_1, t_2)$  represents the total abnormal return for firm  $i$  from time  $t_1$  to  $t_2$ , which defines the event window. By summing the daily abnormal returns  $AR_{it}$

over this period, the CAR captures the overall effect of the event on the firm's stock price, rather than just a single-day reaction. This helps to account for possible information leakage before the announcement or delayed market response afterward, providing a more complete picture of the market's reaction.

The fourth formula in MacKinlay's event study methodology is used to calculate the Average Abnormal Return and the Cumulative Average Abnormal Return, which assess the overall effect of an event across multiple firms. The Average Abnormal Return states as follows:

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

This formula computes the average abnormal return on a specific day  $t$  across all  $N$  firms in the sample. Each  $AR_{it}$  is the abnormal return for firm  $i$  at time  $t$ , calculated using formulas presented earlier. Furthermore, the Cumulative Average Abnormal Return states as follows:

$$CAAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AAR_t \quad (8)$$

This formula sums the AARs over a defined event window from time  $t_1$  to  $t_2$  showing the total average abnormal return across all firms over the period. CAAR is especially useful for identifying whether the event had a lasting positive or negative impact on stock prices, and whether the market reacted quickly or gradually. Together, these measures allow researchers to draw broader conclusions about how markets typically respond to specific types of events, such as M&A announcements.

## **6 Empirical results**

This section presents and analyzes the empirical findings derived from the study. The primary objective is to assess whether mergers and acquisitions lead to improved long-term operating performance for acquiring firms based in the Nordic countries. By examining post-deal performance over an extended period, the study seeks to identify any consistent financial benefits or drawbacks associated with such corporate actions. Furthermore, this section explores whether there are significant differences in economic outcomes based on varying deal characteristics, such as deal size, industry relatedness, and cross-border versus domestic nature, as outlined in Chapter 5. Through this comparative analysis, the study aims to provide deeper insights into the factors that may influence the success or failure of mergers and acquisitions (M&A) deals in the Nordic context.

### **6.1 Accounting-based study results**

To evaluate the impact of mergers and acquisitions on the operating performance of acquiring firms, this study employed an accounting-based methodology. This approach involves analyzing key financial performance indicators, such as return on assets (ROA), return on equity (ROE), earnings before interest and taxes (EBIT), Current Ratio (CR), and total debt, over a defined time horizon. Specifically, financial data were collected for each acquiring firm over a six-year window, comprising three years before the M&A transaction and three years following its completion. By calculating and comparing these metrics over time, the study aims to identify any significant changes in the rational efficiency, profitability, and overall financial health of mergers and acquisitions resulting from the M&A event.

To ensure a more accurate and isolated assessment of performance, the results were benchmarked against a carefully selected control group of comparable firms that did not engage in M&A activity during the same period. This benchmarking process allows the

analysis to control for broader industry trends and macroeconomic conditions, thereby isolating the effect of the M&A deal itself. By subtracting the performance trends observed in the benchmark group from those of the acquiring firms, the study aims to measure the net effect of the M&A transactions. This methodology provides a structured, empirical basis for assessing whether such corporate actions deliver tangible long-term benefits to the acquiring companies. The performance measures and average yearly performance, as well as the mean performance before and after an acquisition, are presented in Table 4 below. All performance measures were normalized for each year by subtracting the yearly industry median.

The empirical analysis in Table 4 presents mixed results on the impact of mergers and acquisitions on firm performance. Although both return on assets (ROA) and return on equity (ROE) improve in the post-acquisition period, the changes are not statistically significant at the 95% confidence level, indicating that the observed improvements in profitability may not be robust. However, the current ratio (CR) decreases significantly after an acquisition, suggesting a deterioration in the short-term financial position of firms. Additionally, total debt increases significantly, indicating that the debt ratio rises following acquisitions. Lastly, EBITDA margins improve slightly, but the improvement is not statistically significant. These findings suggest that while acquisitions may offer some operational and profitability benefits, they also increase financial risk, in particular due to increased debt and reduced liquidity.

Sample industry and time adjusted mean	ROA	ROE	CR	EBITDA	Total Debt	
<b>Years relative to Acquisitions</b>						
	-3	0,53	-8,61	0,13	-1 078 034,70	-25 045,20
	-2	1,10	-7,71	0,03	-1 002 139,71	-25 077,75
	-1	1,17	-4,07	0,13	-895 559,64	-25 074,23
<b>Mean performance before acquisition</b>		<b>0,94</b>	<b>-6,80</b>	<b>0,10</b>	<b>-991 911,35</b>	<b>-25 065,73</b>
	1	1,33	5,10	-0,73	-1 311 950,69	-26 189,74
	2	3,72	3,20	-1,02	-921 564,15	-26 167,22
	3	2,58	-10,97	-1,04	-534 845,10	-26 260,26
<b>Mean performance after acquisition</b>		<b>2,54</b>	<b>-0,89</b>	<b>-0,93</b>	<b>-922 786,65</b>	<b>-26 205,74</b>
<b>Acquirer performance measure - change model test</b>						
<b>Mean performance -3 to -1</b>						
Variance	0,12	5,79	0,00	8 402 750 838,65	212,71	
Min	-522,36	-6 890,65	0,02	-13 762 000,00	-2 398,92	
Max	242,24	1 150,14	153,94	267 700 000,00	24 408,52	
Median	5,26	11,49	1,40	95 279,00	53,79	
N	1602	1525	1506	1631	1705	
<b>Mean performance 1 to 3</b>						
Variance	1,43	77,09	0,03	100 649 597 121,73	1 570,63	
Min	-302,58	-7 275,90	0,01	-34 839 731,00	-127 570,59	
Max	4 376,13	451,12	329,47	848 789 930,00	24 408,52	
Median	4,73	10,48	1,28	173 000,00	59,98	
N	1602	1525	1506	1631	1705	
<b>Difference of means test</b>						
ΔPerformance	1,61	5,91	-1,03	69 124,70	-1 140,014*	
Two sided t-test ratio	0,089	0,324	0,001	0,779	0,000	
Critical Ratio	4,303	4,303	4,303	4,303	3,18	
P-Value	0,155	0,378	0,010	0,793	0,00	

\*= Statistically significant at 95% confidence level

Note: The performance measures have been normalized by subtracting the corresponding year's industry median from acquirer's ratios.

**Table 4.** Overall performance results

The hypothesis H1 stated that: “post-acquisition profitability improves compared to pre-acquisition profitability levels”. Based on the presented empirical result, the hypothesis can be rejected. Although there are observable increases in profitability indicators after the acquisition, these changes are not statistically significant. This suggests that the improvements may not be attributed to the acquisition itself but could instead be the result of random fluctuation or other external factors. In conclusion, there is insufficient empirical evidence to support the claim that mergers lead to a meaningful enhancement in firm profitability.

Although the overall findings do not indicate significant improvements in operating performance following acquisitions, the study further examines whether specific deal characteristics influence outcomes. Notably, it examines variations in performance

based on whether the merger took place within the same industry or across different sectors, as well as whether the deal was domestic or cross-border.

Table 5 below compares the operating performance of firms that acquire companies within the same industry to that of firms that acquire companies within different industries. The findings suggest that while neither group resulted in statistically significant improvements, acquisitions in various sectors showed slightly more substantial numerical improvements in profitability metrics, indicating a relatively better performance on the surface.

<b>Industry relatedness</b>	<b>ROA</b>	<b>ROE</b>	<b>CR</b>	<b>EBITDA</b>	<b>Total Debt</b>
<b>Pre-acquisition</b>					
Same industry	0,594	-8,103	0,09651528	-387 986,28	-25 057,05
N	1138	1085	1063	1151	1213
Different industry	1,775	-3,570	0,09486291	-2 440 073,34	-25 087,18
N	464	442	443	480	491
<b>Post-acquisition</b>					
Same industry	1,590	-1,983	-0,9074802	-153 984,13	-26 209,30
N	1138	1085	1063	1151	1213
Different industry	4,884	1,813	-0,9883945	-2 767 861,72	-26 196,86
N	464	442	443	480	491
<b>Difference of means test: Same industry</b>					
ΔPerformance	0,996	6,120	-1,004*	234 002,15	-1152,26*
Two sided t-test ratio	0,238	0,405	0,001	0,428	0,000
Critical Ratio	4,303	4,303	3,182	4,303	3,182
P-Value	0,300	0,451	0,003	0,471	0,000
<b>Difference of means test: Different industry</b>					
ΔPerformance	3,109	5,384	-1,083*	-327 788,38	-1109,6*
Two sided t-test ratio	0,401	0,089	0,000	0,117	0,000
Critical Ratio	4,303	4,303	4,303	4,303	2,776
P-Value	0,447	0,155	0,008	0,184	0,000

\*= Statistically significant at 95% confidence level

**Table 5.** Industry-relatedness performance

The second hypothesis stated that: “Acquisition within the same industry does not lead to greater improvement in operating performance than those in unrelated industries.” This hypothesis supports the results shown in Table 5 above. Although acquisitions within the same industry showed some numerical gains, these were not statistically significant when compared to the acquisitions within different industries. While both groups experienced similar patterns, acquisition in different industries showed stronger numerical evidence. Thus, there is no evidence to suggest that the same industry acquisitions lead to greater operational performance.

Table 6 compares the operating performance of firms that acquire domestic and cross-border companies to determine whether one group outperforms the other. The findings suggest that while neither group reveals statistically significant results, cross-border acquisitions showed slightly higher numerical values in the post-acquisition period. This indicates that cross-border acquisitions appear to perform relatively well on the surface.

<b>Geographical scope</b>	<b>ROA</b>	<b>ROE</b>	<b>CR</b>	<b>EBITDA</b>	<b>Total Debt</b>
<b>Pre-acquisition</b>					
Domestic	1,133	-3,748	0,099	-197 922,65	-25 031,27
N	968	922	882	982	1038
Cross-border	0,634	-11,379	0,089	-2 193 293,33	-25 118,22
N	634	625	651	649	697
<b>Post-acquisition</b>					
Domestic	1,885	-0,565	-0,994	23 310,57	-26 204,70
N	968	922	882	982	1038
Cross-border	3,551	-1,350	-0,822	-2 354 036,90	-26 202,09
N	634	625	651	649	697
<b>Difference of means test: Domestic</b>					
ΔPerformance	0,752	3,183	-1,092*	221 233,22	-1 173,43*
Two sided t-test ratio	0,353	0,561	0,004	0,518	0,000
Critical Ratio	4,303	4,303	3,182	4,303	4,303
P-Value	0,404	0,591	0,010	0,553	0,001
<b>Difference of means test: Cross-border</b>					
ΔPerformance	2,916	10,029	-0,910*	-160 743,57	-1 083,87*
Two sided t-test ratio	0,171	0,228	0,001	0,262	0,000
Critical Ratio	4,303	2,776	4,303	2,776	4,303
P-Value	0,237	0,228	0,014	0,262	0,000

\*= Statistically significant at 95% confidence level

**Table 6.** Geographical performance

Hypothesis H3 stated: “Domestic M&A transactions experience greater improvements in operating performance compared to cross-border transactions.” This hypothesis is rejected based on the findings presented in Table 6. The results indicate that cross-border transactions exhibited slightly more substantial numerical improvements in operating performance compared to domestic acquisitions; however, these differences were not statistically significant. Consequently, there is no empirical evidence to support the claim that domestic mergers and acquisitions (M&A) transactions lead to superior operating outcomes relative to cross-border deals.

In conclusion, the results indicate that mergers and acquisitions do not lead to statistically significant improvements in operating performance, regardless of the deal

type, whether related to industry or geographical scope. However, a consistent pattern across all groups is a substantial increase in total debt and a decline in liquidity following the acquisition. The rise in debt levels is likely due to the need for external financing to fund the acquisition. This aspect warrants further investigation, particularly by examining the different methods of payment used in the deals, such as cash, stock, and debt, to understand their impact on post-acquisition financial health better. This underscores the need for continued research in this area.

## **6.2 Event Study Results**

To evaluate the impact of mergers and acquisitions announcements on stock market reactions, this study employs the event study methodology. The analysis covers 10 days before and 10 days after the announcement day (day 0) to provide a comprehensive overview of the market. This event window is benchmarked against each country's stock markets' daily returns to find the abnormal returns. The benchmarked results are compared to the estimation window, which spans 240 days before the event day to 41 days before the event day, following the study conducted by MacKinlay's (1997).

The results are shown in Table 7 below. Based on the event study findings, the AARs were statistically significant on several dates. The period of days -10 to -7 had negative Z-values that are significant at the 1 percent level, suggesting the market may have anticipated the event. The other window around the event day showed some positive outcomes that were significant, especially on days -1, 0, and 1, indicating investor action during the event window. Day 9 was also significant at the 5 percent level. However, not all days are significant; for instance, days -4, -3, and 8 do not display any clear pattern. Still, in general, such observations tell us that most action occurred just before or immediately after the event.

Day	AAR	Median	Max	Min	Stdev	Pos:Neg	t-test	Sign Z
-10	0,0003	0,0000	0,0559	-0,1057	0,0107	1949:1725	0,0004	-4,9837***
-9	0,0002	0,0000	0,0709	-0,1057	0,0103	1862:1739	0,0003	-5,8957***
-8	0,0001	0,0000	0,0709	-0,0531	0,0106	1863:1731	0,0001	-7,0684***
-7	0,0013	0,0000	0,0709	-0,0895	0,0105	1904:1731	0,0005	-6,6449***
-6	0,0003	0,0000	0,0709	-0,1057	0,0111	1945:1683	0,0004	-0,7492
-5	-0,0001	0,0000	0,0709	-0,1057	0,0114	1939:1657	-0,0001	-1,95434**
-4	0,0003	0,0002	0,0559	-0,0832	0,0111	1915:1685	0,0004	-0,4235
-3	0,0003	0,0003	0,0709	-0,1057	0,0118	1896:1700	0,0004	1,3029
-2	0,0003	0,0002	0,0709	-0,0531	0,0113	1961:1647	0,0005	1,0749
-1	0,0002	0,0005	0,0709	-0,0531	0,0111	1905:1701	0,0003	2,8013***
0	0,0000	0,0003	0,0559	-0,1057	0,0120	1585:1703	0,0001	2,3453**
1	0,0002	0,0005	0,0547	-0,1057	0,0113	1634:1648	0,0002	2,0847**
2	0,0001	0,0000	0,0709	-0,1057	0,0113	1604:1684	0,0001	-0,7492
3	0,0001	0,0000	0,0709	-0,1057	0,0115	1609:1691	0,0001	-0,7166
4	0,0003	0,0001	0,0554	-0,0832	0,0114	1630:1680	0,0004	0,6189
5	0,0004	0,0004	0,0709	-0,1057	0,0113	1645:1648	0,0006	1,9544**
6	0,0005	0,0003	0,0559	-0,1057	0,0113	1602:1645	0,0007	1,7589
7	0,0003	0,0002	0,0559	-0,1057	0,0117	1643:1671	0,0004	0,9772
8	0,0001	0,0001	0,0709	-0,1057	0,0121	1654:1661	0,0001	0,3583
9	0,0005	0,0006	0,0709	-0,1057	0,0114	1687:1689	0,0007	2,4756**
10	0,0002	0,0001	0,0709	-0,1057	0,0113	1620:1685	0,0003	0,6515

The T-statistics are shown in parentheses below each coefficient, with \*, \*\*, and \*\*\* indicating statistical significance at the 10%, 5%, and 1% levels

Further support for the robustness of these findings is seen from CAAR summarized in Table 8 for various event windows. The CAAR for the window [-1, +1] was 0.01%, which is significant at the 1% level. Likewise, both the CAARs for the [-5, +5] and [-10, +10] windows yielded results of 0.02% and were significant only at the 5% level. These results indicate consistent and statistically significant positive abnormal returns across all event window periods studied, suggesting that the market reacted to the event almost immediately and maintained this reaction over a longer period.

Day	CAAR	Median	Max	Min	Stdev	T-test	Sign Z
[-1,+1]	0,0001	0,0005	0,0709	-0,1057	0,0114	-0,0002	4,1750***
[-5,+5]	0,0002	0,0002	0,0709	-0,1057	0,0114	0,0000	2,5142**
[-10,+10]	0,0002	0,0000	0,0709	-0,1057	0,0113	0,0000	-2,3528**

The T-statistics are shown in parentheses below each coefficient, with \*, \*\*, and \*\*\* indicating statistical significance at the 10%, 5%, and 1% levels

The fourth hypothesis stated that “M&A announcements result in significant positive abnormal returns for acquiring firms during the event window”. This hypothesis is supported by the results presented in Tables 7 and 8, as the event study shows statistically significant and positive cumulative abnormal returns across all examined windows.

### **6.3 Limitations**

Previous literature suggests that the accounting-based methodology offers valuable insights into the operating performance of the acquiring firms following mergers and acquisitions. One of the key strengths of this approach is the use of a benchmark group, which serves as a reference point to assess whether a firm’s post-acquisition performance reflects genuine improvements or decline. This comparative framework helps isolate firm-specific performance changes from broader industry trends or macroeconomic fluctuations, thereby providing a more grounded evaluation of merger outcomes.

However, it's essential to acknowledge the limitations of this methodology, as identified in prior research. Ghosh (2001) highlights concerns related to the selection of the benchmark group, for example. A common practice in literature is to compare acquiring firms to the industry median, but this approach can produce biased results. Acquiring firms often outperform their industry peers before the merger and tend to be significantly larger, making the industry median an imperfect comparator. Ghosh argues that more accurate benchmarking would require matching firms not only by industry, but also by size and potentially by other firm-specific characteristics such as profitability or growth rate. However, implementing such refined matching techniques is often constrained by data availability and complexity. This study, like many others, is subject to these limitations. Due to restricted access to firm-level data, the benchmark group in this research is based solely on industry classification, without accounting for firm size or other potentially relevant factors.

Moreover, Tuch and O'Sullivan (2007) argue that the use of different performance measures across M&A studies complicates comparisons and makes it difficult to draw consistent conclusions. They also note that accounting-based metrics are particularly vulnerable to manipulation by management, as firms may adjust reporting practices to present more favorable results. Furthermore, differences in accounting standards across countries pose challenges to the comparability of financial data in cross-national studies. However, this issue is less pronounced in the context of this research as the Nordic countries follow relatively harmonized accounting standards. This consistency helps improve the reliability and comparability of accounting-based performance measures within the region, although some caution is still warranted.

Event studies have limitations along with the inevitable confines of accounting-based analysis. Although it captures the impact on the market during transactions over the shorter term, this does not apply to chronic performance or post-acquisition integration consequences. Besides, the assumption is made that the market will be efficient, which is not always the case; biasing effects based on event window or model can be produced. In addition, while longer windows risk including events not relevant to the M&A transaction, shorter windows may overlook delayed effects. Nevertheless, event studies have proven to be valuable in measuring immediate investor reactions to M&A announcements.

## 7 Conclusions

Mergers and acquisitions present some of the most pivotal strategic decisions a company can undertake during its corporate lifespan. Over the past few decades, the global volume and value of mergers and acquisitions transactions have increased substantially, drawing considerable scholarly attention. Since the seminal work of Manne (1965), which laid the foundation for modern M&A research, the topic has been extensively studied from various angles. Despite this, the question of whether mergers and acquisitions generate tangible long-term benefits for acquiring firms remains a matter of ongoing debate.

A significant body of existing literature primarily focuses on short-term financial indicators, such as stock-price reactions and abnormal returns for shareholders around the announcement date. While these metrics offer some insight into market expectations, they often fail to capture the broader and more enduring economic implications of M&A transactions. They overlook operational performance and long-term value creation, which are essential in assessing the true success of such deals. These limitations in the current literature underscore the need for further investigation into the actual post-acquisition operating performance of acquiring firms.

Accordingly, this thesis aims to evaluate the long-term operating performance of mergers and acquisitions from the acquirer's perspective in addition to short-term stock price reactions, with a particular focus on firms located in the Nordic region. This geographical focus is chosen due to the relative scarcity of prior research on M&A outcomes in these markets, despite their growing participation in global deal activity. Following the methodologies of Healy and others (1992) and Ghosh (2001), this study employs an accounting-based approach to measuring long-term performance. Specifically, it compares key financial ratios over three years before and after the transaction, adjusted for industry medians. This method aims to isolate the actual impact of M&A transactions on firm performance by controlling for industry-wide trends and external influences.

Grounded on existing empirical literature on mergers and acquisitions, the first hypothesis of this thesis posits that the overall operating performance of the acquiring firm improves in the post-acquisition period relative to its pre-acquisition performance. To test this, the study analyzes a sample of 1602 mergers completed between 2010 and 2022 across five Nordic countries. This regional focus helps address a gap in the literature and offers a relevant context for evaluating post-acquisition performance. The study finds improvements in operating performance, although these are not statistically significant. These findings are inconsistent with those of Sharma and Ho (2004), who saw substantial improvements in operating performance following an acquisition.

In addition to the overall operating performance of M&A deals, the study examines deeper characteristics of each deal and whether these characteristics play a role in the post-acquisition operating performance. Previous literature suggests that mergers in the same industry do not lead to greater performance; thus, the second hypothesis suggests that M&A transactions within the same industry do not lead to greater improvement in operating performance than those in unrelated industries. Out of the 1602 mergers in the sample, 1138 were conducted in related industries and 464 were conducted in non-related industries. The study found that, although the results indicate no significant performance improvements, acquisitions made in different sectors performed better than those within the same industry. This finding aligns with the findings of Sharma and Ho (2004).

The third hypothesis continues to examine the deeper characteristics of the deals, focusing on the differences between domestic and cross-border deals. Previous literature finds positive operating performance improvements from domestic deals, making the third hypothesis state that Domestic M&A transactions experience greater improvements in operating performance compared to cross-border transactions. Out of the 1602 mergers in the sample, 968 were domestic and 634 were cross-border. The study presents findings that contradict those offered by Georger and Renneboog

(2004), as the results indicate that cross-border acquisitions perform slightly better than domestic acquisitions.

The fourth hypothesis posits a claim regarding the short-term stock price reaction to mergers and acquisitions (M&A) announcements. That is, announcements regarding M&As are generally associated with significant positive abnormal returns to acquiring firms during the event window. An event study revealed statistically significant and positive cumulative abnormal returns across all examined windows. The most pronounced effect appears in the [-1, +1] window, where CAAR comes to 0.01% with a highly significant Z-value of 4.1750. These results are in accordance with those reported by Hackbarth and Morellec (2008). Generally, the market views M&A announcements positively, which are thought to create short-term value for acquiring firms.

In conclusion, this study found no significant improvements in operating performance after mergers and acquisitions transactions, regardless of the deal type, including industry-relatedness or geographical scope. However, a consistent pattern across all groups is a significant increase in total debt and a decline in liquidity post-acquisition. In the short term, however, the event study results show that M&A announcements are followed by statistically significant positive abnormal stock returns, indicating a favourable initial reaction from the market. Future research could benefit from incorporating the method of payment used in the transactions to assess its impact on post-acquisition financial outcomes. Specifically, examining whether cash or stock-based deals are associated with lower increases in debt levels compared to debt-financed acquisitions could offer valuable insights into how different financing strategies influence a firm's operating performance after the acquisition.

While the study provides valuable information about the operating performance of acquired firms, it also has limitations. The main concern is the benchmarking against industry medians without adjusting for the size of the firm or other attributes that are specific to the firm. This practice could lead to bias, as acquirers significantly differ from

the industry average in their specifics. Future research may consider a more refined matching method that takes into account factors such as firm size, previous performance, and growth potential. The study demonstrates market-based metrics through event study methodology. However, this method has limitations. Event studies reveal short-term investor reactions but may not accurately reflect the long-term strategic or operational ramifications of M&A transactions. Their results are also sensitive to assumptions of market efficiency and the selection of an event window. Therefore, while combining accounting-based and market-based measures may lend greater robustness to the analysis, both methods are bound to weigh certain limitations depending on their specific idiosyncrasies.

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