

LAPPEENRANTA UNIVERSITY OF TECHNOLOGY

School of Business and Management

Business Administration

Master's Programme in Strategic Finance and Business Analytics

Master's Thesis

**Impact of Mergers and Acquisitions on Market Valuation and Profitability of
Acquiring Firms: The Finnish Evidence**

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2017

ABSTRACT

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Title:	Impact of Mergers and Acquisitions on Market Valuation and Profitability of Acquiring Firms: The Finnish Evidence
Faculty:	School of Business and Management
Master's Programme:	Strategic Finance and Business Analytics
Year:	2017
Master's Thesis:	Lappeenranta University of Technology 88 pages, 8 figures, 10 tables, 8 appendices
Examiners:	Professor Eero Pätäri Associate Prof. Sheraz Ahmed
Keywords:	Mergers, acquisitions, M&A, performance, event study, accounting study, value creation, shareholder wealth effects, market valuation, profitability

Mergers and acquisitions have received a lot of attention from academics but the prior results are mixed. The shareholders of acquiring companies often experience small positive wealth effects but long-term performance rarely improves. The objective of this master's thesis is to examine impact of mergers and acquisitions on market valuation and profitability of Finnish listed companies. The sample consists of 128 acquisitions 2004 and 2012. The short-term impact is tested with event study methodology and the long-term impact is tested with accounting study methodology.

On average, the acquiring firms' shares generate an abnormal return of 0,73% on the event day. Based on the long-term results, the acquiring companies outperform their peers before the acquisition but the outperformance does not persist after acquisitions. ROE and CF/Assets show statistically significant decrease in performance with both change and linear regression models. Investors also value different deal characteristics differently but the characteristics only have an impact on the abnormal returns and not on the long-term profitability or market valuation.

TIIVISTELMÄ

Tekijä:	Juhana Holmström
Otsikko:	Impact of Mergers and Acquisitions on Market Valuation and Profitability of Acquiring Firms: The Finnish Evidence
Tiedekunta:	School of Business and Management
Maisteriohjelma:	Strategic Finance and Business Analytics
Vuosi:	2017
Pro Gradu -tutkielma:	Lappeenrannan teknillinen yliopisto 88 sivua, 8 kuviota, 10 taulukkoa, 8 liitettä
Tarkastajat:	Professori Eero Pätäri Tutkijaopettaja Sheraz Ahmed
Avainsanat:	Mergers, acquisitions, M&A, performance, event study, accounting study, value creation, shareholder wealth effects, market valuation, profitability

Yritysjärjestelyistä on tehty paljon akateemista tutkimusta, mutta tulokset ovat olleet ristiriitaisia. Osakemarkkinareaktio on yritysostojen julkistamisen yhteydessä ollut yritysostajan omistajien kannalta usein lievästi positiivinen. Yritysostoilla ei kuitenkaan empiiristen tulosten perusteella ole vaikutusta ostavan yrityksen kannattavuuteen. Tämä tutkimus pyrkii selvittämään mikä on suomalaisten listattujen yritysten tekemien yritysostojen vaikutus niiden osakkeen hinnoitteluun sekä pitkän aikavälin kannattavuuteen ja valuaatioon. Tutkimuksessa sovelletaan tapahtumatutkimusmenetelmää, muutosmallia sekä lineaarista regressioanalyysiä. Tutkimuksessa käytetty otos koostuu 128:sta yrityskaupasta vuosilta 2004-2012.

Tapahtumapäivänä ostavan yrityksen osake tuottaa keskimäärin 0,73%:n epänormaalien tuoton. Pitkän aikavälin tulosten perusteella ostavat yritykset ovat ennen yritysostoa kannattavampia kuin verrokkiryhmä, mutta ostopäivän jälkeen eivät. Oman pääoman tuotolla sekä CF/Assets -tunnusluvulla mitattuna yritysten pitkän aikavälin kannattavuus heikkenee yritysostojen jälkeen. Tulosten perusteella yritysostojen ominaisuuksilla on myös vaikutus lyhyen aikavälin epänormaaleihin tuottoihin, mutta ei pitkän aikavälin kannattavuuteen tai valuaatioon.

ACKNOWLEDGEMENTS

The journey that begun five years ago, has finally reached its end. The years spent in LUT have been fantastic and I would like to thank all the great friends that I made during my time in Lappeenranta. The moments we shared together made this journey truly unforgettable. In addition, a big thanks to my family for their never-ending support during all these years.

The process of writing this thesis was more challenging than I thought. I am very grateful for all the help and advices that my supervisor Eero Pätäri gave me during my thesis project.

Finally, a special thanks to Bloomberg L.P. for letting me use data from their database. This thesis wouldn't have been possible without it.

Helsinki, 18.5.2017.

Juhana Holmström

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1. INTRODUCTION

Mergers and acquisitions activity has been gradually increasing during the last few decades despite the dot-com bubble and the global financial crisis. The year 2015 was the biggest year for mergers and acquisitions in the history. The total value of M&A deals reached over 4,78 trillion US dollars and numerous megadeals were announced. For example, the world's largest brewer Anheuser-Busch InBev agreed to purchase another brewer called SABMiller for 105 billion US dollars. Yet, political uncertainties, like Brexit and president Trump's election victory, caused a slowdown in M&A activity during 2016. (KPGM 2016)

The global economic growth has been mostly stagnant after the global financial crisis. The challenging economic conditions have caused EPS projections of S&P 500 companies to decline for the past few years and the confidence in organic growth has caused firms to seek growth from other sources (KPGM 2016). Despite the ongoing political uncertainties, many economic indicators both in Europe and in the US have been showing positive signs lately and the global economic growth seems to be picking up again. Yet, the cyclicity of M&A activity is not a new phenomenon but rather an empirically proven fact. Nevertheless, mergers and acquisitions have been tempting strategic choices for growth in the past and they certainly continue to be one in the future.

Mergers and acquisitions and their impact on company performance have been a very popular topic of debate for researchers and academics. Numerous studies on the topic have been conducted during the last five decades. These empirical studies have dealt with various aspects of M&A like, for example, short- and long-run stock market reaction to M&A announcements, characteristics of the transactions and performance of domestic and cross-border acquisitions. However, most of the previous literature has focused on either the US or the UK markets and, for example, the Nordic markets have received very little attention. The volume of M&A deals in the Nordic markets is relatively low which most likely is the main explanation for the lack of interest by researchers.

Academics and the shareholders of the corporations are not the only ones interested in the outcomes of mergers and acquisitions. M&A transactions are often very

valuable which makes them very important for numerous other stakeholders. For example, creditors, suppliers and advisors also have an economic interest in the outcomes of M&As. There are also investors, both professional and unprofessional, who seek to profit from the acquisition events.

Merger arbitrage is an investment strategy especially employed by hedge funds and other large investors. The idea behind the strategy is to exploit temporary pricing inefficiencies occurring before or after mergers and acquisitions. In practice, hedge funds generally bet that the acquirer's share price will decline and that the target's share price will increase. Because there are always risks involved in the approval of M&A, the stock price of the target company rarely rises to par with the actual offer and this is where the merger arbitrageurs get involved. (BarclayHedge 2017)

1.1 Research Objectives

The purpose of this study is to examine mergers and acquisitions completed by Finnish listed companies. This study sets to find out what kind of shareholder wealth effects are caused by M&A deals in the short-term and what kind of impacts M&As have on profitability and market valuation in the long-term. Are mergers and acquisitions seen as value creating or value eroding processes by shareholders and investors and do the deals create value in the long run? The focus is on the Finnish stock market and only on the acquirer side. Since the topic is mainly approached from the financial point of view of the acquiring company's shareholders, the chosen point of view is reflected on the theoretical background, as well as in the performance ratios chosen to measure the possible changes in company long-term performance. In accordance with the terminology of previous literature, the term performance is used throughout this thesis and it refers to both profitability and market valuation.

Two of the most commonly used empirical methodologies are employed to study both short and long-term effects of M&As on acquiring companies. The short-term effects are examined using event study methodology and the long-term effects are examined using the accounting technique. Additionally, this study examines whether characteristics (M&A type, domestic or cross-border, financing of the deal

etc.) of the M&A deals have an impact on either short on short-term abnormal returns or long-term performance.

The timeframe used in this study is between 2004 and 2012. The M&A transactions must have been conducted during this period to be included in the sample. For measuring the changes in acquirers' profitability and market valuation, three years are needed before and after the actual year that a deal takes place. Hence, no deals after 2012 could be included in the sample. The final sample consists of 128 completed transactions. Only deals that were concluded and that had their details published were included. Sample selection and the criteria used in the process are explained in detail in the fourth section.

Prior literature on M&A performance is mixed. Most event studies suggest that short-term wealth effects for acquiring company's shareholders is positive but very small (Georgen & Renneboog 2004; Yilmaz & Tanyeri 2015) but some studies have even found negative wealth effects (Loughran & Vijh 1997; Moeller, Schlingmann & Stulz 2003). Sadly, majority of accounting studies on long-term performance improvements haven't reached a clear consensus either. Sharma & Ho (2002) point out that in general, studies reporting decline in post-acquisition performance usually apply earnings based measures. On the other hand, those studies that employ cash flow based measures report increase in post-acquisition performance.

1.1.1 Research Problem

Bruner (2002) states that only around 20 percent of all mergers and acquisitions succeed. Most acquisitions typically destroy shareholder wealth and fail to achieve any financial returns. Based on the existing literature and theories on M&As, three research questions were derived for this study:

- *Do the announcements of mergers and acquisitions cause a market reaction on the acquirer's stock price?*
- *Does the performance of acquiring firms improve after acquisitions?*
- *Is the possible market reaction in line with the long-term performance of the acquirers?*

This study aims to contribute to the existing literature by providing evidence from the Finnish market. The answers to questions above should elaborate whether acquisitions by Finnish companies have a value-creating outcome or not. This study focuses only on the acquirer side since most of the targets are private companies. In addition, there is not much controversy on the target side evidence as target firms' shareholders are in most cases the main beneficiaries in M&As. Both event study and accounting study methodologies are used to capture the short- and long-term impacts of the acquisitions.

In addition to the above research questions, the sample is divided further into sub-samples. This study also aims to find out whether the wealth effects of domestic and cross-border acquisitions are different. The method of payment is also examined by dividing the sample into cash, stock and hybrid deals. Neoclassical theories suggest that synergies are the main motivator in mergers and acquisitions. Thus, the possible differences between industry-related and conglomerate takeovers on shareholder wealth effects and long-term performance are also analyzed.

Earlier studies focusing on short- and long-term performance of M&As are mostly either event or accounting studies or a combination of both (Bruner, 2002). Both methodologies have their strengths and weaknesses which are further discussed in the Data and methodology section. Both methodologies are used in this study for achieving a wider understanding of Finnish M&A performance.

While the first part of this thesis introduced the topic of mergers and acquisitions and their performance, the remainder is organized in the following way. The second and third sections of the thesis form the theoretical framework of M&A performance and shareholder wealth effects. The second section focuses on the theoretical background of M&As and aims to explain the most common theories revolving around the goals and motivations behind M&As. It also offers explanations on why M&As tend to occur in waves. The third section presents the vast existing literature on short and long-term performance of M&As. It also shows what kind of impacts the different characteristics of M&A deals have on the post-acquisition short-term wealth effects and long-term profitability and market valuation. Figure 1 illustrates

the theoretical framework of this thesis and clarifies the connections between different types of theories and studies.

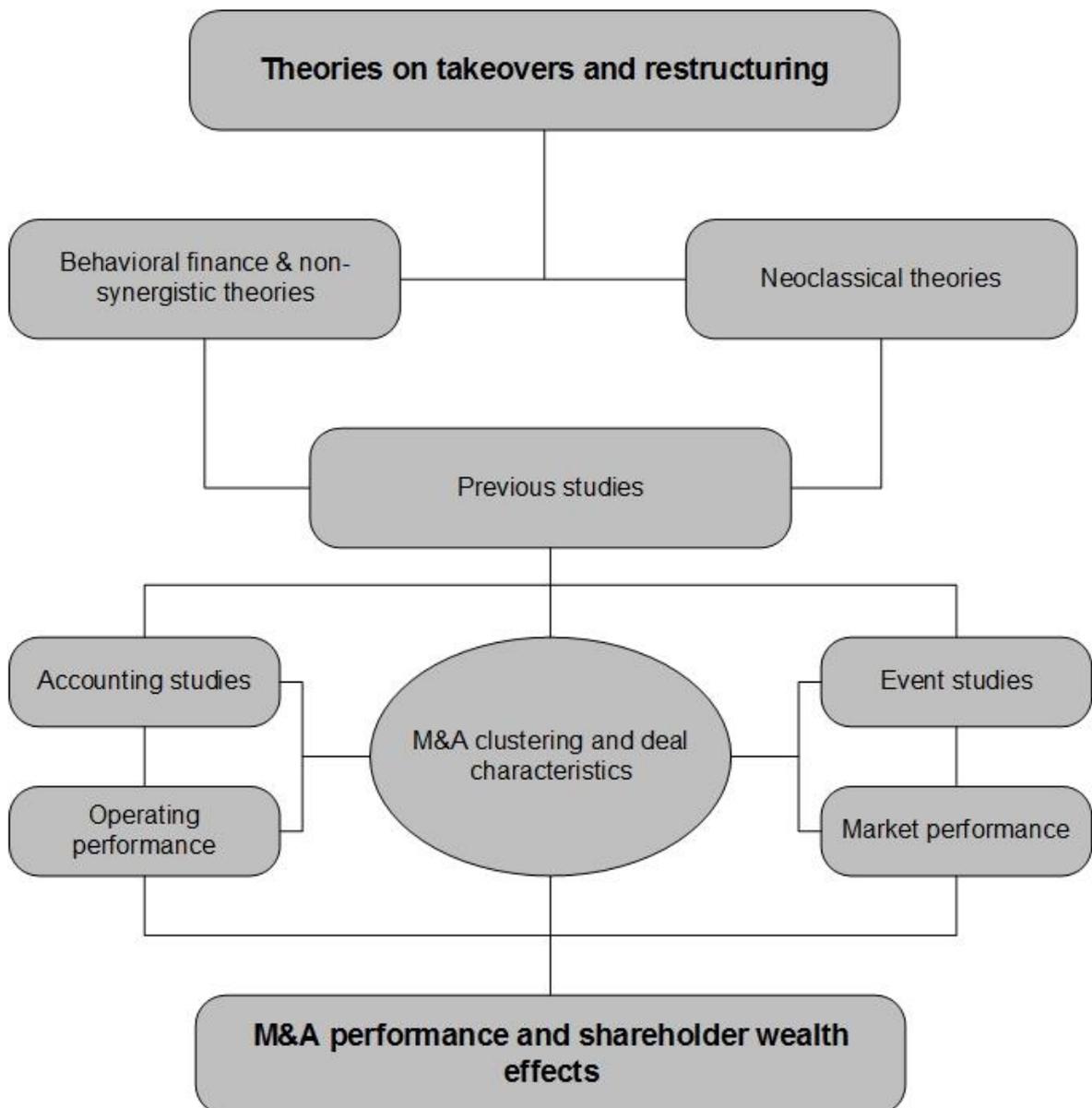


Figure 1. Theoretical Framework of M&A Performance

The fourth section presents the data and the methodologies employed in this thesis. It also presents the hypotheses which are then tested in section 5. Finally, section 6 offers the conclusions and suggestions for further research.

2. THEORETICAL BACKGROUND OF MERGERS AND ACQUISITIONS

Mergers and acquisitions (M&A) are, simply put, transactions where the ownership of enterprises or their operating units are transferred or combined between two companies. Mergers and acquisitions are often referred to being synonyms but there are slight differences between the two processes. Mergers are transactions where two companies consolidate into one entity. On the other hand, acquisitions are transactions where one company acquires the ownership of another company or a part of another company. (Ross, Westerfield & Jaffe 2013)

Like business cycles, mergers and acquisitions have also been proven to occur in cyclical waves. Typically, the M&A waves move in unison with business cycles. When economy is booming, more and more M&A deals are executed and in the time of economic decline and recessions the amount of M&A deals falls. However, recent years have proven that mergers and acquisitions can also be a source for growth when overall economy is stagnant. Currently we are amid the seventh M&A wave, which began in 2011. (Goergen & Renneboog 2004; KPMG 2016)

Basic financial theory states that the main goal of firms is to maximize shareholder wealth. Therefore, firms should invest in projects that have a positive NPV (or zero) and discard investments to those projects that erode wealth. This means that mergers and acquisitions should be considered as investment decisions whose aim is to maximize shareholder wealth. In the case of an acquiring firm, the managers should only make bid offers that result in positive net present value for their shareholders. On the other hand, bidding firms will only accept the bid which results in increased wealth for their shareholders. Shareholder maximization hypothesis therefore states that mergers and acquisitions only happen when shareholders of both sides benefit. (Berkovitch & Narayanan 1993; Woolridge & Snow 1990)

Conn, Cosh, Guest & Hughes (2005) state that mergers and acquisitions are increasingly global and larger than before. The value of cross-border mergers and acquisitions tripled between the 1980s and the early 2000s. According to Kang (1993), majority of foreign direct investments nowadays are cross-border acquisitions. Foreign direct investment theory is important in the case of mergers

and acquisitions because it has implications on shareholder wealth effects of M&A deals. Multinational companies have competitive advantages over their domestic counterparts and this leads to better M&A performance (Kang 1993).

2.1. M&A Process and Key Concepts

According to Immonen (2015, 45), the process of M&A can be categorized and phased in various ways depending on the situation in hand. The acquiring firm usually initiates M&As, thus this section will present the process from the acquirer's point of view. The process of mergers and acquisitions can be simplified into three different phases. Figure 2 illustrates these phases below.

The first phase in the M&A process is planning, which usually starts with target screening. Possible screening criteria vary, but they can be for example, target's market share and growth potential. The aim of target screening is to identify and evaluate the potential targets and determine which of the targets would be the best strategic fit for the acquirer. It is very important to determine the goals of the transaction for the screening to be effective. Acquisition should always be a means to an end and not an end in itself. Valuation of the target and the synergies is done after the potential target has been screened. The valuation can be done by using a free cash flow model combined with market multiples. In most cases, multiple different valuation methods are used for getting a broad understanding of the synergies and the target's value. (Immonen 2015)

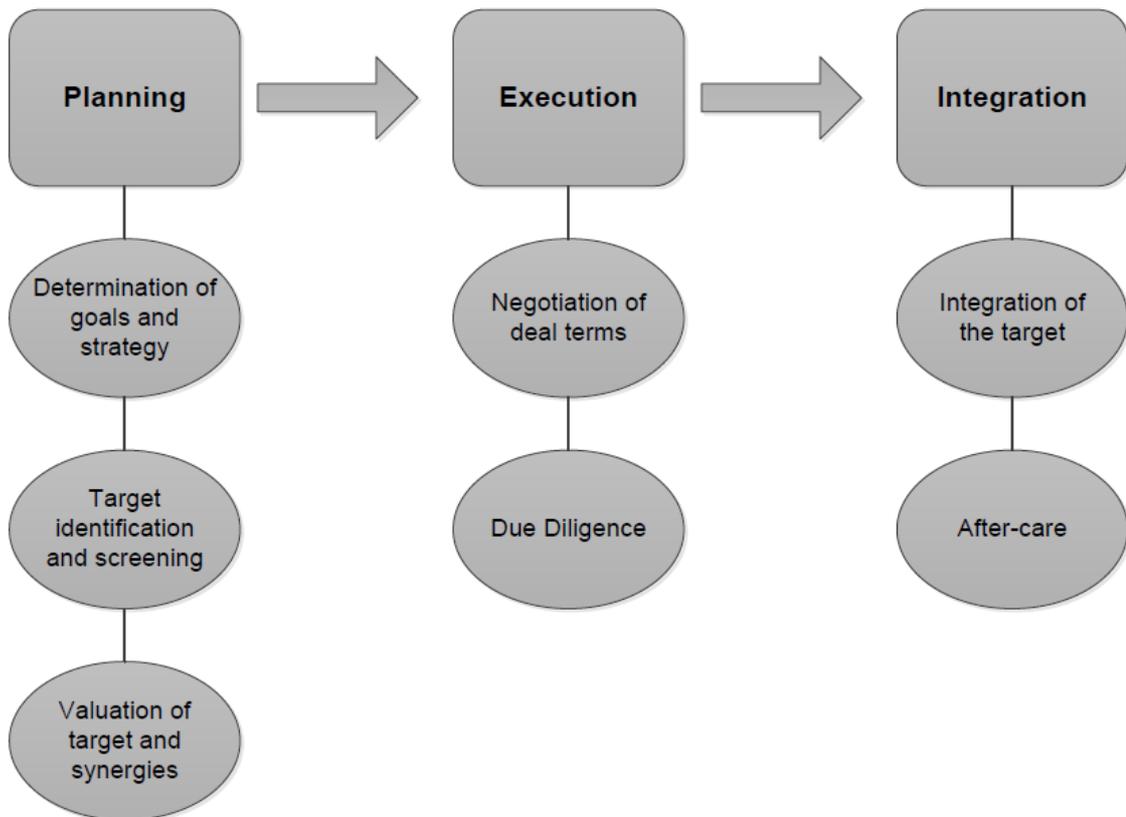


Figure 2. Three Phases of M&A Process from Buyer's Point of View (Immonen 2015)

The negotiations of the terms of the deal are done in the execution phase. Immonen (2015) argues that financing of the deal and the method of payment are the most important details of the negotiations. Usually the final value of the deal is at least partly conditional on future earnings or other factors. Due Diligence (DD) is also a crucial part of the execution phase. DD is conducted by an independent third party and its aim is to make sure that the acquirer gets what it was promised and nothing is wrong with the target.

The final phase of the M&A process is integration. In this phase, the target company is integrated into the acquirer. Immonen (2015, 45-46) emphasizes the importance of integration. He states that integration is a very delicate and difficult process. Poor integration often causes M&As to fail. Successful integration requires consideration of numerous financial factors but also organizational factors like employees and management.

2.1.1 Different Types of M&As

Ross et al. (2013) categorize acquisitions into three basic categories. The first category is merger/consolidation. Mergers and consolidations belong to the same category but they are slightly different. In a merger, one firm absorbs another firm and the absorbed firm ceases to exist. Usually the bigger firm, which in majority of the cases is the acquirer, retains its name and entity and acquires all the assets and liabilities of the acquired firm. In a consolidation, the legal existence of both the acquirer and the target cease and an entirely new firm is created.

Acquisition of stock is the second form of acquisitions. In this form, the acquirer purchases the target firm's voting stock with either cash, shares of stock or other securities. Acquisition of stock might start as a private offer but at some point, the offer is made public in the form of a tender offer, which is made directly to the shareholders of the target company. A tender offer is communicated as a public announcement for example in a newspaper advertisement. Acquisition of stock does not require a shareholder meeting from the target company. However, the shareholders are not required to accept the offer if it is not satisfactory. The target company continues to exist as long as dissatisfied shareholders are holding onto their shares. (Ross et al. 2013)

The third form of acquisitions is the acquisition of assets. Unlike acquisition of stock, acquisition of assets requires the approval of shareholders. The advantage of acquisition of assets however, is that in this case the acquirer acquires all the assets and it cannot be left as a minority shareholder. (Ross et al. 2013)

Additionally, financial analysts sometimes categorize mergers and acquisitions into three different types depending on the target company's operations. These three types are horizontal, vertical and conglomerate. Horizontal acquisitions are acquisitions where both the acquirer and the target company operate in the same industry and they are direct competitors. With horizontal acquisitions, companies usually try to gain economies of scale, economies of scope and strengthen their market power. (Ross et al. 2013; Singh & Montgomery 1987)

In vertical acquisitions, the two companies combining their operations operate in the same industry but they are not direct competitors. In these types of acquisitions, the

two companies operate “vertically” in different steps of the production process. Companies usually try to remove or limit the possible hold-up problems and increase the efficiency of the production process with vertical acquisitions. (Ross et al. 2013)

Conglomerate acquisition is the third type of mergers and acquisitions. In conglomerate acquisitions, neither of the two sides is related to each other. (Ross et al. 2013). The idea behind conglomerate acquisitions is diversification and entry to new markets and product lines. Compared to innovating new products, conglomerate acquisitions can often be a less risky and cheaper way of expanding a company’s product portfolio or entering new markets. However, when neither the acquirer or the target operate in the same industry, economic benefits of the deal can easily be exaggerated.

2.3 M&A Clustering and Wave Effects

As discussed earlier in the introduction, mergers and acquisitions have been shown to occur in cyclical waves. The cyclicity and clustering of mergers and acquisitions have a lot interest from academics and many different theories and explanation have been developed.

During the last century and so, there have been six large M&A waves. Martynova & Renneboog (2008a) demonstrate that none of the past M&A waves are identical, all of them have unique traits and patterns that distinguish them from each other. For example, the first wave occurred between 1890 and 1904 and its main characteristic was the formation of monopolies. The second wave came after the First World War and ended in the Great Depression. Stigler (1950) states that second wave was a movement towards oligopolies, since after the wave many industries were dominated by two or more companies as opposed to just one. The third wave’s main feature was the formation of large conglomerates and it began after the Second World War and it ended in the early 1970s because of the oil crisis. According to Martynova & Renneboog (2008a), the fourth wave in the 1980s was caused by the need to reorganize business structures because of the inefficient conglomerate structures created during the past wave. The fifth wave occurred during the 1990s as a result of economic globalization and technological innovations. The sixth wave

started in 2003, when the economy started to recover after another stock market crash, the dot-com bubble. It ended in 2007 because of the global financial crises. (Martynova & Renneboog 2008a)

Even though each of the past waves has its unique traits, all of them also share common characteristics. For instance, all past M&A waves have occurred in times of economic recovery. The waves also occur simultaneously with rapid credit expansion and bull markets. Another important factor is that a stock market collapse has ended each of the past six merger waves.

In general, theories on M&A clustering and merger waves can be divided into four groups. First explanation for clustering is based on the economic factors that shape the corporate environments and states that M&A waves occur because of industrial, economic, political or regulatory shocks. For example, technological change can trigger a boom in takeover activity. Changes in economic growth and capital market conditions have also been proven to be major positive drivers behind takeover intensity. (Martynova & Renneboog 2008a; Golbe & White 1987)

The most successful studies in explaining M&A activity fluctuations are those that have examined M&A activity at the industry level. Mitchell & Mulherin (1996) study the impact of industry shocks on takeover activity during the fourth and the fifth M&A waves. They state that there was significant inter-industry takeover clustering during these waves. Alexandridis, Mavrovitis & Travlos (2001) report similar results and state that most of the takeover activity in the 1980s was driven by industry specific shocks such as foreign competition, oil price fluctuations and industry deregulation. The authors also state that the takeovers in 1980s were mostly triggered by industries adapting to the changing economy. Another implication made by Mitchell & Mulherin (1996) is that the post-merger performance of acquiring firms should not necessarily be higher when compared to a control group (usually non-acquiring firms in the same industry). The authors state that M&A announcements very often have spillover effects. This means that an announcement of a takeover by one firm in the industry cause its competitors to re-evaluate their need for takeovers. If the merger waves are triggered by industry level clustering, then majority of the firms in the industry will partake in acquisitions.

Another explanation for M&A clustering is derived from the agency theory. Jensen (1983) explains that M&A waves can be caused by agency problems if managers are left with excessive free cash flows as result of booming financial markets or industrial shocks. Instead of returning these excessive cash flows to the shareholders, managers are faced with agency problems and might be tempted to use these funds on poor acquisitions. Harford's (1999) findings support this theoretical explanation as he shows that acquiring firms with significant excess cash have a negative abnormal return reaction when they make M&A announcements. The more the acquirer has excess cash, the bigger the negative reaction. Other theories have also explained M&A clustering by distortionial behavior like hubris or herding but these will be discussed later in the thesis.

In the recent years, market timing by corporate managers has emerged as new explanation for takeover waves (Martynova & Renneboog 2008a). Using market timing to explain takeover clustering is based on the work of Myers and Majluf (1984). These authors suggest that during financial bull markets, corporate managers use temporarily overvalued equity to finance acquisitions.

Schleifer and Vishny (2003) developed a theory based on the suggestions of Myers and Majluf (1984). These authors state that M&A clustering happens because during financial bull markets, stocks are often overvalued in the short-term but at the same time, the degree of overvaluation varies greatly between different companies. Acquiring firms can take advantage of this temporary overvaluation by using their own overvalued equity to buy less overvalued firms. The underlying assumption in Schleifer's and Vishny's (2003) model is that the target firm's managers aim to maximize their own personal benefit in the short-term. Because of this, they accept all-equity bids even though it wouldn't be in the best interest of the firm's shareholders. In short, the idea of this model is that M&A waves are positively correlated with stock markets because the managements of overvalued companies tend to take advantage of possible opportunities offered by short-term market inefficiencies. Consecutively, this model also implies that firms have a strong motive to get their equity overvalued because this enables them to make acquisitions with stocks. The authors also argue that the benefits of having overvalued stock might make it tempting for management to manipulate earnings.

A similar theory that also leads to similar predictions was developed by Rhodes-Kropf & Viswanathan (2004). Yet, the underlying assumption of their theory is different from the previous. Their model assumes that there is no agency problem and managers of target companies aim to maximize shareholder wealth. But why do target firms accept overvalued all-equity bids? The authors explain that overvalued equity offers are accepted because the managers of target firms overestimate potential synergies. This overestimation of synergy gains stems from the existing overvaluation in the equity markets. In other words, there is a correlation between the uncertainty of synergy gains and the overall uncertainty in the market. Therefore, the chance for mergers increases as the market becomes more overvalued.

Both of the above market timing theories have been tested by empirical studies. Rhodes-Kropf, Robinson & Viswanathan (2005) break down the market-to-book ratio into three components (firm-specific error, time series sector error and long run market-to-book ratio) and test the market timing theory with these components. The authors find that M&A activity has a high positive correlation with short-run deviations in valuation from long-run trends. This is especially true with stock acquisitions. In addition, they find out that stock acquirers are overvalued compared to cash acquirers. Their findings also seem to support the industry clustering theories because industry-wide acquisition activity increases when the industry is overvalued. Dong, Hirshleifer, Richardson & Teoh (2006) find similar results. These authors show that acquirers are, on average, more overvalued than their targets. The degree of acquirer's overvaluation also increases the likelihood of a stock offer.

Not everyone agrees with the market timing theories. Harford (2005) argues that while there is extensive evidence supporting the market-timing theories, most prior literature only focuses on testing either neoclassical or behavioral explanations but none compare the two directly. Harford states that economic, regulatory and technological shocks are the main cause behind merger waves. He doesn't deny the existence of market timing by managers but he simply argues that M&As are a response to changing economic environment and market-timing itself doesn't cause mergers to cluster and form waves. Martynova & Renneboog (2008a) note that regardless of Harford's (2005) critique, all above empirical studies successfully

explain the fifth merger wave as the result of market timing by managers. However, the generalizability of these findings to other merger waves is questionable.

Finally, M&A clustering also has significant implications on the shareholder wealth effects of acquisitions. Bhagat, Dong, Hirshleifer and Noah (2005) show that M&As happening outside the takeover waves always result in lower wealth effects. Harford (2003) makes a similar conclusion in his research. In addition, both studies conclude that first-movers are the ones who benefit the most. This is presumably because first-movers get to buy the best targets. Acquisitions made in the later stages of M&A waves result in lesser returns and even negative returns, as shown by Moeller, Schlingemann and Stulz (2005). These findings have interesting implications if combined with the concept of overvaluation and market timing which were discussed above. The first-movers might buy the best targets but they might also benefit because the market is not overvalued. In later stages of the market cycle, overvaluation is a plausible cause for lower or even negative returns.

2.4 Neoclassical theories on M&A

Behavioral corporate finance theories are based on psychology, and on assumptions that there are additional motivations, besides value maximization, that explain why firms engage in mergers and acquisitions. On the other hand, neoclassical theories are founded on value maximization and rational human behavior. Neoclassical theories assume that markets are efficient and that stock prices always fully reflect all available information (Fama 1972). Neoclassical theories are also sometimes called synergistic theories and they see M&As as an efficiency-improving response to different industry and economic shocks (Shleifer & Vishny 2003).

As explained earlier, financial theory states that the main goal of firms is to maximize shareholder wealth. Thus, mergers and acquisitions should be considered as investment decisions that aim to maximize shareholder wealth. Acquiring firm's managers should only make acquisitions that result in positive net present value for their shareholders. On the other hand, target firms will only accept the bid offers if the offer results in increased wealth for their shareholders. Therefore, shareholder maximization hypothesis states that mergers and acquisitions only happen when

shareholders of both sides benefit. (Berkovitch & Narayanan 1993; Woolridge & Snow 1990) This means that the wealth effects of mergers and acquisitions should be positive for both acquirers and targets.

In most cases, synergies are the main objectives of mergers and acquisitions. Synergies refer to the fact that the performance of two companies is improved when they operate together and their combined value is greater than the sum of their individual values. Positive synergies are, for example, increased market share, improved performance and possible financial and operational benefits. Synergies can be divided into four main categories, which are financial, operating, strategic and managerial synergies. (Sharma & Ho 2002)

2.4.1 Financial Synergies

Damodaran (2005) states that when two companies are able to create more value together than alone then the firms are said to have financial synergies. Financial synergies usually result in increased amount of capital and possibly lower costs of capital. The latter is the result of the increase in company's size after an acquisition. Ross et al. (2013) explain that costs of issuing debt and equity are naturally lower for larger issues. The authors also state that financial synergies can occur in the form of tax benefits. Tax benefits can come from the use of net operating losses, debt capacity or surplus funds. For example, if an acquiring company acquires an unprofitable company, it can use the net operating losses to reduce tax its taxes.

Financial synergies can also be gained through diversification. Trautwein (1990) argues that by investing in unrelated businesses, a company can gain financial synergies in the form of lowering its systematic risk. However, these kinds of synergies are questionable since investors can diversify much more easily and at a lower cost compared to publicly listed companies (Damodaran 2005).

2.4.2 Operating Synergies

Operating synergies exist when two firms combined can increase earnings from operations and lower the costs of operations. For example, improved marketing, stronger pricing power, higher margins and other functional strengths lead to increased earnings. Operating synergies can be gained from both horizontal and

vertical acquisitions. Economies of scale is usually a benefit gained through horizontal acquisitions but vertical integration also results in economic benefits because it can make operation of closely related activities much easier. Thanks to economies of scale, the combined firm can become more cost-efficient and more profitable. Combined firms also gain increased negotiating power and they can negotiate better agreements with their suppliers and reduce their costs. (Damodaran 2005; Ross et al. 2013)

Operating synergies can also be achieved in the form of higher growth in new or existing markets. Damodaran (2005) explains that a domestic firm can achieve higher growth in new markets by acquiring an already established and well recognized foreign firm and use these strengths to increase sales.

2.4.3 Managerial Synergies

Acquiring company's managers are sometimes able to manage the target company better than its current management. For example, current management of a firm might not understand new technology or changing market conditions, thus resulting in bad strategic decisions. Jensen & Ruback (1983) state that these kinds of situations cause managerial synergies.

Theories on managerial synergies mostly rely on Jensen's (1986) free cash flow hypothesis. According to free cash flow hypothesis, mergers and acquisitions are in a way conflicts of interests between managers and shareholders but also a solution to this problem. M&As are undertaken to limit the waste of resources by acquirers' managers with excess cash. Synergistic theories claim that M&As are undertaken to replace bad management of target companies and to promote efficiency (Jensen & Ruback 1983).

2.4.4 Strategic Synergies

Strategic decisions like obtaining global presence, pursuing market power, acquiring a competitor or a supplier are becoming increasingly common as drivers for M&A activity. Both deregulation and increased globalization have also played important roles, especially during the fourth and the fifth merger waves (Martynova & Renneboog 2008a). Goold & Campbell (1998) argue that mergers can support the

creation of new businesses. Combining knowledge and skills of different firms might create strategic synergies. Porter (1985) uses Procter & Gamble as an example of strategic synergies. By acquiring a paper company, P&G was able to develop a variety of different paper products ranging from diapers to hygiene products.

Strategic motivations behind M&As can be seen as change forces. Faced with a possible decline in firm value caused by change forces, certain strategic choices can offer ways for management to enhance or retain the value of the firm. In many ways, strategic synergies are more like options rather than traditional investment opportunities. Strategic synergies also tend to be harder to achieve and harder to quantify. (Ross et al. 2013)

2.5. Behavioral Finance and M&As

During the past decades, researchers have identified many different psychological factors that affect managerial decision-making and this has led to the increased popularity of behavioral finance. Behavioral economics and its sub-field behavioral finance are disciplines of economics that combine psychological theories with economics and finance and try to increase the explanatory power of economics through psychology. (Camerer & Loewenstein, 2002)

Unlike traditional finance, behavioral finance assumes that markets are not fully efficient and people do not possess unbounded rationality. Mullainathan & Thaler (2000) argue that rationality of human behavior is rather bounded than unbounded and irrational behavior often occurs in decision making situations.

As discussed above, neoclassical theories suggest that M&As are only undertaken when both the acquirer and the target benefit from the transaction. Many acquiring firms make statements about the possible synergies gained through mergers and acquisitions. Yet, in significant number of M&As these potential forecasted gains are never realized. Schleifer & Vishny (2003) explain that neoclassical theory has extensive explanatory power but it is lacking pieces. For instance, neoclassical theory completely ignores explanations for method of payment in M&As, even though extensive evidence shows that the method of payment is linked to both bidder and target returns. The different behavioral finance theories discussed in this

section offer explanations on why so many of M&As end up destroying shareholder wealth.

2.5.1 Agency Theory

The relationship of agency, where one party (the agent) acts on behalf of another party (the principal) on a certain decision problem, is one of the oldest forms of social interaction (Ross 1973). Neoclassical theories on corporate finance assume that corporate managers are rational and always try to act in the best interest of the shareholders. After all, managers are the agents of shareholders and their aim is to maximize firm value. In real life, however, managers are often faced with conflicting decisions where their own personal benefit is not necessarily the benefit of the shareholders. The analysis of these kinds of conflicts, the agency theory, has established itself among the economic literature. Ross (1973) was the first to introduce the agency problem in the corporate finance context. His work sparked the interest of others, and the problem was later studied by Jensen & Meckling (1976).

Motivating the managers to act on the best interest of the shareholders is the problem referred to as the agency problem and the costs caused by this problem are the agency costs. Jensen & Meckling (1976) argue that if both parties of the agency relationship, in this case the manager and the shareholder, are expected to maximize their utility, then there is strong reason to assume that the manager will not always act in the best interest of the shareholder. The authors add that in general, it is impossible for the shareholder to ensure at zero cost that manager makes the optimal decision from the shareholder's point of view. The shareholder can try to incentivize the manager to act fully in his behalf but this incurs costs, agency costs. The existence of these costs makes thorough monitoring of the manager unprofitable.

Conflicts of interest between shareholders and managers can stem from the agency costs of free cash flow. Free cash flows are excess cash flows left after all good investment opportunities have been exhausted. Jensen (1986) states that severe conflicts of interest between managers and shareholders occur especially when firms generate significant free cash flows. Based on value maximization, all excess

cash flows should be distributed to the shareholders. This however, reduces the resources under the management's control and thus their power. Jensen (1986) explains that there is an incentive for managers to grow firms beyond optimal size. The growth increases the resources under the management's control and thus their power. There is also a strong positive relationship with firm size and management's compensation.

Jensen (1986) argues that the free cash flow theory can predict which acquisitions are profitable. Firms with large free cash flows and unused borrowing power often make poor acquisitions. The theory also states that acquisitions financed with cash or debt are more beneficial than those financed with stock. In addition, conglomerate acquisitions generate lower gains than horizontal ones. Various empirical studies have shown Jensen's (1986) predictions to be accurate. For example, Harford (1999) proves that cash-rich acquirers experience negative abnormal stock price returns when they announce M&A deals. He states that large amounts of cash reduce the monitoring of investment process which then often leads to value-destroying acquisitions. Furthermore, Martynova, Oosting & Renneboog (2006) demonstrate that companies with low cash reserves experience significant increase in post-acquisition performance while cash-rich acquirers experience a significant decline in post-acquisition performance.

As mentioned above, managers can be incentivized to act in the best interest of shareholders. Equity-based compensation is one way to efficiently align managements interest with those of shareholders. Datta, Iskandar-Datta & Raman (2001) show that there is a strong positive correlation with equity-based compensation and stock price reaction on M&A announcements. Managers with high equity-based compensation pay lower premiums and acquire higher growth targets.

2.5.2 Signaling Theory and Asymmetric Information

Signaling theory assumes that financial markets are not fully efficient because there exists an information asymmetry between the markets and the management. The theory suggests that management might choose to convey positive information to the market in the form of financial policy decisions. When the market value of the

firm is higher than the management's own assessment of the firm's value, they will favor issuing equity to finance investments. Consequently, management will favor the use of internally generated funds or debt for financing when they think the company is undervalued. (Yook 2003; Rhodes-Kropf & Viswanathan 2004)

Several empirical studies have focused on the role of signaling theory and asymmetric information in the choice of the method of payment. Hansen (1987) states that acquisitions are financed in stock when the acquiring firm doesn't have the same information on the target firm's value as the target does. In this case, information asymmetry is one-sided, only the other party has private information. All-stock offers are also preferred when the information asymmetry is both-sided and the acquiring company's management thinks their shares are overvalued. Fishman's (1989) findings support Hansen's (1987) theory. He claims that acquirers get higher returns with cash offers because cash offers are a signal of high valuation of the target.

Eckbo, Giammarino & Heinkel (1990) focus solely on acquisitions which were financed with both cash and stock. Their model is based on the same assumption as Hansen's (1987), that there exists two-sided asymmetric information between the acquirer and the target. The authors argue that the composition of mixed offer signals the target about the true value of the acquirer. The relationship between the acquirer's true value and the proportion of cash in the offer is positive and convex. The higher the portion of cash in the offer, the higher the signaled value. Berkovitch & Narayanan (1990) draw somewhat similar conclusions. They show that high-value firms use a mix of cash and stock to finance acquisitions. By contrast, low-value firms only use stock.

According to Yook (2003), synergies of the acquisition and valuation of the combined firm are more logical sources for information asymmetry in the M&A market rather than the acquirer's current assets. He also argues that whether or not it's intentional, the choice of payment method conveys inside information from the managers to the markets. If the acquirers feel that the possible synergy gains are higher than what the market, then they will pay the acquisition with cash. When the market perceives the synergies to be higher than what the acquirer thinks, then the

method of payment will be stock. In short, the method of payment conveys the acquirer's estimate of the value of the combined firm's assets.

In summary, signaling theory predicts that acquisitions financed with cash incur higher returns because acquirers only offer stock when they believe their share to be overvalued. The market perceives the reasoning behind both types of payment and corrects upwards in the first case and downwards in the latter case. Yet, there are instances where all-stock offers result in positive returns for bidders. Positive abnormal returns for acquirers occur especially when all-stock offers are used to acquire unlisted firms (Moeller, Schlingemann & Stulz 2004; Faccio, McConnell & Stolin 2006). Officer, Poulsen, and Stegemoller (2009) argue that the positive reaction is because of risk sharing. Paying acquisitions with stock enables acquiring firms to share the risk of the deal. The sharing of risk is especially important when acquiring firms purchase unlisted firms that are difficult to value. Using stock to acquire unlisted firms seems to decrease agency costs and asymmetric information, thus boosting the gains of acquisitions (Moeller et al. 2004).

2.5.3 Managerial Hubris and Investor Sentiment

Roll (1986) was one of the first to suggest managerial hubris and overconfidence as the causes behind unsuccessful mergers and acquisitions. In his model, managers are not fully rational and they tend to make errors. Acquiring firms often pay too much for the target firms because overconfident managers overestimate the potential synergy gains and the value of the target company. The idea behind Roll's model is that if synergies exist, acquirer's stock price reaction is positively correlated with target's stock price reaction. If the correlation is negative, then there are no synergies. Several empirical studies support the hubris hypothesis. For instance, Berkovitch & Naraynan (1993) study on motives for takeovers finds significant evidence on hubris in the US market. Goergen & Renneboog (2004) find similar results in the European markets, where third of firms undertake bad mergers and acquisitions because of managerial hubris.

Martynova & Renneboog (2008a) suggest that Roll's (1986) theory on managerial hubris in combination with herding can be used to explain the occurrence of merger waves. Herding in the M&A context means that firms try to copy the actions of

leading firms. Successful acquisitions by first mover firms encourage other firms to undertake similar acquisitions. The authors explain that the combination of these two theories predicts that efficient and profitable M&As are followed by unprofitable and inefficient ones.

In addition to managerial hubris, investor sentiment has also been used to explain the variations in post-acquisition returns. Barberis, Shleifer & Vishny (1998) state that empirical research has found two types of common regularities in the market, which are underreaction and overreaction. The authors explain that stock prices tend to underreact to news like earnings announcements and overreact when there is a series of good or bad news. Firms who have exhibited superior performance in the past tend to become overvalued and have low average returns in the future (Barberis et al. 1998). This has direct implications on the wealth effects of M&A announcements. Gosh (2001) points out that acquirers tend to make acquisitions following periods of good performance. Therefore, the shares of acquiring companies might be overvalued at the time of acquisitions which leads to mean reversion in long-term returns, even though the acquisition was profitable.

Daniel, Hirshleifer & Subrahmanyam (1998) argue that investor overconfidence and biased self-attribution cause short-term overreactions on firm stock price after events like acquisition or earnings announcements. In the long-run, this overreaction is eventually reversed. Rosen (2006) shows that during periods when investors are over-optimistic, short-run abnormal returns to acquirers are higher. Similar findings are presented by Bouwman, Fuller & Nain (2009) who state that there is a positive relationship between short-term acquirer returns and market valuation of the acquirer. Alexandridis, Mavrovitis & Travlos (2012) use investor sentiment to explain differences between acquirer returns during the fifth and the sixth merger waves. According to the authors, both of these waves are categorized as high-valuation periods but short-term acquirer returns were much higher during the fifth wave. Higher short-term acquirer returns were due to over-optimism during the fifth wave (Alexandridis et al. 2012).

2.6 Efficient Market Hypothesis

Efficient Market Hypothesis or EMH is a theory that focuses on different characteristics of market efficiency and it was developed by Eugene Fama (1965). Fama (1970) explains that in efficient markets, the current value of a company reflects all the decisions made by its managers. The value of a company is also the fair value and undervaluation doesn't exist because all the available information, public and private, is accounted in the stock price. Since the Efficient Market Hypothesis is based on very theoretical assumptions, Fama created three different forms of efficiency. These forms are weak, semi-strong and strong-form efficiency.

In weak-form efficiency, stock prices fully reflect all the available information from the past. This information also contains the price history and its volume. The implication of weak-form efficiency is that it is impossible to forecast future prices and earn excess returns by analyzing the historical data because all the historical information is already in the prices. (Fama 1970) In other words, time series movement follows a random walk pattern. Random walk in the context of finance means that the price changes are random and the probability of a stock's future price to go up or down is equal (Malkiel 2003).

Semi-strong market efficiency states that only publicly available new information will have an effect of share prices. Share prices will adjust to any new information very rapidly and in an unbiased way so that investors are unable to earn excess return if they try to trade based on this information. (Fama 1970)

The last of the three is the strong-form market efficiency, which states that all the information is included in stock prices (public and private). Under strong-form efficiency it is impossible to earn any excess returns. (Fama 1970) However, as discussed above in the Behavioral finance section, strong-form market efficiency is often hard or even impossible to achieve. Shleifer (2000) argues that achieving any of the following conditions: rationality, independent deviations from rationality or arbitrage, leads to efficient markets. Yet, he argues that none of the above conditions are likely to hold in real life. Malkiel (2003) argues that short-term excess returns are possible due to market irregularities and can even persist for a short while. These market irregularities are caused by irrational market participants but

are only temporary and excess returns cannot be earned consistently. Ross et al (2013) state that there is extensive evidence that stock prices adjust slowly to new information because investor conservatism.

3. PREVIOUS LITERATURE ON M&A PERFORMANCE

As mentioned earlier, the increased volume and value of mergers and acquisitions have drawn a lot of attention from academic researches and investors. Schoenberg (2006) states that the choice of performance measures in M&A research has divided researches within the field of finance for a long time. In general, there are four different measures of M&A performance. These four are cumulative abnormal returns (event studies), accounting data (accounting studies), managers' self-reports and questionnaires, and finally, assessments from external expert informants. Schoenberg (2006) criticizes earlier literature for usually using only one metric. He states that combination of multiple performance measures would give a more holistic view of M&A performance. He also argues that event studies and accounting studies focus too much on shareholders' agendas and ignores other stakeholders. Similar concerns are voiced by Haleblian, Devers, McNamara, Carpenter & Davison (2009). These authors argue that the use of cumulative abnormal returns as the "default" metrics for M&A performance can be misleading, because event study methodology primarily assesses the potential value seen in the decision to acquire and not the potential value created in the implementation of M&A.

A potential remedy to the shortcomings of short-term event studies is the use of long-term performance metrics, either accounting measures or annual buy and hold abnormal returns (BHAR). Yet, long-term metrics also present challenges. For instance, investment decisions, changes in product mix and other corporate decisions might have strong effects on company performance. The longer the period under study, the more "noise" is produced by events other than the acquisition. This "noise" can then easily dilute the effect of the acquisition. (Haleblian et al. 2009)

Nevertheless, majority of previous studies on performance of mergers and acquisitions have concentrated on the short-term shareholder wealth effects and on the long-term post-acquisition performance (Bruner 2002). The characteristics of the M&A deals and their impact on shareholder wealth effects and company performance have also received increased attention. According to Bruner's (2002) meta-analysis, most studies measuring short-term shareholder wealth effects of

M&A deals have shown mixed results. Accounting studies focusing on the long-term performance have mostly shown a mild but not significant decline on performance.

3.1 Shareholder Wealth Effects and Post-acquisition Performance

According to Martynova & Renneboog (2008a), the two most commonly employed techniques in measuring M&A performance are event studies and accounting studies. Event studies are mostly used to analyze short-term wealth effects of mergers and acquisitions while accounting studies focus on analyzing the changes in company performance after the acquisitions.

3.1.1 Event Studies

There are some areas where researches have reached a strong consensus. Bruner (2002) shows that overwhelming majority of earlier studies have proven that there is a clear difference on stock market reactions between the acquiring and target firms. Target firms earn very large positive abnormal returns (ranging from 10% to 40% depending on the market), whereas acquiring firms earn abnormal returns which are usually close to zero. Similar conclusions on earlier studies were made by Argwal & Jaffe (1999) and Martynova & Renneboog (2008a). These findings are also backed by Jensen & Ruback (1983) who found out that the shareholders of target companies are the main beneficiaries in M&A deals.

It is safe to conclude that literature focusing on the impact of M&A announcements on stock prices in the case of target companies is unanimous. Target firms earn large cumulative abnormal returns ranging from 20% to 40%. The abnormal returns are also consistent through time and they have stayed relatively high all the way since the 1960. (Goergen & Renneboog, 2004)

Majority of studies focusing on the short-term shareholder wealth effects of acquiring company's shareholders have found that there is a stock market reaction on the event day. However, the academic opinions are mixed on whether the reactions are positive or negative. Authors like Goergen & Renneboog (2004), say that this market reaction is generally positive but very small. These authors also found out that the abnormal returns were cumulative. Similar conclusions were

drawn by Yilmaz & Tanyeri (2015), who performed an extensive global study on M&A performance, and by Andriosopoulos, Yang & Li (2015). In contrast, negative abnormal returns were documented by Loughran & Vijh (1997) and by Moeller, Schlingmann & Sctulz (2003).

Goergen & Renneboog (2004) have criticized that majority of earlier studies on short-term performance for focusing either only on US or UK markets or just on a single country. They also state that studies examining cross-border acquisitions have mostly focused on M&A activity between UK and US. Their own study examined the shareholder wealth effects of European domestic and cross-border takeover bids during the latest mergers and acquisitions waves. Goergen & Renneboog also analyzed which types of acquisitions offer the largest returns for bidders and targets. Compared to earlier US and UK results, the short-term results for target firms were similar. Average abnormal return for the event day was approximately 9%. An interesting finding by the authors was that target firms had a cumulative average abnormal return (CAAR) of 23% for the event window starting two months prior to the event. This would indicate that the M&A bids were anticipated by the shareholders. In the case of acquiring firms, the average abnormal return on the event day was only 0,7% which is significantly lower than for target firms. Campa & Hernando (2004) found similar results in their study on European M&A announcements. Acquirers' CAARs were shown to be approximately zero and even slightly negative in some cases.

The abnormal returns were also different in the UK when compared to Continental Europe. Bidding firms in the UK earned over two times larger returns than their Continental European counterparts. Goergen & Renneboog elaborate that this is because of the greater size of UK market and because Continental European companies have more concentrated ownership and control. Yilmaz & Tanyeri's (2016) study further elaborates the abnormal return differences between different markets. These authors show that both acquirers and targets in developed markets earned significantly larger abnormal returns than their counterparts in the emerging markets.

Even though the bulk of the existing researches focuses on developed countries (especially on US and UK), emerging markets have received increasing attention

during recent years. Ma, Pagán & Chu (2009) offer two explanations for the lack of extensive study of mergers and acquisitions in developed countries. First of all, emerging markets lack an extensive database on M&A transactions. Secondly, the economies of scale and scope are relatively small in emerging markets. However, globalization and increased economic integration are sure to change this.

Ma, Pagán & Chu (2009) study short-term returns to acquiring firms' shareholders around M&A announcements in ten different Asian markets. Their results show that the stock price reactions of acquirers to M&A announcements is positive and statistically significant. On average the acquirers experience cumulative abnormal returns of nearly two percent around the announcement day. Similar results are found by Wong & Cheung (2009). Interestingly, their results also show that target companies in Asia do not experience positive short-term stock price returns around the M&A announcements. The authors explain this with target companies having poor performance prior to being acquired. Both above studies on Asian markets also show evidence of information leakage.

Ma, Pagán & Chu (2009) offer numerous reasons why abnormal returns across developed markets differ from those in the emerging markets. The divergence might stem from differences in market efficiency, information leakage and corporate governance structure. For example, if information leakages exist, then the impact of M&A announcements can be seen in the stock prices before the announcement is actually issued. Yilmaz & Tanyeri (2016) also suggest that legal environment, political and economic uncertainty and illiquidity cause differences in market efficiency which results in differences in abnormal returns.

3.1.1 Accounting Studies

Bruner (2002) states that most studies on long-term performance of mergers and acquisitions show mixed results just like studies on short term performance. He adds that the studied performance ratios differ a lot between different studies and this is probably the main reason why the results are not consistent. By contrast, Martynova & Renneboog (2008a) state that most studies on long-term M&A performance have concluded that mergers and acquisitions result in post-acquisition decline of performance regardless which performance ratios are used.

Evidence suggesting an increase in financial performance compared to industry-median after acquisitions is presented for example by Healy, Palebu & Ruback (1992). Similarly, Switzer (1996) shows that acquisitions in the U.S. improve the acquirer's industry-adjusted performance. However, Gosh (2001) criticizes that these kinds of conclusions are biased if the sample firms systematically outperform other firms in the industry during the years before the acquisition. In his study, he accounts for the superior pre-acquisition performance of acquirers and concludes that acquirers are not able to increase their operating performance through acquisitions. Taking account of Gosh's (2001) critique, Powell & Stark (2005) study post-acquisition performance changes in the UK. These authors find that operating performance increases significantly after takeovers. Nevertheless, they acknowledge the methodological concerns raised by Gosh (2001) and state that the performance increase might be because of different markets (UK).

Despite the findings of above studies, Martynova & Renneboog (2008a) state that most studies focusing on developed markets show that post-acquisition performance is not improved compared to control groups. For example, Ravenschaft & Scherer (1987) show that post-acquisition performance of acquiring firms declines compared to non-acquiring peers. On the other hand, Mueller (1980) studied growth rates of US companies after mergers and showed that the growth rate of merged companies declines significantly. Furthermore, Sharma & Ho (2002) find no significant increase in post-acquisition performance of acquirers.

Sharma & Ho (2002) point out that in general, studies reporting decline in post-acquisition performance usually apply earnings based measures. In the other hand, those studies that employ cash flow based measures report increase in post-acquisition performance. Martynova & Renneboog (2008a) make the same conclusions even though they state that the majority of M&As result in decline of post-acquisition performance.

A more recent study by Gugler, Mueller, Yurtoglu & Zulehner (2003) provides new perspective to existing literature. They state that most prior literature defines M&A successful or unsuccessful based on either profits or sales. These authors are the first to examine the effects of M&As on efficiency and market power by first dividing the sample to those M&As that increase profits and to those that reduce them, and

then examining the effects of M&As on sales. They present evidence that acquisitions which increase profits also decrease sales at the same time. The authors claim this to be the result of increase in market power.

Yen, Chou & André (2013) offer insight from the emerging markets. They studied the impact of M&As on financial performance of acquiring firms in thirteen emerging market countries. Their results show that acquirers in emerging markets usually have good performance pre-acquisitions but the average adjusted operating post-acquisition performance didn't improve significantly. Kumar (2009) studies the post-acquisition corporate performance in India and comes to the same conclusion, according to which takeovers do not improve the profitability of acquirers. Overall, existing literature would suggest that financial performance of acquirers doesn't improve after M&As, neither in developed nor in emerging markets.

3.2 Characteristics of M&A Deals and Their Impact on Short and Long-term Performance

Many researches have tried examining whether the characteristics of mergers and acquisitions have an impact on the short and long-term performance. The characteristics that have been shown to have an impact on M&A performance are, for example, method of payment, bid attitude and target status (private or publicly listed). In addition, another proven factor is whether the acquisition is domestic or cross-border. However, there is much controversy regarding the deal characteristics and their effects on the performance of M&As, which is demonstrated by the controversial results of earlier studies. Variation in the results might be caused by the use of different performance ratios in different studies.

3.2.1 Method of Payment

King, Dalton, Daily and Covin (2004) state that generally there are three methods of payment for acquisitions. These three methods are cash, equity and combination of cash and equity (hybrid). The underlying assumption is, that the managers of the bidding firm will, of course, choose the method which is the most profitable for them. The authors further elaborate that when a company's stock is thought to be

overvalued, managers will try to finance acquisitions primarily with equity and when the managers believe that the stock is undervalued they will use cash to finance the acquisition. Based on these assumptions, one could argue that in general, financing deals with equity would be preferable the further we are in the market cycle. King et al. (2004) logic is based on the signaling theory, which was discussed earlier. Signaling theory suggests that all-stock payment of an acquisition gives a negative signal about the acquirer's market value. Stock is mostly used when acquirer's management feels that their shares are overvalued, and thus, stock acquisitions lead to lower short-term returns.

Several studies have examined which method of payment results in the best acquirer and target performance and concluded that there is a difference between the methods of payment. Franks, Harris & Mayer (1988) suggests that cash offers result in better wealth gains for shareholders in both acquirer and target cases. Yook (2000) also finds out that cash deals generate larger positive shareholder wealth effects than equity deals. In contrast, Goergen & Renneboog (2004) state that cash deals generate better abnormal returns only for the target firms, whereas the acquiring firms earn larger abnormal returns when they finance their acquisitions with equity. These findings are supported by Andrade, Mitchell & Stafford (2001) who also show evidence that cash deals result in higher returns for target company's shareholders than equity deals.

Martynova & Renneboog (2008a) state that studies focusing on the means of payment have shown varying results because of regional differences. US studies mostly show that acquisitions financed with equity result in significantly negative abnormal returns for the acquiring firms and that these kinds of acquisitions greatly underperform deals financed solely with cash. However, European studies show opposite results. Acquiring companies earn positive and sometimes even significant CAARs. Furthermore, Dutta, Saadi & Zhu (2013) show that in the case of cross-border acquisitions by Canadian firms, stock-financed deals create significantly larger positive market reactions in the short-run compared to cash financed deals. Yet, in the long-run, acquisitions financed with stock significantly outperform their cash counterparts.

As discussed earlier in the M&A wave chapter, misvaluation can be an underlying driver for takeover clustering. Rhodes-Kropf & Viswanathan (2004) argue that misvaluation can also have a significant effect on the means of payment. In most cases, stock mergers are accepted because the target firm's management believes for the deal to increase shareholder wealth. The authors state that rational managers don't misvalue cash offers but they can misvalue stock offers, especially when the stock markets are in midst of a bull market. Thus, when the market is overvalued, the means of payment for M&As will more often be stock and not cash.

Rhodes-Kropf & Viswanathan (2004) also state that even though the existing literature suggests that the short-term performance of cash deals is better than that of stock deals, it does not necessarily mean that cash deals are superior to stock deals. It simply means that cash is more often used as a method of payment when the market is not overvalued. When the market is not overvalued, the stock price reaction to M&A announcements is greater.

An alternative explanation on why cash deals are associated with stronger shareholder wealth effects and better financial performance improvements is based on the agency theory discussed earlier. Martynova, et al. (2006) elaborate that cash payments are often financed with debt which in turn limits the availability of company funds at the manager's disposal. The limited availability of funds decreases the possible problems of free cash flow (Jensen & Meckling 1976).

However, existing literature on financial performance changes has given mixed results. Evidence by Gosh (2001) suggests that cash acquisitions result in higher operating cash flows for the acquirer. Consequently, he shows that stock acquisitions result in lower cash flow margins and sales growth. Somewhat similar results are found by Linn & Switzer (2001), who show that cash acquisitions result in much larger increases in operating performance. In contrast, results by Healy et al. (1992) and Heron & Lie (2002) would indicate no difference in post-acquisition performance between all-cash and all-stock deals. Furthermore, Dutta et al. (2013) show that means of payment doesn't influence post-acquisition performance in cross-border deals.

3.2.2 Differences Between Cross-border and Domestic M&A

In addition to acquisition financing, another topic that has been studied is the differences between cross-border and domestic mergers and acquisitions. According to Kang (1993), market imperfections grant advantages to international firms and because of these imperfections, cross-border acquisitions create more value than their domestic counterparts. Kang's statement is contradicted by numerous empirical studies. Black, Carnes, Jandik and Henderson (2007) find out that domestic acquisitions are actually the ones that create larger wealth gains for the shareholders of acquiring firms. Their findings are supported by Andriosopoulos, Yang & Li (2015), who conclude that the abnormal returns earned by domestic acquisitions are double compared to cross-border ones. The authors state that cross-border M&As can be an important way to enter a foreign market but they are associated with more risk and uncertainty which then leads to lower wealth effects. Similar results were obtained by Goergen & Renneboog (2004).

Martynova & Renneboog (2008b) present an interesting hypothesis on the valuation effects of cross-border M&As. Their "bootstrapping" hypothesis assumes that the corporate governance standards of the bidder and the target have an impact on the returns from cross-border acquisitions. These differences between the corporate governance standards can cause value increasing synergies. The authors show that acquirers with weaker governance standards gain higher abnormal returns when they acquire targets with better standards. However, the authors point out that this effect is only valid for partial acquisitions. Nevertheless, findings of Bhagat, Malhotra & Zhu (2011) are consistent with the bootstrapping hypothesis. These authors show that acquirers from emerging countries experience positive returns and the returns are positively correlated with superior corporate governance practices of the target's country.

In the case of post-acquisition performance, the results are similar to those of the event studies. Moeller & Schlingemann (2005) study the differences between the post-acquisition performance of cross-border and domestic M&As in the US. Their results show significantly lower improvements in financial performance for cross-border acquirers relative to the domestic ones. Martynova et al. (2006) provide evidence from acquisitions where both acquirers and targets are from Continental

Europe or the UK. Their results indicate that domestic acquisitions result in a small increase in financial performance while cross-border acquisitions decrease performance. While in economic terms these findings are notable, it is important to point out that the changes in performance were not statistically significant.

Some academics have explained the worse post-acquisition performance of cross-border M&As with cultural distances. Integration is always major challenge in acquisitions but it's likely to be harder in cross-border acquisitions because the firms are based in different countries that possibly have differing corporate cultures. (Shimizu, Hitt, Vaidyanath & Pisano 2004). Naturally, the odds for conflicts on cultural bases depends on how strong is the required integration. Nahavandi & Malekzadeh (1998) state that when successful integration of the target requires close coordination, cultural distances become very important factors for success. Chatterjee, Lubatkin, Schweiger & Weber (1992) provide evidence that there is negative relationship between the degree of cultural differences and shareholder value in cross-border M&As. Cultural distance might be a factor that explains why for instance Martynova et al. (2006) find no differences on post-acquisition performance between European domestic and cross-border deals. The differences between European corporate and institutional cultures are much less different compared to those of Asia for example and this probably facilitates the integration of intra-European targets.

3.2.3 Friendly and Hostile M&A

Some studies have focused on examining the differences of the shareholder wealth effects between friendly and hostile M&A. Hostile bids have been proven to cause higher shareholder wealth effects for target company shareholders. A study by Servaes (1991) shows that US companies making hostile bids generated CAAR of nearly 32% for target companies. By contrast, friendly bids only generated CAAR of 22%. Similar results were found by Franks & Mayer (1996) when they examined the friendly and hostile bids in the UK market. Hostile UK bids generated CAARs of almost double the friendly ones.

For acquiring firms, the effects are opposite. According to Martynova & Renneboog (2008a), friendly takeovers generally result in the highest cumulative average

abnormal returns. Studies by Servaes (1991) and Goergen & Renneboog (2004) show that hostile takeovers decrease the value of the hostile bidder by approximately four percent.

Martynova et al. (2006) suggest that hostility in mergers and acquisitions might be related to superior long-term post-acquisition performance. The reason is that hostile bids are more expensive for acquiring firms, thus acquiring firms will only pursue hostile bids when they believe the synergy potentials to be significantly large. However, existing literature has not found any evidence to back up this suggestion (Gosh 2001; Powell & Stark 2005).

3.2.4 Industry Relatedness of the Acquirer and the Target

The different types of mergers and acquisitions were discussed in the previous section. In short, these types are horizontal, vertical and conglomerate. The first two types can be classified as industry-related acquisitions and the latter as unrelated or diversifying acquisition. Singh & Montgomery (1987) argue that if the acquirer and the target operate in the same industry, the potential synergy gains (through economies of scale and scope) are much greater compared to those of diversifying acquisitions. The authors also state that unrelated acquisitions are more likely to produce only financial and administrative synergies. Schleifer & Vishny (1989) have also suggested that diversifying M&As might be a product of the agency problems between management and shareholders.

Many empirical studies have tested whether the industry relatedness of the acquirer and the target firm affects the gains from mergers and acquisitions. Majority of studies would indicate that industry related acquisitions result in better short-term wealth effects. Singh & Montgomery (1987) study large acquisitions during the fourth merger wave and show that related acquisitions outperform diversifying ones. Walker (2000) finds that related acquisitions create positive short-term returns while returns from diversifying acquisitions are negative. Moeller & Schlingemann (2005) show that acquirer short-term returns are negatively correlated with industrial diversification. This negative effect is even stronger for cross-border diversifying acquisitions. Yet, some studies have found that diversification results in larger short-term returns for acquirers (Haugen & Udell 1972; Eckbo 1986). However, these

studies focus on the third merger wave, which was all about growth through conglomerate M&As, and therefore the results might be biased.

Some studies have found a relation between the post-acquisition performance improvements and the industry relatedness of the acquirer and the target. Healy et al. (1992) show that post-acquisition performance improvements are larger for related acquisitions. Their finding is supported by Heron & Lie's (2002) results which show that performance improvements are significantly larger when the target firm and the acquirer are from the same industry. Yet, numerous studies have found no relationship between industry relatedness and post-acquisition performance improvements (Linn & Switzer 2001; Sharma and Ho 2002; Powell & Stark 2005).

3.2.5 Relative Size of the Target Firm

It has been suggested that acquisitions of relatively large targets would lead to stronger post-acquisition financial performance because acquiring large targets enables the acquirer to more likely attain significant synergies and economies of scale. The downside of acquiring relatively large targets is the difficulty of integration. Failure to properly integrate the target firm could easily hinder post-acquisition performance and destroy shareholders' wealth. (Martynova et al. 2006) Evidence supporting the first suggestion is provided by Linn & Switzer (2001). Martynova et al. (2006) show that there is positive relationship with acquirer post-acquisition performance and the relative size of the target. In addition, the authors note that medium-size M&As are the most profitable ones, which would give further support the above suggestion about size affecting the difficulty of integration. However, there is extensive amount of literature that finds no significant relationship between the relative size of the target and post-acquisition performance (Healy et al. 1992; Sharma & Ho 2002; Heron & Lie 2002; Powell & Stark 2005).

Fuller, Netter & Stegemoller (2002) examined the impact of relative size of the target on acquirer short-term returns. They find that the bigger the target is compared to the acquirer, the smaller cumulative abnormal returns. The authors claim that this is because smaller targets tend to be private firms and private takeovers have been proven to result in better acquirer returns. Moeller et al. (2004) find that in addition to the relative size of the acquirer and target, the raw firm size also affects the

acquirer returns. They show that returns for small acquirers are significantly larger than those for large firms which supports the managerial hubris hypothesis. Goergern & Renneboog (2004) find no significance for the relative size of the targets. However, they do elaborate that their sample only consisted of large deals which diminishes the reliability of their results.

4. DATA AND METHODOLOGY

The data and methodology used in this research are presented in this chapter. Strengths and weaknesses of both methodologies are also discussed for better understanding the possible limitations of the results. The short-term effects of M&A deals on acquiring firm's share price is studied with event study methodology and the long-term effect on company performance is examined with accounting study methodology.

4.1. Data

The Finnish mergers and acquisitions data sample was collected from Thomson One database. The database provides information about the announcement and closing dates of the acquisition, deal value, names and SIC codes of the acquirer and the target company. Information about deal financing, and other features like the deal type are also available in the database. SIC codes were used to determine whether the deals were industry-related or conglomerate. Industry-related acquisitions include both horizontal and vertical acquisitions. The pooling of horizontal and vertical acquisitions was done because SIC codes collected from the Thomson One database made the sorting of deals challenging. Dividing the industry-related acquisitions further into horizontal and vertical acquisitions would have required a lot more work.

To be included in the sample, the acquiring company had to be listed in OMX Helsinki and its country of domicile had to be Finland. The acquisition also had to be completed between 2004 and 2012. Only transactions that had their values disclosed were included. Additional criteria used for the sample selection were that after the acquisition, the acquirer owned 100% of the target company and that over 50% of target company's shares were transferred in the deal. In order to screen out acquisitions that wouldn't possibly have any effect on long-term performance, the deal value had to be at least five million US dollars. The deal value is defined as the total consideration paid by the acquiring company to the target company excluding all possible expenses and fees related to making the transactions. As suggested by

Gosh (2001), all leveraged buyouts (LBO) and management buyouts (MBO) were also excluded from the sample.

The initial sample screening with the above criteria resulted in nearly 300 completed transactions. However, the initial sample had to be refined with additional screening. Because of the methodological requirements of event study, deals that had other events during their event windows had to be excluded from the sample. Multiple events occurring at the same time might bias the result. Companies that lacked sufficient stock trading data or financial data were also excluded from the sample. In addition, listed private equity companies (funds), as well as real estate companies were excluded. The former were excluded because in most cases the motivations behind their M&A transactions drastically differ from normal corporations, and the latter because their transactions mostly consist of real estates and not real business units or corporations. After strict screening, the final data sample used in this study ended up consisting of 128 completed transactions.

The amount of domestic and cross-border deals is shown in Figure 3 below. In total, the sample consisted of 35 domestic acquisitions and 93 cross-border acquisitions. The high amount cross-border deals is not a surprise since many Finnish companies generate most of their revenue from outside of Finland.

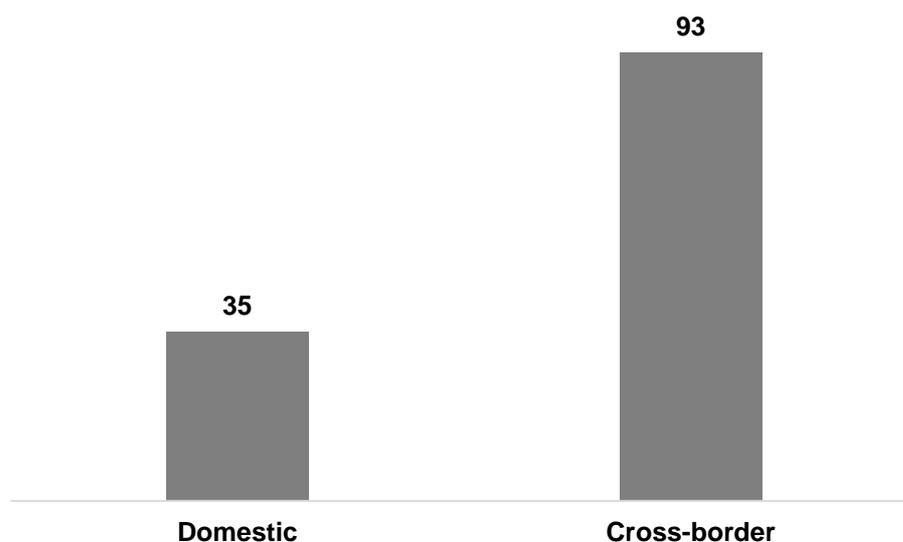


Figure 3. Domestic vs Cross-border Acquisitions

Results from previous literature indicates that acquisitions paid with cash outperform stock and hybrid acquisitions both in short- and long-term. In this study, the deals

were categorized into three groups. These groups were cash deals (100% cash), stock deals (100% stock) and hybrid deals (combination of cash and stock). As can be seen from Figure 4, cash was clearly the dominant method of payment in the final sample. In total, 109 deals were paid with cash, 7 with stock and 12 with both cash and stock.

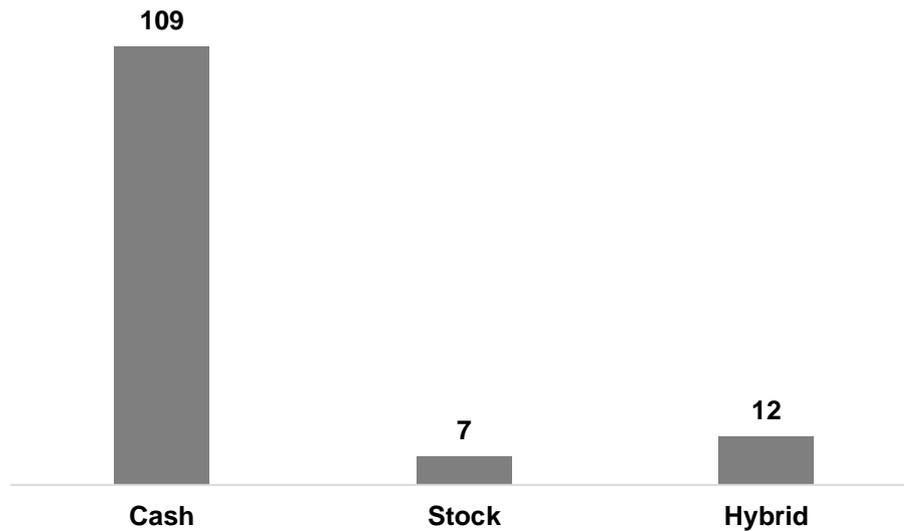


Figure 4. Method of Payment

SIC codes were used to define the industries of the deal participants. From the final sample, 85 deals were industry-related and 43 conglomerate (see Figure 5).

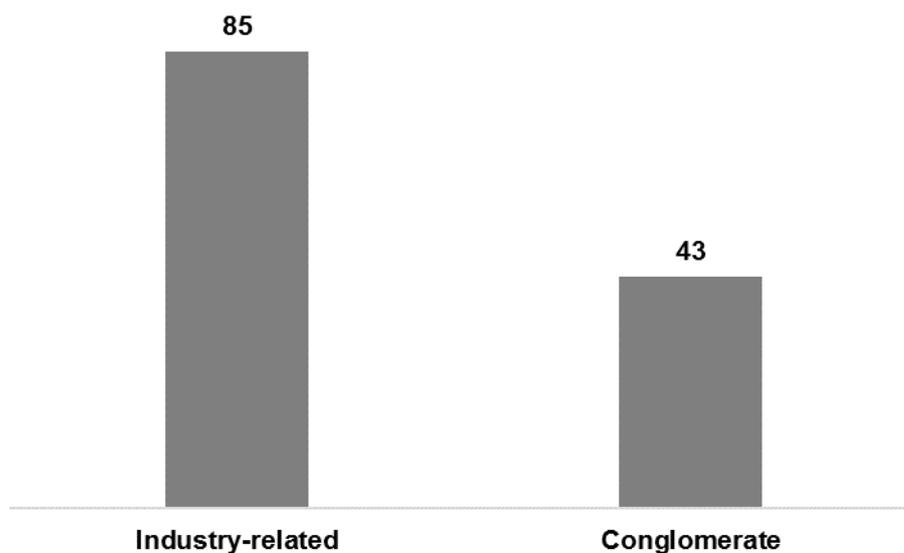


Figure 5. Type of Acquisition

For the short-term analysis, daily stock total return data was used and it was collected from Thomson Reuters Datastream. Logarithmic returns were calculated for the market index and for each stock by using the formula below (1). The OMX Helsinki Benchmark Capped index was used in the study as the proxy for the market return and 3-month Euribor was used as the proxy for the risk-free rate of return.

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

r_{pt} = logarithmic return of a stock at time t

P_t = value of a stock at day t

P_{t-1} = value of a stock at day t-1

4.2. Event Study Methodology

Event study methodology is the main methodology used to examine the short-term impact of mergers and acquisitions on stock prices. Event studies have been widely used to examine impacts of different events on share prices. First studies were conducted already in 1933. The main purpose of event studies is to use financial data to study the behavior of stock returns through time. (MacKinlay 1997)

According to MacKinlay (1997), there is no unique structure for the study itself but there is a general guideline that the analysis should follow. First of all, it is important to define the type of event that will be examined and also the time period over which the stock returns of the companies are examined. This time period is called the event window. The event window is most often defined to being larger than the actual event day. This enables the examination of the days surrounding the event. The length of the event window (21 days) and estimation window (250 days) used in this thesis are illustrated in Figure 6.



Figure 6. Event Window and Estimation Window.

4.2.1. Abnormal Returns and Expected Returns

The impact of mergers and acquisitions on the stock returns are examined by calculating the abnormal returns (AR) for each stock and event. The difference between the actual return of a security over the event window and the expected return of a security is called abnormal return. Market model (formula 2) will be used to estimate the expected returns of each stock. The market model assumes that there exists a linear relationship between the market returns and the stock returns. (MacKinlay 1997) Positive abnormal returns indicate that shareholders feel that the M&A deal create value and vice versa.

$$E(R_{it}|X_t) = \alpha + \beta R_m + \varepsilon \quad (2)$$

$E(R_{it}|X_t)$ = expected return

α = alpha/intercept coefficient estimated with linear regression

β = beta coefficient of the stock (estimated with linear regression)

R_m = market return

$$AR_{it} = R_{it} - E(R_{it}|X_t) \quad (3)$$

AR_{it} = abnormal return

R_{it} = actual return of a stock

$E(R_{it}|X_t)$ = expected return of a stock

4.2.2. The Aggregation of Abnormal Returns

Cumulative abnormal returns (CAR), average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) are all used to measure the event's impact on share prices. Cumulative abnormal returns measure the performance of a single stock during the event window. CAR is calculated according to formula 4. (MacKinlay 1997)

$$CAR_i = \sum_{i=t}^N AR_{it} \quad (4)$$

Because CARs only measure individual performance of stocks another measure is needed in order to make any generalizable conclusions. The aggregation of abnormal returns needs to be done across different stocks and also through time. Average abnormal returns (AAR) measure the daily impact of the event on stock returns of the whole sample. AARs are calculated according to formula 5. Cumulative average abnormal returns (CAAR) measure the average cross-sectional performance of the sample stocks from the beginning of the event period. CAARs are calculated using the formula 6. (MacKinlay 1997)

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

$$CAAR_T = \frac{1}{N} \sum_{i=t}^N CAR_{it} \quad (6)$$

4.2.3 Strengths and Weaknesses of Event Study Methodology

Event studies have dominated the field of M&A performance studies since the 1970s. The reasons behind the popularity of event studies are simple, they are relatively easy to execute and they offer a direct measure of value created for shareholders. Event study offers a direct measure of the possible value created for shareholders. It is also a forward-looking measure because stock prices are simply the present value of expected future cash flows. (Bruner, 2002)

However, Bruner (2002) criticizes that event study methodology is not without faults. It makes extensive assumptions on the functioning of the stock market. These assumptions include for example market efficiency and rationality. Event studies also require care from researchers because simultaneous and overlapping events can have a distorting effect on the company specific returns. However, overlapping events are rarely a problem in short-term event studies because of the short event window. Overall, one of the biggest drawbacks of event study methodology is that it measures the expected synergy and not the realized one.

4.3. Accounting Technique Methodology

Accounting technique or accounting study is most often used when one wants to measure the long-term impact of mergers and acquisitions on the financial performance of companies. The focus of accounting technique is on the reported financial results of acquiring companies before and after the M&A deals. The purpose of course, is to see how the financial performance of a company has changed after the acquisition and if the acquiring firms outperform their nonacquiring peers. In most cases, this kind of matched-sample comparison is the best way to conduct long-term performance studies. These studies usually focus on measuring the change in different indicators like return on equity, cash flow to sales and return on assets. (Bruner 2002)

For the long-term analysis, at least one of each type of performance ratio was used to measure possible impact of M&As on long-term profitability and market valuation. All financial data for the accounting study was collected from Bloomberg professional database via the Bloomberg Terminal software.

Figure 7 below shows the performance measures that are applied in this study. The chosen ratios capture both returns to shareholders and profitability. Furthermore, the chosen ratios can be divided into three different groups. Return on equity is a profitability ratio, cash flow to sales and cash flow to assets are cash flow ratios and price to book -ratio (P/B) and dividend yield (D/P) are market based ratios. The interpretation of P/B -ratio is inverse to D/P. A simultaneous increase in P/B and a decrease in D/P means that the market valuation of the firm increases and vice versa.

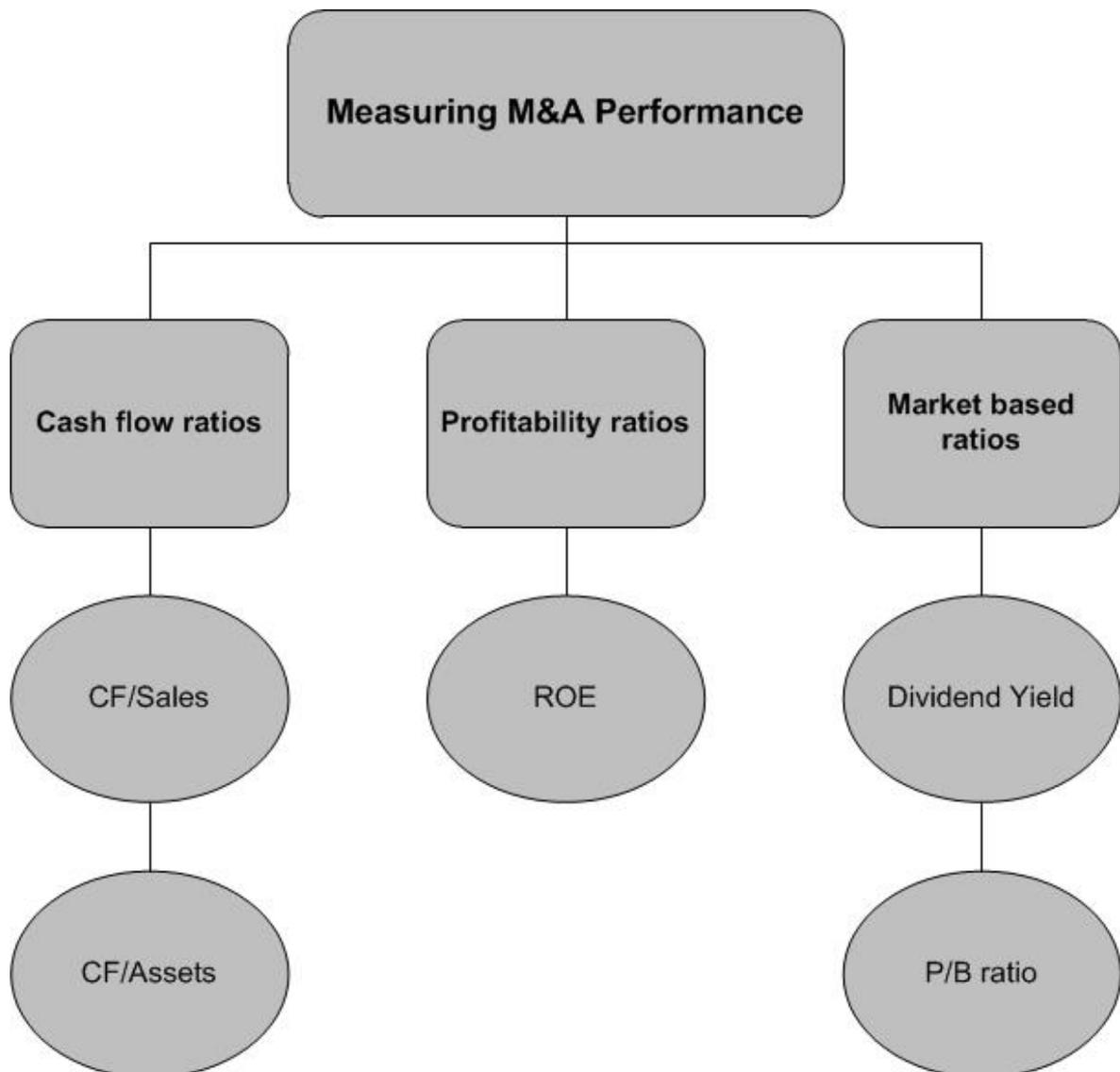


Figure 7. Different Financial Ratios Used to Measure M&A Performance

Healy et al. (1992) argue that cash flow ratios capture actual operational benefits because accounting methods or asset revaluations do not affect them. This thesis follows the example of Hou, Karolyi & Kho (2011) and cash flow is calculated as Net Income plus Depreciation and Amortization plus Income Statement Deferred Taxes.

Wang & Moini (2012) state that accounting studies have several advantages over long-term event studies. First of all, accounting studies capture the realized returns and represent the true economic benefits generated by mergers and acquisitions. Accounting studies also indicate whether synergies were achieved since these synergies would cause improvements in the long-term accounting performance. Long-term event studies are often frowned upon because the model's performance and reliability diminishes significantly when the stock price data used is for example monthly and not daily data. Kothari & Warner (1997) state that long-term event studies can cause misspecification since they often indicate abnormal returns even though there are none. Similar conclusions are presented by Martynova & Renneboog (2006), who state that the isolation of the takeover effect is a lot more difficult over longer periods of time.

Wang & Moini (2012) also state that accounting technique sadly has some drawbacks. For example, accounting data can be manipulated and the data reflects past rather than the present or future. Changes in accounting practices might cause the data to be non-comparable. According to Bruner (2002), accounting technique also ignores value of intangible assets and the differences between country level accounting principles make cross-border comparison rather challenging. He also criticizes accounting studies for being backward looking and sensitive to inflation and deflation because of the historic cost approach. Martynova & Renneboog (2008a) also point out that the biggest flaw of this technique is that financial performance is affected by numerous factors of which takeovers are just one. Because of this, the more years are taken under examination, the more possible "noise" is included which might distort the results.

In this study, two different models are used to conduct the accounting study. The first model is a simple change model which simply measures how the profitability ratios, like return on equity or cash flow to sales, have evolved during the time period (pre- and post-acquisition). The change model is shown in equation 7 and the

formation of test variables is illustrated in Figure 8. The analyzed period is three years, which means that the period under analysis spans from three years before the actual acquisition to three years after. (Healy et al. 1992) All financial data used in calculating the long-term ratios were collected from Bloomberg L.P. database via the Bloomberg Terminal software.

$$\text{Change of Performance ratio} = \text{Performance ratio}^{\text{After}} - \text{Performance ratio}^{\text{Before}} \quad (7)$$

$\text{Performance ratio}^{\text{After}} = \text{Post-acquisition performance ratio} - \text{post-acquisition industry median ratio}$

$\text{Performance ratio}^{\text{Before}} = \text{Pre-acquisition performance ratio} - \text{pre-acquisition industry median ratio}$

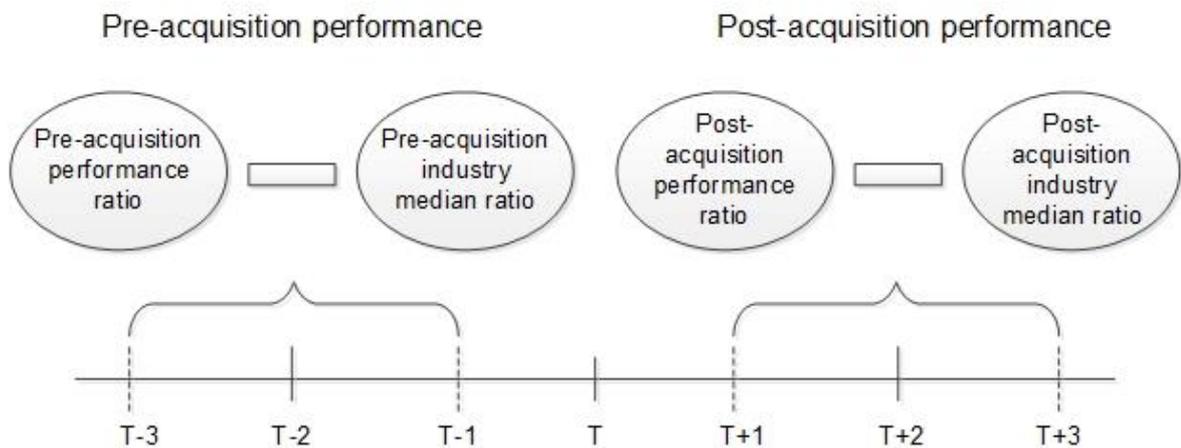


Figure 8. Formation of Test Variables (Sharma & Ho 2002)

At first, the performance indicators were calculated for each of the three years before and after acquisitions. Then the performance indicators were also adjusted by subtracting industry median performance from the acquiring company's performance. This adjustment was done because previous literature suggests that a control group's performance should be used as a benchmark for defining performance without acquisitions (Ravenscraft & Sherer 1987; Gosh 2001).

Company specific SIC codes were used to define an industry group for each sample company. Because this study doesn't focus only on one industry and since many sample companies were relatively small, some of the peer groups might not be optimal for comparison. Size and geography were used in the formation process of the industry peer groups in all cases where it was possible. It is important to note that the lack of multiple peers for some companies might affect the reliability of the accounting study results.

After the performance indicators were adjusted by subtracting the industry median performance for each equivalent year, an average was calculated for the years before and after the acquisition. Finally, the impact of acquisitions on company long-term performance was measured by comparing the mean annual industry adjusted performances before and after M&A transactions. The statistical significance of the means was examined with a paired two sample t-test.

The second model used to measure post-acquisition performance of the sample companies is linear regression. The idea is to use pre-acquisition performance to predict the performance after acquisitions. All variables used in the linear regression are exactly the same as in the change model.

Linear regression also addresses mean reversion, which is a possible problem of the change model. Mean reversion means that if the acquirer's performance before the acquisition is above the industry average, its performance might decline after the acquisition, regardless of the acquisition's effect. A simple linear regression model is used to account mean reversion. This model is described in formula 8. The change model results will then be compared to the regression results in order to see if results differ drastically. (Healy et. al. 1992; Manson et. Al. 2000)

$$Performance\ ratio^{After} = \alpha + \beta Performance\ ratio^{Before} + \varepsilon \quad (8)$$

$Performance^{After}$ and $Performance^{Before}$ are same as in formula 7.

α = alpha coefficient which shows the abnormal industry adjusted return

β = beta coefficient, explains the correlation between performance before and after the acquisition

The impact of deal characteristics on performance is measured by using an independent samples t-test when there are only two characteristics being compared or one-way ANOVA model when there are more than two characteristics being compared. Both models can explain whether the change in company performance after the acquisition has varied statistically between the different deal characteristics.

4.4. Hypothesis

Based on theoretical background and earlier literature, several hypotheses are formed. According to MacKinlay (1997), the null hypothesis (H_0) in the case of event study methodology is that the event doesn't have any statistically significant effect on the behavior of returns. This would be consistent with strong-form market efficiency explained earlier. If there is a stock market reaction to the event, then the null hypothesis is rejected.

Prior studies on short-term shareholder wealth effects of M&A deals have however concluded that strong-form market efficiency does not hold and there is a price reaction, at least on the announcement day. This suggests that mergers and acquisitions are either seen as negative or positive things for the acquiring company. Shareholder maximization hypothesis presented earlier suggests that this market reaction is positive which means that acquiring company's shareholders will experience positive wealth effects because of mergers and acquisitions. Based on these findings, the first two hypotheses are formed:

Hypothesis 1: M&A announcements cause a stock price reaction on the event day.

Hypothesis 2: The market reaction to M&A announcements is positive and small.

If markets are of semi-strong form (since strong-form in this case is not achieved), the stock market reaction will be instant and the new information conveyed to the market in form of M&A announcement will be absorbed to prices very rapidly. (Fama 1972) This means that there shouldn't be any cumulative abnormal returns.

Hypothesis 3: The information in the form of M&A announcement is absorbed very rapidly or even instantly and there will be no cumulative abnormal returns.

Theories regarding synergies suggest that mergers and acquisitions are only made when there are synergies and these synergies will result in better management, stronger pricing power and increased market share. These synergies should be observable in the long-term and they should improve performance ratios like ROE and EPS. (Sharma & Ho 2002)

For the long-term performance, synergy theories and shareholder wealth maximization hypothesis suggest that acquisitions are only made when there are positive synergies and positive gains to be earned. Hypothesis 4 is formed based on these theories.

Hypothesis 4: Mergers and acquisitions improve long-term performance of acquiring companies.

Linn & Switzer (2001) and Gosh (2001) have showed that acquisitions paid with cash result in much larger increases in performance than those paid with stock. Jensen (1986) states that industry-related acquisitions are more likely to succeed than the conglomerate ones. This is because in conglomerate acquisitions the managers of the acquiring company aren't usually familiar with the target company's industry. In addition to payment type and industry relatedness, academics have studied differences between the post-acquisition performance of domestic and cross-border acquisitions. Moeller & Schlingemann (2005) and Martynova et al. (2006) show that cross-border deals result in lower post-acquisitions improvements than domestic deals or even in decrease in performance. Hypothesis 5 is formed based on these findings.

Hypothesis 5: Post-acquisition performance is impacted by deal characteristics.

5. RESULTS

The impact of M&A announcements on company share pricing was examined with event study methodology. The event study was first performed for the full sample, which consists of 128 M&A transactions. After the analysis of the full sample was completed, the sample was divided in sub-samples based on different deal characteristics like the method of payment and industry relatedness. The short-run impact of acquisition announcements on acquiring firm's stock returns was measured with two factors. These two were average abnormal returns (AAR) and cumulative average abnormal returns (CAAR).

The impact of acquisitions on company long term performance was measured with five different variables. These variables were ROE, P/B -ratio, Dividend yield (D/P), CF/Sales and CF/Assets. The aim of the accounting study was to examine whether the performance of acquirers improves after acquisitions and whether long-term performance is in line with the event study results. As mentioned above, the final sample consisted of 128 M&A transactions but the sample sizes used in the accounting study varied per performance measure. This was due to the lack of information in the databases.

5.1. Event Study Results

Previous literature suggests that the target company's shareholders are the main beneficiaries in acquisitions and no significant abnormal returns occur in the case of acquiring companies (Bruner 2002; Martynova & Renneboog 2008a). Some studies have even found that acquirers experience negative abnormal returns after the announcement of acquisitions (Moeller et al. 2003; Loughran and Vijh 1997).

The results of the event study for the full sample are shown in Table 1. The upper section shows the cumulative average abnormal returns for different periods. The lower section shows the average abnormal returns for the event day and the days one, two, five and ten after the event. The results show that there is a statistically significant positive reaction to M&A announcements on the event day. The cumulative average abnormal returns are all statistically significant except for days

one to five. In the case of average abnormal returns, only the event day AAR is statistically significant.

Table 1. Event Study Results

Stock price reaction - Full sample					
	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)
	0,73%**	1,04%**	1,08%**	0,74 %	1,22%**
Min	-19,21 %	-16,15 %	-24,50 %	-21,71 %	-22,06 %
Max	20,99 %	20,23 %	19,12 %	16,15 %	25,37 %
Probability test					
N	128	128	128	128	128
J1 statistic / t-ratio	3,349	3,371	2,852	1,526	5,608
p-ratio	0,000	0,000	0,002	0,063	0,000
**= Statistically significant at 99% confidence level					
* = Statistically significant at 95% confidence level					
	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)
	0,73%**	0,31 %	0,04 %	0,34 %	-0,04 %
Min	-19,21 %	-12,78 %	-14,53 %	-7,24 %	-13,22 %
Max	20,99 %	14,13 %	10,11 %	8,97 %	9,86 %
Probability test					
N	128	128	128	128	128
J1 statistic / t-ratio	3,349	1,418	0,173	1,559	0,842
p-ratio	0,001	0,159	0,863	0,121	0,401

The statistically significant positive reaction confirms that the first hypothesis (H1: M&A announcements cause a stock price reaction on the event day) holds and can be fully accepted. The second hypothesis can also be fully accepted based on the results (H2: The market reaction to M&A announcements is positive but small). The results also show that there is very small cumulative effect following the event day and it is statistically significant during the first and second day after the announcement. Even though this cumulative effect is relatively small, the third hypothesis (H3: The information in the form of M&A announcement is absorbed very

rapidly or even instantly and there will be no cumulative abnormal returns) is rejected. Fama's (1972) concept of semi-strong market efficiency does not seem to hold because the cumulative effects of abnormal returns are persistent after the event day.

The results for the whole sample are in line with prior literature and especially with the findings of Goergen & Renneboog (2004). Finnish acquiring companies on average experience small positive abnormal returns on the announcement day of acquisitions. However, it is interesting to note that there seems to be a significant variation in the company specific AARs of the event day. Maximum AAR is approximately 21% and the minimum is nearly -20%. Appendix 1. shows the plotted cumulative average abnormal returns and daily average abnormal returns through the event window.

Tables 2 and 3 show the differences between domestic and cross-border M&A deals. The plotted cumulative average abnormal returns and daily average abnormal returns through the event window for both domestic and cross-border acquisitions are shown in Appendix 2 and 3. Kang (1993) argues that market imperfections grant advantages to international firms and because of these market imperfections, cross-border acquisitions are more value creating than domestic acquisitions. Yet, prior empirical evidence (Black et al. 2007; Andriosopoulos et al. 2015) suggests that domestic acquisitions cause significantly higher abnormal returns for shareholders than cross-border acquisitions. The results obtained by this study show that domestic acquisitions by Finnish listed companies create larger shareholder wealth effects than cross-border ones. The average abnormal return on the event day for domestic acquisitions is over 2% and the results are statistically significant. In addition, the cumulative effect is greater than in the case of the full sample, which further supports the rejection of hypothesis 3.

In the case of cross-border acquisitions, the AAR on the event day is approximately zero and it's not statistically significant. All CAARs for domestic acquisitions except for the (1,5) are statistically significant at 1% level and there seems to be a more significant cumulative effect even though again, the effect is small. Clearly the small cumulative effect already observed in the whole sample test comes mainly from domestic acquisitions. In the case of cross-border acquisitions, only the 3-day CAAR

(-1,1) is statistically significant. However, none of the AARs are statistically significant.

Table 2. Event Study Results – Domestic Acquisitions

Stock price reaction - Domestic deals					
	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)
	2,34%**	3,06%**	3,14%**	2,01%*	3,06%**
Min	-10,32 %	-10,78 %	-12,53 %	-6,60 %	-8,20 %
Max	20,99 %	20,23 %	19,12 %	13,33 %	18,77 %
Probability test					
N	35	35	35	35	35
J1 statistic / t-ratio	6,652	5,213	4,360	2,165	7,374
p-ratio	0,000	0,000	0,000	0,015	0,000
**= Statistically significant at 99% confidence level					
* = Statistically significant at 95% confidence level					
	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)
	2,34%**	0,73 %	0,07 %	0,46 %	0,00 %
Min	-10,32 %	-10,71 %	-9,05 %	-7,24 %	-3,81 %
Max	20,99 %	10,24 %	6,43 %	3,78 %	5,05 %
Probability test					
N	35	35	35	35	35
J1 statistic / t-ratio	5,625	1,747	0,179	1,114	0,001
p-ratio	0,000	0,089	0,859	0,273	0,999

Again, these results are in line with prior findings about domestic acquisitions outperforming cross-border ones (Black et al. 2007; Goergen & Renneboog 2004; Andriosopoulous et al. 2015). The explanations for this outperformance are most likely numerous, but cultural distance and the challenges of integration are one plausible cause. Integration is likely harder in cross-border acquisition because the firms are based in different countries that possibly have differing corporate cultures (Shimizu et al. 2004). The stock market reaction reflects the doubts of investors on the uncertainty of the success of integration in cross-border acquisitions.

Table 3. Event Study Results – Cross-border Acquisitions

Stock price reaction - Cross-border deals					
	CAR (0,0)	CAR (0,1)	CAR (0,2)	CAR (1,5)	CAR (-1,1)
Average	0,09 %	0,33 %	0,36 %	0,54 %	0,53%*
Min	-19,21 %	-16,15 %	-24,50 %	-21,71 %	-22,06 %
Max	10,79 %	15,51 %	15,85 %	16,15 %	25,37 %
Probability test					
N	93	93	93	93	93
J1 statistic / t-ratio	0,346	0,910	0,804	0,858	2,062
p-ratio	0,365	0,181	0,211	0,195	0,020
**= Statistically significant at 99% confidence level					
* = Statistically significant at 95% confidence level					
	AR (0)	AR (1)	AR (2)	AR (5)	AR (-1)
Average	0,09 %	0,24 %	0,03 %	0,37 %	0,20 %
Min	-19,21 %	-12,78 %	-14,53 %	-6,92 %	-13,22 %
Max	10,79 %	14,13 %	10,11 %	8,97 %	9,86 %
Probability test					
N	93	93	93	93	93
J1 statistic / t-ratio	0,346	0,942	0,104	1,418	0,775
p-ratio	0,730	0,349	0,917	0,160	0,440

Table 4 presents the results from different methods of payment. Interestingly the results differ from prior literature. Largest average abnormal returns on the event day are experienced by companies who use both cash and stock as method of payment in acquisitions. The difference between the event day AARs of hybrid deals versus cash and stock deals is more than 1% and the results are statistically significant. Surprisingly, both cash and stock deals experience similar size wealth effects on the event day but the results for stock deals are not significant. Many theories, like agency theory and signaling theory, predict that acquisitions financed with stock should result in lower shareholder abnormal returns.

According to Hansen (1987), managers use stock to finance acquisitions when they think their company's stock is overvalued. In a way, stock offers convey negative information about valuation and possible synergies to the market from the managers, hence the stock market reaction and CAARs should be lower for stock

deals. Yet, the 2-day CAAR (0,1) for stock deals is significantly higher than for cash deals (over two percentage points), this cumulative positive effect is however nullified already during the second day after the event. The plotted cumulative average abnormal returns and daily average abnormal returns through the event window for all the different methods of payment are shown in Appendix 4, 5 and 6.

Table 4. Event Study Results – Methods of Payment

	Stock price reaction - Cash deals					Stock price reaction - Stock deals					Stock price reaction - Hybrid deals				
	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)
Min	0,62%**	0,82%**	0,98%**	0,62 %	1,04%**	0,57 %	2,84%*	-0,44 %	0,96 %	4,92%**	1,73%**	1,85%*	2,78%*	1,59 %	0,65 %
Max	-13,38 %	-14,21 %	-16,25 %	-21,71 %	-10,70 %	-3,53 %	-4,82 %	-14,53 %	-7,24 %	-0,15 %	-19,21 %	-16,15 %	-24,50 %	-9,75 %	-22,06 %
N	109	109	109	109	109	7	7	7	7	7	12	12	12	12	12
J1 statistic / t-ratio	2,684	2,535	2,449	1,191	4,466	0,482	1,690	-0,213	0,363	4,145	2,414	1,826	2,236	0,991	0,910
p-ratio	0,008	0,006	0,007	0,117	0,000	0,315	0,046	0,416	0,358	0,000	0,008	0,034	0,013	0,161	0,181

**= Statistically significant at 99% confidence level
 * = Statistically significant at 95% confidence level

	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)
	Min	0,62%**	0,14 %	0,24 %	0,37 %	0,18 %	0,57 %	2,27 %	-3,29%*	0,35 %	2,08 %	1,73%**	0,12 %	0,92 %	-0,37 %
Max	-13,38 %	-12,78 %	-9,05 %	-6,92 %	-13,22 %	-3,53 %	-4,06 %	-18,60 %	-7,24 %	-25,91 %	-19,21 %	-11,12 %	-8,35 %	-5,88 %	-6,71 %
N	109	109	109	109	109	7	7	7	7	7	12	12	12	12	12
J1 statistic / t-ratio	2,684	0,872	0,686	1,783	0,910	0,482	1,908	-2,760	0,293	1,755	2,414	0,169	1,290	-0,523	-1,673
p-ratio	0,008	0,385	0,494	0,077	0,365	0,315	0,098	0,028	0,778	0,123	0,008	0,869	0,221	0,611	0,120

Before drawing any extensive conclusions, it is important to note that the sample used in this study is heavily biased towards cash deals. From the total sample, 109 deals were cash deals, 12 deals were hybrid deals and only 7 were stock deals. Because the number of hybrid and stock deals is so small, the validity of the respective event study results are questionable. The small sample size causes the results for stock and hybrid deals' returns to be highly volatile, which is demonstrated by the behavior of stock deal CAARs and AARs in Appendix 5 and 6. Nevertheless, hybrid deals resulted in larger abnormal returns for the shareholders than both cash deals and stock deals on the event day.

Table 5 below presents the event study results for industry-related and conglomerate acquisitions. Difference between these two types is smaller than between domestic and cross-border ones but industry-related acquisitions perform better than their conglomerate counterparts. The plotted cumulative average abnormal returns and daily average abnormal returns through the event window for industry-related and conglomerate acquisitions are shown in Appendix 7 and 8.

There is a statistically significant positive stock market reaction on the event day for industry-related acquisitions. Only two of the conglomerate CAARs are significant but the CAAR of the event day is not. These findings confirm that when the acquirer and the target operate in the same industry, investors see the acquisitions as more value creating than when they operate in different industries. The results are consistent with both the neoclassical theories and with the results of earlier studies. For example, Moeller & Schlingemann (2005) found a negative correlation between short-term returns and industrial diversification.

Table 5. Event Study Results – Industry-related & Conglomerate Deals

Stock price reaction - Industry-related deals					
	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)
	0,72%**	1,12%**	1,05%*	0,61%*	1,08%**
Min	-19,21 %	-16,15 %	-24,50 %	-21,71 %	-22,06 %
Max	20,99 %	20,23 %	19,12 %	14,13 %	25,37 %
N	85	85	85	85	85
J1 statistic / t-ratio	2,700	2,967	2,269	2,036	4,047
p-ratio	0,008	0,002	0,012	0,021	0,000

**= Statistically significant at 99% confidence level

* = Statistically significant at 95% confidence level

	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)
	0,72%**	0,40 %	-0,07 %	0,33 %	-0,04 %
Min	-19,21 %	-12,78 %	-14,53 %	-7,24 %	-13,22 %
Max	20,99 %	14,13 %	6,43 %	6,74 %	9,86 %
N	85	85	85	85	85
J1 statistic / t-ratio	2,700	1,496	-0,266	1,227	-0,148
p-ratio	0,008	0,138	0,791	0,223	0,883

Stock price reaction - Conglomerate deals

	CAAR (0,0)	CAAR (0,1)	CAAR (0,2)	CAAR (1,5)	CAAR (-1,1)
	0,46 %	0,76 %	1,09%*	1,30 %	1,51%**
Min	-10,32 %	-10,47 %	-13,90 %	-14,68 %	-8,86 %
Max	10,69 %	15,21 %	15,83 %	16,15 %	15,45 %
N	43	43	43	43	43
J1 statistic / t-ratio	1,204	1,411	1,652	1,282	3,702
p-ratio	0,235	0,079	0,049	0,100	0,000

**= Statistically significant at 99% confidence level

* = Statistically significant at 95% confidence level

	AAR (0)	AAR (1)	AAR (2)	AAR (5)	AAR (-1)
	0,46 %	0,30 %	0,33 %	0,33 %	0,75 %
Min	-10,32 %	-7,90 %	-9,05 %	-6,92 %	-2,78 %
Max	10,69 %	7,00 %	10,11 %	8,97 %	6,33 %
N	43	43	43	43	43
J1 statistic / t-ratio	1,204	0,791	0,866	0,863	1,948
p-ratio	0,235	0,433	0,391	0,393	0,058

5.2. Accounting Study Results

The aim of the accounting study was to examine whether the performance of acquirers improves after acquisitions and whether long-term performance is in line with the event study results. The final sample consisted of 128 M&A transactions but the sample sizes used in the accounting study varied per performance measure. This was due to the lack of information in the databases.

Results from previous studies on the impact of M&A transactions on company long-term performance have been mixed. Bruner (2002) states that the inconsistency in the results is due to different performance ratios used in many studies. Martynova & Renneboog (2008a) disagree with Bruner and argue that most studies show a decline in of performance after acquisitions regardless which ratios are used.

Table 6 presents the accounting study results for the change model and the mean industry adjusted performance measures before and after acquisitions. Surprisingly, majority of used ratios indicate that mean post-acquisition performance of Finnish listed companies is worse than pre-acquisitions performance. However, only the results for return on equity (ROE), cash flow to assets (CF/Assets) and price to book (P/B) are statistically significant. The difference between pre- and post-ROE is relatively big, over five percentage points. It seems clear that the acquirers haven't been able to increase their profitability after acquisitions even though their assets base has grown due to acquiring the target's assets.

Based on these results, the fourth hypothesis, according to which mergers and acquisitions improve long-term performance of acquiring companies, can be rejected because there is no statistically significant performance ratio showing improvement after acquisitions. In fact, performance measured with ROE, CF/Assets, P/B -ratio decreases significantly after acquisitions. The post-acquisition P/B -ratio is however positive, which means that even though the valuation decreased, the acquiring companies were still more highly valued than their industry peers.

Gosh (2001) has showed that companies outperforming their industry peers usually engage in acquisitions. His statement seems to mostly hold also for this study's

sample since the mean pre-acquisition performance is superior for all measurements except for CF/Sales and D/P.

Table 6. Accounting Study Results (Change Model)

Industry and time adjusted ratios					
	ROE	P/B	D/P	CF/Sales	CF/Assets
Mean performance before acquisition (-3 to -1 years)	0,027	0,391	0,018	-0,050	0,025
Standard deviation	0,124	1,606	0,033	0,514	0,110
Min	-0,346	-3,929	-0,557	-4,828	-0,745
Max	0,422	6,282	2,207	0,533	0,226
N	120	119	114	98	123
Mean performance after acquisition (+1 to +3 years)	-0,030	0,186	0,017	-0,147	-0,003
Standard deviation	0,157	1,329	0,029	1,156	0,093
Min	-0,727	-2,410	-0,648	-11,225	-0,793
Max	0,363	5,141	2,100	0,280	0,171
N	120	119	114	98	123
Difference of means test					
Δ Performance	-0,056**	-0,205*	-0,001	-0,097	-0,028**
Two sided t-test ratio	4,021	2,033	0,222	0,893	3,378
P-ratio	0,000	0,044	0,825	0,374	0,001

**= Statistically significant at 99% confidence level
 * = Statistically significant at 95% confidence level

To compare the results against a broader set of previous literature, a linear regression model was used in addition to the change model. The regression model and equation were explained in more detail in the previous chapter. The regression was done for each ratio independently. Previous studies by Healy et al. (1992) and Sharma & Ho (2002) have found positive improvements of cash flow based ratios after M&A transactions. Gosh (2001) criticizes the use of regression analysis in accounting studies. According to the author, the regression results are biased upwards if the sample companies outperform their peers prior the acquisitions.

The results of the regressions analysis are shown below in Table 7. The correlation between pre- and post-acquisition performance is measured by the coefficient beta. All betas are positive and statistically significant, which indicates a continuance of pre-acquisition performance after acquisitions. Alphas measure the effect of M&A transactions on the abnormal industry adjusted performance and are shown in the second column of Table 7. Based on the regression results, M&As seem to have a negative impact on ROE and on CF/Assets. This finding is consistent with the results of the change model even though the negative impacts are slightly smaller.

Table 7. Accounting Study Results (Linear Regression Analysis)

Variable	α	t value	p value	β	t value	p value	R-Squared
ROE	-0,044**	-3,304	0,001	0,544**	5,150	0,000	0,185
P/B	-0,052	-0,606	0,546	0,608**	11,742	0,000	0,541
D/P	0,014**	4,664	0,000	0,187*	2,327	0,022	0,044
CF/Sales	-0,105	-0,959	0,340	0,843**	3,964	0,000	0,141
CF/Assets	-0,016*	-2,309	0,023	0,514**	8,345	0,000	0,365

**= Statistically significant at 99% confidence level

* = Statistically significant at 95% confidence level

Overall, the results are somewhat in line in with the mixed results of previous studies. Two out of five ratios show no statistically significant change in post-acquisition performance. Of the statistically significant ones, ROE, CF/Assets and D/P show a decline in performance. Furthermore, low R-Squared values burden the reliability of the results. The R-Squared value of D/P is extremely low, which means that conclusions shouldn't be made based on this ratio. The results of the regression analysis further confirm the rejection of the hypothesis 4.

According to many prior studies, domestic M&A deals should improve post-acquisition performance more than cross-border deals (Moeller & Schlingemann 2005; Martynova et al. 2006). Academics have tried to explain differences in post-acquisition performance with cultural distances. Integration is always major challenge in acquisitions but it's likely to be harder in cross-border acquisitions because the firms are based in different countries that possibly have differing corporate cultures.

The results for the independent samples t-test are reported below in Table 8. In this test, the domestic post-acquisition performances were compared to their cross-border counterparts. None of the results are statistically significant, which means that the post-acquisition performance of Finnish acquiring companies is not affected by the location of the target company. These findings neither in line with the findings of Moeller & Schlingemann (2005) or the results of the event study. The event study showed a significant difference on market reaction between the announcements of

domestic and cross-border acquisition. Based on the results, investors seem to overestimate the advantages of acquiring a domestic company over a foreign one because companies announcing domestic M&A transactions experience significant positive short-term returns.

Table 8. Accounting Study Results - Domestic & Cross-border Acquisitions

Independent samples t-test						
		Mean	Standard deviation	N	t-stat	P-value
ROE	Domestic	-0,039	0,180	32	-0,500	0,620
	Cross-border	-0,021	0,152	86		
P/B	Domestic	0,044	1,179	33	-0,977	0,332
	Cross-border	0,292	1,379	86		
D/P	Domestic	0,021	0,033	29	0,430	0,669
	Cross-border	0,017	0,029	85		
CF/Sales	Domestic	-0,012	0,007	28	1,137	0,260
	Cross-border	-0,199	1,868	70		
CF/Assets	Domestic	0,012	0,062	34	0,790	0,432
	Cross-border	-0,006	0,102	90		

**= Statistically significant at 99% confidence level
 * = Statistically significant at 95% confidence level

Authors like Healy et al. (1992), Sharma & Ho (2002) and Powerll & Stark (2005) have concluded that the choice of payment method does not affect the performance of acquiring companies after the acquisition. The results from this study, which are shown in Table 9, are overall in line with the findings of mentioned authors. The effect of choice of payment on post-acquisition performance was tested with a one-way ANOVA model, but only the results for CF/Assets and CF/Sales -ratios are statistically significant. Based on the results, performance measured with CF/Sales declines no matter what method of payment is chosen. For cash deals the decline is almost nonexistent but for stock deals it is significant. This particular finding is line with the results Gosh (2001), who demonstrated that decline of cash flow margins is greater for stock financed transactions. The results are mostly similar based on the CF/Assets -ratio except that hybrid and cash deals cause a very small positive change in performance.

Table 9. Accounting Study Results – Method of Payment

Payment method - One-way ANOVA		Mean	Standard deviation	N	F-stat	P-value
ROE	Cash	-0,025	0,162	103	0,387	0,680
	Stock	-0,025	0,158	5		
	Hybrid	-0,069	0,128	11		
P/B	Cash	0,238	1,311	103	1,663	0,194
	Stock	-0,848	1,805	5		
	Hybrid	0,281	1,073	12		
D/P	Cash	0,270	0,028	98	2,802	0,065
	Stock	0,172	0,058	7		
	Hybrid	-0,099	0,021	10		
CF/Sales	Cash	-0,006**	0,067	89	11,350	0,000
	Stock	-1,935**	4,188	7		
	Hybrid	-0,034**	0,022	6		
CF/Assets	Cash	0,008**	0,054	106	13,205	0,000
	Stock	-0,161**	0,296	7		
	Hybrid	0,003**	0,053	12		

**= Statistically significant at 99% confidence level
* = Statistically significant at 95% confidence level

The event study results for method of payments presented earlier indicated that the stock market values hybrid deals more highly than cash and stock deals. Yet based on the accounting study results, majority of the performance measures indicate that the choice of payment method does not affect the long-term performance of Finnish acquiring companies. Only the cash flow based ratios indicate a statistically significant decline in performance for stock acquisitions.

The independent samples t-test results for industry-related and conglomerate transactions are presented in Table 10. As explained earlier, the transactions were divided to industry-related and conglomerate according to the acquirer's and target's SIC codes. None of the results are statistically significant, which means that the change in performance of acquiring firms is not affected by the industry relatedness of the target firm. These findings are contrary to most of prior studies, which have found positive correlation with post-acquisition performance increases and industry relatedness of the acquirer and the target. For example, Sing &

Montgomery (1987) have argued that if the acquirer and target are in the same industry, the potential synergy gains are much greater. This however, doesn't seem to be the case for this study's sample.

When comparing the accounting study results to the event study results, investors react more positively to the announcements of industry-related transactions. This could indicate that investors overestimate the possible synergy gains of industry-related transactions. Statistically however, industry relatedness does not affect the change in long-term performance.

Table 10. Accounting Study Results – Industry-related & Conglomerate Deals

Independent samples t-test						
		Mean	Standard deviation	N	t-stat	P-value
ROE	Industry-related	-0,032	0,156	77	-1,765	0,082
	Conglomerate	0,000	0,002	41		
P/B	Industry-related	0,213	1,250	77	0,079	0,937
	Conglomerate	0,191	1,478	41		
D/P	Industry-related	0,018	0,031	72	0,128	0,898
	Conglomerate	0,018	0,029	39		
CF/Sales	Industry-related	-0,012	1,430	28	-1,060	0,293
	Conglomerate	-0,199	0,068	70		
CF/Assets	Industry-related	-0,003	0,107	34	-0,344	0,732
	Conglomerate	0,002	0,062	90		

**= Statistically significant at 99% confidence level
 * = Statistically significant at 95% confidence level

Because only two of the components of all change model tests for deal characteristics were statistically significant, the hypothesis 5, according to which post-acquisition performance is impacted by deal characteristics, can be fully rejected. Deal characteristics don't have an impact on the long-term performance of Finnish acquirers.

6. CONCLUSIONS

The objective of this study was to examine the impact of mergers and acquisitions on market valuation and profitability of acquiring companies in the Finnish stock market. In addition, the aim was to find out whether the different deal characteristics like method of payment or industry relatedness had any effect on the performance as suggested by earlier literature. The time period of this study spanned from 2004 to 2012 and in total the sample consisted of 128 completed transaction. This study answered three research questions by first reviewing theories explaining M&A performance and results from prior studies and then combining the two of the most commonly used methodologies, accountings study and event study. The research questions answered were:

- *Do the announcements of mergers and acquisitions cause a market reaction on the acquirer's stock price?*
- *Does the performance of acquiring firms improve after acquisitions?*
- *Is the possible market reaction in line with the long-term performance of the acquirers?*

Mergers and acquisitions have been a very popular research theme for decades and the interest does not seem to be fading. Historically, the topic has been studied from a more neoclassical point of view but the increasing popularity of behavioral finance has brought its own mix to the existing pool of literature. For a topic that has received this much attention, the results from prior studies are puzzling. Most studies suggest that short-term wealth effects for acquiring company's shareholders are positive but very small. In contrast, most studies on long-term performance improvements find no change in performance. Prior studies have also focused on different characteristics of M&A transactions and their possible impacts on company performance.

The impact of mergers and acquisitions on long-term performance of Finnish companies was measured by comparing the annual industry adjusted performance three years prior and after the deal. By adjusting the performance with industry median performance, the difference in pre- and post-acquisition performance directly shows how the acquirer has performed on average compared to its industry

peers. Both change model and regression model were used to examine the statistical significance of the change in performance.

Based on the results obtained from the event study, there is a small positive market reaction on the announcement day of M&A transactions. This finding confirms the validity of the first two hypotheses. Positive market reaction clearly indicates that investors perceive acquisitions as value creating and not value eroding. There is also a statistically significant cumulative effect on the two days after the announcement. This cumulative effect is also observable in some of the deal characteristic tests. Based on the results semi-strong market efficiency does not seem to hold and hypothesis 3, according to which the information in the form of M&A announcement is absorbed very rapidly or even instantly and there will be no cumulative abnormal returns, is rejected.

On average, the performance of Finnish acquirers before acquisitions has been better than the median performance of their industry peers but the same does not hold for their post-acquisition performance. The change model results indicate that the change in company profitability is negative based on majority of the performance ratios employed. Only the results for ROE, CF/Assets and P/B -ratio are statistically significant.

The results from the regression model are mostly identical to those obtained from the change model. ROE, CF/Assets and D/P -ratio show a statistically significant decline in performance. However, the regression model might give biased results because the acquirers have outperformed their industry peers before acquisitions (Gosh 2001). In addition, the model fitness for D/P was very small which makes the result for this measure unreliable. Nevertheless, the fourth hypothesis, according to which mergers and acquisitions improve long-term performance of acquiring companies, is rejected since company performance does not improve but rather deteriorates after acquisitions.

Many academics have tried to explain the changes in short- and long-term performance with different deal characteristics. In this thesis, the impact of three different characteristics on performance were tested. For the short-term wealth effects, the results were clear. Investors clearly value different type of acquisitions differently. Hybrid and stock deals outperformed cash deals, domestic deals

outperformed cross-border deals and industry-related deals outperformed conglomerate deals. Only the results for the payment methods differ from what theories and prior studies would suggest. However, the impact of deal characteristics on long-term post-acquisition performance were non-significant in almost all cases. This indicates that the fifth hypothesis, according to which post-acquisition performance is impacted by deal characteristics, is rejected.

In summary, both the event study and accounting study results are in line with prior studies. The short-term wealth effects for Finnish acquirers are positive but small and the long-term performance does not improve after acquisitions. Even though some studies have found differences between M&A performance in different markets, the results from the Finnish market are mostly in line with earlier studies from other developed markets. There are some differences when comparing the results for deal characteristics and their impact on M&A performance. Yet, these differences are most likely due to the big differences in the sample sizes of different methods of payment.

When the share price reactions are compared to the post-acquisition performance changes, it is evident that investors were too optimistic on possible synergy gains. Finnish acquirers were not able to significantly improve their financial performance after acquisitions and when measured with ROE or CF/Assets, profitability deteriorates. While some of the performance measures showed no significant change, it does not necessarily mean that the acquisitions were value destroying. Instead, the investment just earned the return that was required, but not more.

The contrast between the event study and accounting study results demonstrate how difficult it is to measure and quantify the possible gains or losses of mergers and acquisitions. While event studies and accounting studies are the most commonly used methodologies, they both have weaknesses. This is also evident when looking at the constantly increasing literature on the topic. Authors like Haleblan et al. (2009) have argued that due to the weaknesses of both event studies and accounting studies, qualitative measurements should be incorporated in addition to the traditional methodologies.

Future research could extend this study in numerous ways. For instance, including additional deal characteristics like premiums paid, deal size and deal hostility could

yield interesting results and broaden the understanding of the possible impacts of deal characteristics on M&A performance. Dividing the industry-related acquisitions to horizontal and vertical could also yield extra insight. The use of SIC codes to define industries however makes this challenging and it would require a lot more work to go through each transaction.

Another interesting extension would be to study other Nordic countries and to find out whether their results differ from the Finnish one. The Swedish stock market would be particularly interesting because both the number of listed companies and the M&A activity are much higher there than in the other Nordic countries. Focusing on a certain industry, for example capital goods companies, either just in Finland or in the Nordics could also be a possible future research topic. Majority of the Nordic capital goods companies, like Kone, Cargotec and Atlas Copco, are global leaders in their business areas, and therefore, it would very interesting to find out whether acquisitions have influenced their success in becoming industry leading companies.

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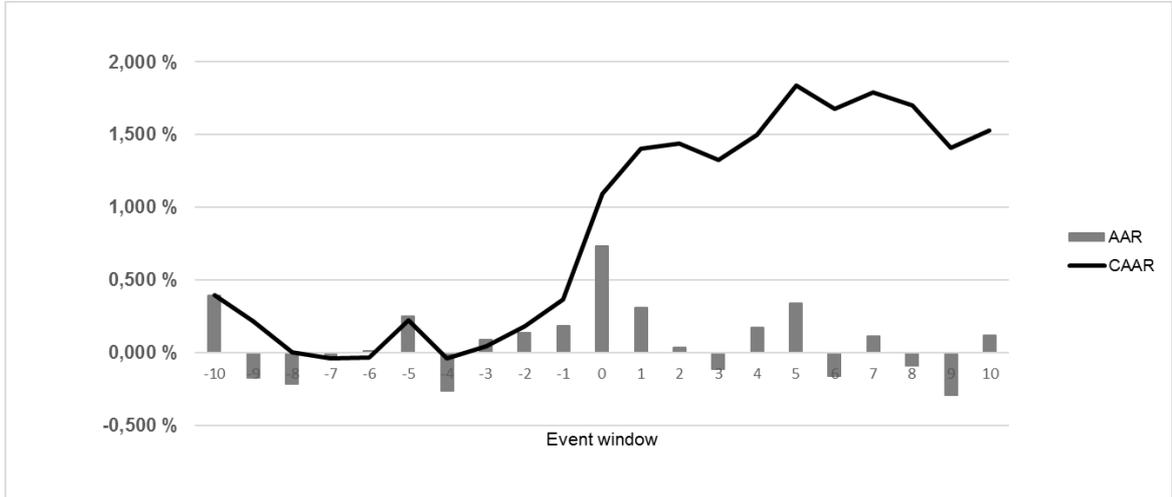
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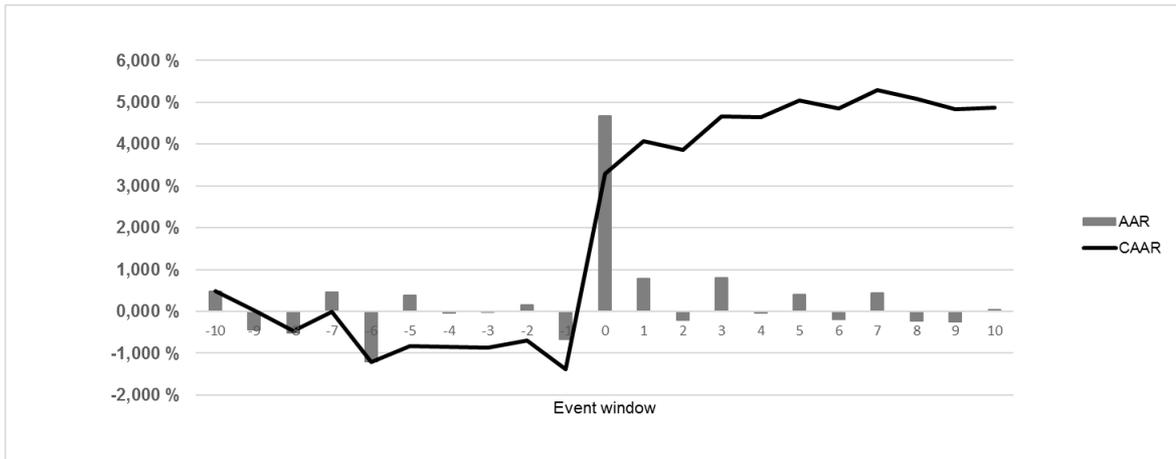
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APPENDICES

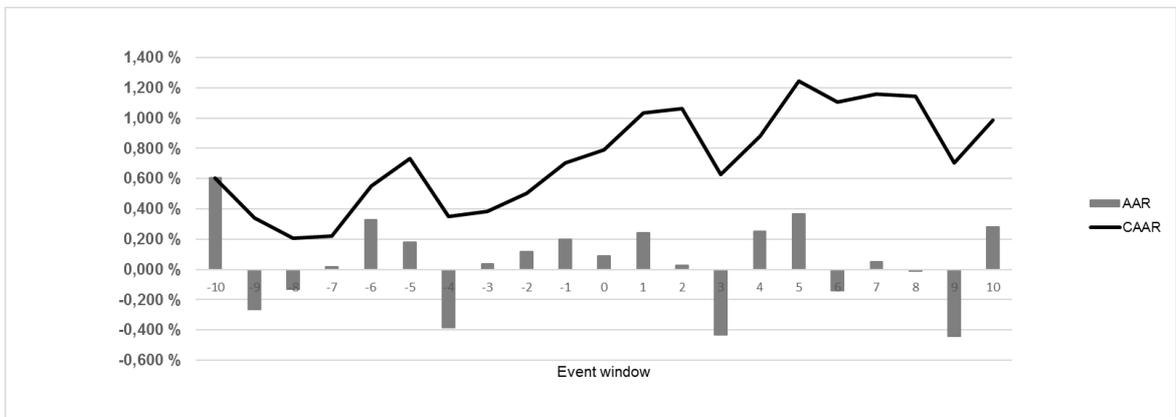
Appendix 1. Behavior of AARs and CAARs – Whole Sample



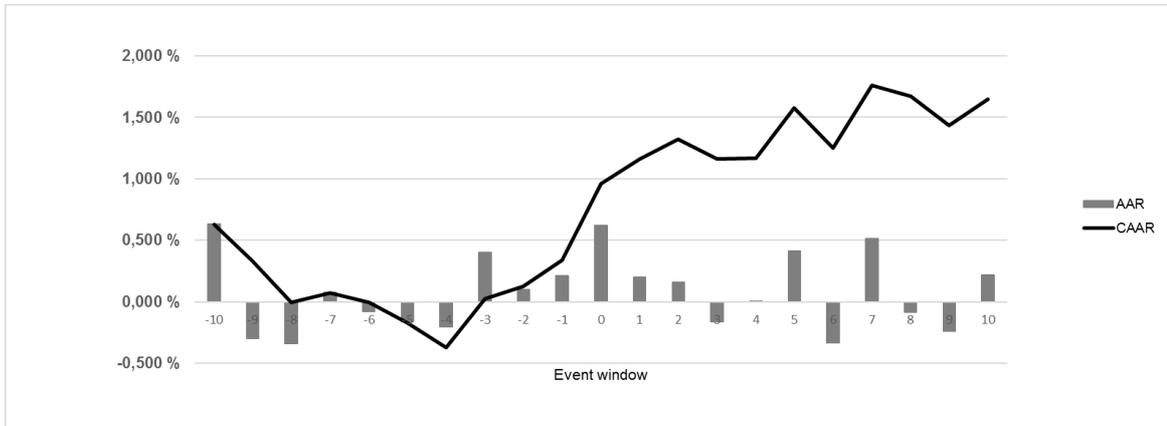
Appendix 2. Behavior of AARs and CAARs – Domestic Acquisitions



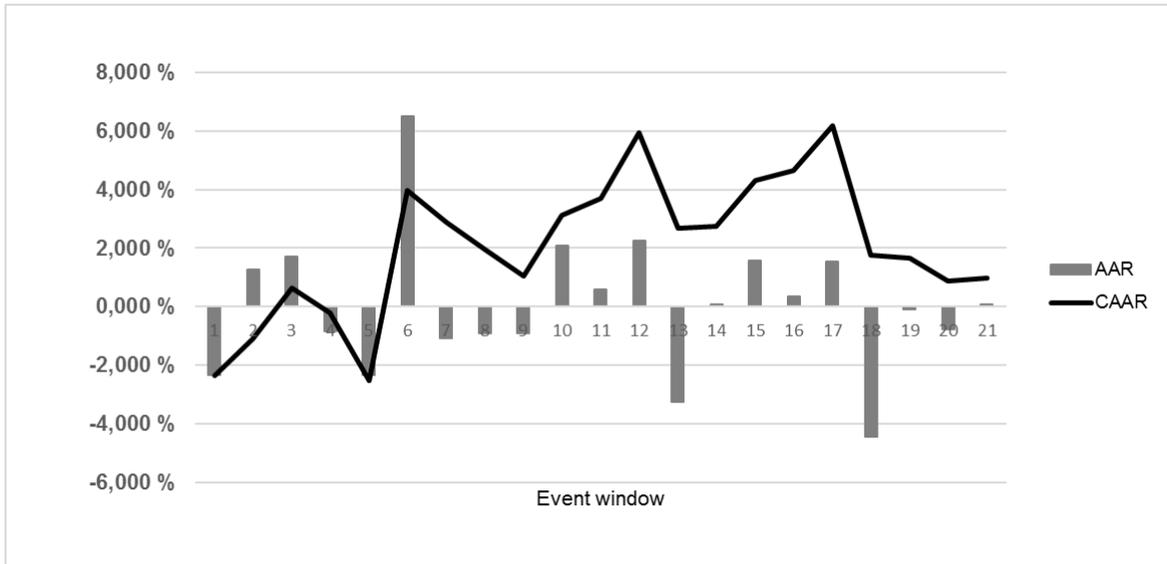
Appendix 3. Behavior of AARs and CAARs – Cross-border Acquisitions



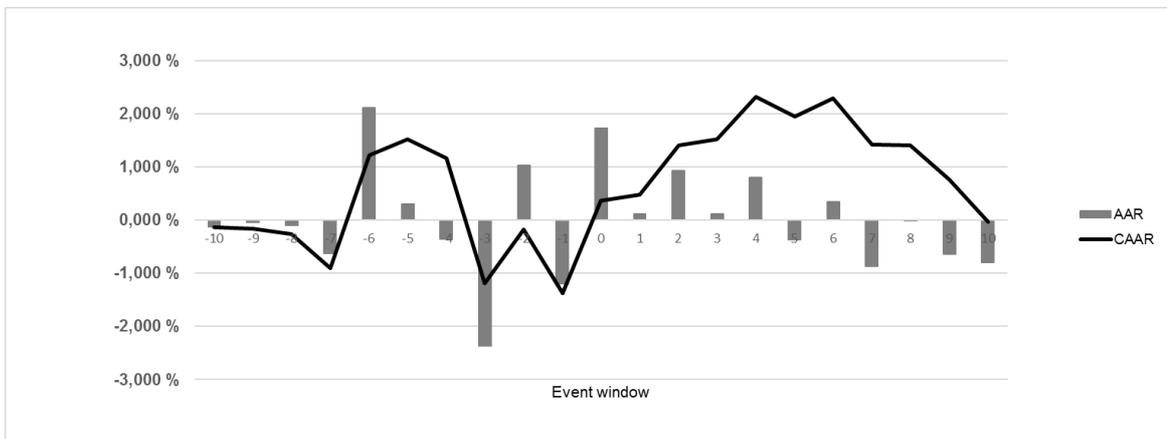
Appendix 4. Behavior of AARs and CAARs – Cash Deals



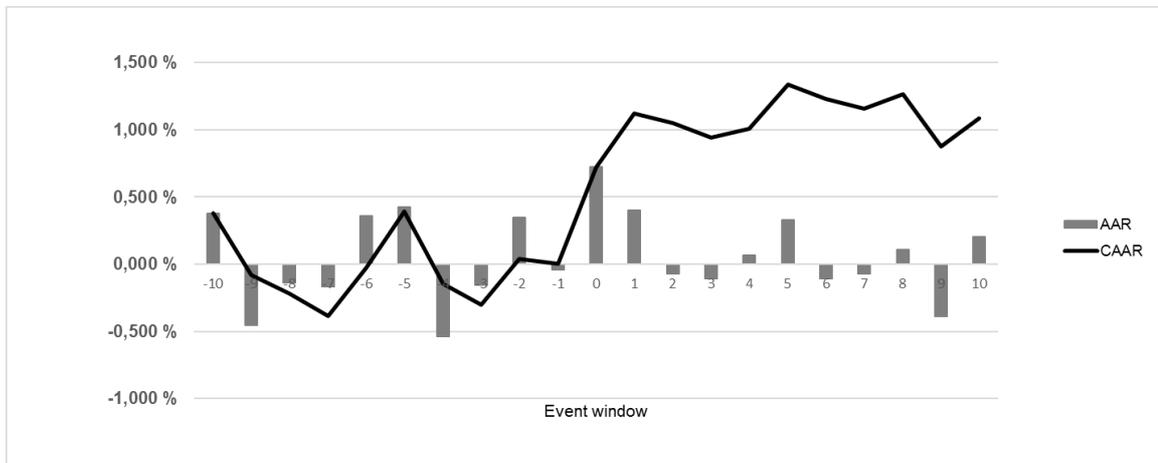
Appendix 5. Behavior of AARs and CAARs – Stock Deals



Appendix 6. Behavior of AARs and CAARs – Hybrid Deals



Appendix 7. Behavior of AARs and CAARs – Industry-related Deals



Appendix 8. Behavior of AARs and CAARs – Conglomerate Deals

