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PROFITABILITY OF MERGERS AND ACQUISITIONS IN FINLAND BEFORE AND DURING THE FINANCIAL CRISIS

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ABSTRACT

This research thesis concentrates on evaluating the short- and long-term profitability of Finnish companies M&A transactions. Examined full sample period includes the years from 2001 to 2010. Total period is also divided into two sub-periods in order to analyze the recent Financial Crisis' impact on the profitability of M&A transactions. General statement from previous studies is that mergers and acquisitions are profitable for acquired company's shareholders but the wealth impacts on the acquirer company's shareholders is however ambiguous. In addition the wealth effects seems to be more positive during the short-term but the positive effects seem to vanish after longer examined period. Previous studies have mainly concentrated on US and UK markets and there are not many studies conducted with Finnish data. The purpose of this study is to find out whether the mergers and acquisitions are profitable transactions for the shareholders of the acquiring company. Analysis is conducted for both, short- and long-terms and in addition the recent financial crisis is taken into account.

Short-term results are examined with general event study methodology and the statistical significance of abnormal returns is tested with t-test. Long-term results are examined with wealth relative method and finally the volatility adjusted mean components from wealth relatives are tested with t-test. General event study methodology is appropriate method for short-term studies but in order to avoid the problems which arise from long-term event studies, this research paper exploits the wealth relative method for long-term period analyze.

The results suggest that in the short-term Finnish companies' M&A transactions have even positive impact on shareholders' wealth. When the examined period is extended the wealth impact decrease and finally the M&A transactions seem to generate negative returns. In addition the results suggest slight improvement in profitability during the crisis period but any of the difference was not statistically significant.

KEYWORDS: mergers and acquisitions, wealth relative, event study, financial crisis

INTRODUCTION

During challenging times companies try to find out ways to improve their operations. Companies are forced to cut out their expenses, layoff work power and generally optimize their operations. Mergers and acquisitions are possible strategic movements during hard times and eventually these actions can be profitable and reasonable decisions in order to go through challenging market situation. General reasons to conduct mergers and acquisitions are related to efficiency-related aims which are meant to create economies of scale or other benefits from “synergies”. In addition there are motives which aim to achieve more market power compared to current situation. More market power is beneficial for company during the challenging times and it can ensure that company can create stable income despite recession. Finally there are also pure motives toward cost-effectiveness and benefits from diversification. Cost effectiveness can be reached when two entities are combined and operations of two old entities can be done effectively by one new entity. Diversification motives are narrowly related to market power issues, because diversification enables company to create incomes despite its old core business is not doing well. (Andrade, Mitchell & Stafford 2001.)

After 2008 when financial crisis really hit to the Europe and the whole World’s economy, it has been challenging to maintain and continue profitable business. Growth of the Gross Domestic Product (later GDP) has been slow, investments have decreased and unemployment rate has peaked in the European Union area (later EU). Development of GDP has been very moderate after 2007 and after strong turmoil period GDP of the EU has started to grow again. Finland as a part of the EU has suffered same problems and the growth of GPD has been even negative after 2007. Modest development of the economy has had impact on investments in Finland and investment activity has declined after 2007 (total value of investments around 39 billion in 2007 and 38 billion in 2012). (Eurostat 2014; Statistics Finland 2014.) At the same time when total value of investments has decreased in the EU and in Finland, total value of mergers and acquisitions has also declined. Before the crisis, year 2007 was very successful year in M&A operations and the total value of M&A transactions reached nearly 1800 billion euros in EU. That year was the best year since 1999 when total value of M&A transactions reached over 1800 billion euros. It is interesting to notice that M&A activity has peaked just before the crisis and that’s what happened in 2007 also. After 2007 total value of M&A transactions has decreased dramatically and in 2013 M&A transactions totaled just around 400 billion euros (Institute of mergers, acquisitions and alliances 2014.)

According to represented statistics it can be seen that investment activity and eagerness toward mergers and acquisitions have declined during the financial crisis. Campello, Graham & Harvey (2010) studied the financial crisis impact on companies' investment decisions and they found out that during the challenging and uncertain times companies often postpone their investments. They also noted that problems with external borrowing were one reason why companies had to reject their investments during crisis. Bloom, Bond & Reenen (2003) have also studied the investment decision making process and they found out that uncertainty of revenues has impact on investment decisions. These findings are aligned with represented statistics that during the crisis and uncertain time companies are more cautious to make significant investment decisions like mergers and acquisitions. Fortunately recent survey from European Central Bank (2014) reports that only small percentage of European companies have suffered turnover reduction in the beginning of 2014. European Central Bank report also states that availability of external financing has improved during 2014. These findings create positive sights for future merger and acquisition operations.

In addition with motives concerning firm performance and effectiveness there is also other important reason why companies should make investments. Investments can enable that firms perform well in the future also but all the investments are not acceptable from the point of view of finance theory. General theory, according to Modigliani & Miller (1958), states that companies should only make investments which create value for shareholders and maximize value creation of the company. This aspect of companies' investments is significant since mergers and acquisitions as investments should be operations which create value for shareholders.

Profitability and value creation of mergers and acquisitions has been the topic of many studies. Jensen (1988) studied the consequences of takeovers, which were conducted by USA companies during the period 1981-1984. Takeovers, mergers and acquisitions all are operations which change the corporate control and hence they have significant impact on related companies. According to Jensen (1988), shareholders of the target firm benefit from takeovers. Impact on acquiring-firm is however slightly opposite, because shareholders of the acquiring-firm earn only small or even zero returns. In the light of these findings it is at least ambiguous how beneficial mergers and acquisitions are for shareholders. However there are also contradictory findings in M&A studies which state that mergers and acquisitions are beneficial for both, shareholders of the target and acquiring companies. Barber & Lyon (1997) have studied value creation of these operations and they stated that results are strongly dependent on the methodology that is used to measure returns.

Although mergers and acquisitions have been popular topics of research, there are not many studies concerning Finnish companies and their mergers and acquisitions. Previous studies concerning Finnish companies' M&A transactions are related motives behind M&A transactions (Lehto 2006), innovations impacts on M&A operations (Lehto & Lehtoranta 2006) and legitimation strategies related to M&S transactions in Finnish Pulp and Paper Fiction (Vaara 2006). In addition there is at least one study related to profitability of Finnish companies' M&A transactions. Koskinen (2010) studied how Finnish companies performed in the long-run after they had taken part in mergers and acquisitions. Lack of the studies related to profitability of Finnish companies' M&A transactions is one of the primary reasons for doing this research.

During stable economic times companies have more liquidity and they are able to create cash surplus. On the other hand during recession or economic downturn sales decrease and it is harder for companies to create surplus. Good liquidity may have also some influence on investment decision that companies make, because during good times companies don't face so tough financial constraints. Vogt (1994) studied the relationship between cash flow and capital investment spending and he found out that there is some relationship between extra cash flows and unprofitable investment decisions. This would imply that when companies don't have extra cash flow they must think accurately how profitable investments they will conduct. These issues construct another motive for this study because it would be interesting to find out whether Finnish companies have done more profitable mergers and acquisitions during crisis than before.

1.1. Research problem

The primary purpose of this study is to find out whether the mergers & acquisitions of Finnish companies are profitable for shareholders or not. In order to get as comprehensive picture as possible, profitability is measured for both short- and long-term. Difference with previous studies, this research paper will use alternative method which is based on wealth relative method. Using of wealth relative method for analyzing mergers and acquisitions' returns should removes the possible bias problem of the right-skewed distribution, survivorship bias and problems of re-balancing.

Secondly, putting some interest on recent recession and crisis this study tries to find out whether there is difference in profitability of the Finnish companies M&A transactions before the crisis and during the crisis. Financial crisis is the background of many recent studies but the investment profitability and M&A transactions are not that popular yet. Motive behind this approach is that during the more stable times and times with extra cash flows companies may take part in investments which are not as profitable as possible.

There are already many studies concerning the profitability of mergers and acquisitions in the field on finance studies. Many of these studies however have been made with US, UK or with some other wide landscape data. Generally these studies have tried to find out the mergers and acquisitions' impact on shareholders wealth in short- or long-term. Using the database from for example US has some benefits compared to smaller databases and one example relates purely on methodology issues. General approach to measure M&A transactions' profitability in the long-term is to compare returns of mergers with some benchmark portfolio, which includes companies with similar characteristics but they have not taken part in mergers or acquisitions. This benchmark approach is not that easy to use with small data like Finnish stock exchange and probably that is the one reason why there are quite few studies concerning Finnish companies' transactions.

1.2. Research hypotheses

Profitability of mergers and acquisitions has been popular topic in finance research. Many studies have tried to find out whether mergers and acquisitions are wealth decreasing or increasing events and results have been quite diversified. According to previous studies from Carper (1990), Loderer & Martin (1992), Martynova, Oosting & Renneboog (2006), and Shantanu & Vijay (2009) mergers and acquisitions did not result any significant abnormal returns. On the other hand Corhay & Alireza (2000) and Kiymaz (2003) result that mergers and acquisitions generally have positive effect on shareholders wealth. However there are also opposite findings and for example Limmack (1991) found out that mergers and acquisitions are wealth decreasing operations for acquirers and wealth increasing operations for targets. These previous studies would imply that generally mergers and acquisitions are not wealth increasing neither wealth decreasing actions. One study from Jakobsen & Voetman (2003) has put some interest on used methodologies to measure abnormal returns from M&A transactions and first of all they found out that mergers and acquisitions did not result any significant negative or positive returns and secondly they pointed out that earlier findings which result significant abnormal returns may suffer from methodological bias.

In the light of these earlier results the first hypothesis of this paper is following:

H1: *Mergers and acquisitions did not create any significant abnormal returns for shareholders, not in short- and neither in the long-run.*

Second hypothesis tests the value creative effect of investments and its change during different economical periods. As stated earlier according to Modigliani & Miller (1958) investment decisions should lead to value creative activities. However many studies have stated that there is significant contradiction between management decisions and wealth effect for shareholders. At least Jensen (1986), Jensen (1988) and Vogt (1994) have noted that during extra free cash-flow, management is more eager to make investments and always these investments decisions are not value creative for shareholders. These findings create a background for second hypothesis. In addition recent findings from Campello, Giambona, Graham & Campbell (2011) and Campbello, Graham & Harvey (2010) have concluded that companies have been forced to postpone their investments during crisis and because of lack of finance. Conclusion from these studies is that during more stable times companies can make more investments but when companies have more free cash flow for making investments, results are not always value creative for stockholders. However the Modigliani & Miller's (1958) statement should be the base of every investment and hence the investments should always have wealth increasing impact on shareholders. Hence the second hypothesis is summarized following way:

H2: *There is no difference in profitability of mergers and acquisitions before and during the crisis.*

1.3. The organization of the research thesis

The purpose of this study is to finds out whether mergers and acquisitions of Finnish companies increase the wealth of firms' shareholders or not. In addition second goal is to solve whether there is difference in profitability of Finnish companies' M&A transactions before and during the crisis. Chapter 1 represents some statistics and evidence related to topic and also motivates the research problem and introduces the hypotheses. Previous literature related to topic is introduced in chapter 2. Chapter 3 goes through the general theories related to M&A transactions. Merger and acquisition process and the most critical factors of this process are introduced and analyzed in the chapter 4. Data and methodology issues are represented in Chapter 5. In chapter 6 empirical tests with represented data and methodology is conducted. Finally conclusions of the study are reported in the chapter 7.

2. PREVIOUS LITERATURE: PROFITABILITY OF MERGERS AND ACQUISITIONS

Previous literature concerning value creation of mergers and acquisitions is at least ambiguous. Results from previous studies vary between negative impacts to positive and some studies have reported the zero effect. The main motive behind this study is to find out whether the mergers and acquisitions of the Finnish companies had positive or negative impact on shareholders' wealth. Because investigation is made for both short- and long-term period, also the previous literature for both two time periods will be covered.

2.1. Short-term profitability

Anju (1990) has studied the value creation of mergers and acquisition and the possible performance differences between transactions of the related and unrelated companies. Data were collected from U.S. companies and the study was conducted by using general event-study method. Realized returns after announcement were compared with expected returns, which were estimated from market model. Expected returns were estimated by combining returns of both firms and then handling them like a one entity. So basically imagined portfolio of two companies was constructed and then expected returns for post-acquisition period were estimated. Study included 104 tender offers in which 51 were classified as unrelated transactions and 53 as related ones. As a measure of performance the study used synergy score and average cumulative abnormal return. Synergy score was calculated by comparing actual and expected values and abnormal and cumulative abnormal returns were calculated by comparing actual and expected returns of companies. According to results, mergers and acquisitions were value creative transactions. *Z*-statistics for both value measures were significant. Conclusions were that mergers and acquisitions had wealth increasing effect, there was no significant profitability difference between related and unrelated M&As, and synergistic gains and profitability were better in bigger transactions.

Limmack (1991) studied the wealth effects of mergers with UK company data. Investigated period was 1977-1986 and the final data set included 529 bidders and 552 targets. Method used was also event-study method and there were two event days, announcement day and the outcome day. Outcome day is the day when the deal is first time considered as accepted or abandoned. For wealth effect measurements the study uses three different measurements: market model developed by Fama; Fisher, Jensen and Roll, adjusted beta model and index model. Market model is a general model where alphas and betas are estimated from earlier security returns and the expected return is the sum of alpha and multiplier from beta and market return. Infrequent trading of certain securities lead in biased estimators of alpha and beta and hence Limmack decided to use the adjusted beta model also. The third method, Index Model, is a model which assumes that alphas are zero and betas are one for all securities. By using these methods for calculating the returns, conclusion is that during pre-merger period both bidder and target earn positive returns. Positive abnormal returns for target are aligned with other previous studies but positive abnormal return for bidder is surprising. Limmack has noted that positive abnormal returns in pre-merger period can be caused by two explanations: whether information about merger has leaked before announcement or the bidder has performed exceptionally well during the announcement. In contrast bidder firms earn negative abnormal returns and targets positive abnormal returns during the post-merger period. In addition Limmack has tested the wealth effects of mergers and in conclusion the wealth of bidder company's shareholders decreases at the same time when the wealth of target company's shareholder increases. Results indicate that at least mergers are not value reducing transactions but wealth transfers between parties is unbalanced.

Sudarsanam, Holl and Salami (1996) have also studied the wealth effects of mergers with UK data. The method they used was also event-study and the returns were estimated by using normal market model, the market model with a correction for thin trading and in addition market adjusted model in which alpha is considered to be zero and beta one respectively. The returns from these three different calculations were finally cumulated in cumulative average abnormal returns and the statistical significance of the results was tested with *t*-test. Totally their study included 429 takeover bids and the observations were from years 1980 to 1990. Main agenda with wealth effects was try to find out which factors influence most on the wealth creation. That is why the regression model of the study included different ownership and synergy variables. Conclusion from the study is that financial synergy seems to dominate operational synergy, combining companies with complementary fit in terms of liquidity slack and surplus investment opportunities is value creative for firms' shareholders, and when highly rated firm acquirers less highly rated firm, the acquiring firm's shareholders experience wealth loss and target firm's shareholders experience wealth gains. In addition large shareholdings decrease the returns of the shareholders of both companies. Finally equity offers seems to generate smaller wealth gains compared with cash or mixed payment methods.

Compared with above represented studies, study by Goergen (2004) has analyzed the shareholder wealth effects of European domestic and cross-border takeovers. His study is large-scale study which includes totally 187 mergers and acquisitions of European firms. Data was collected from years 1993 to 2000 and the requirement was that both, acquiring and acquired, companies must be European. From 187 transactions 118 were classified as domestic and 69 as cross-border. In addition data sample included just transactions which value were minimum USD 100 million. As a methodology Goergen has used the general event-study method. Betas for future expected returns are calculated by six different ways: market model, market model where estimation period is closer the event day, Datastream betas which were corrected for mean-reversion, betas corrected for mean-reversion and calculated by Merril Lynch method, betas corrected for mean-reversion using a Bayesian method where degree of adjustments depends of the sampling error of the beta, and Dimson beta which corrects thin trading bias of the betas. As a result from various tests Goergen states that selection of beta has no significant impact on results so he ended up to use Dimson betas which are corrected for thin trading bias. Finally realized returns were compared with estimated returns in order to get cumulative average abnormal returns of the firms. Significance of CAARs was tested by standard significance test. In conclusion Goergen states that target firms earned significant positive returns (9% during announcement and even 23% return over two month period). In contrast the returns for acquiring firms' shareholder were only 0.7%. Type of the transaction had also impact on profitability, because hostile takeovers were very profitable for targets but value decreasing for acquiring firms' shareholders. In addition method of payment seemed also to have impact on returns, because transactions paid by cash very more profitable than transactions which were paid by equity or mix of cash and equity. Final statement is that domestic transactions earned higher return than foreign. In the light of this study the expected conclusion, that takeovers are wealth increasing for targets but nearly zero profitable for acquirers, seems to be correct.

In the light of this study there is an interesting study by Knif and Pape (2014), which analyzes the short-term value creation for bidder company's shareholders in Finland. Their data observations are from period 2000-2009 and total amount of transactions that they have investigated is 249 takeover announcements. All the acquiring firms were Finnish companies. Study sample includes only transactions where the acquiring firm acquired over 50% of the target and the total value of the transaction must be over USD 10 million. USD 10 million value of the transaction seems to be generally used in M&A studies. In addition the major part of the target companies were privately owned. Methodology of the study is also the event-study methodology and betas for estimated returns were calculated by using three different methods: the market model, the adjusted market model, and the market model where betas were adjusted for mean-reversion. Aligned with previous studies the used beta estimation method had no impact on recognized results. In order to get a clear picture of value drivers Knif and Pape used different explanatory variables in their regression. Used variables were the size of the transaction, the origin of the target, the legal status of the target, the strategic scope of the transaction, and the mean of payment. Results show that the shareholders of the acquiring company earn significant and positive abnormal results during the announcement (1.1%). After widening the event-window returns reached about 2%. From 249 takeovers, 156 had positive results and smaller transactions yielded more than bigger ones. In addition domestic transactions yielded more than cross-border and transactions between unrelated firms performed better than transactions between related firms. As stated, these findings are interesting in the light of this study and possible explanation for positive abnormal returns can be an impact of the sixth merger wave which occurred during the investigation period.

2.2. Long-term profitability

Long-term wealth gains from mergers and acquisitions have been under the scope of many previous studies. Results of the previous studies vary a lot and the primary reason of the paper by Agrawal, Jaffe and Mandelker (1992) is to find out whether shareholders benefit from mergers and acquisitions in the long-run. Data of the study consist of 1164 transactions from period 1955-1987. All the target companies came from NYSE or AMEX exchanges. For examining the abnormal returns, two different methods are used in this study. The first method is benchmark portfolio model where merging companies are compared with their benchmark portfolio. Benchmark portfolios are constructed according to size and beta characteristics. Strength of this model is that the size matching is checked continuously in order to sustain the optimal fit between merging companies and benchmark portfolios and the betas are calculated for each merging company. The second method is called Returns Across Time and Securities (RATS) method and here the merging companies are also adjusted for size. Strength of this method is that the betas are checked monthly which removes bias possibilities. In addition the accumulated returns from these two models are calculated by using value weighted and equally weighted methods. Results from regressions show that long-term wealth gains are significantly negative for acquiring companies' shareholders. Returns are negative in all 1, 3, and 5 year periods. Positive returns were obtained only in 44% of the events and the difference between negative and positive returns is significant. In conclusion the shareholders of the acquiring companies suffer around 10% negative returns from mergers and acquisitions in the long-run. These results have faced also some criticism because stock returns tend to have mean-reverting characteristic. This might be a problem in return estimation but the constantly adjusting betas remove that problem.

Study by Loughran and Vihj (1997) has concentrated on shareholders' long-term benefits from corporate acquisitions. This study is interesting also in the light of this study because the aim of this study is to find out the mergers' and acquisitions' impact on shareholders' wealth for both, short- and long-term. Sample of the study includes all the mergers and acquisitions which occurred in NYSE, AMEX, and NASDAQ during the period 1970-1989. Only transactions which included American Depository Receipts (ADRs), Real Estate Investment Trusts (REITs) or closed-end funds were excluded from the data. In addition the transactions which included stocks which trading volume were less than three dollars per day, were excluded. Totally the sample included 947 transactions made by 639 firms. All the transactions were also categorized in three groups by method of payment: stock payment, cash payment, or some mix of these. In order to observe the abnormal results Loughran and Vihj used benchmark method. Included mergers and transactions were categorized by size and by book-to-market value. According to these values every merging firm get a matching firm which acts as a benchmark for abnormal returns. After matching firms were selected the regression for returns were run annually. Researchers used *F*-statistics in order to ensure the best possible matching characteristics between firms. Finally the returns of merging firms were calculated in the respect of matching firm and the cumulative average abnormal return for five year period was found out. In conclusion, on average acquirer's stock returns were positive and the return from hostile takeovers were greater compared with friendly ones. Also the transactions where cash was used as a method of payment result in greater wealth increase. Difference between cash transactions and equity transactions was significant. In the light of the results, the shareholders of the acquirer earn positive returns but the owners of target companies did not recognize as encouraging results. During the announcement period target firms' shareholders earned positive results but that wealth increase seemed to diminish during longer period. Results are encouraging for acquiring firms' shareholders but the benchmark method is the possible source of bias, because finding matching firm is not always evident.

Research of mergers and acquisitions has earlier concentrated much on U.S. markets and hence it is interesting to get research from other countries also. Study by Andre, Kooli and L’Her (2004) concentrates on Canadian market and the long-run performance of Canadian merging firms. Their study data include 267 Canadian companies’ M&As from period 1980-2000. All the transactions under the scope had transaction value over USD10 million. Major part of the transactions (92.5%) were classified as friendly ones. 44.5% of the transactions were paid by cash, 20.6% were paid by equity, and the rest were mixed payments. Almost one-third of the included transactions were cross-border ones and around 75% were transactions between related industries. The analyzed sample can be said to be quite comprehensive. For measuring the returns, researchers used calendar-time method which according to Fama’s suggestions is less subject to “the bad model problem”. This method allows researchers to examine the cross-correlations between the firms in the sample, and allows better statistical inference of returns. In order to find abnormal returns there are used two methods in the study: Fama and French three-factor-model and mean calendar-time abnormal returns-method. The alphas from these two methods are used in the examination of the long-term effects. Abnormal returns are recognized finally from the difference between merger companies and benchmark companies. The valid benchmark companies are found by size and book-to-market characteristics. In conclusion, the companies which merged during the examined period underperformed compared with benchmark companies in the long-run. In addition glamour (book-to-market is low) firms underperformed compared with value (book-to-market is high) firms. Also the transactions paid by equity proved to underperform compared with transactions paid by cash and the cross-border transactions seemed to be underperforming transactions.

Recent study from Koskinen (2010) concerns the long-term performance of Finnish companies’ mergers and acquisitions. The study is very interesting in the light of this study because the examined market and part of the methods are similar. Koskinen examined 117 Finnish firms’ acquisitions during the period of 1995-2006. Study is conducted by using event-study methodology and abnormal returns are observed from market model. As a conclusion study has found out that the shareholders of the merging Finnish companies suffer major wealth loss. Wealth losses were over 70% for multiple bidders and over 50% for single bidders. These wealth reductions are significant and even exceptionally high compared with other studies. One explanation for huge wealth loss is “peripheria” syndrome which is caused by thinly traded market like Finland. High variation in stock returns during the downturns is seemed to exist especially in thinly traded markets. In addition study has concluded that despite major part of the companies underperformed, the glamour firms underperformed more than value firms. Also the method of payment seemed to have impact on performance because equity transactions underperformed cash transactions and big acquirers did not underperform as poorly as small and median size firms.

3. MERGERS AND ACQUISITIONS: OVERVIEW

Mergers and acquisitions are corporate control transactions which often include also significant restructurings of organization. These transactions have huge impact on organizations and their stakeholders like managers, employees, suppliers, customers and even residents of surrounding communities. In general literature all the transactions which lead to the corporate control changes and restructurings of organization are spoken as mergers and acquisitions. However there is small difference in exact definitions. Mergers are transactions where two entities combine and after that they continue business by one entity. Acquisitions on the other hand are transactions where one entity could purchase another and they can continue business by one entity or the acquired company can be subsidiary of the acquirer. As said, in general both of these transactions are spoken together and their common nomination is mergers and acquisitions. (Jensen 1988.)

Depending on the target and the reason for transaction, mergers and acquisitions can be categorized at least in three main groups. First two categories are horizontal and vertical M&As and in the literature they are named as “traditional” M&A transactions. In horizontal transaction merger occurs between direct competitors and in contrast vertical transaction merger occurs between buyer-and-seller relationships. In finance theory some specific goals are linked to these different types of M&A transactions. Horizontal and vertical mergers are more likely expected to yield operating synergies such as economies of scale. The third category is called as conglomerate mergers. Product extension is one example from conglomerate merger. Product merger occurs without direct competition but functional or distributional relation can exist. In addition conglomerate merger could refer to transaction where two companies from different geographical regions combine. In conclusion conglomerate merger is a term for merger transactions when there is no significant connection between companies before the merger. Conglomerate mergers are often expected to yield some financial synergies like different price-earnings multiples or different financial leverage. (Melicher & Hempel 1971.)

Organizational restructurings like mergers and acquisitions have significant impact on corporate control also. M&A transactions have substantial impact on ownership structure and the way how ownership transfers between old and new owners can be one way to categorize these M&A transactions. In general, merger and acquisition transactions are either friendly or hostile and the way how and to whom the acquirer makes the offer defines which type particular transaction is. Friendly transaction occurs when acquirer negotiates first with incumbent management and after based on negotiations offer is approved by management and shareholders. In contrast hostile transaction occurs when acquirer makes the offer directly to shareholder of the target company, without negotiating the incumbent management. Previous studies have suggested that hostile transactions are not very attractive neither profitable because acquirer must often pay high premium to shareholders. In addition hostile takeovers include quite significant additional costs from high cost services of merchant banks and lawyers. On the other hand there are some questionable aspects in friendly takeovers too. Separation of ownership may create agency problem between management and shareholders. In takeover transactions management may act unfavorable way even if the transaction could be profitable for shareholders. Reason for this is that management does not want to lose its power and position which could happen by takeover. (Schnitzer 1996.)

Takeovers are huge transactions and just before the crisis really hit the economy, value of worldwide transactions reached nearly 5000 billion U.S. dollars (imaa 2014). Due to significant financial impact acquirers must think properly how they will finance coming transaction. In general, acquirers have two options for financing: equity or debt based. Martynova (2009) has studied the financing decision impact on the value creation of takeover. She states that financing decision is influenced by the bidder´s pecking order preferences, acquirer's growth sights, and acquirer's corporate government environment. Financing method is also strictly aligned with bidder's strategic preferences. According to Martynova's research, takeovers financed by debt outperform transactions financed by internally generated funds. Results of the Martynova's research are interesting also in the scope of this paper because during the upswing, firms have more cash flow surplus but the transactions financed by this surplus may not be as profitable compared with recession period when firm's may be forced to finance their transactions with more debt. Profitability differences of the takeovers between different economic cycles will be considered later in this paper.

3.1. Merger Waves

It is proved fact that mergers tend to occur in waves. Academic literature has approved at least five different merger waves during the last century. In addition the sixth merger wave started after dot.com bubble burst, around year 2001 and it peaked just before financial crisis really hit in year 2007. Takeover wave is recognized when number of transactions and value of transactions are significantly high. Earlier merger waves occurred in early 1900s, in 1920s, in 1960s, in 1980s and in 1990s. Every wave has some certain characteristics and the reason for start and end of every wave is kind unique. Every wave typically has started during some economic, political or regulatory changes. Interesting fact about merger waves is that first waves occurred almost only in U.S but the fifth merger wave in 1990s is considered as a first real international wave. (Martynova & Rennebook 2008.)

The first wave occurred in the beginning of 20^{th} century. Typical for that period were radical changes in technology, economic expansion and innovation in industrial processes, the introduction of new state legislation on corporations, and the development of trading in industrial stock in NYSE. The characteristic feature for this first wave was horizontal consolidation and monopolization. Monopolization and horizontal concentration increased merged firms' market power. The first wave ended around 1905 and the reason for the end was the crash of equity markets.

The Second merger wave took place between years 1910 and 1920. If it was typical characteristic for the first wave that firms aimed to form monopolies in contrast typical for second wave was that firms aimed to form oligopolies. Smaller companies which were left out from monopolies of the first wave formed oligopolies and by these actions they tried to achieve economies of scale and increase power to fight against dominant firms. Appropriate reasons for this oligopoly centered wave were that dominant firm did not try to expand more because the lack of capital and better enforcement of antimonopoly law. This second wave ended in the crash of stock market. (Martynova & Rennebook 2008.)

After the second wave it took quite many years before the next wave emerged. However the third wave took off in the 1950s and last until the end of 1960s. Important issues for the third wave were the tightening of the anti-trust regime in 1950. Certain characteristic for the third wave was a significant amount of conglomerate mergers. By conglomerates, firms aimed to achieve benefit from growth opportunities in new product markets unrelated to their core business. Conglomerate mergers enabled them to enhance value, reduce their earnings volatility and hedge from the imperfections in external capital markets. The oil crisis in the beginning of 1970s was the end of the third merger wave. (Martynova & Rennebook 2008.)

The fourth wave started around 1980 when stock market had recovered from recession. Important factors which had impact on this fourth wave were changes in anti-trust policy, the deregulation of financial services sector, the creation of new financial instruments and markets, as well as technological progress in the electronics industry. Significant issue for this fourth merger was a huge number of divestitures, hostile takeovers and going-private transactions. Motive behind these actions were inefficiency of conglomerates formed in the previous wave. The fourth merger wave faced its end also because of stock market crash. (Martynova & Rennebook 2008.)

In the beginning of 1990s took place fifth merger wave and it is called the first international wave. Compared to earlier waves the size of European takeover market was about as large as its US counterpart. In addition Asian takeover market started to grow during that fifth wave. Significant factors influencing on the fifth wave were increasing economic globalization, technological innovation, deregulation and privatization as well as the economic financial markets boom. Specific characteristic for this fifth wave was a huge number of cross-border transactions. Previously domestically-oriented firms expanded abroad in order to survive in tough international competition. The fifth wave ended also due to stock market crash in the beginning of 21^{st} century. (Martynova & Rennebook 2008.)

The latest merger wave started after stock markets recovered from dot.com bubble crash. Firms continued the globalization projects through mergers and acquisitions. Excess financing by debt and recovering stock markets supported this sixth wave. Unfortunately bloomed wave faced its end in 2007 when financial crisis hit to the economy. (Martynova & Rennebook 2008; Gugler, Mueller, Weichselbaumer & Yurtoglu 2012.)

3.2. M&A theories

Before running the regressions for the data and analyzing the results, the basic theories related to mergers and acquisitions must be covered. Because mergers and acquisitions are driven by different motives, also different theories must be analyzed in order to get a clear picture why companies merge. These theories help analyzing the results and with theoretical background it is easier to conclude why certain issues occur. For theoretical framework this study will use the same categorization as Weitzel (2011) has used in his paper. Weitzel has grouped M&A theories in two groups: value increasing theories and value decreasing theories. Theories which are grouped are efficiency theory, market power theory, corporate control theory, hubris theory, managerial discretion theory, entrenchment theory and empire building theory. First three are value increasing theories and the rest are value decreasing theories. These two categories and seven different theories will be presented next.

3.3. Value Increasing Theories

3.3.1. Efficiency theory

Motive for merger according to value increasing theories is that merger will be beneficial for both the acquirer and the acquired company. This is strictly aligned with basic idea behind finance theory that firm’s most important goal is to increase the value of its shareholders. Efficiency theory suggests that merger will increase company’s and its shareholders’ wealth through operative synergies. Main point in efficiency is that combination of two entities can perform more efficiently because for example the administration of the new entity can be handled by one entity’s workforce. In general the idea is that one plus one is more than two in the case of synergies of efficient. (Weitzel 2011.) Efficiency theory also supports the idea that poorly working firm led by poor management is very likely to be purchased and hence the efficiency of old firm will be improved through merger and by new owner (Scherer 1988).

Because mergers and acquisitions are multidimensional transactions, source of wealth creation is not always easy to find out. Expected efficiency increase of the combined entity is one very likely reason for value increase but alternative suggestions are for example increased power through monopoly power and even market mispricing. These mentioned aspects are studied by Banerjee & Eckard (1998) and they concluded that expected efficiency related outcomes were the primary source of value creation after merger. They rejected the monopoly power alternative because they did not find any “free-rider” reaction which is typical in monopoly behavior. They neither found any support for market mispricing alternative. Supporting evidence for efficiency theory can be found from study by Avkiran (1999). According to their study inefficient banks were more likely to become merged. Their conclusions support the theory that efficiency increase is the main motive for merger. In addition studies by Devos, Kadapakkam & Krishnamurthy (2009) and Mukherjee, Kiymaz & Baker (2004) support the efficiency related theory. Primary source of effectivity according to these studies is cost cuttings. Savings of expenditures are considered more important source of effectivity than even increased revenues.

3.3.2. Market Power Theory

Market power theory is another explanation why mergers increase shareholders' and other stakeholders' value. Primary target of the benefits are however shareholders. If efficiency theory suggested that wealth increases by more cost effective organization, market power theory suggests that wealth increase comes from higher prices. Higher prices are wealth transfers from customers and it is possible because increased market power enables firms to ask higher prices. Wealth link in market power theory is also synergies and these synergies are results from increased market power. (Weitzel 2011.)

Horizontal mergers and acquisitions are proved to increase market concentration at least in some level. In the light of market power theory, concentration of the market leads to higher prices and hence the increased market power is the primary source of wealth gains. Market power gains and benefits from more concentrated markets get support from the study by Prager (1992). Prager investigated railroad industry in the U.S. and his conclusions support market power theory but diversification and antitrust enforcements have impact on wealth gains. Empirical support for market power theory and the significant role of market concentration can be found also from study by Kim and Singal (1993). Their study investigated mergers' effects in airline industry and according to their findings mergers had positive impact on shareholders wealth and the primary source of wealth gains was higher prices. Interesting finding was also that poorly performing firms ask lower prices but after merger they rose their fares and it helped them to perform more profitable. That is quite genuine but it supports the theory that mergers lead to market power and it enables asking of higher prices.

In contrast with horizontal mergers, market power theory can be applied with vertical mergers also. According to empirical evidence market power theory explains the mergers and acquisitions when target company is operating in relatively competitive markets. On the other hand firms already operating in highly concentrated industries do not have significant incentives to take part in mergers and acquisitions. In conclusion the concentrated market position is one strategic goal of firms and mergers are considered as an appropriate alternative for achieve it. (Chatterjee 1991).

Market power hypothesis seems to be strongly related to the size of the acquirer, because empirical evidences state for example that big banks which acquire, achieve more market power. Conclusion is that the larger mergers result in higher interest rates. Increased market power enables banks to ask higher interest rates similar to increased market power enables firms from other industries ask higher prices (Sapienza 2002). Significance of size of the acquiring firm is considered also in the study from Chatterjee (1991) and the conclusion is that bigger acquirer results in bigger gains in market power. In addition Chatterjee however states that market power theory and efficient theory must be considered simultaneously sometimes and motives must be investigated case by case.

3.3.3. Corporate Control Theory

The third theory in the group of value increasing theories is corporate control theory. According to this theory the management's primary task is to run the firm so that the wealth of shareholders will be maximized. If management and company underperform there will always be eager firms to purchase this underperforming firm. In a result of merger this poorly operating management will be replaced and firm will start maximize shareholders' wealth again. Corporate control theory includes some kind of circular effect where new management will maximize firm's profit until there emerge new firm and management which is able to earn even higher profits with firm's assets. Corporate control theory is slightly related to efficient theory but significant differences arise at least in two issues. First, value increasing is not a result of combined assets of two firms but the acquirer firm's management and underutilized assets of acquired firm. Second, corporate control theory often includes hostile takeovers because incumbent management is likely to resist the takeover. Typically bidders in these occasions are private investors or corporate riders which will bring in more sufficient management teams. In conclusion shareholders' wealth is increased by net gains through managerial synergies. (Weitzel 2011.)

Market power theory has been criticized by many authors and lawyers that mergers are harmful for society and customers because of risen prices. In contrast with this approach Manne (1965) has concluded that merger markets are important part of the markets because profitable assets of the poorly managed organizations must be fully utilized and here markets for mergers are important. From economical point well-functioning firms are beneficial for the whole society. However if organization's assets are not utilized fully because of poor management, the firm does not increase the wealth in the society. According to corporate control theory well-functioning merger markets result in wealth increase of the shareholders and the whole society.

Supporting evidence for corporate control theory is also suggested by study of Jensen and Ruback (1983). According to their findings mergers increase the wealth of shareholders. They state that previous studies reject the hypotheses that increased market power is not the source of wealth gains. Their conclusion is somehow combining result of better performing management and increased efficient. According to their study the source of wealth increase is not explicitly the new management or cost effectiveness but the combination where competent management enables the firm to be profitable and efficient in the future.

3.4. Value Decreasing Theories

3.4.1. Theory of Managerial Hubris

Theory of managerial hubris suggests that mergers result in value decrease of shareholders and the primary reason is bad bids made by acquirer's management. In hubris theory, management of the acquirer suffers from bounded rationality and they end up bid too high price for target firm. Result for the company and the shareholders are net losses through overpaying. Overpaying often leads firms in the situation which is called the "winners curse". "Winners curse" is a phenomenon which often happens in auction situations and during the incomplete information. Generally average of the bids is the best estimation of right value but because winning bid must be higher than average it results in overpaying. (Weitzel 2011.)

Background of managerial hubris theory is that valuation of the target company made by bidder's management is incorrect. Bidder's management thinks that merger will lead a synergy efficiencies and ends up bid too high price for target firm (Roll 1986). According to hubris theory there are no gains from takeovers and takeovers occur just because acquirer's management has been too overconfident and made incorrect valuation. The result is negative or zero wealth gains for stockholders. (Berkovitch 1993.)

The study from Malmendier (2005) discuss about managerial hubris related problems and the success of firm's investments. According to Malmendier's study, managers often overestimate the returns from their investment projects and hence they suffer from overconfidence problem. Overconfidence is result from three main factors: the illusion of control, a high degree of commitment to good outcomes and abstract reference points that make it hard to compare various individuals' performance. In the light of this study and later discussion, Malmendier has found that managers overinvest during the extra free cash-flow but in contrast they cut investments when they would need external funds and debt. Because hubris theory suggests that merger is the result of overconfidence and misevaluation, the paper by Ming (2006) offers interesting result for this phenomenon. According to Ming's study, main reason for mergers is the aggregate misevaluation of investors. Hence it could be concluded that in the light of managerial hubris, managers make more often misevaluated than correct decisions.

Hayward & Hambrick (1997) have also studied the managerial hubris theory and they have also listed the problem of management overconfidence. However their study concludes that managerial hubris is the result of many simultaneously existing factors. According to their results, managerial hubris is the result of the following factors: recent organizational success, media praise for the CEO and weak board vigilance.

Rau & Vermaelen (1998) have found out that there is a profitability difference of mergers between glamour (low book-to-market ratio) and value (high book-to-market ratio) firms. In addition with these findings they concluded that management of the acquirer and the market over extrapolate the post-performance of the company and hence the merger results in value decrease. Markets also show some pessimism towards value firms' management. Hence if management of value firms decides to conduct a merger the markets indicates its distrust and the result is wealth decrease of shareholders.

3.4.2. Managerial Discretion

One alternative of value decreasing theory is a theory which is called managerial discretion by Jensen (1986). According to this theory it is not management's overconfidence but rather the extra cash flow which drives the unprofitable mergers and acquisitions. Jensen's theory constitutes from managerial discretion and free cash flow. Its core idea is that conflicts of interests between shareholders and management result very often in value decreasing takeover decisions. Management with the excess of cash flow is more prone to make takeovers and just few of these transactions are value increasing for shareholders. According to this theory management with much free cash flow compared to management with free cash flow constrains and a high debt financing makes more and faster investing decisions which seldom result in profitable transactions.

Conflicting interests and agency problems are named also the main reason for bad takeover decisions in the paper by Martynova and Rennebook (2009). Booming financial markets or industrial shocks create excessive cash funds for companies. This excessive cash flow results in managerial discretion where self-interested managers are prone to make empire building investment decisions rather than thinking the wealth increase of shareholders. Extra cash flow makes it possible to take part in unprofitable acquisitions when profitable ones are already finished. Empirical studies have shown that bidders with significant cash flows result in poor post-acquisition profitability. Paper by Marris (1963) investigates the growth of the company and management's incentives. According to his paper managers are very eager to find out growth supporting investments like mergers and acquisitions despite better option would be pay out extra money to shareholders. This explanation is aligned with the core idea from managerial discretion theory.

Noticeable difference between managerial hubris theory and managerial discretion is that according to managerial discretion management makes bad decisions because they are less challenged. Surplus of free cash flow does not require managers to pay huge attention in their decisions compared with companies with lack of free cash flow surplus (Rau & Vermaelen 1998). Successful companies also suffer from management heroistic problem where previously competent managers are expected to make good decisions in the future also. This problem is partly related in corporate governance issues also (Hayward & Hambrick 1997).

Managers' self-interested motives are much researched topic in finance and it is proved that these motives play role for example in investment decisions. Empirical studies have found connection between bidder's returns and managements' ownership. Results prove that the bigger stake management has in company, the higher are the returns from acquisitions and opposite. These findings are aligned with the theory that management evaluates their investment decisions more careful when their own incentives are aligned with company. (Weitzel 2011.)

3.4.3. Managerial Entrenchment

According to managerial entrenchment theory, firms merger because taking part in mergers and acquisitions protect their position in the company. This motive behind the mergers does not lead to value maximization of the firm but the increased individual value of the manager. Result is that replacement of the management will be costly for the shareholders and in addition value will be decreased because free resources will be invested in manager-specific assets rather than shareholder value-maximizing assets.

Firms and shareholders suffer value decrease because of agency cost and differentiated interest. Result is value decrease due to poor investments which do not maximize firm's value but reinforce manager's own position. (Weitzel 2011.)

Investments in long-term assets and other long-term investments like mergers and acquisitions are often transactions which most increase the firm value in the long-run. Managerial entrenchment has a contradiction with this idea because managers are involuntary to make significant investment decisions because they fear failure and possible dismissal. Chakraborty & Sheikh (2010) has investigated the antitakeover amendments impact on investment activity. According to their findings managers avoid to make huge investments if their position is in danger. In contrast if there are no antitakeover amendments, managers are more eager to find profitable investments and hence they aim to maximize shareholders' and firm's value. In conclusion active and well-functioning takeover- and CEO-markets can enable value increasing incentives of management. Aligned findings related to management's reluctance to take part in investments when managerial entrenchment exists, is documented in the study by Chakraborty, Rzakhanov & Sheikh (2014). Their study concerned management willingness to investment in innovation when antitakeover provisions protected their position. In addition also the study by Subramaniam (2001) provides evidence that managerial entrenchment creates a conflict of interests between management and shareholders. Managerial entrenchment makes management more unwilling toward investments and hence the result is shareholders wealth decrease.

3.4.4. Theory of empire building

Theory of empire building includes also conflict of interests and agency costs between management and shareholders. According to this theory management is motivated to invest in the growth of the firm (revenues or assets) despite the required rate of return is not met. Problem rise again from agency based issues and the source of shareholder wealth decrease are the acquisitions which do not maximize the shareholders' and firm's value but grow just the size of the firm. This kind of activity services only the goals of the management. (Weitzel 2011.)

Supporting evidence is provided the paper by Marris (1963). According to his findings managers are eager to increase the growth of the firm despite the expected profitability from all the investments does not full the required rate of return. This kind of action leads to wealth decrease of shareholders. Management's empire building incentives are linked to corporate control problem because when managers are not monitored by shareholders they have power to do self-maximizing investments which do not support the wealth maximization of shareholders. Managers pursuit just aggressive growth via mergers and acquisitions despite their results are value destroying (Hope & Thomas 2008).

4. MERGER AND ACQUISITION PROCESS

Mergers and acquisitions are significant means for expand companies' operations into domestic or international markets. Corporate reconstructing operations enable firms to expand their operations within same industry (horizontal transactions), to the next level of business (vertical transactions) and even into new business areas (conglomerate transactions). Expanding business through mergers and acquisitions is viable alternative compared with organic growth operations. Primary reason behind these transactions is gaining of synergy benefits. (Berkovitch 1993.)

Corporate reconstructing transactions have undoubtedly significant impact on firms' strategic, monetary and social issues and that's why these transactions should be evaluated, prepared and implemented properly. Previous literature concerning success of these transactions is not however that encouraging, because many studies have resulted in underperformance and failure of the M&A transactions. Due to multifactor characteristic of mergers and acquisitions it is important to evaluate which issues may lead to underperforming and failure. The connections between different stages of these transactions must be evaluated in order to get a clear picture why mergers and acquisitions failure. (Gomes, Angwin, Weber & Tarba 2013.)

During the next subchapters the critical issues related in success and failure of M&As will be discussed. In addition the important connections between these critical points will be highlighted. In order to get a clear framework for this analysis, the framework by Gomes et.al (2013) will be used. In their study they discuss about these critical issues and connections between them. They have divided mergers and acquisitions processes in two main stages: pre-merger phase-critical success factors and post-merger phase-critical success factors. Pre-merger factors include the following phases: choice and evaluation of the strategic partner, paying the right price, size mismatches and organization, overall strategy and accumulated experience on M&A, courtship, communication before merger, and future compensation policy. Post-merger factors in contrast are: integration strategies, post-acquisition leadership, speed of implementation, post-merger integration team and disregard of day-to-day business activities, communication during implementation, and managing corporate and national cultural differences.

4.1. Premerger phase-critical success factors

4.1.1. Choice and evaluation of the strategic partner

After the firm has evaluated the need for merger and acquisition expanding it must investigate the potential target properly. Target company's existing strengths and weaknesses must be analyzed well. Potential problems can arise from issues such quality of the target firm's management, cultural differences and human resource related issues like top management turnover. In order to achieve successful combination, consolidating companies should have common organizational and strategic constructs. (Gomes et.al. 2013.) Study by Weber (1996) is aligned with these statements. According to Weber's study, acquiring firms which manage to control the cultural problems and manage to take care of possible concerns arising from cultural factors are successful in mergers and acquisitions. Paying attention on cultural fit with acquired company is important because in the worst case cultural contradictions can have destructive effects. Combining firms with cultural similarities are likely to reach outperforming results compared with companies with disparate cultures. In addition study by Wang & Zajac (2007) has investigated the factors which affect how well combining firms fit together. Their starting point is also that firms decide to combine because they share similar strategic goals. They states also that cultural issues, target company's capabilities and environmental uncertainty are remarkable factors affecting on eagerness to combine with another company. In addition with previously listed issues the resource similarity and complementarity, combined rational capabilities and partner-specific knowledge are crucial factors which must be evaluated properly before deciding the merger target.

Due diligence is the process where all the earlier presented risks and possible problems will be evaluated. Due diligence is a comprehensive analysis of possible target and especially the fit and risks related to target must be critically analyzed in due diligence process. Process starts before the final target company is even decided. Motivation for due diligence rises from the acquisition decision and the motivation toward acquisition must be well named before finding the target company. (Harvey & Lusch 1998.)

When motive towards acquisition is clear it is easier to start analyze potential targets. Due diligence process should start with the industry analysis. Industry assessment should provide inputs how to compare companies in industry and how attractive the potential industry really is. Industry assessment must include overview about current market situation. For example current situation with rivalries, suppliers and customers must be analyzed. In addition industry assessment must provide some support for future also. Important issues are for example the future success of certain industry and threat of new entrants. Without deep understanding of these factors, merger could turn out be very bad decision in later investigation. After analyzing all the potential industries where company may expand, they must analyze the potential targets. (Harvey & Lusch 1998.)

Analysis should be conducted by dividing potential targets into homogenous groups. Categorization can be made by size, market share, market(s) served, strategic positioning and products served. The classification should give some information which are potential successors and which one are likely losers in the future. Due diligence should provide so much information and knowledge that during the negotiations acquirer company is always up to date with current situation. (Harvey & Lusch 1998.)

Third important thing in due diligence is to evaluate the potential fit. Fit relates the earlier mentioned things like cultural and strategic issues but it is also more. Fit includes also the comparing of the sizes of two companies, how are the market positions of each company and even customer perceptions of the companies. (Harvey & Lusch 1998.)

After the target company is selected the due diligence process must continue. Due diligence must provide the most detailed information about target. Five crucial issues must be involved in due diligence after the target company is selected. Due diligence must include historical data on various functional components of the target company, deep analysis of the quality of each functional area, analysis of key personnel in each functional area, evaluation of how to modify existing systems so that they perform well in the future and that they will be integrated properly, and lastly evaluation of certain opportunities so that they will be utilized effectively in the future. Following this procedure acquiring firms can significantly increase their success probability in merges. (Harvey & Lusch 1998.)

4.1.2. Pay the Right Price

The final purchase price of the target has a significant role in how successful the corporate control transaction finally is. Bidding the right price is always challenging task because of asymmetric information between firms. Information asymmetry exist always at least in some level even tough due diligence process is conducted properly. Previous research of M&As have stated that very often too high price paid of target is the major reason for transaction failure. If acquiring company pays too much of the target, the required return is sometimes very hard to achieve and the result is value decrease by transaction. (Gomes et.al. 2013.)

Acquiring companies make different kind of valuations and analysis in order to avoid the problem of overpaying. Generally companies use consultants help in the whole takeover process and in valuations. Aim of the valuation is to find out the reasonable value of the target company and how much the acquiring one should pay in order the deal will be satisfactory and successful for both parties. Analysts and consultants which help companies in merger process have many different tools for valuation but according to study by Demirakos, Strong & Walker (2004) the most used methods in valuation by experts are comparatives of different indicators and some alternative of discounted cash flow model (DCF). In addition with these methods there are also other popular valuation methods like dividend based models and residual earnings based models. According to survey by Bailey, Brown, Potter and Wells (2008) the residual based model gave the most accurate approximation of the value.

Above presented valuation methods are based in available financial data and all other possible knowledge that is available in market. As mentioned earlier there still always exist asymmetric information problem in some level and that can cause excess costs for acquiring company. Shortage of all the crucial information is often the reason for too high bidding prices and as Gomes et.al. (2013) have stated, too high premiums are the most significant source of takeover failure. Study by Skaife and Wangerin (2013) concerns the problems that low quality of financial reporting can create. Firstly they have found that low quality of financial reporting of the target company leads in higher premiums paid in acquisitions. This is aligned with study by Gomes et.al. (2013). Secondly they have stated that low quality of reporting is the major source of renegotiations or even termination of the deal. According to their findings the termination rate of the deals is about 9 percent higher in situations where the target company’s reporting quality is poor. Thirdly they have found that companies which have problems with low quality reporting more often use restated financial statements. Restated financial statements are not as transparent as official ones and again that increases the information asymmetry. In the light of these conclusions it can be stated that despite the firms use the consultation of experts and even though they use the most sophisticated methods in valuation, finally the valuation and finding the right bidding price is someway more rule of thumb than the real fact.

Purchase of the target can be made by many ways. Transaction can be made by share payment, payment by cash or some mix of those. Purchase process can also be classified as hostile or friendly takeover. Empirical findings states that the type of payment and the characteristic of the transaction have impact on merger's success. Study by Tuch and O'Sullivan (2007) concludes that hostile takeovers, deals paid by cash and the deals which occur in the same industry often lead in positive (or at least not as negative) result. Hostile takeovers appear to have important governance role in transactions and they seem to lead in deals with companies that own greater wealth potential. However hostile takeovers paid by equity seem to lead in worse results. Probable explanation is that investors estimate that acquirer's equity is overvalued before transaction.

4.1.3. Size Mismatches and Organization

Previous studies discussing about size and organizational similarities have found that size of the combining organizations and the organizational structure and industry type have impact on the success of the takeover process. Results from previous studies state that mergers and acquisitions where acquirer is relatively bigger than the target result in more poor post-acquisition performance. In contrast an acquisition where bidding company is smaller than target can result in better performance than average. Generally it seems to be trend that smaller firms perform better in mergers and acquisitions. Support for this statement can be found from study by Moeller & Schlingemann (2004). According to their study, smaller firms perform better in mergers and acquisitions compared with bigger ones. Abnormal returns from small firms' announcements exceed the abnormal returns from big firms' announcements by 2.24 percentage points. Their conclusion is that no matter what, bigger firms suffer wealth loss almost every time they announce an acquisition. One reliable explanation for bigger firms' wealth loss is that they offer higher acquisition premiums than smaller ones. Wealth loss in larger deals can also be result from managerial attention. Deals which values are relatively small compared with acquirer's market value can attract too much managers' attention and then the other functions of the acquirer will suffer. In contrast deals which are relatively big in relation with acquirer can however raise political in-fighting concerns (Gomes et.al. 2013).

Empirical studies support the view that the best result will be achieved when both combining firms are balanced and the relatedness of organizations and industries is favorable. Study by Ahuja and Katila (2001) has concluded that larger absolute size and smaller relative size of the transaction leads to superior post-acquisition performance. In addition they have stated that relatedness in knowledge base is also key factor for conducting successful acquisition. Conclusions from paper by Tuch and O'Sullivan (2007) are aligned with earlier findings. According to their study the industrial relatedness is positively affected on success of acquisition. In contrast conglomerate mergers and acquisitions seem to result more often in negative returns. Similar findings can be found also from paper by Finkelstein and Haleblian (2002). Their study suggests that similarity between acquirer and target increases the likelihood of positive result from merger. In contrast dissimilarities between merging companies increases the possibility of negative result.

4.1.4. Overall Strategy and Accumulated Experience on M&A

Previous academic research of overall strategy and accumulated experience on M&A has stated that firms with more experience from mergers and acquisitions perform better with these transactions.

General explanation from previous research is that companies may fail in mergers and acquisitions because they lack of continuous and accumulated experience of mergers and acquisitions. It is stated that companies with more experience and which follow continuous learning approach tend to be more successful in these transactions. (Gomes et.al. 2013). Study by Haleblian (2006) is aligned with these assumptions. His study concerns the acquisitions experience on acquisition performance and the main findings in his paper are that experience from previous mergers and acquisitions is important and in addition actively maintained and updated feedback from these previous transactions impact on transactions' performance. He also states that positive performance from earlier M&As had positive influence on future acquisition activity. The bigger the positive image and view from earlier mergers was, bigger was its impact on subsequent activity.

However some studies related to strategy and experience suggests that firms can learn and gain knowledge even without taking part in these transactions by themselves. Companies are able to learn by studying other companies' operations and by means of this method they can become well prepared for takeover transactions even without own experience. (Gomes et.al. 2013). Study by Delong and Deyoung (2007) supports this view of learning and gaining experience through monitoring. Their study concerns the performance of U.S. bank mergers and how investors and firms who didn't take part in these transactions were able to gain knowledge. Their conclusion is that companies who were able to observe the best and the worst practices in others' M&As could improve their own merger performance in the future. In addition companies were able to use this knowledge even in predicting the stock markets' reactions on transaction.

Conclusion from overall strategy and experience is that firms can accumulate their knowledge from prior transactions, no matter did they take part in themselves or not. Important notions are continuous improvement and maintain of the feedback. In addition companies which systematically gain their knowledge from one industry and after that move forward will success well in future. In contrast the aim to collect knowledge simultaneously from many fields will not be as effective. (Zollo & Singh 2004; Barkema & Schijven 2008.)

4.1.5. Courtship Period

Before conducting a merger it is crucial for companies to have a "courtship" period. Purpose of this period is to deepen the understanding of both parties. This period enables the companies to know each other better before finishing the transaction. This kind of activity can include many kinds of actions and possible actions are for example prior formal engagement, such a joint venture, or working on specific projects. Courtship period allows both parties to become familiar with other company's organizational and cultural issues, general working habits and explicit and implicit values. Negotiations before the exact transaction can reduce the probability of future potential tensions and conflicts. (Gomes et.al. 2013.) Sompayrac and Costello (2008) have discussed about possible problems and concerns which may arise after the merger is finished. They state that proper negotiations and getting familiar with other party can prevent future conflicts. Issues which may arise during the "courtship period" are for example: Do both companies agree with common goal of the transaction? Does the companies' organizational and national culture match with each other? Does the quality of both companies' practices match? What are the possible hidden risks which would relate in transaction?

Courtship period is very good chance to test exactly the match between companies' cultural issues. Different organizations share different cultures but problems can arise just from national culture differences. Study by Barkema and Shcijven (2008) has paid attention to these national cultural differences. According to their findings companies which are aware of likely cultural differences will be performed better in takeovers. Proper preparations for cultural issues result in better result compared with transactions where a random strategy for cultural risks is used. Findigs by Jitao (1991) are aligned with these assumptions. His study concerns the mergers and acquisitions in United

States and the compared issues are domestic-controlled and foreign-controlled firms. His conclusion is that U.S. affiliates whose foreign parents are from culturally different countries tend to fail more often than companies whose parents are from culturally similar countries. This conclusion is aligned with organizational fit issues and exactly this kind of problems could be noticed during the courtship period.

4.1.6. Communication before Merger

Communication during merger process has a very big impact on the success of the transaction. Both parties in process must put effort in communication, because by avoiding employee uncertainty and harmful rumors are in center of project's success. Poorly managed communication can significantly damage the whole process and it can increase the lack of confidence within key stakeholders. In the worst case poor communication can create fear and even dysfunctional actions. (Gomes et.al. 2013.) Study by Bastien (1987) has discussed these communication problems and conflicts which may arise from the lack of proper communication actions. He has stated that three typical concerns relate in M&A transactions and poor communication: personal uncertainty is pervasive and must be managed through proper communication management, the individual and social processes of coping with this uncertainty involve sudden switches between opposites (flight-fight, commitment-rejection), rather than gradual change from one phase to other, and culture contact and culture shock almost systematically exist in mergers and acquisitions. Almost all individuals in M&A have reported some level of uncertainty during the process and the highest level of uncertainty is experienced in the beginning of the process. Uncertainty and fear toward future can be decreased by formal communication. Formal communication generally resulted in positive reactions in acquired company and stabilization of volatile situations.

Communication has a major role in smoothing the cultural differences also. Shuhui and Seeger (2012) analyzed the poor acquisition between Taiwanese-based company BenQ and German company Siemens. The acquisition was not a great success and especially the communication related issues were poorly managed in this acquisition. Communication is considered even the most important issue during acquisition process and it has key role in integration of two different cultures. Simple issue like lack of proficiency of foreign language leads to great problems and it creates even a real costs. Communication process between companies from different cultures is very prone to rumor mills and misinterpretations. Management's role in communication is vital and the lack of this role of management was one big problem in the acquisition of BenQ and Siemens. Executives did not keep the employees updated and the role of certain employee in the process was unclear.

Hubbard and Purcell (2001) have pointed out that managing employee expectations in mergers and acquisitions have significant impact on later integration and success of the whole project. Employees who were aware of their job and who had a clear picture of their own role in the new organization had positive attitude toward the process. Especially trust between management and employees was a significant factor which made the process easier. Aligned findings can be found also from study by Teerikangas (2012). According to her findings employees' attitude toward process was positive and opportunistic rather than uncertain. However the management has big role here because if they managed to create an atmosphere of success the employees were also highly motivated and opportunistic toward future. In conclusion the right way to take care of communication has a major role in the success of M&As. If the goals, vision of the future and employees' role in the new organization are clearly noted, the probability to achieve positive result is good.

4.1.7. Future Compensation Policy

Management compensation in the new entity is also vital factor on the way toward successful business combination. Management's compensation should be aligned with the company's objectives. Contradiction in compensation policy and company's objectives can dramatically danger the success of combination. (Gomes 2013.) Inkpen, Sundaram and Rockwood (2000) have supporting conclusions about compensation policy and company's objectives. They state that compensation policy can create a contradiction between individuals' and company's goals. For example stock options are much used methods to align both parties' goals.

Devers, Cannella Jr., Reilly and Yoder (2007) studied the different payment structures and their impact on company's performance and shareholders' wealth. Residual income-based compensation plans, where management is paid by return excess of required rate of return, had positively affected on increase of residual income. However these plans had no positive impact on shareholder wealth. Second variation is paying for performance and in this system management's remuneration is connected with different kind of performance measures. This kind of system seemed to have positive effect on shareholders' wealth and on accounting earnings. Firms which took this kind of payment plan had better stock-price performance even year after the implementation of the plan. Third variation that they investigated was a system where managements' ownership in the company was in the center. Result was that management's ownership gradually increased after the implementation of the plan. In addition they also found excess stock and accounting returns. The last system they investigated was the effects of economic profit plans (EPPs). This system rewards managers when earnings exceed the cost of capital of strategy and performance. This method was not associated with abnormal shareholder values but adapters of this method managed assets more efficiently and had higher profitability.

In conclusion the payment policy clearly effects on firm's performance and shareholders´ wealth. As stated earlier, compensation policy where management's incentives are aligned with company's goals is effective. Performance measures which are wide enough to measure the overall performance of the company are effective. In addition equity based and ownership based payment methods are effective because then management's income is dependent on firm's performance. For example, it is proved that the CEOs' ownership has positive impact on the transaction profitability. (Anslinger & Copeland 1996).

4.1.8. Interrelations between Pre-acquisition Success Factors

Above represented factors are crucial for success of mergers and acquisitions. Taking care of these issues gives a good background for successful transaction. Despite these factors were represented separately they still have to work properly together. According to previous research, combination of these success factors is in the center of successful operations. Previous findings for example support the combined effect of choice of strategic partner. Organizational and strategic fit can be improved by considering the size effects of partner. In addition the complementary competencies and resources can be effectively combined with absolute size effects. Also the size and method of payment is recognized to have some significant effect on result. Mergers where transaction is paid by cash and the target company is large are noticed to performance well. In contrast transactions where payment of method was cash but target company was small founded to be less competent. (Gomes et.al. 2013.)

4.2. Post-merger Critical Success Factors

4.2.1. Integration Strategies

Pre-merger factors are vital issues in terms of successful merger. However without sufficient integration of all the combined elements the result will be disaster. Some previous discussions state even that post-merger phase and integration is the most crucial factor in final wealth creation process. Poor integration is noted one of the biggest reason for merger and acquisition failures. Integration is not simply task because M&As taken from different context and from different reasons demand unique and proper integration operations. Integration process must reflect these differences. (Gomes et.al. 2013.)

Because of multifunctional characteristic of M&A process the integration process is not a simple task. It is very challenging to reach all the synergy potential because of different organizational and national cultures and because of various working habits that companies have maintained before the merger. Integration process and success of mergers and acquisitions is in the scope of the study by Almor, Tama and Benjamin (2009) which investigated the merger between two pharmaceutical companies and their integration process. Their findings related to integration are part of the wider framework for integration but the main finding from their study is that level of autonomy is in crucial role in success. Level of autonomy for acquired company is linked with the speed of market performance. If the motive of the merger is quick entering in markets with a new products the lower level of autonomy and higher level of integration is needed. The empirical results prove that effects are good at least in the short-run but the long-run effects are ambiguous. In contrast if the motive is the long-term entering into market with well-prepared products the integration level should be lower and level on autonomy in contrast should be higher. This allows creating of long-term synergies and the wealth effects are more likely to stand in longer term. Aligned findings are also in the study by Zaheer, Castaner and Souder (2013). Their conclusion is also that level of autonomy and level of integration depend on certain goals of the entity. However there are also situations where both high level of integration and high level of autonomy may exist. This kind of situation may exist in merger where the primary source of synergy was a complementarity rather than similarity.

Studies by Schweiger and Goulet (2005) and Hopkins (2008) have paid attention on cultural issues and integration and according to these studies mergers and acquisitions which fail in integration of cultural issues will perform poorly in the future. It is admitted that cultural fit has a major role in merger success and for example companies which allow multiculturalism and prevent too much control perform better compared with firms which have stricter style. In addition these studies state that the cost of cultural conflicts resulting from poor integration may be even 25-30 percent of the acquirer's performance. In order to avoid this cost the firms must pay attention in integration procedures which enhance cultural understanding and resolve cultural differences between firms.

4.2.2. Post-acquisition Leadership

Leadership is needed in post-acquisition operations because without competent leaders the process will not be finished successfully. New combined organization with a management without competency to make right comprehensive decisions seems to be one big reason of failure of M&As. New organization need a strong leadership which makes the right things to happen in order to wanted changes and aimed goals will be achieved. It is proved that high percentage of M&As failure because of poor management during the implementation. Because corporate restructurings include often elimination or shutting down of some previously existed units the leader in the process must have right characteristics for the changing processes. However it is also proved that top management change is very common feature in corporate restructuring operations. (Gomes et.al. 2013.)

Leadership in mergers and acquisitions is multiform issue and the different types of managers should be used in different situations. The role of management is dependent on aim and the form of the transaction. Different types of management should be used in different kind of integration processes. Generally different individuals own different skills and hence it is important to know when should certain type of managers used. Managers in corporate control operations can be divided in insiders and outsiders. Both types have certain tasks and skills. Insider managers are proved to be effective in maintaining the integrity and core competencies of acquired company. In contrast using insiders is not that effective when rapid internal changes are wanted. Insider managers are the best choice for example in preservation acquisitions which do not include many changes in acquired firm. Outsiders in contrast are effective in mergers and acquisitions where rapid change and quick action is wanted. Outsider managers do not hold the same kind of relationship to acquired company and hence the view of these managers is more objective. Using of outsiders is reasonable option in acquisitions which include for example high level of absorption. In conclusion using a different kind of managers is related to the goals and forms of integration. (Anqwin & Meadows 2009.)

4.2.3. Speed of Integration

Speed of integration process is quite novel topic in the literature which concerns the success of mergers and acquisitions. According to existing studies the speed is important factor in the successful integration. General view is that quick integration process is beneficial because slow progress may cause some uncertainty and build rumors about process' performance. In addition morale can suffer and some customers can get forgotten. It is stated that costs of losing momentum are much greater than the possible mistakes which may happen because of fast decisions. (Gomes et.al. 2013.) According to Vester (2002) the speed of integration is seemed to be one of the six most important factors affecting on M&A success. Keeping up high speed in merger and acquisition process is crucial because there is only limited amount of time but the amount of the vital decisions is also huge. If high speed is not kept the whole process may failure because of low integration speed. In contrast there are also some suggestions in previous literature that high speed may create even problems. Slow integration speed may help to reduce conflicts and it enables build trust among employees (Gomes et.al. 2013).

Study by Bauer and Matzel (2014) has investigated the integration process and the impact of speed on success of mergers and acquisitions. They couldn't provide true empirical evidence that integration speed has straight impact on M&A success but managers must be aware of this factor. Many consulting companies follow the 100-days rule in integration. 100-days integration is quite high speed and it is argued that benefits from fast integration are at least: faster exploitation of synergies and returns, reducing of uncertainty among employees, minimizing the time spent in suboptimal conditions, and taking advantage of the momentum right after deal.

Because the role of speed is not clear yet the used integration speed must be analyzed case by case. Speed of integration depends on background of the process and expected goals. Internal and external relatedness is proved to have impact on chosen integration speed. Internal relatedness is affiliated to things like similar management habits. External relatedness is in contrast related in things like market position and industry. It is proved that speed is the most beneficial when combining companies are related highly internally and less externally. In contrast speed can be destructive if external relatedness is high and internal relatedness is low. (Homburg & Bucenius 2006.)

4.2.4. Post-merger Integration Team and Disregard of Day-to-Day Business Activities

Mergers and acquisitions are complex processes and they demand a lot from managers. This could be a problem if managers put all their effort on transition process and hence the day-to-day operations are left on less attention. This can be one source of failure and managers should pay attention that normal operations must also be performed well. Managers should find an optimal equilibrium between external and internal development operations. (Gomes 2013).

Because mergers and acquisitions are demanding processes, some organizations use certain kind of transition teams or Top Management Teams (TMTs) which are in responsibility to conduct the transition. Organizations are very dependent on TMTs operations and the whole performance during the transition relies on the hand of TMT. Well performing TMT can secure the success of the firm during and after the corporate control process. TMT has a big role in value creation and achieving the expected synergies after the process in finished. Because of dynamic role of acquisitions they have major impact on organization’s stakeholders like employees and on organizational performance. Hence TMT should properly emphasize the goals of the project; the strategic and organizational fit and how to create employees trust toward the project. If TMT manages to achieve their goals the expected result is more likely to be successful. In order to perform successfully and value creating, TMT should have some certain capabilities. TMT should include two kinds of capabilities, individual capabilities and capabilities which make them well functioning team. In addition all the members of the TMT must act in the interests of firm and team performance in order to ensure the success of the acquisition and to ensure that the aimed benefits from synergy are reached. (Vasilaki & O’Regan 2008.)

4.2.5. Communication during Implementation

Communication after the acquisition is in critical role because its task is to disseminate the purpose of the acquisition and convey the integration message. Previous literature has stated that post-acquisition is essential practice within other human resource operations because it has important impact on diminishing the uncertainty and insecurity. Because communication can have many forms it is very important that managers stand behind their words. That’s why managers should only make promises that they really can keep. (Gomes et.al. 2013).

Because of complex role of the mergers and acquisitions they can create unwanted effects in organization. Mergers and acquisitions have proved to increase uncertainty within organization and increase of uncertainty is bad thing for the success of the project. Increase of uncertainty seems to raise stress and decrease satisfaction, decrease commitment intentions to remain with an organization, and decrease perceptions of the organization’s trustworthiness, honesty and caring. These problems may lead in poor performance of combined organization. It is proved that if employees are well informed and their expectations during the merger process are maintained it is easier for them motivate toward process. Proper communication and information before and during the M&A process may have significant effect on prevention of dysfunctional outcomes. (Schweiger & Denisi 1991.)

Mergers and acquisitions are big challenge for human resource management of the companies. Mergers and acquisitions occur more and more beyond the national borders and that challenges organizations with cultural aspects. Studies by Weber and Tarba (2010) and by Schweiger, Napier and Csiszar (1993) have discussed of cultural fit problems and how should these issues managed in mergers and acquisitions. These studies have stated that cultural issues can create serious problems and the result can be even culture crash which remarkably decreases the success of the project. Proper communication is an effective tool for resolving the possible cultural problems. Communication helps employees’ adaptation in new organization and it can remove the possible biases. Because of very dynamic role of the M&As the created organization should be as coherent as possible. Coherent organization allows employees from both parties to share implicit and explicit knowledge and sharing these vital practices may be the key factor for well performing organization.

Differences between cultures should be understood and acquiring company should be prepared for possible cultural challenges. Employees must have opportunity to learn about their new counterparts and there should be base for open dialog where both parties can get know each other. Open dialog removes the stereotypes and decreases the possibility of future conflicts.

4.2.6. Managing Corporate and National Cultural Differences

Poor cultural fit is used as an explanation for poor post-acquisition performance of many mergers and acquisitions. Cultural differences can be seen in many levels: national, regional, industrial, company, and professional levels. Especially in cross-border transactions the cultural differences is proved to have significant effect. Problems with cultural fit have proved to be correlated with poor accounting measures and stock values in domestic M&As. In addition cultural distance problems have seen to raise problems and lead in poor performance in cross cultural transactions. Cultural issues are also connected with different stages of integration because cultural concerns effect differently in different levels of integration. However cultural differences can sometimes be even the source of post-acquisition success. Moderate and controlled cultural differences can create competitive advantage they are managed and integrated in right way. (Gomes et.al. 2013).

Weber and Tarba (2012) have studied the cultural factors and their impact on organization's success. They have stated that cultural issues must be managed properly and for that reason they have created a special framework. They have divided integration process in various stages and in every stage they have mentioned how to handle cultural aspects. Integration process is divided in three stages and stage three concerns the post-acquisition period. They have stated that during the post-acquisition period company must set the appropriate integration approach, choose the units which will be in the center of integration, and define the desired organization culture. Stage three in post-acquisition period includes defining critical issues like how big are the cultural differences, what kind of problems arise from cultural differences, and which functions are the most prone for cultural conflicts. Conclusion from their paper is that preparing and concentrating properly for cultural issues companies can ensure their long-term success and hence make sure that complex and multidimensional projects like mergers and acquisitions are value increasing transactions. Cultural issues really exist and they must be managed or otherwise problems will arise sooner or later.

4.2.7. Human Resource Management

Problems arising from human resource issues can prevent the optimal exploitation of the expected synergies in mergers and acquisitions. By better human resource management all the workforce's capabilities and knowledge can be utilized and the result is profitable synergies, value creation and effective transfer of knowledge and good practices. Certain HR practices aim to prevent future problems in corporate restructurings and specific practices are for example: training employees to deal with conflicts and new assignments during the integration, using communication to address human resource stress and uncertainty, and adjusting other practices to the new situation. (Gomes et.al. 2013).

Previous literature concerning profitability of the mergers and acquisitions is at least ambiguous, because the expected and stated synergies and wealth effects are not always reached. Major reason for value decrease and failure is too high premiums paid for target company. High premiums load huge expectations on organizations performance and unfortunately very often the expected synergies and value effects are not reached. Human resource management has important role in mergers and acquisitions and possible problems can be prevented by proper HR actions. High premiums lead to failure at least by two reasons: by pressures to realize quick value through cost-cutting and through employee resistance that undercuts prospects for success. HR management skills are needed in the all stages of transaction. Firstly HR management must consult the other management about expected labor synergies, cost related in new workforce, and evaluate possible reductions in workforce. HR professionals should also be able to evaluate the value of workforce and analyze the actions how maximum benefit is reached by new combined workforce. Secondly HR management must be used in implementation of new workforce. Human resource professional must find right persons in critical positions, enable the effective transfer of explicit and tacit knowledge and maintain the productive and motivated atmosphere in the organization. By proper preparing and well planned implementation the problem of too high premium would never exist and the expected synergies for combination are more likely achieved. (Trank, Stambaugh & Bemis 2012.)

In global business cross-border mergers and acquisitions are everyday phenomenon. Cross-border operations include always possible concerns related to cultural differences. International projects and cultural differences challenge also human resource management. Champers (2013) has discussed about cross-border deals and HR’s role in these transactions. He has stated that human resource management has four roles in mergers and acquisitions: strategic partner, change agent, administrative expert, and employee champion. As a strategic partner HR leaders align HR operations with organization’s strategic business goals. Aligned operations are the major force behind value creation and success. Biggest challenges relate in alignment of different practices between different countries and cultures. The role as a change agent relates in making corporation more competitive. In order to achieve expected results the organizations must be able to change and adapt in new situations. Biggest challenges relate in motivating employees and other managers toward change and facilitating favorable base for the change. As an administrative experts HR managers deliver efficient processes that exploit new technologies and improved methods. By these activities HR experts notice the opportunities to add value. Global challenges relate for example recruiting and selecting employees in a timely and cost-efficient manner and providing efficient training programs. The fourth role, employee champion, relates in two main issues. Firstly HR managers must listen and respond to employees' needs with available resources. Secondly, HR managers aim to increase employees' knowledge, skill, and ability to contribute to company goals. Global challenges relate for example issues like establishing an international HR and meeting global employee information needs.

4.2.8. Interrelationships between Post-acquisition Critical Success Factors

Every presented factor has important role in successful transaction and in order to achieve good results every factor must be considered properly. However these single factors must work effectively also together and hence the interrelationships between critical factors are essential source of success. Previous studies have found possible interrelation aspects for example between integration strategies and speed of integration. Speed of integration and integration strategy are strictly linked each other but the valid speed and strategy should be selected case by case. Proper speed of integration is related for example in the degree of integration. Another interrelationship exists between chosen integration strategy and usage of top management team. Certain management teams have different capabilities and hence the link between strategy and usage of management teams must be considered properly. Third important interrelationship exists between integration strategy and cultural differences. Because cultural issues are considered to be source of possible conflicts or in some cases source of superior performance, the chosen strategy must be aligned with these constraints. (Gomes et.al. 2013).

5. DATA AND METHODOLOGY

5.1. Data

The empirical part of the study began with the data collection. First restriction related to data is that only publicly traded acquirers are investigated and the reason for that is the data availability. In some cases it is almost impossible to find out the financial data of the private companies so this study concentrates only in publicly traded companies. Secondly the study concentrates only in the acquirer’s profitability and that is also related with data availability. It is very challenging to obtain financial data of private acquired companies.

Record of mergers and acquisitions is from the database of the department of the Accounting and Finance in the University of Vaasa and the primary source of this database is Datastream. Additional sources for the data are companies’ annual statements and companies’ stock exchange releases. Because the purpose of the study is also to find out whether there is difference between, before and during the crisis, periods, the total time period includes period from 2001-2010. Period 2001-2003 is defined as a pre-crisis period and period 2008-2010 is defined as a crisis period. Year 2007 is considered as a break year for the pre-crisis and crisis periods and hence the observations from 2007 are not taken into account.

After all the mergers and acquisitions by publicly traded Finnish companies were obtained, the next step was to match the announcement day, target company and the price of the transaction. Prices of the transactions were obtained from companies’ financial statements and from the market announcements of the companies. Because the short-term profitability was obtained by using the event study methodology according to MacKinlay (1997) it was crucial to obtain the prices of the transactions. In addition the price of the transaction must equal the certain size because the “event” must be significant enough in order some effects can be expected. The price of the transaction must be at least 5% of the acquirer’s book value in order the transaction is included in the sample. According to Rosen (2006) this five (5%) percent cut-off rate is big enough. Totally the used sample includes 80 transactions in which 43 transactions belong to pre-crisis period and rest 37 belongs to crisis period. Total number of companies included in the data is 64.

Short-term event study methodology according to MacKinlay (1997) demands the market returns and beta-coefficients. Market index returns for examined period are also available in the database of the department of the Accounting and Finance of the University of Vaasa, where the primary source is the Datastream and beta coefficients for the market model are estimated from the certain stock and market index returns. The long-term profitability is obtained by wealth relative method and the used wealth relative method is slightly different from market model. The method for long-term profitability is the same that Jakobsen & Voetman (2003) has used in their study and this method requires the matching firm and also market index data and these data are also available from the database of the department of the Accounting and Finance of the University of Vaasa, which is collected from Datastream. Wealth relative method has slightly same requirements as event study method do so in conclusion the data set for long-term investigation is same than used in short-term investigation.

In conclusion the data must meet the following requirements: the announcement date of the transaction must be known, the book-value of the acquirer must be known, the price of the transaction must be available, returns of market index must be known and the returns for matching firms must be known. In addition transaction and companies are included in the sample if the price of the transaction is at least 5% from the book-value of the acquirer (Rosen 2006) and the stock price data is available one (1) year before and at least three (3) years after the announcement. Finally the total period 2001-2010 (excluding year 2007) is divided into two sub periods: 2001-2003 is defined as the pre-crisis period and 2008-2010 is defined as the crisis period.

5.2. Methodology

5.2.1. Methodology for short-term returns

As mentioned before, this study uses the event study methodology in order to capture the short-term impact of mergers and acquisitions on companies' profitability. Event study method according to MacKinlay (1997) is very useful for studies which investigate the certain events impact on companies' returns. In this study the events are the mergers and acquisitions. Equation for event-study method exploits the market model and the equation for market model is following:

(1) $$E(R_{it}) = \alpha_i + \beta_i * R_{mt} + \varepsilon_{it}$$

where $E(R_{it})$ is the expected normal return of company i, α_i is the stock specific parameter of the market model equation, β_i is the stock specific beta coefficient of the market model, R_{mt} is the market index return, and ε_{it} is the standard error term of the model. Market model is used to estimate the expected normal returns of certain stock. When normal expected returns are estimated, the next step is to calculate the abnormal return. The main idea behind event-study is that the certain event (here mergers and acquisitions) has impact on company's profitability and if the event really has impact it will generate abnormal returns. In order to calculate the abnormal returns the following equation is used:

(2) $$AR_{it} = R_{it} - E(R_{it})$$

where AR_{it} is the abnormal return from the event, R_{it} is the realized return of the stock, and $E(R_{it})$ is the expected normal return from equation (1).

In order to capture the short-term effects of the mergers and acquisitions the above represented equations are used and they are used in different periods. Jakobsen & Voetman (2003) have investigated also the mergers and acquisitions in the short-term with event study method. The maximum event window in their study is -15;+15. According to their study the same maximum event window will be used also in this study. In addition this study uses the -1;+1 event window in order to capture the abnormal returns exactly around the event.

After the abnormal returns for every merged and acquired company has been calculated, they will be collected in the portfolio. Abnormal return of the portfolio for certain period is the average of all the stocks abnormal returns included in the portfolio. Average Abnormal Return for certain period is calculated by following equation

(3) $$AAR_{tp} = \frac{1}{N} * \sum_{t=1}^{N} AR_t$$

where AAR_{tp} is the average abnormal return of the merged and acquired companies, N is the number of companies which made the merger or acquisition, and AR_t is the abnormal return of certain stock including in portfolio. After the average abnormal return for certain period is calculated it is possible to calculate the cumulated abnormal return for the whole estimation period *t1 – t2*. This cumulated abnormal return is calculated by the following equation

(4) $$CAAR_{t1,t2} = \sum_{t=t1}^{t2} AAR_{tp}$$

where $CAAR_{t1,t2}$ is the cumulative average abnormal return for period *t1 – t2* and AAR_{tp} is the average abnormal return of the portfolio for period *t*. This cumulative average abnormal return allows capturing the general impact of mergers and acquisitions in the short-term.

Cumulative average abnormal returns will be calculated for both sub-periods. Because the aim of the study was to capture the impact of mergers and acquisitions and compare the profitability between different periods, the *t*-tests for statistical significance will be conducted. First, the certain period's significance will be tested against zero and after that those parameter will be tested against each other in order to find whether there is a significant difference between these two variables.

Simple *t*-test for testing the significance of abnormal return in certain periods (pre-crisis and during the crisis) is performed with the following equation:

(5) $$t = \frac{\overline{x} - \mu_0}{s/\sqrt{n}}$$

where *t* is the *t*-value from the test and its statistical significance is compared against 5% critical value, $\overline{x}$ is the sample mean which refers here to the calculated mean of cumulated abnormal returns, μ is the value which against the $\overline{x}$ is tested. In this study the μ is zero. s is the standard deviation of the sample and *n* is the number of the transactions in the sample.

After the statistical significance of the abnormal returns is calculated for both periods, the difference between these two periods is tested with paired *t*-test. Paired *t*-test is conducted by following equation:

$$t = (\overline{x}_1 - \overline{x}_2)/\sqrt{(s_1{}^2/n_1 + s_2{}^2/n_2)} \tag{6}$$

where t is again the t-value from the test and its significance is compared against 5% critical value, $\overline{x}_1$ and $\overline{x}_2$ are the average abnormal returns from pre-crisis and crisis periods, $s_1$and s_2 are the standard deviations for the returns of both periods, and n_1 and n_2 are the total number of the transactions during these periods.

5.2.2. Methodology for long-term returns

Long-term returns for M&A companies could be calculated and tested by same event study methodology as it is done for short-term returns. Many previous studies have used exactly the same method where the first thing is to estimate the expected returns and then the abnormal returns would be the difference between realized and expected returns. However the methodology for long-term returns will be different in this study. The used method is called the wealth relative method which was first time introduced by Ritter (1991) and Loughran and Ritter (1995). This method will be discussed detailed later but first it is important to argument why this method is used.

First argument against long-term event studies is represented by Fama (1998). He states that event-study methodology is very useful in order to capture the impact of certain events on stocks' prices in the short-term. In the short-term the normal expected returns are close to zero, hence the abnormal returns in the short-term can be linked to the certain event. Fama has introduced so called bad model problem. According to his findings many anomalies exist due to used methodology. This assumption implies that actually almost every anomaly can exist or disappear if proper methodology is used. The bad model problem arises from biased expectations and it has impact on both short- and long-term returns. However the bias from bad model problem is bigger for long-term methods because the errors in expectations become bigger in the long-term.

Fama's argument about bad model problem gets support from Barber and Lyon (1997). They have studied the long-term abnormal return method which is used in event studies and their results highlight the following three problems of the long-term event studies: new listing bias, rebalancing bias, and skewness bias. As represented earlier, the abnormal returns can be obtained from estimated returns or then from reference returns. According to Fama (1998), the estimation error increases when the period is longer. New listing bias, rebalancing bias, and skewness bias relate to reference method, where the abnormal return is obtained as a difference between examined stock return and the reference stock return. New listing bias occurs because the reference portfolio may change very often compared to analyzed portfolio, rebalancing bias is associated with new listing bias because the reference portfolio is rebalanced periodically and the returns are calculated assuming this periodic rebalancing; however the returns of target portfolio are calculated without rebalancing, skewness bias is the result of positively skewed long-run abnormal returns. According to Barber and Lyon (1997), using reference portfolios result in higher rejection rates because of those biases. In order to get more realistic results it is appropriate to take into account these problems when constructing the methodology for long-run returns.

Considering the bad model problem by Fama (1998) and the new listing bias, rebalancing bias, and skewness bias by Barber and Lyon (1997), this study will use the wealth relative method for long-run returns. Wealth relative method is first time represented by Ritter (1991) and Loughran and Ritter (1995). They have used this wealth relative method for event study like situations in order to capture the long-term effects. After them for example Jakobsen and Voetman (2003) have used this same methodology in order to study the mergers and acquisitions in Denmark. The paper by Jakobsen and Voetman (2003) was one of the main incentives of this study and the methodology part of this study will follow their paper quite closely. Base for wealth relative method is in buy-and-hold return calculations. From the statistical point of view the long-term buy-and-hold returns has severe skewness problem. However the wealth relative transformation of buy-and-hold returns can be accepted to be log-normally distributed, hence the logarithms of the wealth relatives can be accepted to be normally distributed and hence the using of general statistical tests is possible (Jakobsen & Voetman 2003).

In order to calculate the wealth relatives, the long-term buy-and-hold-returns must be first calculated. In addition buy-and-hold-returns for matching firms and for the stock index must be calculated. Matching firms are selected according to market value and Book-to-Market (B/M) measures. It is assumed that firms with equal market value and B/M can be expected to have similar characteristics and hence the comparing is reasonable. In this study the buy-and-hold returns are calculated on monthly basis and the long-term impact is the result of compounded monthly returns. Maximum examined holding period in this study is 36 months (3 years) but also results for 6, 12, 18, 24 and 30 months are represented. Buy-and-hold returns are used also because they are suggested to represent best the real situation that investors experience.

Buy-and-hold-returns can be imagined to be the wealth increase (decrease) the investor get if initial amount of $W_{i,0}$ is invested in stock *i* and the monthly returns are $r_{i,t}$. The initial amount after *t* months is then:

(7)
$$W_{i,t} = W_{i,0} * \prod_{t=1}^{t}(1 + r_{it)}$$

From the equation (5) the buy-and-hold return for the stock *i* for *t* months is then:

(8)
$$BHR_{i,t} = \prod_{t=1}^{t}(1 + r_{it}) - 1$$

After calculating the buy-and-hold returns for M&A stocks, matching firms, and stock index, it is possible to calculate the wealth relatives. Basically wealth relative is the accumulated wealth of M&A stock compared with matching firm or the market index. The equation for wealth relative is following:

(9)
$$W_{\frac{i}{m},t} = W_{\frac{i}{m},0} * \prod_{t=1}^{t}\frac{(1+r_{i,t})}{(1+r_{m,t})}$$

where $W_{\frac{i}{m},0}$ is the initial wealth relative for M&A stock and matching firm or market index. The initial wealth relative can be accepted to be one (1.0) and $W_{\frac{i}{m},t}$ is the wealth relative after *t* months. After wealth relatives are calculated for each stock, the portfolio wealth relative of the M&A companies is calculated as an average of the companies' values.

Wealth relative value which is bigger than one (wealth relative > 1.0) shows that M&A companies have performed better than matching firms or market index. In contrast if wealth relative value is smaller than one (wealth relative < 1.0) the M&A companies have underperformed related to matching firms or market index. Wealth relative can be calculated for both M&A companies compared with matching firms and market index or matching firms compared with M&A companies. First way shows the M&A companies under- or outperformance and the second, inverse equation, shows same for matching firms and market index. Wealth relative is just measure for how M&A companies have done related to matching firms or market index. In order to get real results about performance, the wealth relative measure must be decomposed into mean and volatility factors. Wealth relatives alone cannot show the real truth because the volatility component makes the results upward biased. Decomposing of wealth relatives is made by following way:

(10) $$E(WR_t) = \exp(\mu_t T) = \exp(\alpha_t T + \tfrac{1}{2}\,\sigma_t^2 T) = \exp(\alpha_t T) * \exp(\tfrac{1}{2}\,\sigma_t^2 T)$$

where $\exp(\alpha_t T)$ is the transformed mean component and $\exp(\frac{1}{2}\,\sigma_t^2 T)$ is the volatility component. As it can be seen, the volatility component causes upward bias and hence the results must be volatility adjusted by comparing just the decomposed mean components. Mean- and variance estimations for wealth relatives can be calculated by following equations:

(11) $$\hat{\alpha} = \frac{1}{t*N}\sum_{i=1}^{N} \log(WR_{i,t}^{M})$$

(12) $$\hat{\sigma}_t^2 = \frac{1}{T*(N-1)}\sum_{i=1}^{N}(\log\left(WR_{i,t}^{M}\right) - \hat{\sigma}_t * T)^\wedge 2$$

These mean and variance components are marginal estimates for the expected wealth relative at time *t*. With these estimates it is possible to perform statistical test and figure out how M&A companies perform compared with matching firms or market index. The wealth relatives can be accepted to be log-normally distributed and the marginal estimates for log($W\frac{i}{m}, T$) are $\hat{\alpha}_{\frac{i}{m},T} * T$ and $\hat{\alpha}_{\frac{i}{m},T} * \sqrt{T}$.

Log($W\frac{i}{m}, T$) is normally distributed and hence also are the marginal estimates. With normally distributed marginal estimates it is possible to make statistical significance tests. Testing the mean component is the most important test which tells whether there is statistically significant difference in M&A companies' performance or not. Testing the means between two sub-periods also tells whether there is difference in the performance between different periods.

In the next section the buy-and-returns for all the M&A companies, matching firms, and market index will be calculated. After that the wealth ratios are calculated for both M&A companies compared with matching firms and market index. After wealth relatives are calculated the values are decomposed into the mean and volatility components. For both sub-periods the mean components are tested against zero with general t-test and in addition the difference between two sub periods' mean components is calculated in order to find out whether there is statistically significant difference between two periods' performance. Significance test for the means and for the difference of the means are conducted by using the equations 5 and 6.

6. EMPIRICAL RESULTS

6.1. Short-term profitability

Short-term profitability of Finnish companies M&A transactions are calculated by using the methodologies introduced in the previous chapter. As mentioned earlier the total number of the transactions made is 80 and the total number of companies which are analyzed is 64. In addition the short-term profitability is calculated for two sub periods (pre-crisis period and crisis period), for the total period and in addition the comparison between these two sub-periods is conducted.

In order to find out and test the short-term returns, the abnormal returns from market model are calculated. Abnormal returns for the merger and acquirer companies are calculated with two different event windows. Two event windows used in this study are -1:+1 and -15:+15 days. The purpose for using two event windows is that results should give as comprehensive results as possible about short-term profitability.

Short-term abnormal returns for two event windows and for two periods are represented in the following tables. Column 3 of the table 1 includes the mean abnormal return of the pre-crisis period, column 4 in table 1 includes the standard deviation of the abnormal returns, column 5 in table 1 includes the standard error of the abnormal returns, and column 6 in table 1 includes the *t*-test value for mean.

Table 1. Short-term abnormal returns, pre-crisis period

Event window	*N*	Mean abnormal return	Standard deviation	Standard error	*t*-value
-1:+1	43	1.61 %	5.5%	0.84%	1.92*
-15:+15	43	-1.31 %,	24.58%	3.75%	-0.35
significance at 5% level **, significance at 10% level *					

Results from the short-term returns in the pre-crisis period show that during the announcement event -1:+1 the average abnormal return of M&A companies has been positive (1.61%). After extending the event window the positive abnormal returns seem to vanish. The abnormal returns of the M&A companies during the event window -15:+15 are negative (-1.31%).

Abnormal returns seem to be quite volatile during the short-term period and very short period positive returns finally become negative when the event window is extended. These return calculations show just the absolute return development during the short-term and in order to get arguments about the significance, the statistical significance of the results must be analyzed. The column 5 in the table 1 show the *t*-test values for the mean and these values reveal that neither of the abnormal returns are significantly different from zero at 5% significance level (returns of -1:+1 event window are significant just at 10% level). Hence the first hypothesis is supported for the short-term profitability in the first sub period (pre-crisis).

The next table 2 shows the same statistics for the second sub-period (crisis). Again column 3 shows the mean abnormal return during the event window, column 4 shows the standard deviation of the returns, column 5 shows the standard error of the returns, and finally column 6 shows the *t*-test value for mean.

Table 2. Short-term abnormal returns, crisis period

Event window	*N*	Mean abnormal return	Standard deviation	Standard error	*t*-value
-1:+1	37	+3.53	14.80%	2.43%	1.45
-15:+15	37	+2.97 %	28.10%	4.62%	0.64
significant at 5% level **, significant at 10% level *					

Results from the short-term returns in the crisis period show that average abnormal returns for both event windows are positive. However the positive returns are not statistically significant in crisis period.

After analyzing the short-term returns during the two sub-periods it is interesting to find out what were the abnormal returns for the total period. This analyze is conducted by taking the average of two sub-periods abnormal returns. Analyze is done for both event-windows: -1:+1 and -15:+15. Table 3 shows the results for the whole period. Columns in the table include the same information as the columns in the previous tables 1 and 2.

Table 3. Short-term abnormal returns, total period

Event window	*N*	Mean abnormal return	Standard deviation	Standard error	*t*-value
-1:+1	80	2.50%	10.81%	1.21%	2.07**
-15:+15	80	0.67%	26.19%	12.93%	0.229
significant at 5% level **, significant at 10% level *					

Results show that while the total period is under analyze the Finnish companies M&A transactions produced positive abnormal returns for the both two event windows. Abnormal returns for both event windows were positive and actually the abnormal returns for the shorter, -1:+1, event window were even statistically significant at 5% level. This finding does not support the first hypothesis because transactions produced statistically significant abnormal returns.

Despite the absolute values show that there is a difference in profitability between two periods, the significance of the difference must be conducted. In order to get a clear picture whether the short-term returns are bigger during the crisis period than pre-crisis period, the paired *t*-test for mean returns is conducted.

The next table represents the results from paired *t*-test which is conducted for two independent samples. Column 1 shows the used method, column 2 shows the number of observations, column 3 shows the event-window compared, column 4 shows the degrees of freedom, column 5 shows the value of the *t*-test, and the column 6 shows the *p*-value of the test.

Table 4. Difference in profitability between two periods (pre-crisis, crisis)

Method	*N*	Event window	Df	*t*-value	*p*-value
t-test	80	-1:+1	78	0.78	0.433
t-test	80	-15:+15	78	-0.72	0.469
significant at 5% level **, significant at 10% level *					

Results in the table 4 reveal that despite the absolute values were different between two periods the difference between these two analyzed periods was not statistically significant. Values of the *t*-test are not very high and the *p*-values reveal that there is no significant difference between two periods.

The first hypothesis of the thesis is: *Mergers and acquisitions did not create any significant abnormal returns for shareholders, not in short- and neither in the long-run.* Hence in the light of these results it can be stated that the first hypothesis is not supported, because companies which conducted M&A transactions created positive abnormal returns when the whole examined period is under analyze. Abnormal returns under the whole examined period were positive and statistically significant when the shorter event-window was analyzed (at 5% level) despite neither of the two-sub periods created significant positive abnormal returns (at 5% level).

Short-term results are aligned with the previous study by Knif and Pape (2014), because Finnish companies' M&A transactions seem to be wealth increasing transactions for the shareholders of the acquiring company. These findings are very interesting, because also the Knif and Pape's study is performed with Finnish data. Many other previous studies with US and UK data have shown totally opposite results, because the general view is that M&A transactions are wealth decreasing transactions for the shareholders of the acquiring company. Short-term abnormal returns were statistically significant only during the shorter event window (-1:+1) and when the event window was extended (-15:+15) the positive effect seems to vanish. Fama (1991) has stated that efficient capital markets should reflect all the available information to the prices and according to this statement it seems that the prices in Finnish stock exchange seem to reflect the new information fast, because the impact of M&A announcements vanish when the analyzed period is extended. In addition it seems that investors expect that M&A transactions have efficient increasing impact on the new entity because the announcement of the transaction creates positive abnormal returns.

The second hypothesis of the thesis is: *There is no difference in profitability of mergers and acquisitions made before and during the crisis*. In contrast with the first hypothesis it can be stated that the second hypothesis is supported, because there was no statistically significant difference in profitability between pre-crisis and crisis period. Returns for the second period (crisis period) were positive for the both event windows but these returns were not significantly different compared with the first, pre-crisis, period.

The second hypothesis challenges the value decreasing theory called managerial discretion by Jensen (1986). Managerial discretion theory suggests that management of the company makes poorer investment decisions during extra cash flow. This theory would imply that actually the M&A transactions' profitability was better during the more challenging, crisis, period, because companies must think every investment properly. However the empirical results are partly aligned with Jensen's (1986) theory, because there was a difference in profitability between the two sub-periods, but the difference was not statistically significant.

6.2. Long-term profitability

Previous sub-chapter revealed what kind of returns Finnish companies M&A transactions' produced in the short-term period. As stated, this study aims is to give as comprehensive picture as possible about the M&A transactions' profitability and hence this sub-chapter reveals how Finnish companies M&A transactions performed in the long-term period. Analyze is done for both sub-periods (pre- crisis and crisis), for the whole period and the difference between two periods is also analyzed.

6.2.1. Buy-and-hold returns of the M&A companies

Long-term profitability analyze begins by calculating the buy-and-hold returns for the companies which have performed M&A transactions. Buy-and-hold returns for the companies are calculated with the equation (8). In order to get as comprehensive picture as possible the buy-and-hold returns are calculated for the M&A companies, matching firms, market index, for the both sub-periods, and for the whole analyzed period.

Table 5 and figure 1 illustrate the buy-and-hold returns of the M&A companies, matching firms, and market index during the first, pre-crisis, sub-period. Column 1 in table 5 show the period for which the buy-and-hold return is calculated and columns 2, 3 and 4 show the buy-and-hold returns of M&A companies, matching companies (companies with same characteristics but without M&A transaction) and market index.

Table 5. Pre-crisis period Buy-and-hold returns

Month	M&A companies	Matching companies	Market index
6	-15%	-3%	-11%
12	-15%	-6%	-15%
18	-18%	-8%	-17%
24	-13%	-2%	-15%
30	3%	4%	-9%
36	3%	12%	-3%

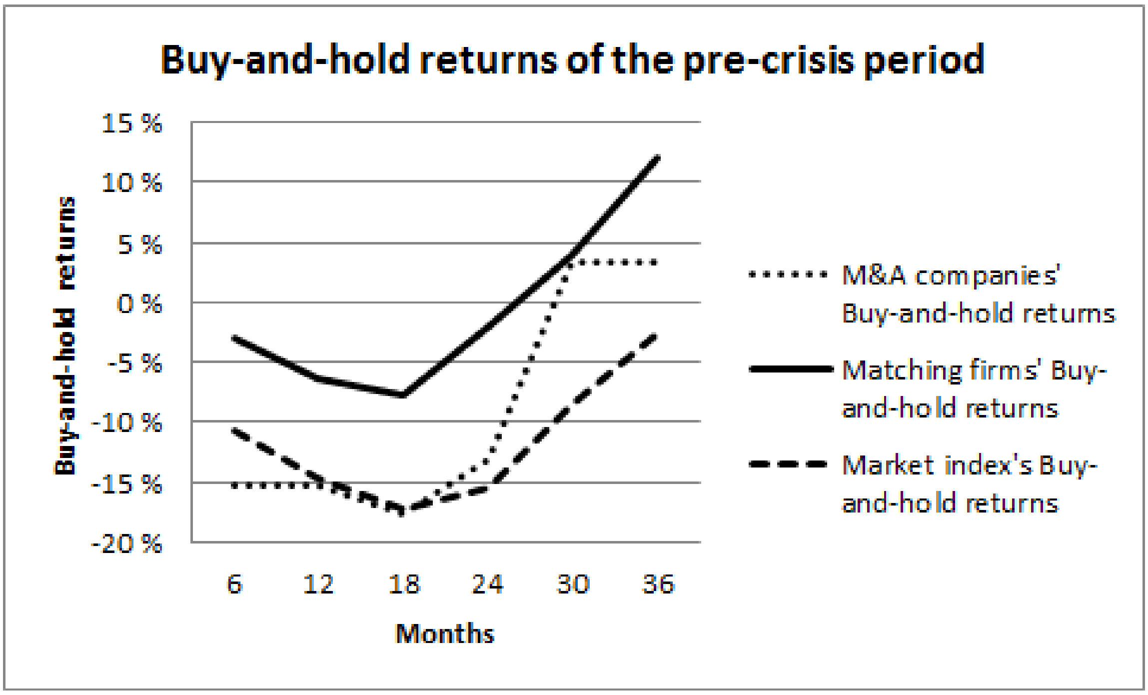

Figure 1. Pre-crisis Buy-and-hold returns

Table 6 and figure 2 show buy-and-hold returns of the M&A companies, matching companies and market index but now the analyzed period is the second, crisis, period.

Table 6. Crisis-period Buy-and-hold returns

Month	M&A companies	Matching companies	Market index
6	-11%	-9%	-13%
12	-14%	-10%	-18%
18	-3%	5%	-11%
24	-1%	2%	-10%
30	3%	3%	-12%
36	-7%	0%	-16%

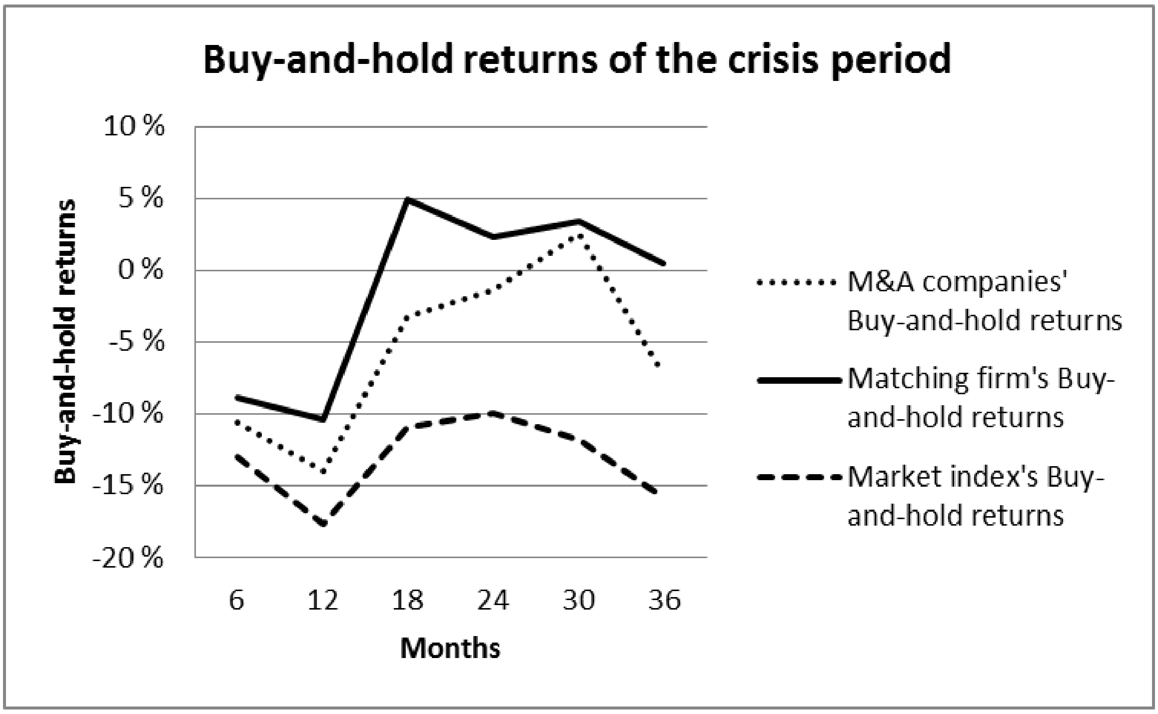

Figure 2. Crisis-period Buy-and-hold returns

Finally table 7 and figure 3 shows how M&A companies, matching companies and market index performed when the total analyzed period is under examination.

Table 7. Total period Buy-and-hold returns

Month	M&A companies	Matching companies	Market index
6	-13%	-6%	-12%
12	-15%	-8%	-16%
18	-11%	-2%	-14%
24	-8%	0%	-13%
30	3%	4%	-10%
36	-2%	12%	-9%

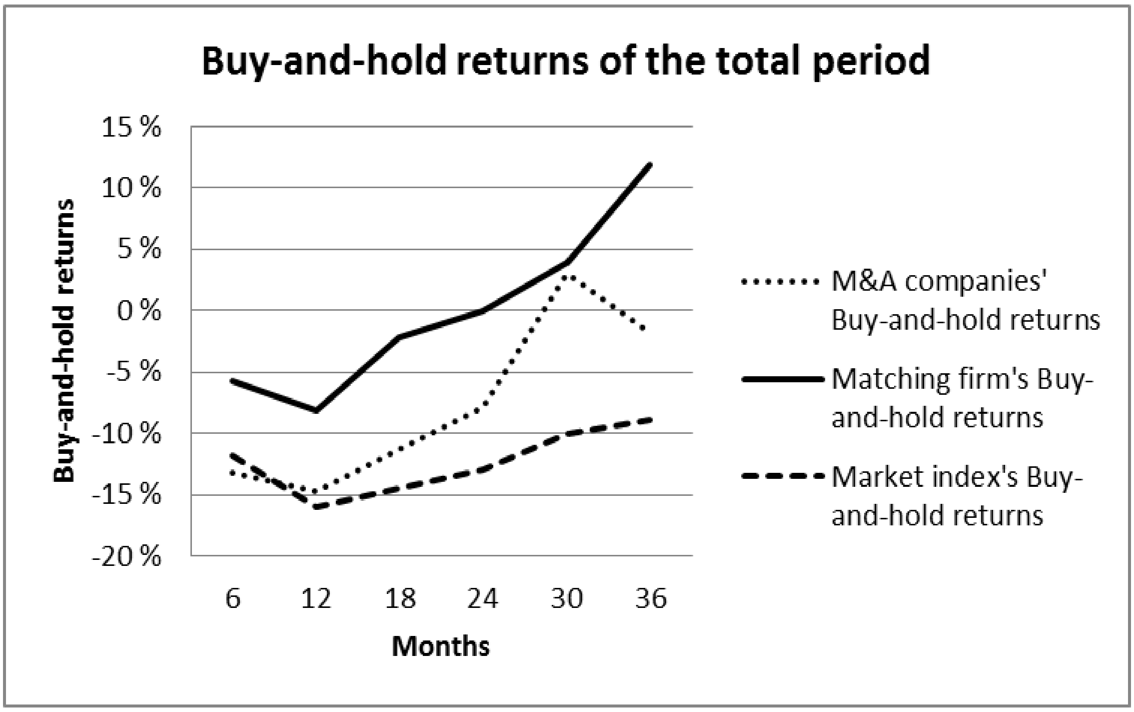

Figure 3. Total period Buy-and-hold returns

Tables 5, 6 and 7 and figures 1, 2 and 3 reveal very clearly that during the both sub-periods and during the whole examined period the matching companies have performed better than M&A companies. Matching companies have created higher buy-and-hold returns in the every analyzed period and in every different holding period. However M&A companies have outperformed the market index almost all the time. For example the table 7 and figure 3 reveal that market index has created higher buy-and-hold returns just under 11 month period after the transaction. Both returns still have been negative. Table 7 and figure 3 illustrate well that two years (24 months) after transaction the M&A companies have created negative buy-and-hold returns. However this trend changes after 30 months and finally the three years' (36 months) buy-and-hold return of the M&A companies have been just slightly negative (-2%). These results from buy-and-hold returns are in line with the previous studies' findings that companies which conduct M&A transactions will destroy the shareholders' value.

6.2.2. Wealth relatives of the M&A companies

In order to get more comprehensive picture about the M&A companies' performance, the next thing is to analyze the wealth relatives of the M&A companies. Strength of wealth relative analysis is that according to Voetman & Jakobsen (2003) the wealth relative transformation of buy-and-hold returns can be accepted to be log-normally distributed. This means that the logarithms of the wealth relatives can be accepted to be normally distributed and hence the using of general statistical tests is possible. Next two tables 8 and 9 and the next two figures 4 and 5 show the wealth relatives of the M&A companies compared with matching companies and the wealth relatives of the M&A companies compared with market index.

Table 8 and figure 4 show how wealth relatives of the M&A companies compared with matching companies have developed through the different holding periods. In addition they illustrate what kind of wealth relatives are obtained during two sub-periods and finally during the total analyzed period. Wealth relatives reveal that M&A companies have underperformed the matching firms during the all holding-periods and during the all analyzed periods (wealth-relative less than 1.0 means underperformance compared with matching company).

Table 8. Wealth relatives: M&A companies/matching companies

Month	1st sub-period	2nd sub-period	Total period
6	0.874	0.971	0.917
12	0.905	0.955	0.927
18	0.893	0.919	0.905
24	0.887	0.966	0.923
30	0.995	0.990	0.993
36	0.922	0.905	0.916

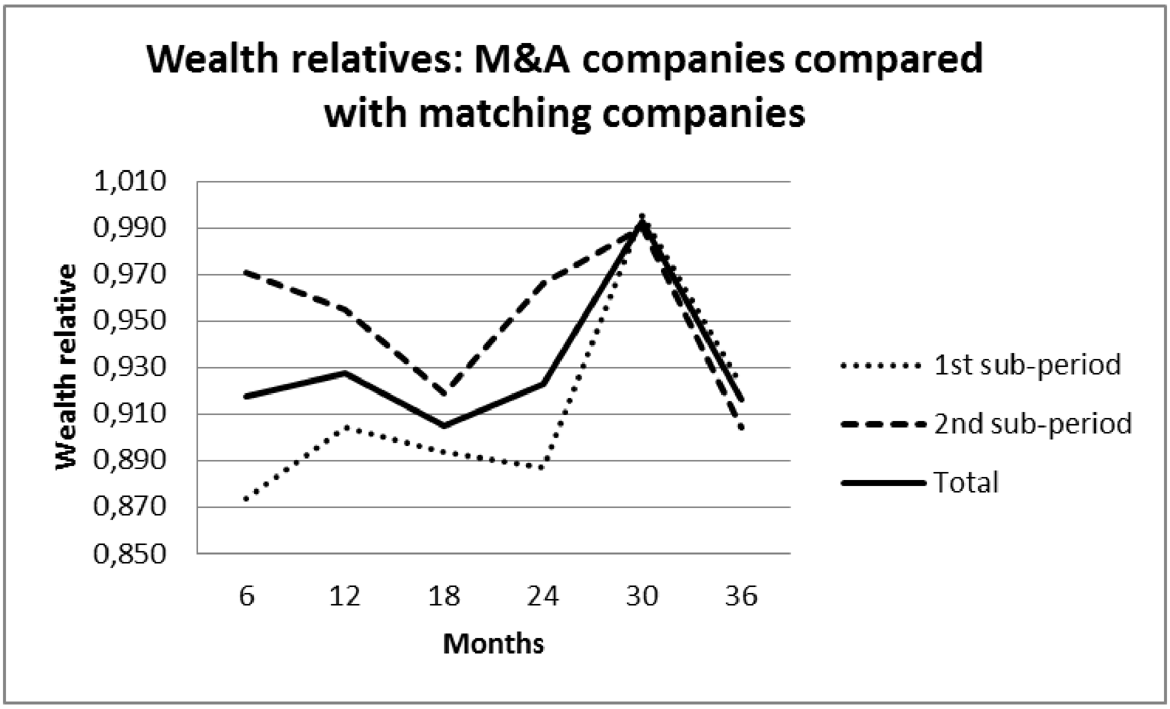

Figure 4. Wealth relatives: M&A companies/matching companies

Table 9 and figure 5 shows how the wealth relatives of the M&A companies relative with market index have developed through the different holding periods. In addition they illustrate what kind of wealth relatives are obtained during two sub-periods and during the whole analyzed period. Values of table 9 and figure 5 reveal that M&A companies have outperformed the market index almost all the time (wealth relative over 1 means outperformance compared with market index). Wealth relative calculated from the whole period has been under 1 only during first 6 months.

Table 9. Wealth relatives: M&A companies/market index

Month	1st sub-period	2nd sub-period	Total period
6	0.947	1.046	0.989
12	0.982	1.065	1.107
18	0.991	1.096	1.035
24	1.004	1.137	1.060
30	1.092	1.208	1.142
36	1.016	1.151	1.073

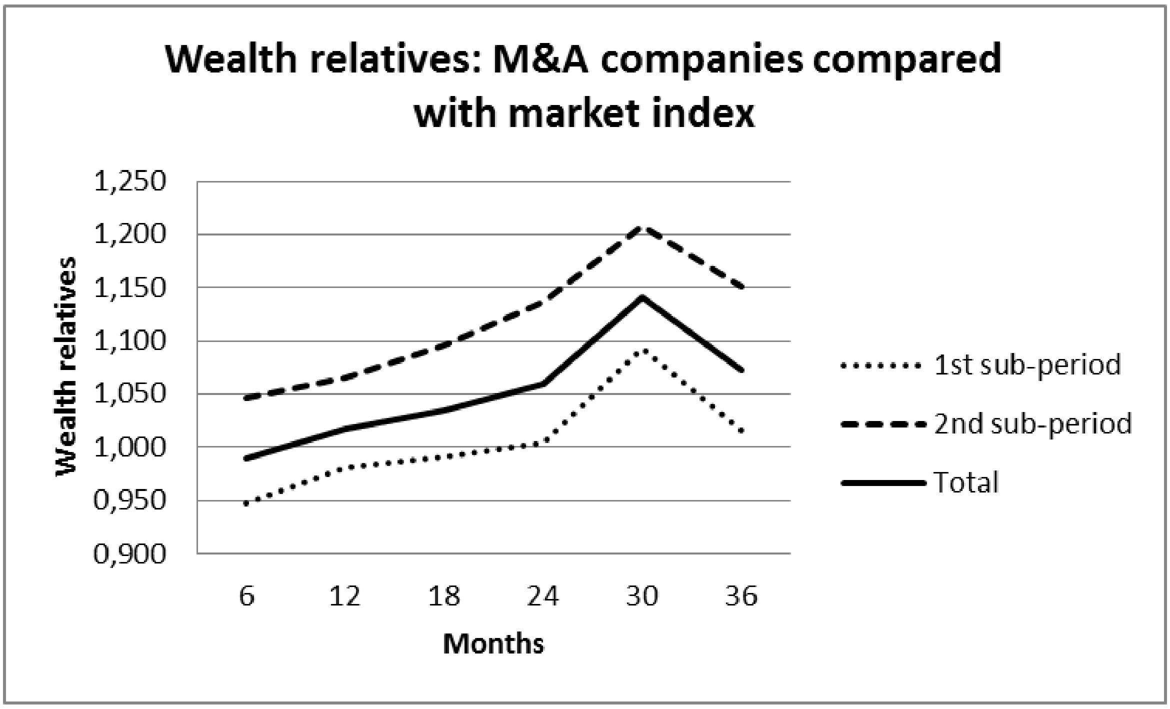

Figure 5. Wealth relatives: M&A companies/market index

Wealth relatives show that M&A companies have underperformed the matching companies all the time but in contrast they have outperformed the market index almost all the time. Wealth relatives M&A companies compared with matching companies give better approximation about the performance of the M&A companies, because matching companies have similar characteristics as M&A companies but they have not conducted the M&A transactions. As stated earlier the distribution of the wealth relatives can be approximated as a normally distributed. Hence it is possible to conduct general statistical tests for these values and make conclusion about the under- or outperformance. Equation (10) show that wealth relative values can be divided into two components: mean component and volatility component. In this equation the volatility component is always positive and it causes the bias into final values. In order to get clear picture how do M&A companies really perform in the long-term, the mean components of the wealth relatives must be analyzed.

Mean component analyses are conducted by using the estimates from the equations (11) and (12). Mean components are calculated for both wealth relative measures (M&A companies compared with matching companies and M&A companies compared with market index) and also for both two sub-periods and for the whole analyzed period.

Wealth relatives of M&A companies compared with matching companies are decomposed into mean component and volatility component and the important ones, mean components, are reported in the table 10 and graphed in the figure 6. In the table 10 the first column tells the holding period, second column tells the calculated mean component, third column tells the standard deviation of the values, and fourth and fifth columns tells the *t*-statistics and *p*-values from the mean test against zero. Columns two to five are divided into three groups and these individual groups tell what kind of mean components are obtained in different analyzing periods (pre-crisis, crisis and total). All the mean components are negative for every holding period and for every analyzing period. However, the statistical tests reveal that only one of these mean components (pre-crisis 6 month holding period) is significantly different from zero (mean component -5.9%). Hence it can be concluded that despite the M&A companies created negative profitability compared with similar matching firms, the negative difference could not be stated statistically significant.

It is important to note here the difference between wealth relative values and the mean component values. Wealth relative values interpret that M&A companies underperform matching companies around 8% during the 36 months period. However the real underperformance can be seen from mean components because the volatility part causes bias into the calculated wealth relative values. Underperformance calculated by mean component is 2% for the 36 months period. There is quite big difference in these two values and the mean component result depicts better the reality because the volatility component bias is removed from these results.

Table 10. Mean components: M&A companies/matching companies

Month	Mean component	Standard deviation	*t*-value	*p*-value
6	**pre-crisis** -5.9%**	**pre-crisis** 18.4%	**pre-crisis** - 2.086**	**pre-crisis** 0.043**
	crisis -1.3%	**crisis** 23.4%	**crisis** -0.334	**crisis** 0.74
	total -3.7%	**total** 20.9%	**total** -1.605	**total** 0.113
12	**pre-crisis** -4.4%	**pre-crisis** 24.5%	**pre-crisis** -1.164	**pre-crisis** 0.251
	crisis -2.0%	**crisis** 22.4%	**crisis** -0.546	**crisis** 0.589
	total -3.3%	**total** 23.5%	**total** -1.291	**total** 0.201
18	**pre-crisis** -4.9%	**pre-crisis** 34.1%	**pre-crisis** -0.94	**pre-crisis** 0.352
	crisis -3.7%	**crisis** 20.6%	**crisis** -1.082	**crisis** 0.286
	total -4.3%	**total** 28.5%	**total** -1.357	**total** 0.179
24	**pre-crisis** -5.2%	**pre-crisis** 35.9%	**pre-crisis** -0.953	**pre-crisis** 0.346
	crisis -1.5%	**crisis** 24.4%	**crisis** -0.374	**crisis** 0.711
	total -3.5%	**total** 31%	**total** -1.01	**total** 0.316
30	**pre-crisis** -0.2%	**pre-crisis** 25.3%	**pre-crisis** -0.052	**pre-crisis** 0.959
	crisis -0.4%	**crisis** 27.8%	**crisis** -0.096	**crisis** 0.924
	total -0.3%	**total** 26.3%	**total** -0.106	**total** 0.916
36	**pre-crisis** -3.5%	**pre-crisis** 30.9%	**pre-crisis** -0.749	**pre-crisis** 0.46
	crisis -4.4%	**crisis** 35.3%	**crisis** -0.751	**crisis** 0.457
	total -3.9%	**total** 32.8%	**total** -1.065	**total** 0.29
significant at 5% level **, significant at 10% level *				

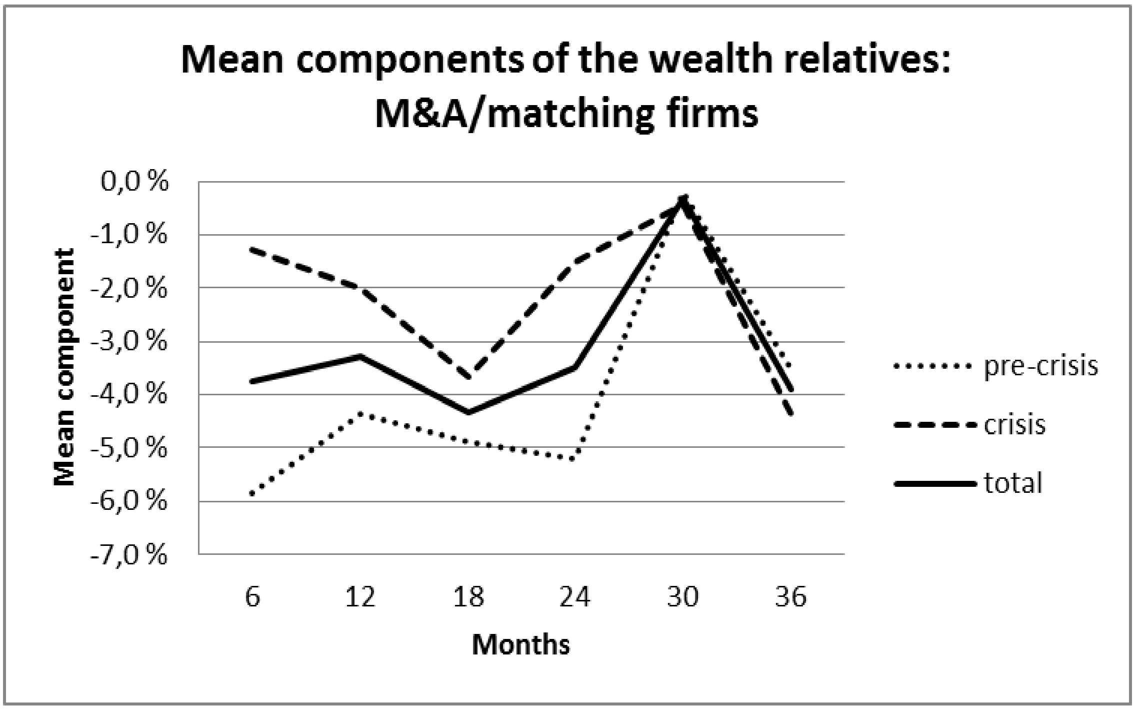

Figure 6. Mean components: M&A companies/matching companies

The study has two main hypotheses: the first hypothesis tests whether the M&A transaction create any statistically significant abnormal returns and the second hypothesis tests whether the M&A transactions are equally profitable or unprofitable during the both sub-periods. In the next table (table 11) the above introduced mean components from the two sub-periods are compared in order to find out whether there is a significant difference in profitability between two sub-periods. First column tells the return period, second names the used method (same method used for every return period), third column shows the number of the observations fourth column show the degrees of freedom (same for every test), and fifth and sixth columns show the results of statistical test. As the results of mean tests show there is no statistically significant difference in profitability between two sub-periods. In conclusion it can be stated that there is no statistically significant difference in profitability between two sub-periods when wealth relatives are calculated as M&A companies compared with matching companies and hence the results support the second hypothesis.

Table 11. Mean components of M&A companies/matching companies between two sub-periods

Month	Method	*N*	Degrees of freedom	*t*-value	*p*-value
6	*t*-test	80	78	0.977	0.331
12	*t*-test	80	78	0.443	0.659
18	*t*-test	80	78	0.191	0.849
24	*t*-test	80	78	0.32	0.596
30	*t*-test	80	78	-0.040	0.968
36	*t*-test	80	78	-0.113	0.910
significant at 5% level **, significant at 10% level *					

Previous analyses considered the wealth relatives of the M&A companies compared with matching companies. Next this study conducts the same analyses but now the wealth relatives are calculated for M&A companies compared with market index. Wealth relatives of M&A companies compared with market index are decomposed into mean and volatility components, and the interpretations about profitability are made according to mean components. Column 1 in table 12 show the used holding period, column 2 show the calculated mean components and, column 3 show the standard deviation of the returns and columns 4 and 5 show the results of statistical tests. In addition the columns from two to five are divided into three groups in order to find out how the profitability changes between three different analyzed periods (pre-crisis, crisis, and whole period).

Table 12. Mean components: M&A companies/market index

Month	Mean component	Standard deviation	*t*-value	*p*-value
6	**pre-crisis** -2.3%	**pre-crisis** 17.6%	**pre-crisis** -0.839	**pre-crisis** 0.406
	crisis 1.6%	**crisis** 23.5%	**crisis** 0.415	**crisis** 0.681
	total -0.5%	**total** 20.5%	**total** -0.205	**total** 0.838
12	**pre-crisis** -0.3%	**pre-crisis** 23%	**pre-crisis** -0.099	**pre-crisis** 0.921
	crisis 2.0%	**crisis** 21%	**crisis** 0.581	**crisis** 0.565
	total 0.7%	**total** 22%	**total** 0.301	**total** 0.764
18	**pre-crisis** -0.2%	**pre-crisis** 28.8%	**pre-crisis** -0.048	**pre-crisis** 0.962
	crisis 3.5%	**crisis** 21.3%	**crisis** 1.003	**crisis** 0.322
	total 1.5%	**total** 25.5%	**total** 0.531	**total** 0.597
24	**pre-crisis** 1.2%	**pre-crisis** 31.4%	**pre-crisis** 0.243	**pre-crisis** 0.810
	crisis 4.1%	**crisis** 23.5%	**crisis** 1.069	**crisis** 0.292
	total 2.5%	**total** 27.9%	**total** 0.813	**total** 0.419
30	**pre-crisis** 5.3%	**pre-crisis** 22.5%	**pre-crisis** 1.555	**pre-crisis** 0.128
	crisis 6.2%	**crisis** 26.8%	**crisis** 1.416	**crisis** 0.166
	total 5.8%**	**total** 24.4%	**total** 2.106**	**total** 0.038**
36	**pre-crisis** 2.5%	**pre-crisis** 27%	**pre-crisis** 0.617	**pre-crisis** 0.541
	crisis 3.7%	**crisis** 30.4%	**crisis** 0.736	**crisis** 0.467
	total 3.1%	**total** 28.4%	**total** 0.964	**total** 0.338
significant at 5% level **, significant at 10% level *				

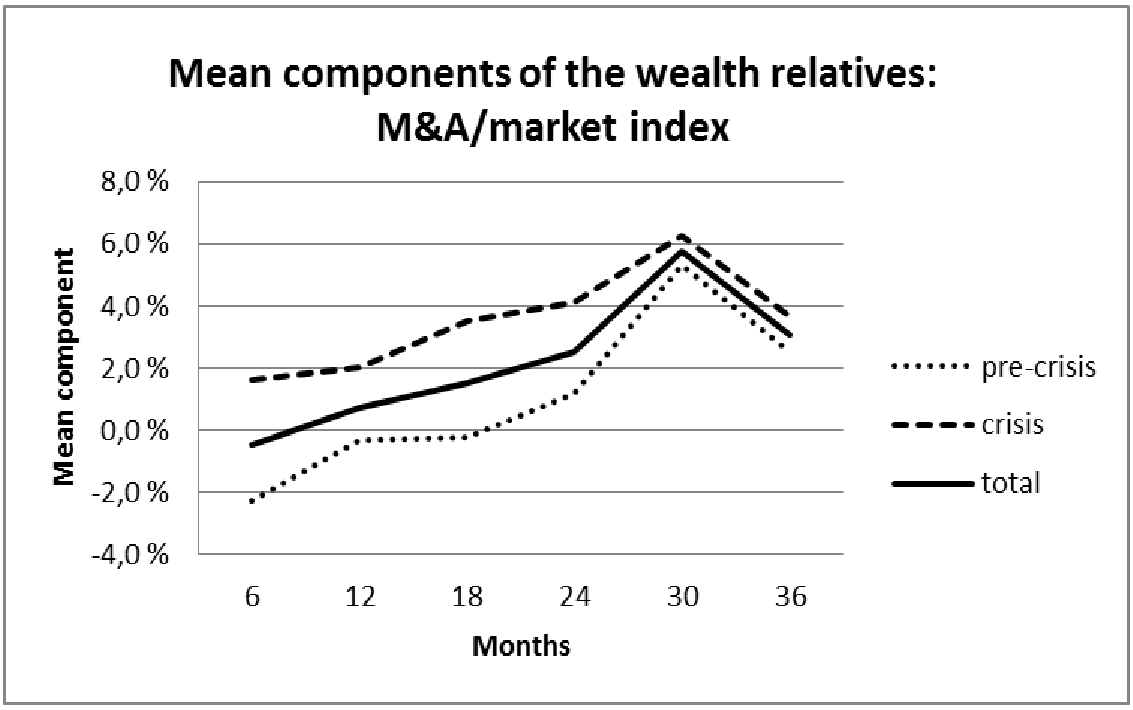

Figure 7. Mean components: M&A companies/market index

Results of the table 12 and figure 7 show that mean components calculated from the wealth relatives M&A companies compared with market index, are mainly positive. Mean components have been positive almost all the time when pre-crisis and total analyzed period is considered. If M&A companies underperformed compared with matching companies, now they outperform compared with market index. Despite the mean components were positive almost all the time they were statistically significant only ones (30 month holding period while the whole analyzed period is examined +5.8%). Again it is important to note the difference between pure wealth relative value and the volatility adjusted mean component value. Wealth relative value indicates around 7% outperformance of M&A companies compared with market index in the three years holding period. Volatility adjusted mean component however reveal that the outperformance was just around 3%. Volatility adjusted mean component can be accepted to depict the reality better because the volatility component causes the positive bias in the wealth relative values.

Aligned with the previously introduced tests, this study conduct also the mean difference test for these mean components calculated from M&A companies compared with market index. Mean components were mostly positive in both sub-periods but in order to find out whether there is significant difference in profitability between two periods, the mean tests must be conducted. Columns include same factors as in table 11 but here the mean components are calculated from the wealth relatives of M&A companies compared with market index. Column 1 includes the holding period, column 2 shows the used method, column 3 shows the number of observations, column 4 shows the degrees of freedom and columns 5 and 6 reveal the results from mean tests.

Table 13. Mean components of M&A companies/market index between two sub-periods

Month	Method	*N*	Degrees of freedom	*t*-value	*p*-value
6	*t*-test	80	78	0.837	0.405
12	*t*-test	80	78	0.475	0.636
18	*t*-test	80	78	0.650	0.518
24	*t*-test	80	78	0.472	0.638
30	*t*-test	80	78	0.166	0.869
36	*t*-test	80	78	0.178	0.859
significant at 5% level **, significant at 10% level *					

Comparison of the profitabilities between two sub-periods reveals that there is no statistically significant difference in profitability between two-sub periods. Any of the test values is not even close to critical values. These findings support the second hypothesis because there seems not to be difference in profitabilities between two sub-periods.

6.2.3. Summary of the long-term results and suggested explanations

The first hypothesis of the thesis is: *Mergers and acquisitions did not create any significant abnormal returns for shareholders, not in short- and neither in the long-run.* In contrast with short-term results it can be stated that findings support the first hypothesis when the long-term profitability is analyzed. Long-term profitability of the M&A transactions calculated by wealth relative method did not create any significant abnormal returns. Companies which made M&A transactions underperformed compared with matching companies and outperformed compared with market index. However the results could not be accepted to be statistically significant.

Many previous studies have stated that M&A transactions are wealth decreasing transactions for the shareholders of the acquiring company. Many previous studies have used data from US or UK. However, at least one study by Koskinen (2010) is conducted with Finnish data and the results show that M&A transactions really are wealth decreasing transactions in the long-term. Jakobsen & Voetman (2003) have studied the long-term profitability of the Danish companies M&A transactions. Their study takes the statistical issues and the Fama's (1998) the bad model problem into account and the results show that actually the M&A transactions are not as poor transactions as could be expected. This study aims to take the statistical issues and the bad model problem also into account and the results are aligned with Jakobsen & Voetman (2003). Despite the underperformance compared with matching companies was not statistically significant, the results are party aligned with the theory of managerial hubris by Roll (1986). Underperformance of M&A companies indicates that acquiring companies end to bid too high price and the result is that the expected synergies cannot be achieved in the long-term.

The second hypothesis of the thesis is: *There is no difference in profitability of mergers and acquisitions made before and during the crisis*. Results suggest that there was no statistically significant difference in profitability between two analyzed periods in the long-term and hence the findings support the second hypothesis of the thesis. Despite the results were not statistically significant it can be stated that underperformance compared with matching companies was smaller during the crisis period than pre-crisis period. In addition outperformance compared with market index was also bigger during the crisis period than during the pre-crisis period. These results indicate that there could be some difference in investments' profitability between different periods. Hence the managerial discretion theory by Jensen (1986) can partly be attributed to the long-term analyze also. Companies seem to make more profitable investments during the challenging times when the extra cash flows are rare and every investment decision must be properly analyzed, although the profitability difference is not statistically significant.

6.2.4. Additional tests: structural changes

Above introduced results about short-term and long-term profitability gives a good picture how profitable the M&A transactions of Finnish companies' have been. These results are comprehensive but for extra analysis this study tests whether the companies which have made M&A transactions have experienced structural changes in their systematic risk. Systematic risk is measured by beta coefficient. Study by Hackbarth and Morellec (2008) have studied the mergers and acquisitions' impact on companies' systematic risk and their conclusion is that actually the systematic risk (beta coefficients) of the acquirer companies decreased after the transactions.

In order to find out the possible structural changes in beta coefficients this study has run the cusum test for every company which has made M&A transaction during the analyzed period. Cusum (cumulative sum) test can be used in order to find out whether the analyzed coefficients have been constant under the investigation period. In this study the analyzed coefficients are the beta coefficients and the critical value for the possible structural change is 5%.

Results of the cusum tests reveal that the mergers and acquisitions did not change the risk characteristics of the companies. Only one regression from 80 cusum test regressions resulted in extreme variation in beta coefficient and hence the significant structural change.

CONCLUSIONS

Investing and extending the business is crucial for companies in order they survive and can maintain profitable business in the future. Companies can grow and extend their business by organic growth or by mergers and acquisitions with already existing companies. The main motive behind the mergers and acquisitions is the synergy effect. Consolidation of the two companies can be managed by more effective way and the resulting synergy effects mean that one plus one results more than two. Existing studies related on mergers and acquisitions are at least ambiguous. According to previous studies it is not clear whether mergers and acquisitions are wealth increasing or decreasing transactions. Findings from previous studies are interesting because Modigliani & Miller (1958) have stated that companies should only take part in transactions which increase the shareholders' wealth.

Most of the previous studies are conducted with US or UK data. General conclusion from these previous studies is that mergers and acquisitions are wealth increasing transactions for the target companies' shareholders but negative or at least neutral for acquiring company's shareholders. US and UK studies' strength is that they concentrate on the M&As' effects on actively traded and large stock exchanges. However it is also interesting to find out whether the same results can be found from smaller and not so actively traded stock exchanges. Study by Jakobsen & Voetman (2003) have examined the M&A transactions' profitability with Danish data and their results suggest that actually the mergers and acquisitions are not as bad transactions for shareholders as the previous literature suggest.

Fama (1991) has introduced the bad model problem. The main idea behind this Fama's statement is that generally every anomaly in financial markets is the result of used methodology. Bad model problem is important when mergers and acquisitions are examined, because especially long-term studies are prone to this bad model problem. Bad model problem leads into biased results and the bias grows when the examined period is extended. Event study methodology is useful method for short-term studies but for long-term studies the used methodology must be considered properly. Jakobsen & Voetman (2003) have used the wealth relative method for long-term analyze. Wealth relative method should remove the biases which arise from new listing bias, rebalancing bias, and skewness bias. Hence the wealth relative method is used in this study also.

Previous studies of mergers and acquisitions have not taken the recent financial crisis impact into account. In addition there are not many studies conducted with Finnish data. Statistics show that merger and acquisition activity and the absolute value of the transactions decreased during the recent financial crisis. Financial crisis clearly seems to have impact on merger and acquisition activity. However it is not clear whether the crisis period has impact on transactions profitability. Actually the crisis period's impact to transactions' profitability may have positive, because according to managerial discretion theory by Jensen (1986), companies may make worse investment decisions during extra cash flow. In conclusion it would be expected that during the more challenging times companies make more profitable investment decisions because every investment must be properly analyzed.

Based on the introduced theories and previous literature this study tries to find out whether the mergers and acquisitions are wealth increasing, decreasing or wealth neutral transactions for the acquiring company's shareholders. M&As' impact is analyzed for both, short- and long-, terms. In addition this study tries to find out whether the financial crisis had impact on the mergers and acquisitions' wealth creation. Based on these research problems this study has two hypotheses:

H1: *Mergers and acquisitions did not create any significant abnormal returns for shareholders, not in short- and neither in the long-run.*

H2: *There is no difference in profitability of mergers and acquisitions before and during the crisis.*

According to empirical results Finnish companies' M&A transactions are not as bad transactions are the previous literature would suggest. Actually the mergers and acquisitions created even positive abnormal returns (+2.5 %) in the short-term when the event window was -1:+1 days. Results do not support the first hypothesis and suggest that prices of Finnish stock exchange reflect the new information quite fast, because the abnormal effect seems to vanish when the event window was extended to -15:+15 days. Used event study methodology can be accepted to be appropriate method for short-term studies. Short-term results indicate that investors expect that companies which take part in mergers and acquisitions are actually able to achieve the expected efficiency increase and synergy effects.

Long-term results reveal that Finnish companies' M&A transactions were not wealth decreasing neither wealth increasing transactions but wealth neutral transactions for shareholders. Long-term performance is analyzed with the wealth relative method and absolute results reveal that M&A companies underperform compared with matching companies and outperform compared with market index. However any of the results were not statistically significant and hence the results suggest that M&A transactions' impact on shareholders' wealth would be neutral . Despite the underperformance of the Finnish companies' mergers and acquisitions was not statistically significant, the results show that underperformance was constant through the all examined holding periods. This indicates that companies may suffer of too high bidding prices. This explanation is aligned with the managerial hubris theory by Roll (1986) which suggests that acquiring companies end to bid too high price for the target company and the result is that the expected efficiency increase and synergy effects are not met in the long-term.

Empirical analysis between two sub-periods reveal that M&A companies performed slightly better during the crisis period that during the pre-crisis period. Results are similar for both short- and long-term holding periods. However the differences were not statistically significant and hence the results support the second hypothesis. Better results from crisis period however indicate that companies may make more profitable investments during the more challenging times. These results are partly aligned with managerial discretion theory by Jensen (1986) which states that companies are prone to make poor investments during good and extra cash flow periods.

Merger and acquisition profitability of Finnish companies is not very widely examined topic in finance research. This study's contribution for existing literature is that Finnish companies M&A transactions are not wealth decreasing neither wealth increasing but merely wealth neutral transactions for the shareholders. These results are interesting because they are mostly opposite compared with previous studies from bigger stock exchanges like US or UK. Results are even more comprehensive after the analyzed period is divided into two sub-periods. Financial crisis impact on Finnish companies M&A transactions is very new topic and hence this study can be seen to be quite unique in the field of this area. Keeping in mind the bad model problem by Fama (1991) it can be concluded that Finnish companies are able to avoid the wealth decrease from mergers and acquisitions and in addition the Finnish companies are able to maintain the stable investment profitability during the various economic states.

The biggest limitation of this study relate on the quite small amount of data. Small amount of data is one possible source of the biased returns. This small data problem must be kept in mind when the results of this study are analyzed. Another possible limitation relates on the used methodology. Despite the wealth relative method should remove the biggest sources of biased results, the long-term studies are always prone to possible biases like skewness, rebalancing, and new listing.

First recommendation for future research is that M&A transactions' profitability could be examined with various methods. Methodology issue seems to be very important aspect in financial studies and hence it would be interesting to find out whether the results with Finnish data are same if various methods are applied. Second recommendation relates on the companies characteristics. It would be very interesting to find out whether the companies from different industries perform better in mergers and acquisitions than others.

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