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Master Thesis

**“The impact of mergers and acquisitions on shareholders'
value : An empirical analysis of European banks.”**

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Abstract

Mergers and Acquisitions (M&A) are taken into account as some of the most usable practices for firm development and expansion. These practices have commonly been utilized in European countries while are often used. This research directs to examine the effect of M&A on stock wealth of banking industry in Europe by using event study analysis for the period of 2007–2016, regarding 114 deals. Market Model was used to calculate the abnormal and cumulative abnormal returns for analyzing the three event periods and the impact of the transaction in stock performance. The research disclose composite findings regarding mergers and acquisitions and their stock prices performance. Our results shown that most of the companies performed negative abnormal returns while some others have produced positive abnormal and cumulative abnormal returns after transaction period. All in all, the results indicate that the market make a positive response towards M&A transactions in banking sector of Europe. Especially, shareholders of target firms earn positive abnormal returns, after the announcement. The findings would be beneficial in suppling awareness to the investors and management regarding their investment decisions.

Keywords: Mergers and Acquisition, Stock Value, European Banks

Table of Contents

Acknowledge	2
Abstract.....	3
Table of Contents.....	4
Table of Figures	6
List of Tables	7
Introduction.....	8
1.Mergers and Acquisitions	10
1.1 The reasons for Mergers and Acquisitions.....	11
1.1.1The Main Motives behind Takeovers and Mergers.....	12
1.2 Reasons why most mergers destroy shareholder value.....	13
1.2.1 Financial reasons Mergers and Acquisitions fail to add value	13
1.2.2 Cultural reasons mergers fail to add value	14
1.2 The Effects of the Financial Crisis on M&A Announcement Returns	15
2. Literature Review.....	16
2.1 Target firms	17
2.2 Acquiring firms	17
2.3 Stock reaction on M&A announcements.	19
2.4 Bank industry stock reaction on M&A announcements.....	21
2.4.2 Impact of direction of M&As on stock performance.	23
2.4.3 Impact of means of payment on stock performance.....	24
3. Methodology and Data.....	26
3.1 Methodology	27
3.1.1 Market Model	27
3.1.2 Significance Tests.....	29
3.2 Objective	31
3.3 Data selection	31
4.Empirical Results.....	33
4.1 Average Abnormal Returns and Cumulative Average Abnormal Returns of Acquirers	34
4.1.1 General Sample.....	34
4.1.1.1. Event window of 41 days (-20,+20)	34
4.1.1.2 Event window of 21 days (-10,+10)	36
4.1.1.3 Event window of 5 days (-2,+2)	38
4.2.1 Domestic and Cross-border transactions and their impact to acquirer's shareholders	39

4.2.1.1 Event window of 41 days (-20,+20)	39
4.2.2.1 Event window of 21 days (-10,+10)	41
4.2.3.1 Event window of 5 days (-2,+2)	42
4.1.3 Methods of payment and their impact to acquirer's shareholders	44
4.1.3.1 Event window of 41 days (-20,+20)	44
4.1.3.2 Event window of 21 days (-10,+10)	46
4.1.3.3 Event window of 5 days (-2, +2)	47
4.2 Average Abnormal Returns and Cumulative Average Abnormal Returns for Targets	49
4.2.1 General Sample	49
4.2.1.1 Event window of 41 days (-20,+20)	49
4.2.1.2 Event window of 21 days (-10,+10)	51
4.2.1.3 Event window of 5 days (-2,+2)	52
4.2.1 Domestic and Cross-border transactions and their impact on target's shareholders	53
4.2.1.1 Event window of 41 days (-20,+20)	53
4.2.2.2 Event Window of 21 days (-10,+10)	54
4.2.2.3 Event window of 5 days (-2,+2)	56
4.2.3 Methods of payment and their impact to target's shareholders	57
4.2.3.1 Event window of 41 days (-20,+20).....	57
4.2.3.2 Event window of 21 days (-10,+10)	59
4.2.3.3 Event window of 5 days (-2,+2)	61
5.Conclusions.....	63
5.1 Recommendations for Managers, Investors and Policy Makers.....	66
5.2 Limitations and Implications.....	67
5.3 Suggestions for further research.....	68
Appendix.....	69
Appendix A'	69
Appendix B'	78
References.....	86

Table of Figures

Figure 1: AAR and CAAR of Acquirers (-20,+20)	36
Figure 2: AAR and CAAR of Acquirers (-10,+10)	37
Figure 3: AAR and CAAR of Acquirers (-2,+2)	38
Figure 4: Domestic and Cross-border CAAR of Acquirers (-20,+20)	40
Figure 5: Domestic and Cross-border CAAR of Acquirers (-10,+10)	42
Figure 6: Domestic and Cross-border CAAR of Acquirers (-2,+2)	43
Figure 7: CAAR of Acquirers and methods of payment (-20,+20)	45
Figure 8: CAAR of Acquirers and methods of payment (-10,+10)	47
Figure 9 : CAAR of Acquirers and methods of payment (-2,+2)	49
Figure 10: AAR and CAAR of Targets (-20,+20)	50
Figure 11: AAR and CAAR of Targets (-10,+10)	51
Figure 12: AAR and CAAR of Targets (-2,+2)	52
Figure 13: CAAR of Targets for Cross-border and Domestic M&A deals (-20,+20).....	54
Figure 14: CAAR of Targets for Cross-border and Domestic M&A deals (-10,+10).....	55
Figure 15: CAAR of Targets for Cross-border and Domestic M&A deals (-2,+2).....	57
Figure 16: CAAR of Targets and methods of payment (-20,+20).....	59
Figure 17: CAAR of Targets and methods of payment(-10,+10).....	60
Figure 18: CAAR of Targets and methods of payment(-2,+2).....	62

List of Tables

Table 1: Year-wise Distribution of M&A Announcements (2007-2016).....	31
Table 2: Year-wise Sample Distribution of Cross-border and Domestic M&A (2007-2016)	32
Table 3: Sample Distribution of Cross-border and Domestic M&A According to Features.	32
Table 4: Stake-wise Distribution of M&A Announcements (2007-2016).....	33
Table 5: CAAR of Acquirers (-20,+20).....	34
Table 6: CAAR of Acquirers (-10,+10).....	36
Table 7: CAAR of Acquirers (-2,+2).....	38
Table 8: Domestic and Cross-border CAAR of Acquirers (-20,+20).....	39
Table 9: Domestic and Cross-border CAAR of Acquirers (-10,+10).....	41
Table 10: Domestic and Cross-border CAAR of Acquirers (-2,+2).....	42
Table 11: CAAR of Acquirers and methods of payment (-20,+20).....	44
Table 12: CAAR of Acquirers and methods of payment (-10,+10).....	46
Table 13: CAAR of Targets (-20,+20).....	49

Introduction

All over the time, corporations need economic resources to extend and expand their operations or growth. Growth can be accomplished through launching new products and services or expanding operations beyond the existing resources. There are two assets used for reaching growth, internal resources and external resources. The business organizations commonly depend on internal sources for expansion of their business. However, any considerable growth opportunity will stimulate organizations to count on external resources if there are constrained internal resources.

The external sources may consist of loans from banks, partnerships, mergers with other companies or obtaining another organization. The Mergers and Acquisitions (M&As) are the emerging strategies adopted for enlargement of the businesses in the corporate world. Due to its rapid growth, many organizations have adopted such strategies for expanding their business, and about four thousand transactions are recorded each year in the business world.

Since the second half of the 1990s, we have been witnessing an unprecedented wave of mergers and acquisitions in Europe. Globalization and increased competition have contributed to the rise of mergers and acquisitions of large firms, which are also influenced by a series of technological innovative changes. These mergers and acquisitions are not confined to the industrial sector so alone, but rather of concern to overall economy and particularly the banking sector.

Moreover, deregulation and acceleration of economic innovation process have favored the complexity of varieties of financing mergers and acquisitions and have given the shareholders a key role within the implementation of such operations. This trend is primarily due to technological and financial innovations, the international movement of financial deregulation, the process of financial integration in Europe, favorable economic and financial conditions and eventually necessity to create value for the shareholders. The advent of shareholder value currently remains the essential objective of these mergers and acquisitions. However, the overwhelming majority of mergers and acquisitions have occurred within national borders (domestic M &A), whereas since 2005 a few took place across borders (border M & A).

Investments across all asset classes often are accompanied by excessive opportunities, but they involve many risks. One of the main reasons behind any strategic corporate decision is to maximize the shareholder value. However, the prime strategic choices for firms are mostly, if not probably, M&As. Mergers and acquisitions not only affect the value of the merging firms, but they also produce a positive or negative wealth effect for the shareholders of the involved companies. Consequently, shareholders of target firms attain a positive wealth effect while shareholders of acquiring firms produce a negative wealth effect. Nonetheless, the outcome of such M&A deals is ambiguous.

This study aims to explore the financial performance of European banks and Financial institutions, which have been involved in mergers and acquisitions deals, and examines the impact of merger or acquisition announcements on acquiring and target firms' stock performance. This thesis examines a total of 114 completed M&A transactions from 2007 to 2016 in Europe.

1. Mergers and Acquisitions

Even though they are often used like they were synonymous, the terms “merger” and “acquisition” have a slight difference in their meaning. A merger happens when two separate entities (usually of a comparable size) combine forces to create a new, joint organization in which both are equal partners. An acquisition refers to the obtaining of one organization by another. A new company does not emerge from an M&A transaction rather, the acquired company or the target firm, is absorbed and manages to exist, as its assets become part of the acquiring company. Acquisitions generally carry a more negative connotation than mergers, especially if the target firm shows resistance to being bought. As a result, many acquiring companies refer to an acquisition as a merger even when technically it is not. (Investopedia, 2018)

In general, a merger requires two firms to consolidate into a new corporation by establishing a new ownership status and management structure. An acquisition happens once one firm takes over all of the management decisions of another. The most common revelatory distinction lies on whether the takeover is friendly (merger) or hostile (acquisition).

Practically, friendly mergers of equals firms happen rarely. It is unusual that two companies would benefit from uniting forces, or even two different management approaches come closer to realize mutual opportunities. When this phenomenon take place, the shares of merging firms are surrendered and new stocks are published under the name of the new corporation identity.

Due to the fact that mergers are so occasional and acquisitions seems harsh to take place, the two terms (M&A) have become more and more mixed and used in concurrence with each other. Contemporary corporate modifications are typically referred to as merger and acquisition (M&A) deals rather than simply a merger or acquisition. The main difference focuses on how the acquisition is communicated to and deceived by the target firm's management and employees. The public relations criticism for hostile takeovers are often damaging to the bidding firm. The targets of hostile transactions are usually obligated to publicize a merger to maintain the reputation of the target firm. (Investopedia, 2018)

Mergers and acquisitions could be classified based on the kind of a merger. Most mergers are merely finalized when one firm obtains another one, but there are several motives strategically-oriented behind such a practice. Likewise, legal terminology also differs from merger to merger. The process of an acquisition or a merger calls for a disciplined approach by the decision makers within the firm. The following parameters should be considered:

- Firm should be willing to take risks and make investments in order to profit fully from the deal, competitors and also the industry.
- In order to decrease risk, a couple of bets should be made, since some of the initiatives can fail, while some will prove profitable.
- The management of the bidding company ought to learn to be resilient, patient and able to emulate change owing to changing business dynamics in the industry (Cleverism,2015).

1.1 The reasons for Mergers and Acquisitions

Mergers and acquisitions happen for many strategic reasons, but the most common of them are basically economic. Right below are mentioned the main financial reasons:

- Increasing opportunities: New opportunities may occur from further expansion and development. Likewise, firms might want to combine to leverage costly manufacturing operations. Opportunity may not just be a specific department, it may occur from acquiring a unique technology platform rather than trying to create it from scratch.
- Diversifying products or services: One more factor for merging companies is to improve a current product or service. Two firms could combine their products or services to acquire a competitive advantage in the market share.
- Replacing Management: A private firm may need to merge or be acquired if the current leadership cannot detect someone within the corporation to succeed them.

- Cutting costs: When two firms provide similar products or services, merging them can generate a large opportunity to cut costs. When firms merge, they usually have the ability to combine locations or reduce operating costs. This financial strategy has to do with economies of scale.
- Surviving: It is not simple for an organization to willingly give up its identity to another organization, but sometimes it is the only way for the firm to survive. Several companies used mergers and acquisitions to survive during the global financial crisis from 2008 to 2012. During the financial crisis, many banks and financial institutions merged in order to deleverage failing balance sheets that otherwise may have put them out of business.

Combining firms has some eventual downsides for employees, who have to deal with immediate fears concerning employment or business lines, but additionally positive sides of merging may include more advantages, or having access to alternative resources to do one's job (Wallstreetoasis, 2015).

1.1.1 The Main Motives behind Takeovers and Mergers

Mergers and Acquisitions happen for a several reasons that differ in significance across regions, industries, and sectors, similarly as over time. Needless to mention, the most prominent reason is synergies, the value achieved from the additional cash flows generated or the cash outflows saved by combining two or more firms or going concerns.

There is a statement presented by Johnson & Scholes, who separate the main motives for M&A into three categories:

- Strategic
- Financial
- Managerial

It is undoubtedly true that in a particular M&A deal can be included motives from all three of these categories. Nevertheless, it is necessary to identify the prominent reason for each transaction, by allocating it to one of the three groups.

1.2 Reasons why most mergers destroy shareholder value

Mergers and acquisitions can be profitable for a firm for several reasons: improving existing products or services, amendment of temperament, an entry to international markets and acquiring expert employees. One research by KPMG has come to the conclusion that quite the half of M&A deals destroys stock value while one third made no difference at all. The reasons for unsuccessful transactions contain observable accounting and operation failures, but the most complicated reasons deal with people, culture and human behaviors. These are also the most tough to correct.

1.2.1 Financial reasons Mergers and Acquisitions fail to add value

- Overvaluation: M&As can cost billions, mistakes cannot solely cripple a bidding firm financially by committing its capital resources, but a big failure can seriously injure a firm's name among shareholders. Aberrant financial practices are the primary reason behind overvaluing a M&A deal. In 2013, for example, Caterpillar revealed a 580 million dollar accounting charge concerning their bid of China's Siwei, whose management team led Caterpillar to wildly overpay.
- Intervention: Even when two firms consent to the terms and conditions of an M&A deal, third parties with stealthy motives can intervene, adding restrictions which deter merger from becoming final and accomplished. Usually, these third parties are governments.
- Distraction: Commonly, distractions that accompany mergers can avert managers from focusing on the real business objectives of their firm. During the busiest worldwide M&A period leading to a historic peak in 2000, a ground breaking Wharton study examined the cost-cutting performance of American banks a long time after the merge. Although the reason cited for these mergers was cost-efficiency, the research found that merged organizations actually cut costs at a much slower pace than their peers that remain independent. Counter intuitively, mergers seem to avert firms from reaching targets as fast as they would otherwise.

- Fear and greed: Mergers, when actuate by concern of failure, rising costs or dramatic change are rarely the appropriate reason to merge, and may cause firms to aim at transactions for the completely wrong reasons. Copycat mergers arise in many industries where major deals are followed by a rash of similar consolidations despite the fact that it is usually better to be nimble when the rest of your competitors are expanding.(Martinroll,2014)

1.2.2 Cultural reasons mergers fail to add value

M&As are basically a strategic and financial decision, but assuming the relevant financial and legal steps are made properly, true success depends on how effectively the most important intangible assets of a brand digest. A main object of negotiations is that the legal and financial arrangements can give management opportunities such that the only human capital decisions made with reliance is who will be the next CEO and who will be involved to the new management.

If cultures are not compatible or managed carefully, the merging may be doomed from the beginning. In several cases, people who have spent their working lives competing each other, came together under the new merging company. This is known as a “merger of equals” because, on the surface, it brings along two similar types of firms with strong market place. In other cases, mergers or acquisitions bring along two different types of firms and cultures with a different market position.

The main issue with most mergers is that they do not actually “merge” as much as they put their operations together. Both firms prefer to co-exist rather than create a new organization; therefore, their cultures can stay entrenched.

When two groups are in conflict, each group becomes more closely knit and coherent, unceremoniously demanding additional loyalty to what it believes in order to present a united front. Leadership among each group can become more autocratic as the group stimulates. As soon as the groups begin to realize themselves as good guys vs. bad guys, they only see their strengths, deny their weaknesses, and may ignore the synergies the companies are trying to generate. If these stereotypes persist uncorrected, communication between groups either decreases or becomes hostile and every future

strategic initiative will become a battleground. Infrequently, will a brand with deep-seeded cultural conflict become the cohesive, highly integrated, synergistic organization dreamt of during the early days of a merger.

Cultural conflicts typically have two results. The first result is when management mutually admits defeat and dissolves the merger, as Daimler Chrysler did in 2007, selling what was once the third largest auto-maker in the United States. Chrysler would file for bankruptcy in 2009. Similarly, Time Warner finally spun off the AOL unit in 2009 causing record losses. The second result is when the firms do manage to remain whole, one brand assumes a supplant role within the company. Commonly, the winning group whose values have been affirmed relaxes while leadership becomes maintenance oriented instead of progressive or innovative. On the opposite hand, focus within the supplant group shifts to assigned tasks rather than the greater vision. Scapegoating and internal fighting may begin while talent gradually leaks from the organization. In both situations, cultural discrepancies eliminate the merger's value over time and never truly create a competitive advantage.

If the structural reorganization of an organization is seen as the end, rather than a beginning, mergers will undeniably unravel. Great steps must be taken to assure cultural compatibility before any legal or financial negotiations begin, otherwise, factions will develop along old lines of thinking even when the ink has dried. Merged brands cannot simply be bolted on to one another because they intuitively generate synergies – there must be a unifying and compelling vision based on shared values and structures around which two cultures can join. Without this belief, no amount of legal or financial wrangling can make M&As successful.

1.2 The Effects of the Financial Crisis on M&A Announcement Returns

The global financial crisis is changing dynamically the landscape for mergers and acquisitions and identifying new M&A targets that demonstrate a shift with significant impact on our global business practices. Even more now than ever before, firms are implementing strategies that include gaining access to new geographies. They are corresponding to the crisis by emphasizing on growth outside their home country regions,

extending their geographic diversification and investment in alternative markets. Earlier M&A activity was concentrated on the triad of US, Europe and Japan, the world's largest consumer markets. However, as the triads share of the global consumer market declines, companies are searching for new consumer markets that are expanding and open for opportunity. Our study reviews the increased complexity and challenges those cross-border mergers and acquisitions' need to address in their attempt to succeed globally in an environment of instability fueled by ongoing financial turmoil. New development in formulating innovative deal structures and defining creative terms is obvious. Looking deeper into the supply chain to identify acquisitions targets is becoming more attractive, especially in cross-border M&A deals.

Diversify risk and maximize control, efficiency and productivity. Increasing the impact of shareholders, maximizing legal arrangements and giving consideration to international political consequences are all finding their way into the acquirer's deal structure. Cross-border M&A is contributing to the change into global political, social and economic integration.

2. Literature Review

In this section, there is a discussion of empirical studies which approach the issue of M&A from different points of view. Research on the impact of M&A on the wealth creation of participating firms is plenty. Firstly, Gort and Harford (1969) support the view that the M&A waves have been shaped by the economic turbulence that was affecting the market. In 1983, Jensen and Ruback (1983) enunciate that the agreement

between companies comes when the value of the new company is bigger than the aggregation from both parts. The research of Jensen and Ruback (2002) presents some of the major evidence in the field of mergers and acquisitions, and it concludes that acquisition earned zero or negative returns counter to the targets that earned significant positive returns.

2.1 Target firms

Most of the conducted researches - focused on the returns - show positive abnormal returns for the target firms on the day of the announcement. Specifically, Dodd and Ruback (1977) found that the investors with stocks from target firms earn statistically significant positive abnormal returns in the first month after the announcement. For successful merger proposals, the average abnormal returns were 20.58%, while for the unsuccessful deals were 18.96%. Using the Market Model, Dodd analyzed 151 deals during 1970 and 1977 and the researcher reported large positive abnormal returns accruing target firms shareholders the previous day and the day of the announcement. Karamanos (2015), who examined Greek bank M&As from 1996 to 2013, affirms insignificant abnormal returns for the shareholders of acquiring firms and 7,44% positive abnormal returns for target firm's shareholders.

2.2 Acquiring firms

While there is an agreement in the sector that target firm shareholders earn statistically positive abnormal returns during the period of the announcement, the returns of shareholders of acquiring firms remain controversial. Asquith (1983) have shown that the acquiring companies present negative abnormal returns not only at the day 0 but for a big period after this as well. Agrawal et al. (1992) concludes that the shareholders from the bidding companies face loss up to 10% for the following five years after the bid.

Nevertheless, many studies have shown that there are also some other factors that affect the abnormal returns of the involved companies. Some of them are reported below:

- Method of payment: Deals which the bidders pay with stocks seem to end up to negative abnormal returns counter to the deals that reimbursed with cash outcome to positive abnormal returns.

- Company's status: Researches as Fuller et al.(2002) show that the bids with public firms as target companies give to the bidders zero or negative abnormal returns, while on the other hand deals with private companies compensate the bidding companies with positive abnormal returns.
- Relative to the industry: Another study done by Hubbard and Palia (1999) shows that the M&A announcements with the aim of differentiation, are positively addressed from the market and as a result they harvest to positive abnormal returns.
- High Sigma: Moeller et al. (2007) show that the high sigma has had as a result lower abnormal returns to the bidder counter to the study of Officer et al. (2008) which shows that the bidders have higher abnormal returns.
- Cross border M&A: The research of Doukas and Tavlos (2001) explains the fact that the cross-border M&A announcements has led to positive abnormal returns, as a result of the diversification of risk.
- Competition: The competition to obtain the company reduces the abnormal returns for the bidding companies, as the target company's acquisition price rises.
- Friendly or Hostile takeover: Servaes (1991) confirms that the hostile bids are connected with lower abnormal returns for the acquiring companies while for the targets the effect is positive since the premium higher in hostile takeovers.
- Crossborder M&A: The research of Doukas and Tavlos (2001) explains the fact that the cross-border M&A announcements has led to positive abnormal returns, as a result of the diversification of risk.
- Competition: The competition to acquire the company reduces the abnormal returns for the acquiring companies, as the target company's acquisition price rises.
- Friendly or Hostile takeover: Servaes (1991) confirms that the hostile bids are connected with lower abnormal returns for the bidding companies while

for the targets the effect is positive since the premium is higher in hostile takeovers.

2.3 Stock reaction on M&A announcements.

Mergers and Acquisitions are complicated facts and that's why they are not able to always produce positive value, given that the accomplishment of a new agreement is based on a major of variables that are mentioned above. On this point, it is important to say that a key role constitutes the incentives of a merger. If the incentives are aimed at creating cooperation and acting rationally, this may have an impact on the share prices of the merged companies.

Asquith et al. (1983) examine in their study the effects of both the payment method and the restructuring of the capital structure on the common stock returns of bidding companies at the first announcement of takeover bids. The evidence suggests that cash offers consistently generate higher abnormal returns than stock exchanges. The market's perception of changes in the firms' capital structure cannot react on both cash offers and stock exchanges abnormal returns.

Shleifer and Vishny (2001) introduce a new model of mergers and acquisitions based on stock market misvaluations of the two merging firms. This model analyze who bids whom, the methods of payment and the valuation consistencies of transactions. The study is supported with available empirical evidence on the returns of merging companies and also provides new predictions.

One further research by Moeller et al. (2005) has shown that for every dollar spent on M&As the shareholders of the bidding company lost 12 cents for a total loss of 240 billion dollars from 1998 through 2001, while they had only lost 7 billion in all of the 1980s, or 1,6 cents per dollar spent. The announcement losses to bidding firm shareholders in the 1980s were more than offset by profits to acquired firm shareholders, the losses of bidders overdraw the earnings of targets from 1988 through 2001 by 134 billion dollars. The total loss of bidding shareholders in dollars in 1998 - 2001 is so large that their assets would have been increased due to a low number of M&A deals. The high losses are in agreement with the existence of negative synergies from the

acquisitions. Firms that announce transactions with large dollar costs perform poorly afterwards.

In addition, Mara et al. (2005) examine the abnormal returns of acquirers of listed and unlisted target firms in 17 Western European countries over the period 1996-2001. Acquirers of unlisted targets earn a significant average abnormal return of 1.48%, while listed targets perform an insignificant average abnormal return of -0.38%. This listing effect bidders' returns carry on through event time and across borders and persists after controlling for the target's payment method, the size of the acquirer firm, prior disclosure of information about the deal, whether the take-over is a cross-border deal and other variables.

A further study by Draper and Paudyal (2006) has reported that the transactions with privately held firms represent more than 80% of all deals. Despite their importance, studies of such deals and their effect on the stock value are rare. Using a very large, almost exhaustive sample of UK listed and privately held targets we examine the effect of such bids on the risk adjusted return of listed UK bidders over the period 1981 to 2001. Acquirers generate significantly positive returns over the period around the announcement of the deal, although the profits depend on the target's status, the way of payment and the relative size of participants. The much quoted conclusion that emerges from the experiences of listed acquisition firms that the shareholders of bidding firms fail to gain from takeovers, cannot be generalized. Obtaining a privately held firm is an attractive option to maximize shareholders profits.

Existing research shows that much more acquisitions take place when stock markets are booming than when markets are depressed (Bouwman et.al 2007). Rhodes-Kropf and Viswanathan (2004) assume that firm-specific and market-wide valuations lead to an excess of mergers and these will destroy value. This paper examines whether acquisitions occurring during booming markets are fundamentally different from those in depressed markets. We find that acquirers buying during high-valuation markets achieve significantly higher announcement returns but lower long-run abnormal stock and operating performance than those buying during low-valuation markets. We investigate possible explanations for the long underperformance period and conclude that they are in line with the company's policy.

2.4 Bank industry stock reaction on M&A announcements.

Some researchers have analyzed the abnormal returns of the "bidding" and "target" banks separately while others have analyzed the whole amendment in shareholder wealth. According to Jensen and Ruback (1983) M&A produce wealth but the main beneficiaries are the shareholders of the target corporations.

More recent researchers have shown different results to the previous studies. Whether we take into account the bidder and the target shareholders of the merging banks earn this operation, the creation of global wealth is however tempered by academic research. Zhang (1995) show an increase in total worth. Hugues(1999) found that the recent consolidation was accompanied by an increase in the equity market performance of securities new banking entities, including cross-border bank mergers due to a substantial gain in geographic diversification. The empirical results in Europe especially Cybo-Ottone and Murgia (2000) exhibit those abnormal returns, although negative for the bidder, stay positive for the target. Tourani -Rad and Van Beek (1999) found that shareholders of targets attain more positive abnormal returns than acquirers. They argue that the larger the target bank, the upper the returns are.

Lepetit (2004) examine banking M&A during the period 1991-2001 in 13 European countries, examine the market reaction to the announcement of the merger. They found that the returns of merged banks have react positively in M&A deals. Diaz (2004) using panel data over the period 1993 to 2004 on a sample of 1,629 banks, 181 acquisitions had been identified. They found that 6 acquisitions of financial institutions by European banks can improve their profitability.

Mergers and acquisitions raise several queries and uncertainties concerning their impact in terms of value creation and the findings recorded after mergers are very mixed. It therefore seems legitimate to engage in investigation of European banking M&A announcements on shareholder wealth.

Due to the outspread of globalization, firms broad their business to many countries. One way, this fact can help companies easily get into new markets, is attractive into M&A agreements with local companies since it may diminish obstacles to entry into foreign markets. This kind of M&A is called cross-border M&As. In theory, cross-border M&A deals are supposed to produce wealth for shareholders' acquirers since they can feign

upon the target companies' resources to take advantage of market imperfection (as mentioned by Buckley and Casson, 1976 and Morck and Yeung, 1992). According to Morck and Yeung (1991, 1992), Kang (1993), Markides and Ittner (1994); cross-border M&As will provide benefits of internalization, synergy and risk interparent. Therefore, they are expected to create value for shareholders of both acquirers and target firms. On the contrary, from the perspective of acquirers, they normally do not fully understand about the target country and target companies. This would potentially lead to unsuccessful M&A transactions and wrong valuation of target companies, especially in case that those target companies have high level of unsubstantial capital.

Therefore, due to information asymmetry, acquirers defray higher bid premiums and acquisition costs, which will then benefit those target firms in short run and achieve negative or zero wealth effect for shareholders of acquirers (Datta and Puia, 1995 and Reuer, 2004). In addition, cross-border acquirers may confront more challenges than domestic ones such as differentiation in political and legal systems, language obstacles and history. These differences may hinder the performance of cross-border firms and decrease their stock value. Historically, according to Black (2000), M&As have prospered in a low inflation environment. Uddin and Boateng (2011) support the opinion that if the inflation rate in the bidder country is very high, then bidders would try to bid for acquisition of companies outside their home countries where the inflation rate is low.

Other adverse effects of inflation include value degradation of capital, misallocation of resources, and decadence of markets. In cross border deals, exchange rate fluctuations may also affects the relative strength of the bidders' home currency with respect to that of the targets' which will affect to the premium paid for the transaction. Several studies (Harris and Ravenscraft 1991, Kiyamaz and Mukherjee 2000) have conclude that, when the bidder country's currency is strong, the target shareholders gain by earning higher returns. Kiyamaz (2004) advise that bidders will gain from a strong home currency during the transaction and from a weak home currency at the time of distributing dividends and cash flows. In general, inflation and exchange rates are more likely to affect expected cash flows from crossborder mergers, and acquirers shareholder return may also be affected indirectly though the effect of inflation and relative strength of currently in the acquirer and target countries on the value of dealings.

2.4.2 Impact of direction of M&As on stock performance.

If the bidder and target firms operate in a similar line of business, this M&A deal is classified as horizontal M&A. In a horizontal M&A, positive abnormal returns are generally acknowledged due to the possibilities for synergy. The expected value results from improvement of management and operation (Eriksson and Hogfeldt, 1998). Besides that, market theory states that horizontal M&A can help combined companies save costs and enter into new market to make use of overcapacity and to reduce competition (De Jong, 1998).

Vertical M&A is the combination of two firms at different stages of production (Brealey, 2008). The acquirer will acquire backwards in its source of raw materials or forward in the direction of final consumer. With vertical M&As, firms are able to minimize costs through backward merger, and earn higher margins through forward merger. However, in consistent with Morck (1990), synergy effects are hardly realized due to their lack economies of scale and integration problems. Therefore, shareholders of vertical M&As are expected to experience negative abnormal returns.

Conglomerate M&As are transactions in which two firms are combined in unrelated lines of businesses (Brealey, 2008). The motive behind this kind of M&As is diversification. Managers want to spread the risks by being active in different markets. It is expected that this type of M&As will generate negative stock reactions, as acquirers' shareholders can spread their risks without incurring costs arising out of M&A's. Therefore, empirical evidence suggests that transactions in conglomerate M&As provide the lowest return to shareholders as no synergies are realized (Morck, 1990). Berger and Ofek (1995) found that the average loss in value from diversification M&As is around 13-15%. Some empirical studies have shown that the degree of industry relatedness between bidder and target firms correlates positively with returns. Bosveld et al. (1997) examine Dutch M&A transactions between 1979 and 1995. They have found that both acquirer and target companies show positive CAR in horizontal M&A transactions. Maquieira et al. (1998) report insignificant negative returns to shareholders in conglomerate M&As, while a significant positive abnormal returns in non-conglomerate M&As.

Shareholders of acquirers will normally receive positive abnormal returns as a consequence of M&A announcements if the target firms are in a similar industry to

acquirer; while they receive negative or insignificant abnormal returns when the M&A transactions are vertical or conglomerate.

2.4.3 Impact of means of payment on stock performance

Acquiring firms commonly use three payment methods for the target firms. They are able to pay target companies in cash or by shares or a combination of them. In a cash financed transaction, the acquirer will offer and acquire shares of target companies and in return will pay them in cash. In share swap, the acquirers will obtain the shares from shareholders of the target firms and in return offer them their own shares. These methods may react on the performance of merged firms. Myers and Majluf (1984), Fishman (1989) and Eckbo and Thorburn (2000), based on asymmetric information, suggest that the bidder will pay the target firms in shares if they think their shares are overvalued or there is high uncertainty on the target's value. In contrast, they may use cash to buy target firms if they believe their stocks are undervalued or there is high uncertainty on the acquirer's own value.

Huang and Walking (1985) expose reasons for preferring cash offers. First, using stock offer can contribute to dilution of reported earnings and welfare of shareholders. Second, in real market, cash offer waits for several months to get approval from Securities and Exchange Commission. Hence, it will impede the progress of M&A transactions and increase the uncertainty of the stock market. However, given acquirers have limited cash and liquid assets, cash offer can ordinarily need debt funding. Debt funding, therefore, create monetary distress for the corporations and may limit cash flows for alternative future investments. As a result, it will have an effect on the shareholders' value. In that sense, cash offer is only appropriate for small M&A transactions or those companies, which have abundant cash. Moreover, according to Rappaport and Sirower (1999), offering cash as a mean of payment, acquiring shareholders are taking entire risk that expected synergy value will not materialize. Meanwhile, with deals financed by stocks, this risk is shared with selling shareholders consistent with the percentage of merged firm those acquiring and selling shareholders own.

Wansley et al. (1983) searches for distinction in returns of target firms using cash or stocks to finance M&As transactions. They have report that those target firms using cash

finance would gain, on average, 33.54% abnormal returns around M&A announcements. Meanwhile, target firms using stock finance receives only 17.47% abnormal returns. Similarly, Huang and Walking (1987) in their research, documented that an average abnormal return of 29.3% is realized for target firms in M&A deals using cash finance, while only 14.4% abnormal return is recorded for M&A transactions using stock finance. Moreover, they notice that M&A transactions using mixed payment can bring about 23.3% abnormal returns for shareholders of target firms. Consequently, target firms seem to be more beneficial in M&As financed by cash than those financed by stocks or mixed offers.

Most of empirical studies conclude that acquirers using cash will produce higher returns than those using stock offer. Travlos (1987) documented a significant difference between cash and stock M&As while investigating 60 acquirers. Acquirers using stock offer experience significant negative cumulative abnormal return of -1.47%, while acquirers using cash offer earn an insignificant positive of 0.24% cumulative abnormal return. Likewise, Brown and Ryngaert (1991) achieved the same result once examining 268 M&A deals. They found insignificant positive abnormal return of 0.06% to M&A transactions with cash offers, while a significant negative abnormal return of -2.74% with stock offers. The mixed offer between cash and stock generates a significant positive abnormal return of 2.48%. Wansley (1983) studied 203 companies listed in the Federal Trade Commission large merger series in the period from 1970 to 1978. They found that cumulative average abnormal return generated for acquirers of cash deals are 11% higher than that of stock deals. The study of Huang and Walking (1985) conjointly supports the current finding.

Despite several studies indicate the underperformance of stock offer in reference to cash offer, the number of M&A transactions using stock offer has been increased and significantly become more popular since 1990's. It raises concerns that current hypothesis is not any longer valid. Indeed, Chang (1998) examines returns of acquirers around the day 0 of an acquisition proposal when target firms are privately held. He concludes that there were no abnormal returns for acquirers using cash finance, but positive abnormal returns for bidders using stock offer. They concluded that there is no significant difference for shareholders of firms financing the deals by cash or shares.

3. Methodology and Data

In this unit, are presented both the methodology and data of the sample that was used in the empirical research in order to end up in inference, regarding the reaction of the stock prices for banks and financial institutes (both bidders and targets) after the Merger or Acquisition announcement, in the time period 2007-2016.

3.1 Methodology

The most of the researches that have taken place in the sector of M&A use the Event Studies Methodology (Brown,1968) with which is being considered if the announcement of a financial event affects the stock value of a firm. We will use the same methodology in short-term analysis to investigate the incidence of the M&A in the stock prices from the date of announcement until its completion, supposing that the market is efficient, namely the stock price integrates all the information regarding to the fact and the investors has direct access to them.

The time interval from the deal announcement until its integration is known as observation period and in this specific research is the period of (-260,-20) days before the event date (noted as day 0). The observation period could be divided into event windows which usually are sub-areas before and after the announcement date.

We have determined the event windows of this study as the following time periods: (-20, +20), (-10, +10) and (-2, +2) days. After the definition of the observation period and the event windows we have to calculate the Normal Return (R_t) for the stock prices for the time period (-260,-20) days, which reflects the output that will the stocks have, if the financial event did not exist. The discrepancy between the Expected returns (ER_t) and the Observed returns (R_t) is known as Abnormal Return (AR_t) and represents the financial value that was created from the M&A announcement.

3.1.1 Market Model

Beneficial to typify a return as abnormal we will be using the Market Model. Market Model also called single-index model states that return generated by a security is dependent on that generated by the market portfolio and the degree to which the security responds as evaluated by beta. Also, the return depends on some conditions unique to the business. Market Model correlates the stock returns for every company with the benchmark portfolio returns, which usually is the Market Index (eventstudymetrics,2010).

The observed returns:

$$R_{(i,t)} = a_i + b_i R_{m_t} + e_{(i,t)}$$

Where:

$$i=1,\dots,N$$

$$t=1,\dots,M$$

$R_{(i,t)}$ = the observed return of firm i at time t .

R_{m_t} = market returns at time t

a_i = firm's i intercept term of the regression

b_i = firm's i regression coefficient

$e_{(i,t)}$ = the residual error

As benchmark portfolio we will use the stock exchange of the country in which the firm is traded, as they depicted the markets efficiently and they fulfill the requirements to be a reliable measure of our portfolio's comparison with the market.

The expected return will calculate for the observation period (-260,-20) days with the following model:

$$ER_{(i,t)} = a_i + b_i R_{m_t}$$

Where:

$$i=1,\dots,N$$

$$t=1,\dots,M$$

$ER_{(i,t)}$ = the expected return of firm i at time t .

R_{m_t} = market returns at time t

a_i = firm's i intercept term of the regression

b_i = firm's i regression coefficient

While, the a_i and b_i are the assessments that have been emerged from the Market Model, which is detailed above.

The abnormal returns arising from the following type:

$$AR_{it} = R_{it} - ER_{(it)}$$

Where:

$$i=1, \dots, N$$

$$t=1, \dots, M$$

R_{it} = the observed return of firm i at time t .

$ER_{(it)}$ = the expected return of firm i at time t .

Providing that, the Abnormal Returns are positive ($AR > 0$) can be said that M&A creates value, otherwise when the Abnormal Returns are negative ($AR < 0$) M&A reduce the firm's value. Additionally, if the Abnormal Returns are equal to zero ($AR = 0$) no change is observed in the firm's value, as a result of the M&A deal.

Furthermore, the Average Abnormal Returns (AAR_t) and the Cumulative Abnormal Returns ($CAAR_t$) have to be calculated both for bidders and targets stock into the observation period. The Cumulative Abnormal Returns ($CAAR_t$) represent the overall average impact of the deals for every firm in a specific period.

$$\text{Average Abnormal Returns } (AAR_t) = (\sum_i AR_{it}) / N$$

$$\text{Cumulative Abnormal Returns } (CAAR_t) = \sum_{t=0}^n AAR_t$$

Where:

$$i=1, \dots, N$$

$$t=1, \dots, M$$

AR_{it} = the abnormal return of stock j at time t .

AAR_t = the average abnormal return of all companies at time t .

3.1.2 Significance Tests

Regarding to the significance tests, Cross-Sectional test will be using to verify the results.

We have two basic hypotheses:

- The null hypothesis (H_0) that is differentiated from the sample results.
- The alternative hypothesis (H_1) that confirms the sample results.

Specifically, in this research :

- Under the null hypothesis (H_0), the cumulative average abnormal return is equal to zero and as a result the investors do not benefit from the M&A deals.
- Under the alternative hypothesis (H_1), the cumulative average returns are different from zero and the investors are not affected from the M&A deals.

Taking into account that X and S^2 are the mean and the variance of a random sample, then the statistic of the test which used is the random variable t which follows the normal distribution with $v = n-1$ degrees of freedom (n is the population of the sample). The variance estimator of this statistic is based on the cross-section of abnormal returns.

- A simple test for testing

$H_0: AAR = 0$ is given by

$$t_{AAR_t} = \sqrt{N} (AAR_t / S_{AAR_t})$$

where:

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

- A simple test for testing

$H_0: CAAR = 0$ is given by

$$t_{CAAR_t} = \sqrt{N} (CAAR_t / S_{CAAR_t})$$

where:

$$S^2_{CAAR_t} = (1/N-1) \sum_{i=1}^N (CAR_{it} - CAAR_t)^2$$

N = is the number of the days of the estimation window

If t-stat is bigger or equal to a critical value (accordingly to the level of significance) the null hypothesis H_0 will be rejected and as a result AARs and CAARs will be statistically significant.

Brown and Warner (1980) show that the cross-sectional t-test is robust to an event – induced variance increase. However, Boehmer, Musumeci and Poulsen (1991) provide evidence that their standardized cross-sectional test (requiring an estimation window) exhibits a comparable size, but it is more powerful (Eventstudymetrics,2015).

3.2 Objective

To address the above issues, the following findings have been identified.

To measure the impact of the announcement of M&As on stock value of bidding companies by:

- Ascertaining the magnitude and the direction of the ARs for the entire sample.
- Conducting analysis of the ARs for subsamples on the basis of:
 - (a) General Sample of M&A bank deals (acquirers and targets)
 - (b) Domestic and cross-border M&A bank deals
 - (c) Method of payment (cash, stock or combination)

3.3 Data selection

The study is confined to the analysis of bidding and target banks that undertook the move of M&A and are listed. It covers a period starting from 1 January 2007 to 31 December 2016. There were 114 M&A deals during this period related to banks and financial institutions.

Table 1: Year-wise Distribution of M&A Announcements (2007-2016)

M&A/Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total M&A deals	37	27	9	10	3	11	6	7	2	2
Percentage (%)	32.45	23.68	7.89	8.77	2.63	9.64	5.26	6.14	1.75	1.75

Table 1 provides the year-wise sample distribution of M&A. It has been observed that the maximum announcements happened in the year 2007 (32.45%) followed by 2008 (23.68%) and 2011 (2.63%). Table 1 also reveals that the number of M&A deals has been decreased since year 2007, probably as a result of the global financial crisis.

Table 2: Year-wise Sample Distribution of Cross-border and Domestic M&A (2007-2016)

Year	Cross-border M&A	Domestic M&A	Total
2007	7	30	37
2008	15	12	27
2009	3	6	9
2010	7	3	10
2011	2	1	3
2012	8	3	11
2013	5	1	6
2014	3	4	7
2015	0	2	0
2016	1	1	2
Total	51	63	114

Table 2 depicts that the trend of cross-border and domestic M&A has been decreasing since year 2007 over the sample period with the lowest number of M&A reported in years 2015 and 2016 for both of the categories.

Table 3: Sample Distribution of Cross-border and Domestic M&A According to Features.

Feature	Cross-border M&A	Domestic M&A	Total M&A
Cash financed M&A	23	47	70
Stock financed M&A	4	24	28
Cash and debt financed M&A	1	1	2
Stock and debt financed M&A	0	1	1
M&A with mixed financing	3	1	4
Undisclosed	5	3	8

Table 3 indicates that cash is the most frequently used form of financing in both the sets of M&A. Contrary to the domestic acquisitions, for cross-border M&A, stock payments are rarely used.

Table 4: Stake-wise Distribution of M&A Announcements (2007-2016)

Acquisition of/Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	Percentage
Minor stake	12	11	7	5	1	3	1	3	0	1	44	38.60%
Major/partial stake	11	8	2	2	0	3	2	1	0	0	29	25.44%
Complete stake	14	8	0	3	2	5	3	3	2	1	41	35.96%

Table 4 summarizes the stake-wise sample distribution of M&A. It is evident from the Table that the most (38.60%) of the transactions are of minor stake, whereas nearly (35.96 %) are the deals of complete stake, and acquisitions are of partial/majority control represent the lowest rate.

4. Empirical Results

In the following section we will present the findings of this research which are related to M&A announcement, using the Market Model. These results will be presented in two

forms: graphic trace and tables of the average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) on three different event windows. The average abnormal returns are designed to examine the effect of the announcement of M&A deals for a given event date, the 0 of the announcement. The average cumulative abnormal returns during the event window allows, as it has globally measure the effect of the event on the whole event window. The size of the impact analysis period is 41 days (-20,+20), 22 days (-10,+10) and 5 days (-2,+2) that identifies the expectations and possible corrections in the stock market for an estimation window of 260 days.

In the following pages we will present the reaction of the stock performance as a result of the transaction. We will analyze the performance of target and acquiring banks. Moreover, we are going to investigate the subcategories of domestic and crossborder M&As and how the way of payment affects the stock price of both firms as well.

4.1 Average Abnormal Returns and Cumulative Average Abnormal Returns of Acquirers

4.1.1 General Sample

4.1.1.1. Event window of 41 days (-20,+20)

Table 5: CAAR of Acquirers (-20,+20)

Time Interval	CAAR(%)	t-value
<i>Pre- Announcement period (-20,-2)</i>	0,34%	0,50
<i>Announcement period (-1,0)</i>	0,06%	0,90
<i>Post-Announcement period (1,20)</i>	-2,00%	-0,12

As tables 5 depicts, the average abnormal returns of acquirers are divided into three phases. The first phase is the period before the deal announcement, from day -20 to day -2, the abnormal returns seem to be positive. It goes up to 0,44% from day -19 to day -16, and then drops to 0,10% at day -5. After that, it starts to drop aggressively to -0,79% at the day the announcement is taken place (t=0). It indicates that the shareholders gain negative abnormal returns in the announcement day. Nevertheless, abnormal return recovers again and achieves 0,39% abnormal return for shareholders in 1 day 1 after announcement day.

After day $t=1$, the average abnormal return drops again dramatically and shows negative returns to shareholders in the last phase from day +3 till the last day of the event window ($t=+20$). It is important to mention that the negative abnormal returns are not statistically significant as the positive abnormal returns in the pre-announcement period.

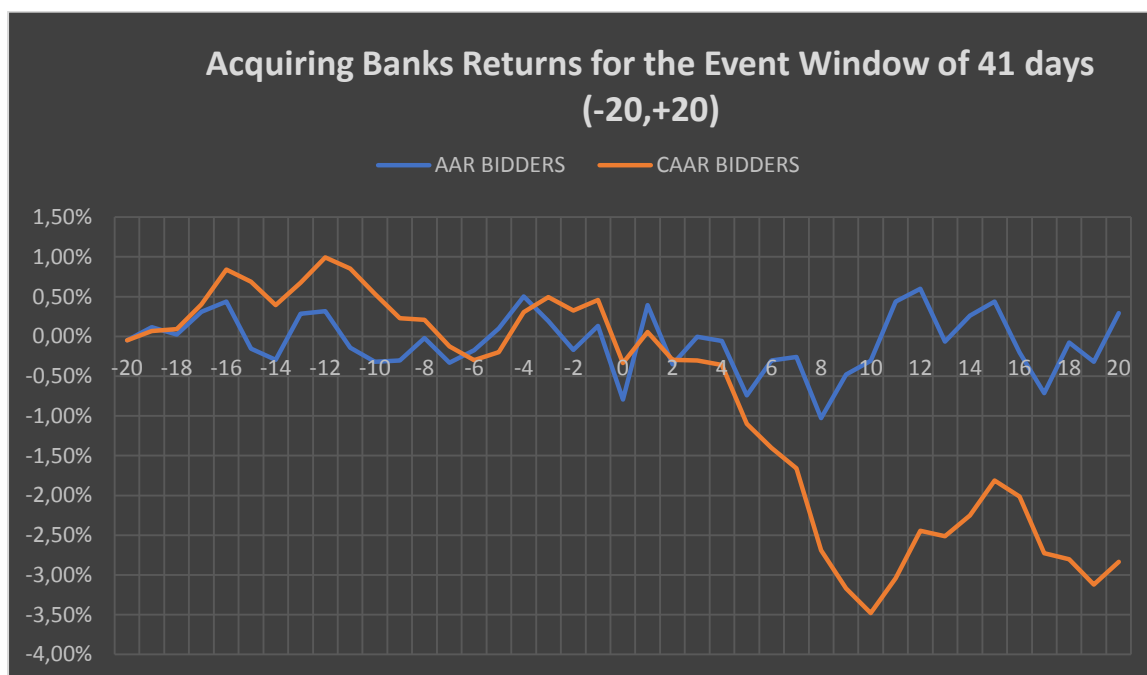
In order to examine the total effect of M&A announcement, we will examine the cumulative average abnormal return (CAAR) in different time intervals. The cumulative average abnormal returns are examined in 3 time intervals: pre-announcement period (-20,-2), announcement period (-1,0) and post-announcement period (+1,+20). Table 6 describes CAAR of acquirers during three periods. According to table 6, CAARs under the first two time periods are positive and only the last one seems to be negative.

Shareholders of acquirers earn a positive CAAR of 0,34% during pre-announcement period. The positive return can be explained as investors are expected about the future performance of combined firms.

The abnormal returns are realized in the announcement period. From a day prior to announcement day, shareholders of acquirers receive a positive CAAR of 0,13%. The CAAR for shareholders of acquirers in the post-announcement period is -2,00%.

This result is consistent most previous studies, indicating that CAAR will generate negative abnormal returns to shareholders of acquirers or they will not generate any of them. We can see that CAAR obtained from post-announcement period is lower than pre- and announcement period. This shows that investors may overestimate the acquirers during pre- and announcement period. Hence, when more information such as financial information of related companies or terms and conditions of the proposal are available.

Figure 1: AAR and CAAR of Acquirers (-20,+20)



As we can see in Figure 1 the AARs for the Acquiring firms present a small variation, as they perform returns from -1,03% until 0,60% for the event window of 41 days. In contrast with AARs, CAARs have a bigger variation in their stock value especially after day 4 with prices from -3,48 until 0,99 per cent.

4.1.1.2 Event window of 21 days (-10,+10)

Table 6: CAAR of Acquirers (-10,+10)

Time Interval	CAAR (%)	t-value
Pre-announcement period (-10,-2)	-1,95%	-0,61
Announcement period (-2,1)	-1,71%	-0,80
Post-announcement period (1,10)	-2,73%	-1,52

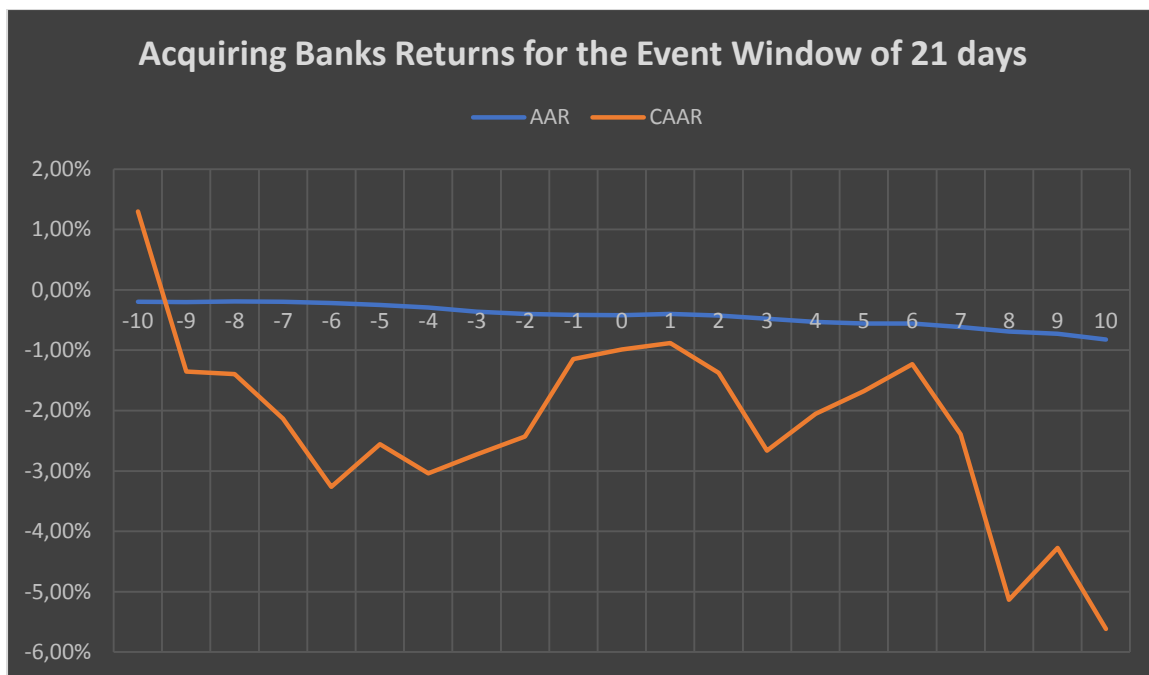
We will examine the cumulative average abnormal return (CAAR) in different time intervals also for this event window. The examined in 3 time phases are the following for the 21 days of the event window: pre-announcement period (-10,-2), announcement period (-1,0) and post-announcement period (+1,+10). Table 8 describes CAAR of acquirers

during three periods. According to table 8, CAARs under the three periods seem to be negative .

Shareholders of acquirers get negative CAAR of -1,95% during pre-announcement period. The abnormal returns are remaining negative also in the announcement period and the post-announcement period (-1,71% and 2,73% respectively).

This result in agreement with most of previous studies, indicating that CAAR will generate negative abnormal returns to shareholders of acquirers or they will not generate any of them. We can see that CAAR obtained from post-announcement period is lower than pre- and announcement period. This shows that investors may overestimate the acquirers during pre- and announcement period.

Figure 2: AAR and CAAR of Acquirers (-10,+10)



As we can see in Figure 2 the AARs for the Acquiring firms present a small variation, as they perform returns from -0,20% until -0,82% for the event window of 21 days. In contrast with AARs, CAARs have a bigger variation in their stock value with prices from -5,62 until 1,30 per cent.

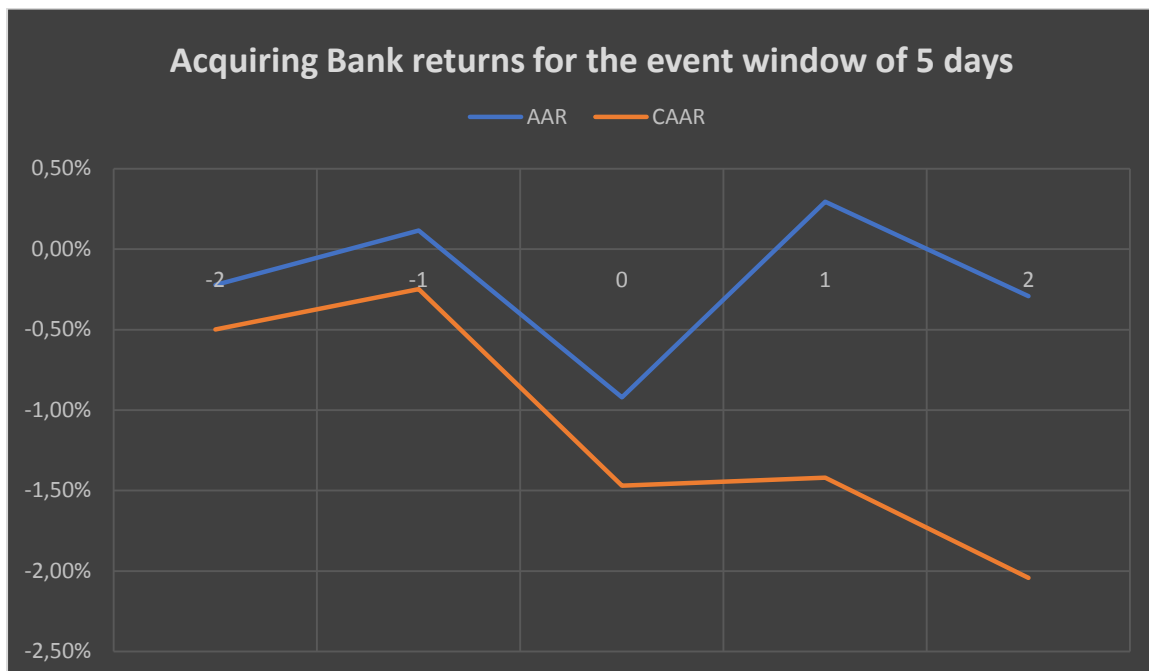
4.1.1.3 Event window of 5 days (-2,+2)

Table 7: CAAR of Acquirers (-2,+2)

Time Interval	CAAR (%)	t-value
Pre-announcement period (-2)	-0,50%	-0,12
Announcement period (-1,0)	-0,86%	-0,445
Post-announcement period (1,2)	-1,73%	-0,63

We are going to divide the average abnormal returns of acquirers into three time phases. In the first one, the pre-announcement phase which is the day -2, the abnormal returns seem to be negative (-0,22%). It goes up to 0,12% the next day (day -1) , and then drops to 0,92% at the announcement day . It indicates that the shareholders gain negative abnormal returns in the announcement day also for this event window. After that, it starts to recovers again one day after the announcement to 0,29%. After day t=1, the average abnormal return drops again and shows negative returns to shareholders. It is important to mention that the negative abnormal returns are not statistically significant.

Figure 3: AAR and CAAR of Acquirers (-2,+2)



As present in Figure 3 AARs for the Acquiring firms give a small variation, as they perform returns from -0,92% (at the announcement day) until 0,29% for the event window of 5 days. In contrast with AARs, CAARs have a bigger variation in their stock value but they earn only negative abnormal returns among this specific event window with prices from -2,04% until 0,25%.

4.2.1 Domestic and Cross-border transactions and their impact to acquirer's shareholders

4.2.1.1 Event window of 41 days (-20,+20)

We split our sample into two groups: cross-border and domestic M&As. Cross-border M&A group includes all transactions in which acquirers obtain target companies in other countries. Domestic M&A group includes all transactions in which both acquirer and target companies are operating in the same country. Our sample includes 51 cross-border and 63 domestic M&A transactions. Table 8,9 and 10 show CAAR that shareholders of acquirers earn before, during and after M&A announcements, distributed by whether the transactions are cross-border or domestic M&A.

Table 8: Domestic and Cross-border CAAR of Acquirers (-20,+20)

Time Interval	CAAR(%)	CAAR(%)	t-value	t-value
	Cash	Other	Cash	Other
<i>Pre-Announcement period</i> (-20,-2)	0,44%	0,92%	0,48	0,01
<i>Announcement period</i> (-1,0)	-0,59%	1,91%	0,05	0,02
<i>Post-Announcement period</i> (1,20)	-3,97%	1,67%	-1,73	0,02

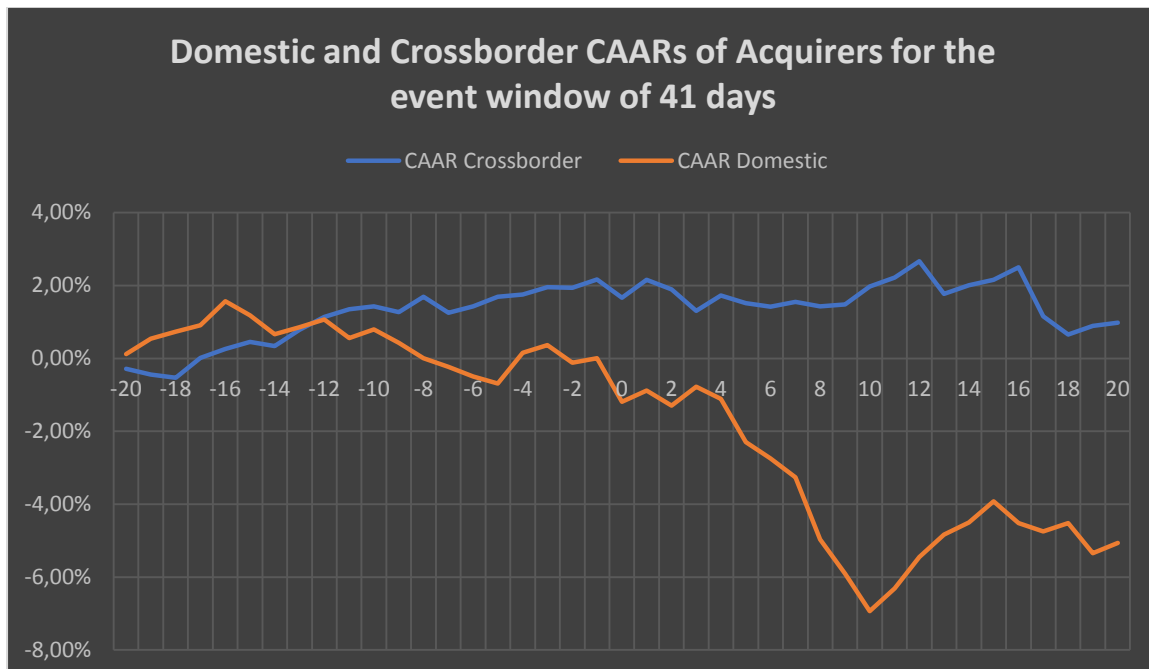
According to Table 8, during three time intervals, both domestic and cross-border M&A transactions generally generate positive CAAR. During pre-announcement period, both cross-border and domestic M&As generate CAARs of 0,92% and 0,44% respectively. Nevertheless, they are not statistically significant different from zero. In the announcement period, shareholders of acquirers earn 1,91% CAAR in cross-border M&As and receive -0,59% CAAR if the target companies are inside the acquirers' country. Nevertheless, they

are not significantly different from zero. Therefore, we can conclude that the country of target companies impose effects on the value of acquirers' shareholders during the announcement period.

Moreover, cross-border M&A deals seem to generate higher abnormal returns than domestic M&A transactions during pre- and announcement period. Domestic M&A transactions are not being seen as attractive to shareholders of acquirers during these two periods

During post-announcement period, domestic M&A transactions slightly generate higher CAAR than cross-border M&A ones. Shareholders of acquirers in domestic M&A transactions earn about 3,97% CAAR, while those in crossborder M&A transactions get 1,67% CAAR. However, any of them generate significant CAARs 0,59% CAAR if the target companies are inside the acquirers' country. Nevertheless, they are not significantly different from zero. Therefore, we can conclude that the country of target companies impose effects on the value of acquirers' shareholders during the announcement period.

Figure 4: Domestic and Cross-border CAAR of Acquirers (-20,+20)



As we can see in Figure 4, the CAARs of cross-border transactions present a small variation, as they perform returns from -0,28 % until 2,50% for the event window of 41

days. In contrast with cross-border CAARs, domestic CAARs have a bigger variation in their stock value among the same period with prices from -5,06 until 1,56 per cent.

4.2.2.1 Event window of 21 days (-10,+10)

Table 9: Domestic and Cross-border CAAR of Acquirers (-10,+10)

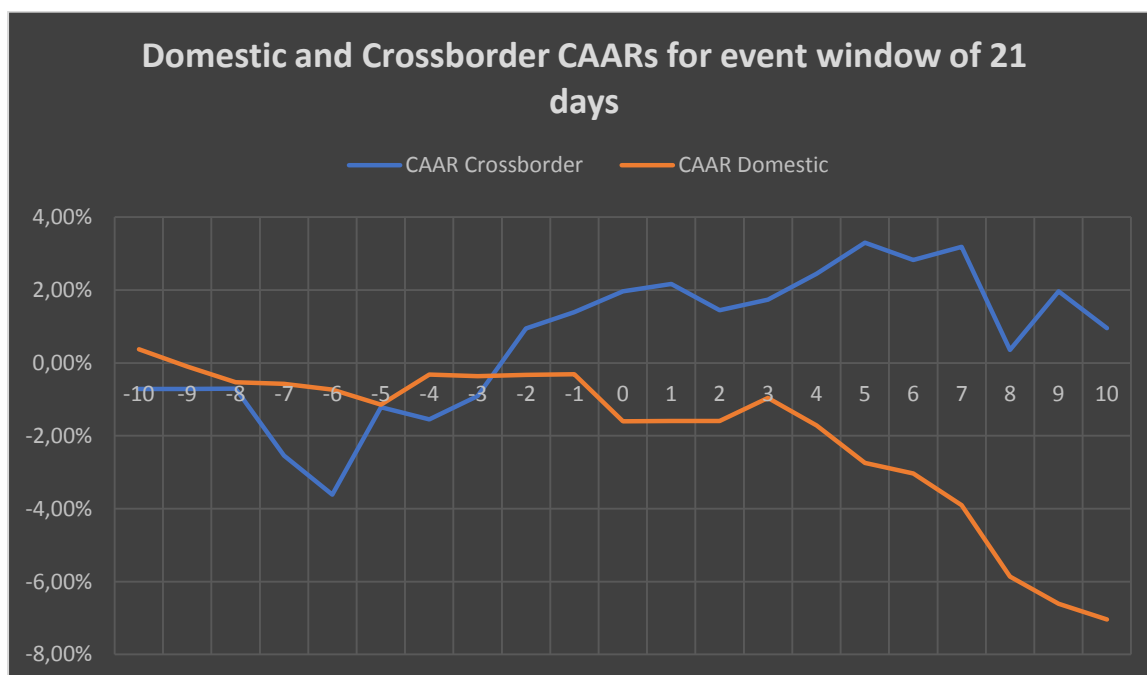
Time Interval	CAAR(%) Cross-border	CAAR(%) Domestic	t-value Cross-border	t-value Domestic
<i>Pre- Announcement period (-10,-2)</i>	-1,22%	-0,41%	0,25	-0,37
<i>Announcement period (-1,0)</i>	1,68%	-0,96%	0,25	-0,92
<i>Post-Announcement period (1,10)</i>	2,04%	-3,51%	-0,08	-2,31

During pre-announcement period, both cross-border and domestic M&As generate CAARs of -1,22% and -0,41% respectively. Nevertheless, they are not statistically significant different from zero. In the announcement period, shareholders of acquirers earn 1,68% CAAR in cross-border M&As and receive -0,96% CAAR if the target companies are inside the acquirers' country. Nevertheless, they are not significantly different from zero.

Moreover, cross-border M&A deals seem to generate higher abnormal returns than domestic M&A transactions during announcement period. Domestic M&A transactions are not being seen as attractive to shareholders of acquirers during this period.

During post-announcement period, domestic M&A transactions keep generating lower CAAR than cross-border M&A ones. Shareholders of acquirers in domestic M&A transactions lose about -3,51% CAAR, while those in cross-border M&A transactions earn 2,04% CAAR. However, only CAARs of domestic deals are statistically significant. This result is in contrast with our previous result for the event window of 41 days.

Figure 5: Domestic and Cross-border CAAR of Acquirers (-10,+10)



As we can see in Figure 5 the CAARs of cross-border transactions present a big variation, as they perform returns from -3,62 % until 3,19% for the event window of 21 days. Also, domestic CAARs have a bigger variation in their stock value among the same period with prices from -7,04 until 0,37 per cent.

4.2.3.1 Event window of 5 days (-2,+2)

Table 10: Domestic and Cross-border CAAR of Acquirers (-2,+2)

Time Interval	CAAR(%)) Cross-border	CAAR(%) Domestic	t-value Cross-border	t-value Domestic
<i>Pre-Announcement period (-2)</i>	-0,76%	-0,12%	-0,76%	-0,26
<i>Announcement period (-1,0)</i>	-0,86%	-0,66%	-0,86%	-0,95
<i>Post-Announcement period (1,2)</i>	-1,55%	-1,35%	-1,55%	-1,38

In the pre-announcement period, both cross-border and domestic M&As generate negative CAARs of -0,12% and -0,76% respectively. Nevertheless, they are not statistically significant different from zero. In the announcement period, shareholders of acquirers earn -0,26% CAAR in cross-border M&As and receive -0,01% CAAR if the target companies

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

are inside the acquirers' country. Nevertheless, they are not significantly different from zero. Therefore, we cannot conclude if that the country of target companies impose effects on the value of acquirers' shareholders during the announcement period.

Moreover, cross-border M&A deals seem to generate higher abnormal returns than domestic M&A transactions during announcement period and the post announcement period. Shareholders of acquirers in cross-border M&A transactions earn about -0,08 % CAAR, while those in domestic M&A transactions get -1,35% CAAR. However, no one of them generate significant CAARs in order to reject the null H0 hypothesis.

Figure 6: Domestic and Cross-border CAAR of Acquirers (-2,+2)

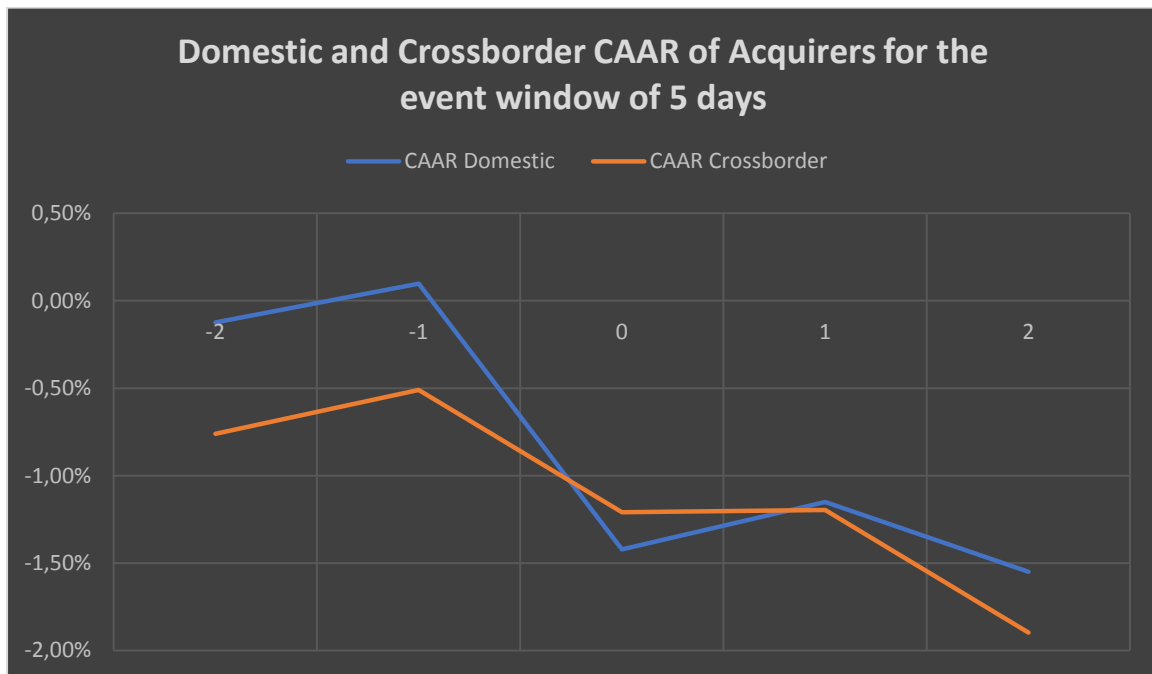


Figure 6 shows the CAARs of cross-border and domestic transactions. Both CAARS present a small variation, as they perform returns from -1,55 % until 0,10% (domestic) and -0,33% until 0,34% (cross-border) ,for the event window -5,+5 days.

4.1.3 Methods of payment and their impact to acquirer's shareholders

4.1.3.1 Event window of 41 days (-20,+20)

Table 11: CAAR of Acquirers and methods of payment (-20,+20)

Time Interval	CAAR(%)		t-value	
	Cash	Other	Cash	Other
<i>Pre- Announcement period (-20,-2)</i>	0,01%	0,63%	0,43	0,65
<i>Announcement period (-1,0)</i>	0,65%	-0,74%	1,68	0,05
<i>Post-Announcement period (1,20)</i>	-0,06%	-4,65%	1,67	-2,36

In Table 11 are analyzed the CAAR of acquirers to the extent of methods of payment during three different time periods. We examine the impacts of methods of payment by dividing the sample into two groups: cash and others. Cash group includes all M&A transactions financed by cash. Other groups contain all M&A transactions financed by stock or combination of cash and stocks. Our sample includes 70 transactions, which are financed by cash, and 44 transactions, which are financed by other methods of payments. Other methods of payment can be stock finance or a combination of cash and stocks, from which 28 transactions are financed by stock and the remaining 36 transactions are financed by both stocks and cash.

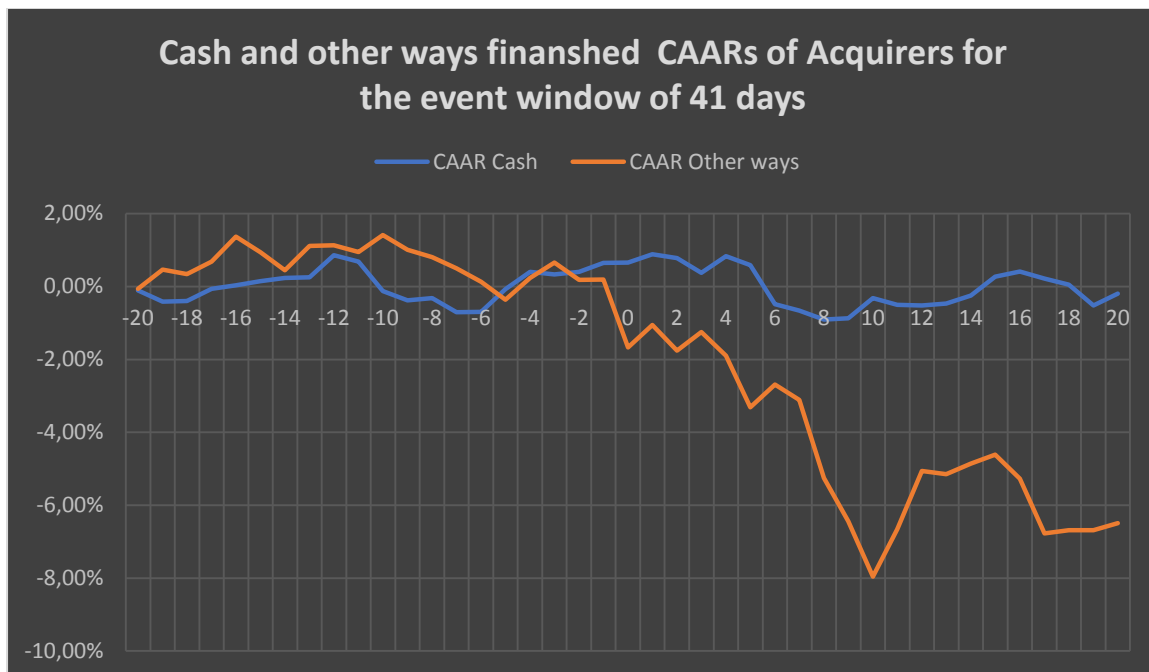
Method of payment does have impact on CAARs of acquirers. As can be seen from the table 10, during pre-and announcement period, all the other methods of payment produce positive CAARs for shareholders of acquirers, but deals which are financed by cash seem to give neutral results to the stock price. In the pre-announcement period, other methods of payment generate 0,63% CAAR for acquirers' shareholders, which is statistically insignificant. In the announcement period, M&A transactions with cash offer create 0.65% CAAR for shareholders of acquirers, while other methods of payment generates a negative insignificant CAAR of -0,74%. Therefore, methods of payment have no impacts on CAARs for shareholders of acquirers during pre-announcement period.

During this first (pre-announcement) period, we can find that shareholders of M&A transactions, which use other methods of payment besides cash only, seem to be more

beneficial than those using cash offer. CAARs generated from other methods of payment dominate those generated from cash offer. Hence, M&A transactions with cash offer in banking sector in the period 2006-2017 do not offer higher abnormal returns to shareholders of acquirers as indicated by most of previous studies.

On the other hand, over the period after M&A announcements are made, the impacts seem to be contrary. M&A transactions with cash offer generate a small negative CAAR of -0,06% for shareholders of acquirers. However, shareholders of acquirers using other methods of payment earn a negative CAAR of -4,65%. CAAR from M&A transactions with cash offer tends to be higher than those with other offers in the announcement periods and the post-announcement period, leading to an opposite result to those obtained for pre-announcement. In addition, the CAARs of cash financed deals are insignificant but the CAARs which occur from transactions based on other ways of payments are statistically significant. Therefore, methods of payment have impact on CAARs for shareholders of acquirers during post-announcement period.

Figure 7: CAAR of Acquirers and methods of payment (-20,+20)



As we can see in Figure 7 the CAARs of cash financed transactions present a small variation, as they perform returns from -0,90 % until 0,88% for the event window of 41 days. In contrast with M&A deal's CAARs which are financed by other ways of payment

(or combination of them) and they present a bigger variation in their stock value with prices from -7,96 until 1,35 per cent.

4.1.3.2 Event window of 21 days (-10,+10)

Table 12: CAAR of Acquirers and methods of payment (-10,+10)

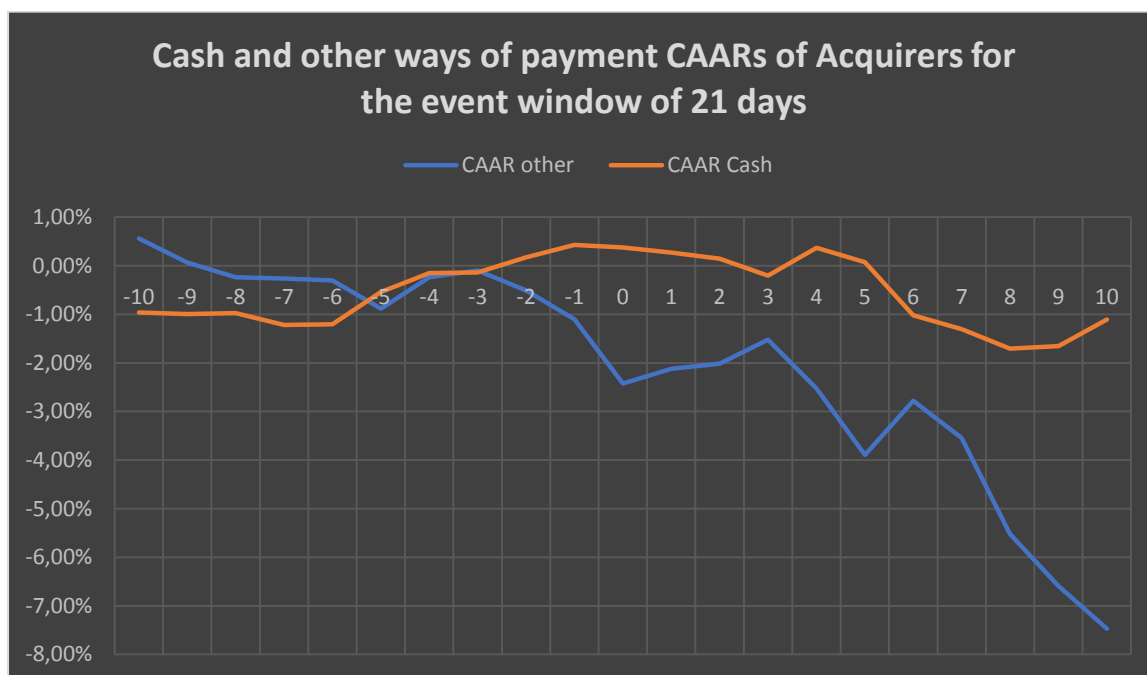
Time Interval	CAAR(%)	CAAR(%)	t-value	t-value
	other	cash	other	cash
<i>Pre- Announcement period</i> (-10,-2)	-0,21%	-0,67%	-0,04	-0,24
<i>Announcement period</i> (-1,0)	-1,76%	0,40%	-1,23	0,72
<i>Post-Announcement period</i> (1,10)	-3,80%	-0,61%	-2,70	0,52

In the pre-announcement period, other methods of payment generate -0,21% CAAR for acquirers' shareholders and cash financed transactions give -0,67%, which are statistically insignificant. In the announcement period, M&A transactions with cash offer create 0.40% CAAR for shareholders of acquirers, while other methods of payment generates a negative insignificant CAAR of -1,76%. Therefore, methods of payment have no impacts on CAARs for shareholders of acquirers during pre-announcement period.

During this first (pre-announcement) period, we can find that shareholders of M&A transactions, which use other methods of payment besides cash only, seem to be more beneficial than those using cash offer. CAARs generated from other methods of payment dominate those generated from cash offer. Hence, M&A transactions with cash offer in banking sector in the period 2006-2017 do not offer higher abnormal returns to shareholders of acquirers as indicated by most of previous studies.

Furthermore, over the period after M&A announcements are made, the impacts seem to be the same. M&A transactions with cash offer generate a small negative CAAR of -0,61% for shareholders of acquirers. However, shareholders of acquirers using other methods of payment earn a negative CAAR of -3,80%. In addition, the CAARs of cash financed deals are insignificant but the CAARs which occur from transactions based on other ways of payments are statistically significant. Therefore, methods of payment have impact on CAARs for shareholders of acquirers only during post-announcement period.

Figure 8: CAAR of Acquirers and methods of payment (-10,+10)



As we can see in Figure 8, CAAR of cash financed transactions present a small variation, as they perform returns from -1,71 % until 0,43% for the event window of 21 days. In contrast with M&A deal's CAARs which are financed by other ways of payment (or combination of them) and they present a bigger variation in their stock value with prices from -7,47 until 0,56 per cent.

4.1.3.3 Event window of 5 days (-2, +2)

Table 13: CAAR of Acquirers and methods of payment (-2,+2)

Time Interval	CAAR(%) other	CAAR(%) cash	t-value other	t-value cash
<i>Pre- Announcement period (-2)</i>	-0,51%	-0,07%	-0,39	0,05
<i>Announcement period (-1,0)</i>	-1,45%	0,00%	-1,34	0,13
<i>Post-Announcement period (1,10)</i>	-2,10%	-0,02%	-1,74	0,08

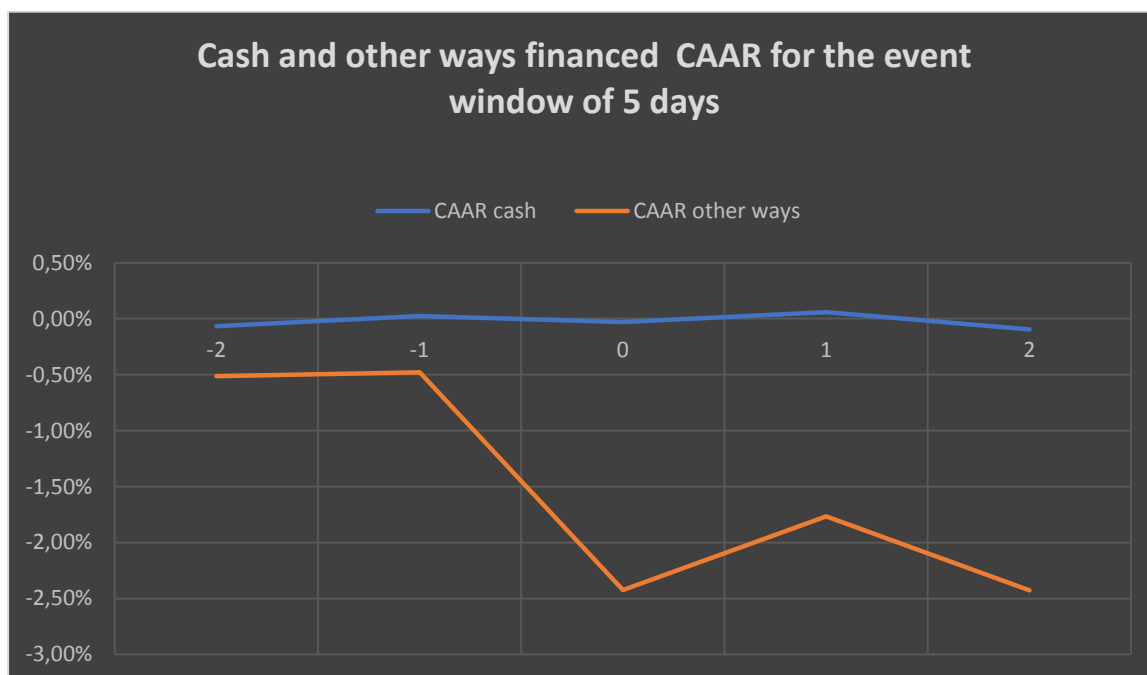
As can be seen from the table 13, during pre-and announcement period, all the other methods of payment produce negative CAARs for shareholders of acquirers, but deals which

are financed by cash seem to give neutral results to the stock price. In the pre-announcement period, other methods of payment generate -0,51% CAAR for acquirers' shareholders, which is statistically insignificant. In the announcement period, M&A transactions with cash offer remains again almost neutral with a small increase of 0,3% CAAR for shareholders of acquirers, while other methods of payment generates a negative insignificant CAAR of -1,45%. Therefore, methods of payment have no impacts on CAARs for shareholders of acquirers during pre-announcement period and the announcement period (days -2,+1).

During this first period, we can find that shareholders of M&A transactions, which use cash as way of payment besides stocks or combination of both, seem to be more effective. CAARs generated from cash offers dominate those generated from other methods of payment. Hence, M&A transactions with cash offer in banking sector in the period 2006-2017 offer higher abnormal returns to shareholders of acquirers as indicated by most of previous studies.

On the other hand, over the period after the announcement, the impacts seem to be different. M&A transactions with cash offer generate a small negative CAAR of -0,02% for shareholders of acquirers. However, shareholders of acquirers using other methods of payment get a negative CAAR of -2,10%. CAAR from M&A transactions with cash offer tends to be higher than those with other offers in the announcement periods and the post-announcement period, leading to an opposite result to those obtained for pre-announcement, as also in the previous event windows.. Therefore, both CAARs of cash financed deals and of those which are financed with other ways of payment are insignificant in the post-announcement period. Therefore, methods of payment have no impact on CAARs for shareholders of acquirers during post-announcement period.

Figure 9 : CAAR of Acquirers and methods of payment (-2,+2)



As we can see in Figure 9 the CAARs of cash financed transactions present a small variation, as they perform returns only from -0,10 % until 0,06% for the event window of 5 days. In contrast with M&A deal's CAARs which are financed by other ways of payment (or combination of them) and they perform a big variation in their stock value with prices from -2,43 % until -0,48% per cent.

4.2 Average Abnormal Returns and Cumulative Average Abnormal Returns for Targets

4.2.1 General Sample

4.2.1.1 Event window of 41 days (-20,+20)

Table 13: CAAR of Targets (-20,+20)

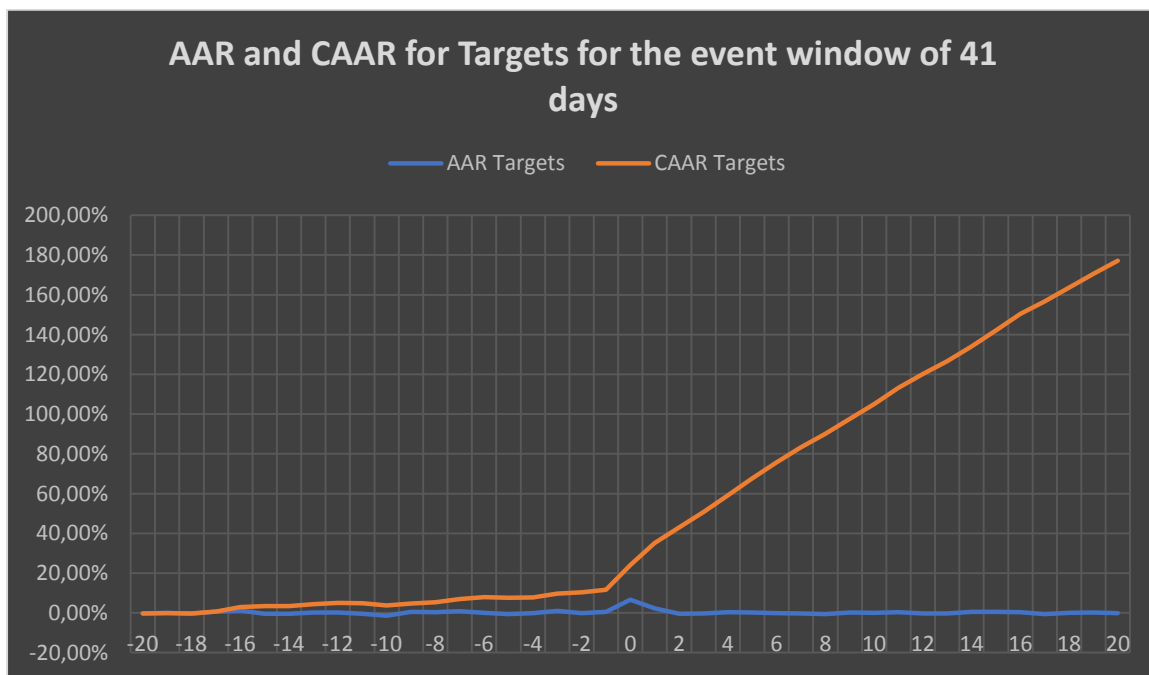
Time Interval	CAAR(%)	t-value
<i>Pre -Announcement (-20,-2)</i>	2,07%	0,26
<i>Announcement period (-1,0)</i>	4,38%	0,41
<i>Post-Announcement (+2,+20)</i>	9,54%	0,96

We will analyze the cumulative average abnormal return in the same three time intervals also for the target banks. The examined in 3 time sectors are the following for the 41 days of the event window: pre-announcement period (-20,2), announcement period (-1,0) and post-announcement period (+1,+20). Table 8 describes CAAR of targets during three periods. According to table 8, CAARs under the three periods seem to be extremely positive .

Shareholders of targets get positive CAAR of 2,07% during pre-announcement period. The abnormal returns are getting higher also in the announcement period and the post-announcement period (4,38% and 9,54 % respectively).

This result in agreement with most of previous studies, indicating that CAAR will generate positive abnormal returns to shareholders of target. We can see that CAAR obtained from post-announcement period is higher than pre- and announcement period. This fact shows that investors may underestimate the targets during the first two periods.

Figure 10: AAR and CAAR of Targets (-20,+20)



As we can see in Figure 11 the AARs for the Target firms present a big variation, as they perform returns from -1,48% until 6,58% for the event window of 41 days. In agreement with AARs, CAARs have a huge variation in their stock value especially after day -1 with prices from -0,36 until 150,35 per cent.

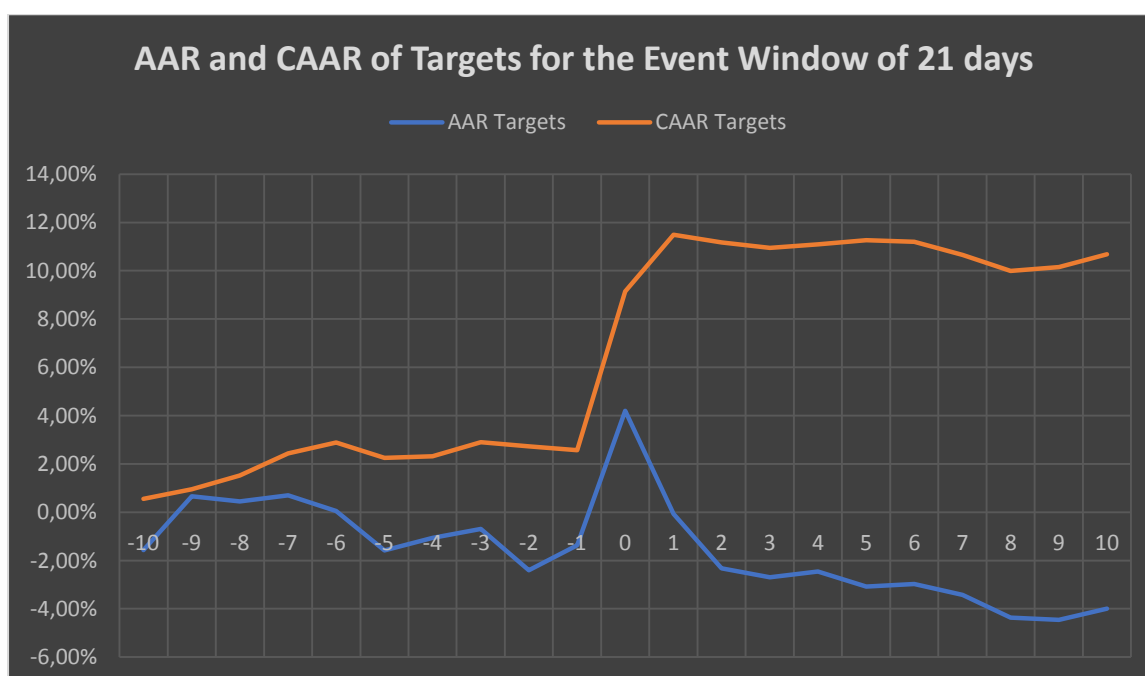
4.2.1.2 Event window of 21 days (-10,+10)

Table 15: CAAR of Targets (-10,+10)

Time Interval	CAAR(%)	t-value
<i>Pre-announcement Period (-10,-2)</i>	2,06%	0,64
<i>Announcement Period (-1,0)</i>	5,94%	2,03
<i>Post-announcement Period (+1,+10)</i>	10,86%	5,08

Based on table 15, CAARs under the three periods seem to be positive. Shareholders of targets get positive CAAR of 2,06% during pre-announcement period. The abnormal returns are getting higher also in the announcement period and the post-announcement period (5,94% and 10,86 % respectively). This result in agreement with most of previous studies, indicating that CAAR will turn into positive returns for shareholders of targets. We can see that CAAR obtained from post-announcement period is higher than pre-and announcement period. This fact shows that investors may underestimate the targets during the first two periods.

Figure 11: AAR and CAAR of Targets (-10,+10)



AARs for Target firms present a small variation, as they perform returns from -4,46% until 4,20% at the day of announcement, for the event window of 41 days. In contrast with

AARs, CAARs have a larger variation in their stock value especially after day -1 with prices from 0,55 until 11,49 per cent.

4.2.1.3 Event window of 5 days (-2,+2)

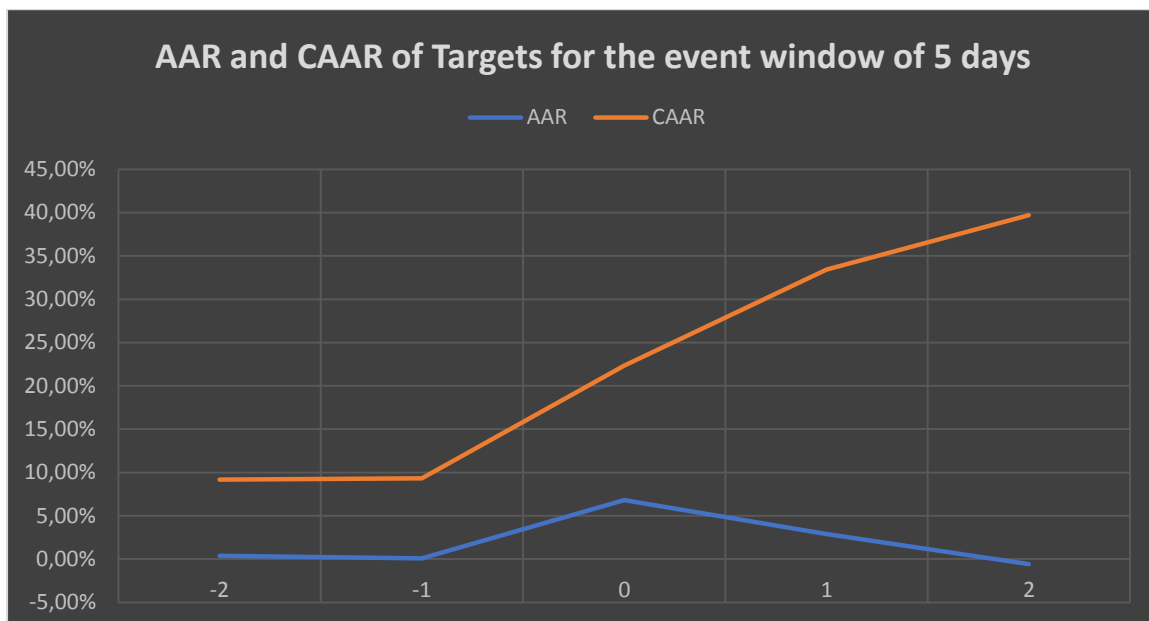
Table 16: AAR and CAAR of Targets (-2,+2)

<i>Time Interval</i>	<i>CAAR (%)</i>	<i>t-value</i>
<i>Pre-announcement period (-2)</i>	<i>9,16%</i>	<i>-0,08</i>
<i>Announcement period (-2,1)</i>	<i>15,84%</i>	<i>2,125</i>
<i>Post-announcement period (1,2)</i>	<i>36,56%</i>	<i>5,36</i>

According to table 16, CAARs under the three periods seem to be extremely positive. Shareholders of targets get negative CAAR of 9,24% during pre-announcement period. The abnormal returns are getting higher also in the announcement period and the post-announcement period (15,83% and 39,71 % respectively).

This result in agreement with most of previous studies indicates that CAAR will generate positive abnormal returns to shareholders of target. We can see that CAAR obtained from post-announcement period is higher than pre- and announcement period. This shows that investors may underestimate the targets during the first two periods as in the previous examples.

Figure 12: AAR and CAAR of Targets (-2,+2)



4.2.1 Domestic and Cross-border transactions and their impact on target's shareholders

4.2.1.1 Event window of 41 days (-20,+20)

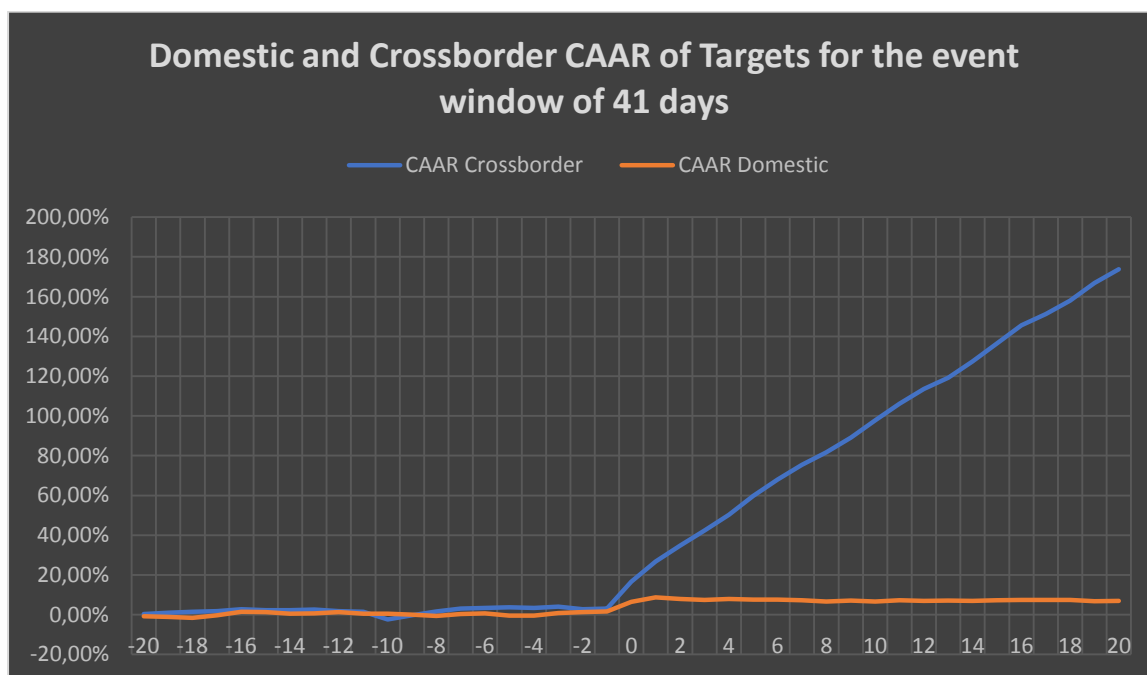
Table 17: CAAR of Targets for Cross-border and Domestic M&A deals (-20,+20)

Time Interval	CAAR(%)	CAAR(%)	t-value	t-value
	Cross-border	Domestic	Cross-borders	Domestic
<i>Pre- Announcement period (-20,-2)</i>	1,95%	0,21%	0,14	0,67
<i>Announcement period (-1,0)</i>	-0,47%	0,50%	-0,26	0,89
<i>Post-Announcement period (1,20)</i>	101,21%	7,33%	4,24	4,81

Both domestic and cross-border M&A transactions generally generate positive CAARs as we can see in Table 17. During pre-announcement period, both cross-border and domestic M&As generate CAARs of 1,95% and 0,21% respectively. Nevertheless, they are not statistically significant. In the announcement period, shareholders of targets receive -0,47% CAAR in cross-border M&As and earn 0,50% CAAR if the target companies are inside the acquirers' country. Nevertheless, they are not significantly different from zero. Therefore, we can conclude that the country of target companies is not able to impose effects on the value of targets' shareholders during the announcement period and pre-announcement period.

Moreover, cross-border M&A deals seem to generate extremely higher abnormal returns (101,21%) compared to domestic M&A transactions (7,33%) during post-announcement period. Domestic M&A transactions are not being seen as attractive to shareholders of targets during this period. Additionally, both of them are significantly different from zero. Therefore, we can conclude that the country of target companies impose effects on the value of targets' shareholders during the announcement period and post-announcement period.

Figure 13: CAAR of Targets for Cross-border and Domestic M&A deals (-20,+20)



As we can see in Figure 13 the CAARs of domestic transactions present a small variation, as they perform returns from -0,56 % until 7,49% for the event window of 41 days. In contrast with domestic CAARs, cross-border CAARs have extremely bigger variation in their stock value among the same period with prices from 0,26 until 173,77 per cent.

4.2.2.2 Event Window of 21 days (-10,+10)

Table 18: CAAR of Targets for Cross-border and Domestic M&A deals (-10,+10)

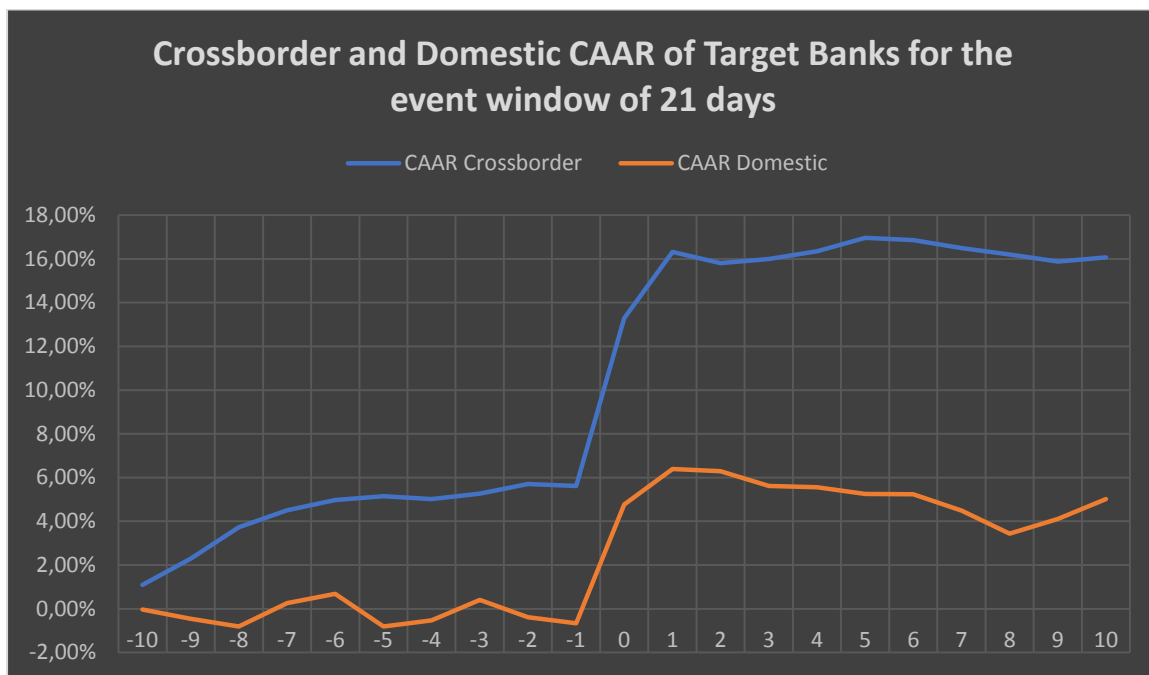
Time Interval	CAAR(%) Crossborder	CAAR(%) Domestic	t-value Cross- border	t-value Domestic
<i>Pre-Announcement period (-20,-2)</i>	4,19%	-0,19%	0,95	0,31
<i>Announcement period (-1,0)</i>	9,45%	2,05%	3,63	1,51
<i>Post-Announcement period (1,20)</i>	16,29%	5,14%	6,77	3,31

Both domestic and cross-border M&A transactions generally generate positive CAARs as we can see in Table 18. During the pre-announcement period, cross-border M&As generate CAARs of 4,19 % and -0,19% respectively. Nevertheless, they are not statistically

significant. In the announcement period, shareholders of targets receive 9,45% CAAR in cross-border M&As and earn 2,05% CAAR if the target companies are inside the acquirers' country. Nevertheless, only CAARs from cross-border deals are statistically significant. Therefore, we can conclude that the country of target companies can affect the value of targets' shareholders during the announcement period and pre-announcement period.

Moreover, cross-border M&A deals seem to generate one more time extremely higher abnormal returns (16,29%) than domestic M&A transactions (5,14%) during post-announcement period. Domestic M&A transactions are not being seen as attractive to shareholders of targets. Additionally, both of them are significantly different from zero. Therefore, we can conclude that the country of target companies impose effects on the value of targets' shareholders also during the post-announcement period.

Figure 14: CAAR of Targets for Cross-border and Domestic M&A deals (-10,+10)



The CAARs of domestic transactions present a small variation, as they perform returns from 0,81 % until 6,39% for the event window of 21 days. In contrast with domestic CAARs, cross-border CAARs have extremely bigger variation in their stock value among the same period with prices from 1,10 until 16,97 per cent.

4.2.2.3 Event window of 5 days (-2,+2)

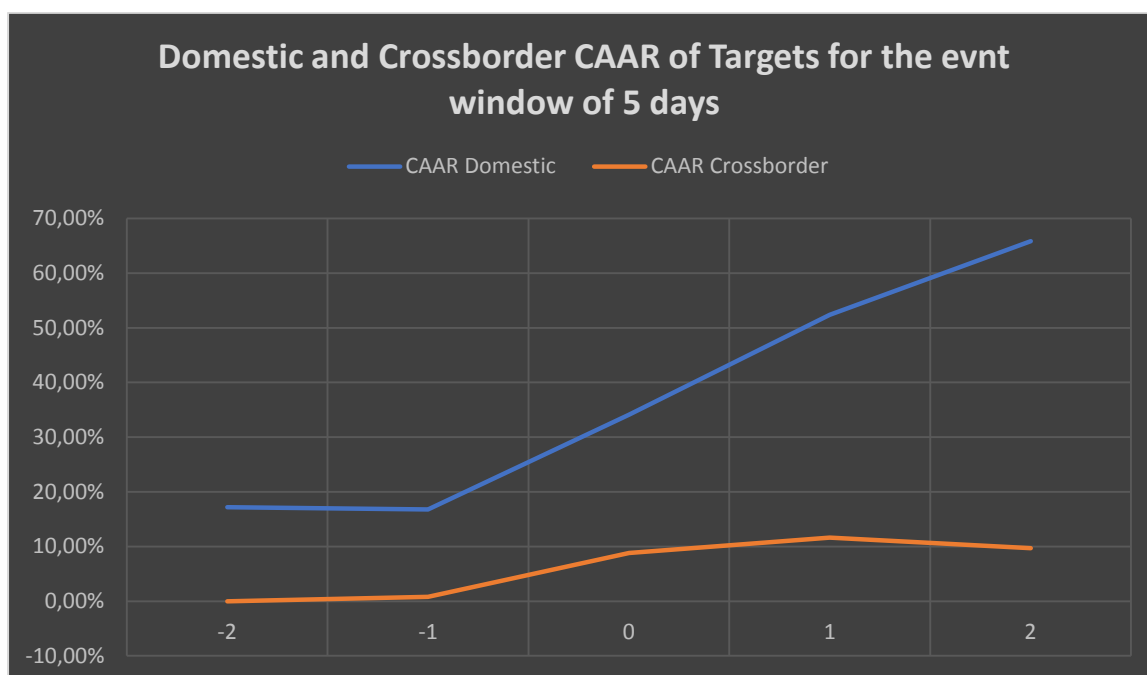
Table 19: CAAR of Targets for Cross-border and Domestic M&A deals (-10,+10)

Time Interval	CAAR(%) Domestic	CAAR(%) Cross-border	t-value Domestic	t-value Cross-border
<i>Pre-Announcement eriod</i> (-2)	-0,12%	-0,76%	-0,26	0,04
<i>Announcement period</i> (-1,0)	-0,66%	-0,86%	-0,95	0,10
<i>Post-Announcement period</i> (1,2)	-1,35%	-1,55%	-1,38	0,18

Both domestic and cross-border M&A transactions generally generate positive CAARs as we can see in Table 19. During pre-announcement period, both cross-border and domestic M&As generate CAARs of 0,38% and 16,97% respectively. Nevertheless, statistically they are not significantly different. In the announcement period, shareholders of targets receive 8,07% CAAR in cross-border M&As and earn 34,12% CAAR if the target companies are inside the acquirers' country. Moreover, they are significantly different from zero. Therefore, we can conclude that the country of target companies impose have impact on the value of targets' shareholders during the announcement period and pre-announcement period.

Moreover, domestic M&A deals seem to generate extremely higher abnormal returns (59,14%) than domestic M&A transactions (10,66%) during post-announcement period. Additionally, both of them are significantly different from zero. Therefore, we can conclude that the country of target companies impose effects on the value of targets' shareholders also during the announcement period and post-announcement period.

Figure 15: CAAR of Targets for Cross-border and Domestic M&A deals (-2,+2)



CAARs of cross-border transactions present a small variation, as they perform returns from -0,02 % until 11,62% for the event window of 5 days. In contrast with cross-border CAARs, domestic CAARs have extremely bigger variation in their stock value among the same period with prices from 16,78 until 65,87 per cent.

4.2.3 Methods of payment and their impact to target's shareholders

4.2.3.1 Event window of 41 days (-20,+20)

Table 20: CAAR of Targets and methods of payment (-20,+20)

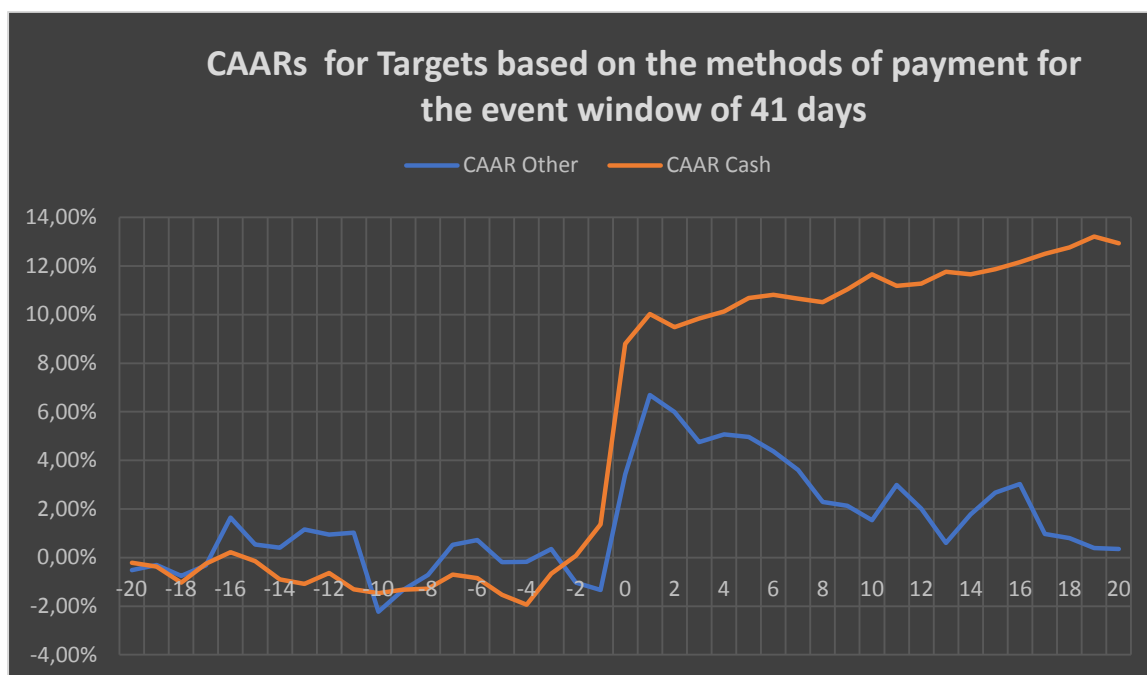
Time Interval	CAAR(%)		t-value	
	Other	Cash	Other	Cash
<i>Pre- Announcement period (-20,-2)</i>	-0,02%	-0,81%	1,01	-0,04
<i>Announcement period (-1,0)</i>	-0,60%	-1,39%	1,22	-0,31
<i>Post-Announcement period (1,20)</i>	2,85%	11,31%	3,82	4,76

As it is to be seen on the table 20, during pre-and announcement period, all the other methods of payment produce negative CAARs for shareholders of targets. In the pre-announcement period, other methods of payment generate -0,02% CAAR for targets' shareholders, which is statistically insignificant. In the announcement period, M&A transactions with cash offer create -1,39% CAAR for shareholders of targets, while other methods of payment generates a negative insignificant CAAR of -0,60%. Therefore, methods of payment have no impacts on CAARs for shareholders of targets during pre-announcement period and announcement period.

During this first (pre-announcement) period, we can find that shareholders of M&A transactions, which use other methods of payment besides cash only, seem to be more beneficial than those using cash offer. CAARs generated from other methods of payment dominate those generated from cash offer. Hence, M&A transactions with cash offer in banking sector in the period 2006-2017 do not offer higher abnormal returns to shareholders of acquirers as indicated by most of previous studies.

On the other hand, over the period after M&A announcements are made, the impacts seem to be contrary. M&A transactions with cash offer generate extremely positive CAAR for shareholders of target firms. However, shareholders of targets participating in transaction financed using other methods of payment earn a lower positive CAAR of 2,85%. CAAR from M&A transactions with cash offer tends to be higher than those with other offers in the post-announcement period, leading to an opposite result to those obtained for pre-announcement. In addition, both CAARs are statistically significant. Therefore, methods of payment have impact on CAARs for shareholders of acquirers during post-announcement period also for this event window.

Figure 16: CAAR of Targets and methods of payment (-20,+20)



As we can see in Figure 16 CAARs of cash financed transactions present a large variation, as they perform returns from -1,94 % until 12,93% for the event window of 41 days. In contrast with M&A deal's CAARs which are financed by other ways of payment (or combination of them) and they present a smaller variation in their stock value with prices from -2,23 until 6,69 per cent.

4.2.3.2 Event window of 21 days (-10,+10)

Table 21: CAAR of Targets and methods of payment(-10,+10)

Time Interval	CAAR(%)		t-value	
	Cash	Other	t-value Cash	Other
<i>Pre- Announcement period (-20,-2)</i>	1,52%	2,94%	0,53	0,82
<i>Announcement period (-1,0)</i>	8,22%	2,01%	3,30	1,46
<i>Post-Announcement period (1,20)</i>	15,35%	3,59%	6,57	2,67

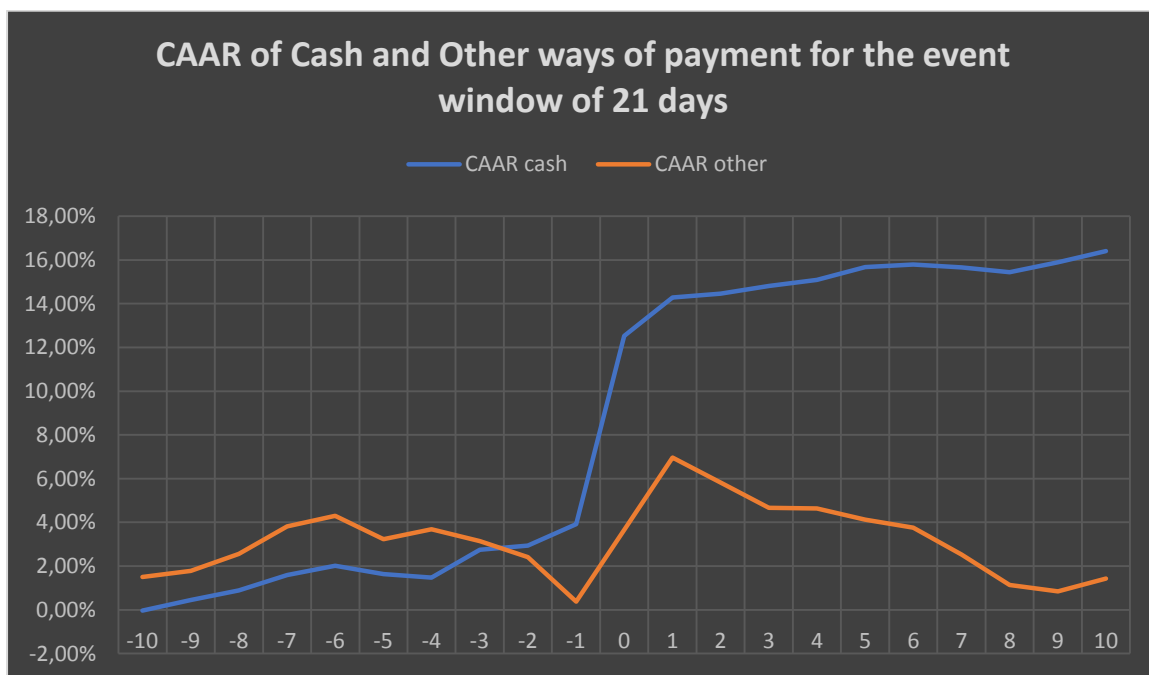
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During pre-and announcement period, all methods of payment produce positive CAARs for shareholders of targets. In the pre-announcement period, other methods of payment generate -2,94 % CAAR for targets' shareholders, which is statistically insignificant. In the announcement period, M&A transactions with cash offer create 8,22% CAAR for shareholders of targets, while other methods of payment generates a positive insignificant CAAR of 2,01%.

During these first (pre-announcement) period, we can find that shareholders of M&A transactions, which use cash as way of methods besides stocks, seem to be more beneficial.. CAARs generated from cash payment dominate those generated from other way of payment.

CAAR from M&A transactions with cash offer tends to be higher again than those with other offers in the post-announcement period. In addition, both CAARs are statistically significant. Therefore, methods of payment have impact on CAARs for shareholders of acquirers during post-announcement period also for this event window.

Figure 17: CAAR of Targets and methods of payment(-10,+10)



Cash financed CAARs present a large variation, as they perform returns from -0,04% until 16,40% for the event window of 21 days. In contrast with M&A deal's CAARs which are

financed by other ways of payment (or combination of them) and they present a smaller variation in their stock value with prices from 0,37 until 6,97 per cent.

4.2.3.3 Event window of 5 days (-2,+2)

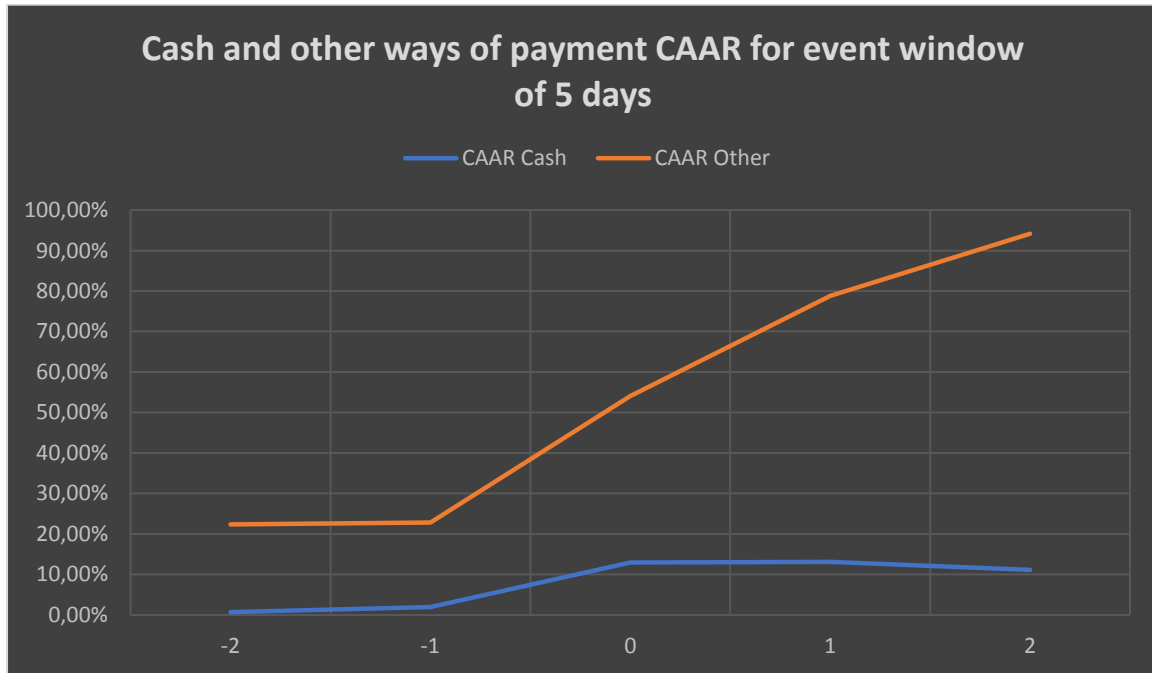
Table 22: CAAR of Targets and methods of payment (-2,+2)

Time Interval	CAAR(%) Other	CAAR(%) Cash	t-value Other	t-value Cash
<i>Pre- Announcement period (-2)</i>	21,66%	0,71%	-0,29	0,21
<i>Announcement period (-1,0)</i>	31,01%	7,45%	0,87	4,39
<i>Post-Announcement period (1,20)</i>	74,36%	12,13%	3,78	8,29

As can be seen on table 22, during pre-and announcement period, all the methods of payment produce positive CAARs for shareholders of targets. In the pre-announcement period, other methods of payment generate 21,29% CAAR for targets' shareholders, which is statistically insignificant. In the announcement period, M&A transactions with cash offer create 12,97% CAAR for shareholders of targets, while other methods of payment generates a positive significant CAAR of 1,34%. Therefore, methods of payment seem to have no impacts on CAARs for shareholders of targets during pre-announcement period and announcement period.

During the three periods, we can find that shareholders of M&A transactions, which use other methods of payment besides cash only, seem to be more beneficial than those using cash offer. CAARs generated from other methods of payment dominate those generated from cash offer. Hence, M&A transactions with cash offer in banking sector in the period 2006-2017 do not offer higher abnormal returns to shareholders of acquirers as indicated by most of previous studies. In addition, both CAARs are statistically significant. Therefore, methods of payment have impact on CAARs for shareholders of acquirers during post-announcement period also for this event window.

Figure 18: CAAR of Targets and methods of payment(-2,+2)



As we can see in Figure 18 CAARs of other ways financed transactions present a large variation, as they perform returns extremely positive returns from 20,93% until 83% for the event window of 5 days. In contrast with M&A deal's CAAR which are financed by cash and they present a smaller variation in their stock value with prices from 0,71 until 13,13% per cent.

5. Conclusions

This study is consisted of three major objectives. Firstly, we have examined whether abnormal returns of bidding companies are significant, like the abnormal returns of target firms as well. Secondly, we have sought to compare abnormal returns performed by target companies with those performed by bidding firms – all deals financed in cash versus stock-financed deals. Thirdly, we have examined a potential relationship between abnormal returns and the origin countries of the two companies. This study's basic outcome has been already analyzed in Section 4 (Empirical Results) by investigating the sample in three different periods: pre-announcement period (-first day of the event window;-2), announcement period (-1;0) and post announcement period (+1;+ last day of the event window). By employing event study methodology, we found the following results: (i) the research reports that abnormal returns of target banks are significantly different from those of acquiring banks. In this specific sample of 114 M&A deal announcements, target companies experienced positive abnormal returns independently of transaction's determinants. (ii) Acquiring companies produced negative, insignificant abnormal returns in transactions which are financed by stocks on Day 0 of the announcement (event day). Moreover, (iii) acquiring companies produce insignificant positive abnormal returns in deals which are financed by cash.

During the pre- and post-announcement period exist positive and negative cumulative abnormal returns respectively for the shareholders of the bidders. However, these numbers are not statistically significant. Hence, we are not able to reject the null hypothesis and the statement that no abnormal return produced by M&A announcements to bidding companies for these two periods. Furthermore, during the announcement period (day 0 and 1), there exists a insignificant negative cumulative abnormal return for shareholders of acquirers. This fact is not enough itself to indicate that the stock performance of bidding banks in response to M&A announcement in EU is negative. Therefore, M&A announcements can be characterized as bad news to shareholders of acquirers during all of the three periods.

In the next part of the results' analysis, we have examined two factors that may have effects on the shareholder value of bidders. They are cross-border/domestic M&As and the methods of payment. In order to examine whether the abnormal returns of acquirers will be affected by cross-border or domestic M&As, we calculated separately CAARs that

shareholders of acquirers earn when M&A deals are cross-border or domestic. We concluded that during pre-announcement period, there is no significant evidence to report that M&A announcements generate abnormal returns for acquirers under both cross-border and domestic M&A transactions. During the announcement period, cross-border M&A transactions create positive and insignificant CAARs for shareholders of acquirers. On the other side, domestic M&A transactions generate negative and insignificant abnormal returns. Thus, we can conclude that bidders who acquire cross-border target companies can generate bigger positive abnormal returns in contrast to those who acquire domestic which seem to generate insignificant negative abnormal returns. In post-announcement period, cross-border M&A transactions generate a positive insignificant CAAR for acquirers while domestic M&A deals generate negative insignificant CAAR as well.

In order to investigate the relationship between methods of payment and abnormal returns to shareholders of acquirers, we have split our sample into the “cash” group and “others” group. The cash group includes all M&A deals for which acquirers use cash to finance, whereas the “others” group includes the other M&A transactions for which acquirers use stocks or combination of stock and cash to finance. The result shows that during the pre-announcement period, transactions using other methods of payment produce positive insignificant CAAR of transactions, which cash offer is not significant different from zero. Announcement period presents again insignificant CAARs for all M&A transactions using cash and other modes of payment negative and positive respectively.

Both ways of payment generate positive significant abnormal returns for shareholders and other methods of payment seem to create higher value for shareholders. During pre-announcement and announcement period, none of them generate significant abnormal returns for bidders.

This result supports again the opinion that, indicating that the choice of payment methods of acquirers cannot affect the abnormal return generated for shareholders of acquirers in pre- and announcement periods.

There is no enough evidence to say that M&A announcement will create shareholder wealth for acquirers. Cross-border M&A transactions will generate positive abnormal returns for shareholders of acquirers in pre-announcement, announcement period and post-announcement period, while domestic M&A transactions will create negative abnormal returns during the three periods.

Methods of payment are not evidenced to effect shareholder's value. M&A transactions finished by other methods of payment (stocks or combination of stocks and cash), shareholders of acquirers will generate positive abnormal returns during pre- and announcement periods. In contrast with the cash financed transactions which are producing negative CAAR.

On the other hand, targets experience totally different the M&A announcement and their stocks value seem to be more sensitive to the transactions. During the pre- and post-announcement period, there produce positive cumulative abnormal returns for shareholders of targets. However, these numbers are not statistically significant. As a result we are not able to reject the null hypothesis and the statement that no abnormal return produced by M&A announcements to the target companies for these two periods. Furthermore, during the announcement period (day 0 and 1), there exists a insignificant positive cumulative abnormal return for shareholders of acquirers, higher than the one in pre-announcement period. But this statement is not enough in order to indicate that the stock performance of bidding banks in response to M&A announcement in EU is extremely positive. Therefore, M&A announcements can be seen as good news to shareholders of acquirers during all of the three periods.

We examine if the abnormal returns of targets will be affected by cross-border or domestic M&As also for target banks. We conclude that during pre-announcement period, there is no significant evidence to report that M&A announcements generate abnormal returns for acquirers under both cross-border and domestic M&A transactions. During announcement period, cross-border M&A transactions create positive and significant CAARs for shareholders of target companies at the event window of 5 days. On the other side, domestic M&A transactions generate also positive and significant abnormal returns, higher than those from cross-border deals. Thus, we can conclude that bidders who acquire domestic target companies can generate bigger positive abnormal returns in contrast to those who acquire cross-border which seem to earn significant positive abnormal returns in announcement period. In post-announcement period, both categories M&A transactions generate extremely positive significant CAAR for target firms.

Examining and the last determinant we conclude that during preannouncement period, transactions using all methods of payment produce insignificant CAAR. Announcement period presents positive significant CAAR for all M&A transactions using cash and other methods of payment. Both ways of payment generate positive significant abnormal re-

turns for shareholders and other methods of payment seem to create higher value for shareholders. During pre-announcement and announcement period, both of them generate significant abnormal returns for bidders in the event window of 5 days. On the event window of 21 days only cash returns seems to be significant.

This result is in agreement with the opinion indicating that the choice of payment methods of acquirers affect the abnormal return generated for shareholders of targets in pre- and announcement periods.

There is enough evidence to say that M&A announcement will create shareholder wealth for targets. Cross-border M&A transactions will generate positive abnormal returns for shareholders of acquirers in pre-announcement, announcement period and post-announcement period, while domestic M&A transactions will generate higher abnormal returns during the post-announcement period.

Methods of payment are not evidenced to effect shareholder's value. M&A transactions finished by both of the payment methods (cash or a combination of other methods) of targets will generate extremely positive abnormal returns during the three periods. As has been already analyzed in Section 4, it is undoubtedly true that the CAAR which are performed by target's stocks are really higher than those which occur by bidder's stock value.

5.1 Recommendations for Managers, Investors and Policy Makers.

Keeping the investment perspective in mind, an investor can earn considerable returns if he obtain the stocks within five days before the news of M&A comes to the market and sells one day after the transaction. An investor can also earn if the shares of the bidding firm are purchased two days prior to the announcement day and sold two days after the announcement day. We can say that 'the earlier he sells, the more he gains' and 'the issuance of stock is not good news'.

This study have certain implications for managers and the policy makers as well. Managers should consider cross-border as more beneficial for target banks and domestic transactions better for the bidding banks. Acquisitions as an option to reinforce their competitiveness as the impact of these deals seem to be a good indicator of longer-term success.

The study recommends that the European bank managers could adopt M&A as an effective strategy for corporate growth. The results also bring attention of the managers to the

mode of payment of M&A transactions. Publication of stocks is not as good as payment in cash as disclosed in market reaction to deals which are financed with stocks.

The positive returns perceived on announcement and during the pre-event window are in agreement with the expectation of the managers.

Perhaps, this may be due to the fact that firms obtain another firm for a strategic reason, so as to utilize the economies of scale and scope, and leverage available resources and capabilities, thus generating more scope for value creation. M&A provide an advantage to the bidding firm to consolidate and judiciously exploit intangible resources of the two companies on a broader scale. It seems that European banks have managed to develop their bidding abilities over time.

The market responds positively if the deal is considered value-adding to the acquiring firm.

European banks use cross-border deals for strategic assets seeking in order to facilitate strategic and organizational transformation of the firms. Moreover, access

to developed markets for products, resources, and capabilities enable European banks to leap-frog to the global league and thus create greater value than what could be achieved by acquiring a domestic firm. The cross-border transaction complement the bidding firms with necessary technological management expertise and widen customer base to compete in international markets.

5.2 Limitations and Implications

This research was limited to European banks and financial institutions that have been listed at the countries' Indexes during the announcement (or approval) dates. Firms that had not been included in these Indexes at that time of the announcement were exempted from the sample since the market statistics could not be specifically determined due to the fact the data was not available. This fact leads to the exclusion of a large proportion of the M&As that happened, since they are privately owned and therefore stock prices could not be calculated.

Furthermore, another limitation is that this research examined only the short time frame after the deal announcement. It would be interesting to look at these corporations after a time frame, greater than 20 days after the transactions. There is a high possibility that the findings might be different.

One more limitation is that the inflation and currency exchange rate, are not taken into consideration. These factors could be affect the value of the transactions and the abnormal returns for bidders and targets which are participating on them.

Finally, the results of this study have been shaped using the Market Model, and alternative models were not taken into consideration.

5.3 Suggestions for further research

This thesis is based on a simple methodology using the Market Model. For further future studies, there is a need to include more independent variables such as the firm size.

One more suggestion for further research is to examine the long-term returns of the shareholders. It is assumed that the market takes time to evaluate the effect of a M&A deal. In a long-term study, the findings have been highly affected by the model which had been used to calculate the abnormal returns.

Additionally, another factor which would be beneficial to be examined is the motivation factors behind the M&A deals for listed banks and institutions.

Last but not least, previous studies have shown that the attitude of Mergers and Acquisitions could affect the abnormal returns of the acquiring and target companies. Bank mergers in Europe have been characterized by both vertical and horizontal deals. Further studies may be conducted to examine the impact of the merger or acquisition type.

Appendix

Appendix A'

Average Abnormal Returns and Cumulative Average Abnormal Returns of Acquirers (-20,+20)

Event window	AAR Acquirers	T-Statistic AAR	CAAR Acquirers	T-Statistic CAAR
-20	-0,05%	-0,12	-0,05%	-0,13
-19	0,12%	0,10	0,07%	-0,03
-18	0,02%	0,14	0,09%	0,01
-17	0,31%	0,36	0,40%	0,29
-16	0,44%	0,34	0,84%	0,58
-15	-0,15%	-0,02	0,69%	0,48
-14	-0,30%	-0,17	0,39%	0,30
-13	0,28%	0,32	0,68%	0,61
-12	0,32%	0,25	0,99%	0,84
-11	-0,14%	-0,03	0,85%	0,82
-10	-0,32%	-0,11	0,53%	0,64
-9	-0,30%	-0,13	0,23%	0,47
-8	-0,02%	0,21	0,21%	0,68
-7	-0,33%	-0,24	-0,12%	0,51
-6	-0,17%	-0,13	-0,30%	0,44
-5	0,10%	0,02	-0,20%	0,48
-4	0,50%	0,24	0,30%	0,78
-3	0,19%	0,12	0,50%	0,92
-2	-0,17%	-0,10	0,33%	0,83
-1	0,13%	0,07	0,46%	1,06
0	-0,79%	-0,52	-0,34%	0,74
1	0,39%	0,10	0,06%	1,04
2	-0,35%	-0,48	-0,29%	0,82
3	-0,01%	-0,29	-0,30%	0,84
4	-0,06%	-0,36	-0,36%	0,80
5	-0,74%	-0,85	-1,10%	0,33

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6	-0,30%	-0,52	-1,40%	0,20
7	-0,26%	-0,49	-1,66%	0,09
8	-1,03%	-0,85	-2,69%	-0,37
9	-0,48%	-0,90	-3,17%	-0,78
10	-0,31%	-0,78	-3,48%	-0,96
11	0,44%	-0,39	-3,04%	-0,80
12	0,60%	-0,34	-2,44%	-0,43
13	-0,07%	-0,72	-2,51%	-0,46
14	0,26%	-0,45	-2,25%	-0,26
15	0,44%	-0,44	-1,81%	-0,02
16	-0,20%	-0,73	-2,01%	-0,11
17	-0,71%	-1,12	-2,73%	-0,54
18	-0,08%	-0,79	-2,80%	-0,61
19	-0,32%	-0,72	-3,12%	-0,72
20	0,29%	-0,51	-2,83%	-0,56

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

Average Abnormal Returns and Cumulative Average Abnormal Returns of Acquirers (-10,+10)

Event Window	AAR Acquirers	T-Statistic AAR	CAAR Acquirers	T-Statistic CAAR
-10	-0,20%	-0,11	1,30%	-0,53
-9	-0,20%	-0,10	-1,35%	-0,55
-8	-0,19%	-0,10	-1,40%	-0,56
-7	-0,20%	-0,11	-2,13%	-0,57
-6	-0,22%	-0,13	-3,26%	-0,59
-5	-0,25%	-0,14	-2,56%	-0,61
-4	-0,29%	-0,16	-3,04%	-0,63
-3	-0,36%	-0,19	-2,73%	-0,68
-2	-0,40%	-0,20	-2,43%	-0,73
-1	-0,41%	-0,20	-1,15%	-0,80
0	-0,42%	-0,20	-0,99%	-0,87
1	-0,40%	-0,18	-0,88%	-0,92
2	-0,42%	-0,19	-1,37%	-1,00
3	-0,48%	-0,21	-2,66%	-1,11
4	-0,53%	-0,22	-2,05%	-1,26
5	-0,56%	-0,22	-1,67%	-1,41
6	-0,56%	-0,19	-1,23%	-1,53
7	-0,62%	-0,22	-2,39%	-1,72
8	-0,69%	-0,24	-5,13%	-1,96
9	-0,73%	-0,25	-4,28%	-2,11
10	-0,82%	-0,28	-5,62%	-2,21

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Average Abnormal Returns and Cumulative Average Abnormal Returns for Acquirers (-2,+2)

Event Window	AAR Acquirers	T-statistic AAR	CAAR Acquirers	T-statistic CAAR
-2	-0,22%	-0,11	-0,50%	-0,12
-1	0,12%	-0,02	-0,25%	-0,14
0	-0,92%	-0,60	-1,47%	-0,75
1	0,29%	0,22	-1,42%	-0,55
2	-0,29%	-0,17	-2,04%	-0,71

Average Abnormal Returns and Cumulative Average Abnormal Returns of Domestic and Cross-border deals (-20,+20)

Event window	AAR Cross-border	T-Statistic AAR	CAAR Cross-border	T-Statistic CAAR	AARS Domestic	T-Statistic AAR	CAARs Domestic	T-Statistic CAAR
-20	-0,26%	-0,28	-0,28%	-0,28	0,12%	0,01	0,12%	0,01
-19	-0,25%	-0,10	-0,44%	-0,38	0,41%	0,26	0,54%	0,28
-18	-0,17%	-0,13	-0,53%	-0,51	0,20%	0,37	0,74%	0,49
-17	0,46%	0,40	0,01%	-0,11	0,17%	0,35	0,91%	0,72
-16	0,23%	0,29	0,26%	0,17	0,64%	0,41	1,56%	1,02
-15	0,11%	0,13	0,45%	0,30	-0,37%	-0,12	1,18%	0,70
-14	-0,03%	-0,07	0,34%	0,23	-0,51%	-0,26	0,66%	0,39
-13	0,41%	0,41	0,78%	0,65	0,20%	0,30	0,86%	0,65
-12	0,45%	0,30	1,14%	0,95	0,21%	0,25	1,07%	0,79
-11	0,14%	0,12	1,35%	1,07	-0,48%	-0,21	0,56%	0,53
-10	-0,92%	-0,50	1,42%	0,57	0,24%	0,23	0,80%	0,70
-9	-0,20%	-0,19	1,27%	0,38	-0,36%	-0,04	0,43%	0,58
-8	0,44%	0,63	1,69%	1,00	-0,43%	-0,07	0,00%	0,43
-7	-0,52%	-0,21	1,25%	0,80	-0,24%	-0,23	-0,23%	0,28
-6	-0,10%	-0,07	1,43%	0,73	-0,26%	-0,16	-0,50%	0,16
-5	0,64%	0,26	1,69%	0,99	-0,21%	-0,11	-0,69%	0,06
-4	0,17%	0,18	1,75%	1,17	0,80%	0,36	0,15%	0,49
-3	0,13%	0,10	1,95%	1,27	0,21%	0,14	0,37%	0,63
-2	0,31%	0,24	1,93%	1,52	-0,47%	-0,38	-0,12%	0,30

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-1	0,24%	0,32	2,16%	1,83	0,11%	-0,08	0,00%	0,43
0	-0,28%	0,02	1,66%	1,85	-1,20%	-0,90	-1,19%	-0,34
1	0,67%	0,35	2,16%	2,20	0,30%	-0,06	-0,89%	-0,07
2	-0,23%	-0,03	1,89%	2,17	-0,42%	-0,78	-1,30%	-0,44
3	-0,48%	-0,26	1,30%	1,91	0,52%	-0,23	-0,78%	-0,17
4	0,27%	0,06	1,73%	1,97	-0,31%	-0,65	-1,11%	-0,32
5	-0,24%	-0,25	1,51%	1,72	-1,17%	-1,28	-2,30%	-0,98
6	-0,12%	-0,12	1,42%	1,60	-0,44%	-0,77	-2,75%	-1,15
7	0,17%	-0,01	1,55%	1,59	-0,51%	-0,79	-3,27%	-1,29
8	-0,25%	-0,18	1,43%	1,41	-1,65%	-1,35	-4,97%	-2,07
9	0,03%	-0,20	1,48%	1,21	-0,89%	-1,41	-5,91%	-2,71
10	0,46%	0,41	1,97%	1,63	-0,98%	-1,70	-6,93%	-3,48
11	0,21%	0,08	2,22%	1,70	0,61%	-0,59	-6,31%	-3,06
12	0,31%	0,20	2,67%	1,91	0,82%	-0,60	-5,45%	-2,58
13	-0,81%	-0,51	1,77%	1,40	0,60%	-0,73	-4,84%	-2,21
14	0,25%	0,14	2,01%	1,54	0,32%	-0,72	-4,50%	-1,95
15	0,18%	0,19	2,15%	1,73	0,57%	-0,80	-3,92%	-1,71
16	0,22%	0,12	2,50%	1,85	-0,59%	-1,26	-4,52%	-2,01
17	-1,26%	-0,86	1,16%	0,99	-0,26%	-1,10	-4,75%	-2,05
18	-0,43%	-0,34	0,66%	0,64	0,25%	-0,98	-4,52%	-1,91
19	0,25%	0,29	0,89%	0,93	-0,79%	-1,36	-5,34%	-2,28
20	0,21%	0,12	0,98%	1,05	0,30%	-0,85	-5,06%	-2,21

Average Abnormal Returns and Cumulative Average Abnormal Returns for Domestic and Cross-border deals (-10,+10)

Event Window	AAR Cross border	t-Statistic AAR	CAAR Cross-border	T-Statistic CAAR	AAR Domestic	T-Statistic AAR	CAAR Domestic	t-Statistic AAR
-10	-0,07%	-0,02	-0,71%	0,16	0,43%	0,08	0,37%	0,08
-9	-0,04%	0,00	-0,71%	0,19	-	-0,20	-0,10%	-0,12

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

-8	-0,03%	0,01	-0,70%	0,23	-	0,40%	-0,19	-0,53%	-0,31
-7	-0,08%	-0,03	-2,54%	0,24	-	0,04%	-0,14	-0,57%	-0,45
-6	-0,12%	-0,06	-3,62%	0,27	-	0,20%	-0,06	-0,73%	-0,51
-5	-0,16%	-0,07	-1,21%	0,29	-	0,41%	-0,26	-1,14%	-0,77
-4	-0,23%	-0,10	-1,55%	0,29	-	0,88%	0,41	-0,32%	-0,35
-3	-0,28%	-0,11	-0,91%	0,29	-	0,08%	-0,06	-0,36%	-0,41
-2	-0,31%	-0,10	0,94%	0,27	-	0,00%	-0,05	-0,33%	-0,46
-1	-0,31%	-0,08	1,40%	0,25	-	0,01%	-0,10	-0,31%	-0,56
0	-0,30%	-0,05	1,96%	0,24	-	1,29%	-0,71	-1,60%	-1,27
1	-0,31%	-0,03	2,16%	0,23	-	0,06%	0,08	-1,59%	-1,18
2	-0,34%	-0,01	1,45%	0,19	-	0,02%	-0,06	-1,60%	-1,25
3	-0,37%	0,00	1,73%	0,13	-	0,64%	0,24	-0,97%	-1,01
4	-0,37%	0,03	2,44%	0,06	-	0,77%	-0,50	-1,71%	-1,51
5	-0,39%	0,07	3,30%	-0,04	-	1,02%	-0,52	-2,74%	-2,04
6	-0,40%	0,13	2,82%	-0,07	-	0,28%	-0,07	-3,03%	-2,10
7	-0,45%	0,15	3,19%	-0,18	-	0,91%	-0,35	-3,90%	-2,45
8	-0,50%	0,16	0,35%	-0,31	-	1,88%	-1,00	-5,86%	-3,45
9	-0,53%	0,20	1,96%	-0,43	-	0,78%	-0,40	-6,61%	-3,85
10	-0,56%	0,23	0,95%	-0,41	-	-	-0,41	-7,04%	-4,26

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

					0,41%			
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Average Abnormal Returns and Cumulative Average Abnormal Returns for Domestic and Cross-border deals (-2,+2)

Event window	AAR Domestic	T-Statistic AAR	CAAR Domestic	t-Statistic CAAR	AAR Cross-border	T-Statistic AAR	CAAR Cross-border	T-Statistic CAAR
-2	-0,12%	-0,25	-0,12%	-0,26	-0,33%	0,04	-0,76%	0,04
-1	0,23%	-0,20	0,10%	-0,48	0,00%	0,18	-0,51%	0,22
0	-1,53%	-0,94	-1,42%	-1,43	-0,26%	-0,23	-1,21%	-0,01
1	0,26%	0,23	-1,15%	-1,24	0,34%	0,22	-1,20%	0,20
2	-0,39%	-0,28	-1,55%	-1,53	-0,18%	-0,04	-1,90%	0,17

CAAR of Acquirers and methods of payment (-20,+20)

Event Window	AAR Cash	T-Statistic AAR	CAAR Cash	T-Statistic CAAR	AAR other	T-Statistic AAR	CAAR other	T-Statistic CAAR
-20	-0,11%	-0,21	-0,11%	-0,21	0,02%	-0,01	-0,06%	-0,02
-19	-0,30%	-0,19	-0,41%	-0,35	0,58%	0,44	0,47%	0,36
-18	0,01%	0,07	-0,40%	-0,29	-0,06%	0,16	0,34%	0,30
-17	0,33%	0,33	-0,07%	0,08	0,33%	0,45	0,69%	0,50
-16	0,10%	0,09	0,03%	0,22	0,90%	0,67	1,36%	1,01
-15	0,11%	0,15	0,14%	0,37	-0,43%	-0,18	0,94%	0,61
-14	0,09%	-0,04	0,24%	0,39	-0,74%	-0,31	0,45%	0,20
-13	0,02%	0,16	0,26%	0,62	0,65%	0,56	1,12%	0,66
-12	0,60%	0,33	0,86%	0,95	-0,07%	0,14	1,13%	0,74
-11	-0,18%	-0,20	0,68%	0,85	-0,11%	0,18	0,94%	0,83
-10	-0,81%	-0,57	-0,13%	0,37	0,37%	0,54	1,42%	1,09
-9	-0,25%	-0,28	-0,38%	0,20	-0,35%	0,09	1,01%	0,95
-8	0,06%	0,24	-0,32%	0,49	-0,20%	0,13	0,81%	1,00
-7	-0,39%	-0,36	-0,71%	0,27	-0,31%	-0,10	0,50%	0,90
-6	0,01%	-0,03	-0,69%	0,31	-0,33%	-0,19	0,13%	0,75
-5	0,63%	0,32	-0,07%	0,68	-0,59%	-0,38	-0,36%	0,33
-4	0,47%	0,28	0,40%	1,03	0,66%	0,29	0,24%	0,65

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

-3	-0,07%	-0,01	0,33%	1,07	0,41%	0,21	0,66%	0,85
-2	0,07%	-0,03	0,40%	1,12	-0,50%	-0,22	0,18%	0,56
-1	0,24%	0,30	0,65%	1,56	-0,01%	-0,22	0,19%	0,52
0	0,02%	0,17	0,66%	1,79	-1,81%	-1,38	-1,67%	-0,52
1	0,22%	0,28	0,88%	2,16	0,58%	-0,15	-1,06%	-0,29
2	-0,11%	-0,27	0,78%	2,02	-0,69%	-0,78	-1,76%	-0,65
3	-0,40%	-0,26	0,38%	1,90	0,49%	-0,35	-1,25%	-0,43
4	0,46%	0,03	0,84%	2,10	-0,64%	-0,85	-1,90%	-0,76
5	-0,25%	-0,37	0,58%	1,91	-1,43%	-1,54	-3,31%	-1,63
6	-1,07%	-0,71	-0,48%	1,32	0,65%	-0,32	-2,69%	-1,17
7	-0,17%	-0,25	-0,66%	1,31	-0,41%	-0,87	-3,11%	-1,47
8	-0,25%	-0,11	-0,90%	1,33	-2,09%	-1,85	-5,26%	-2,59
9	0,03%	-0,17	-0,87%	1,28	-1,10%	-1,81	-6,44%	-3,41
10	0,55%	0,14	-0,32%	1,59	-1,42%	-1,99	-7,96%	-4,24
11	-0,18%	-0,34	-0,50%	1,37	1,25%	-0,46	-6,66%	-3,56
12	-0,02%	-0,15	-0,52%	1,39	1,50%	-0,54	-5,06%	-2,65
13	0,06%	-0,16	-0,46%	1,44	-0,09%	-1,39	-5,15%	-2,68
14	0,21%	0,05	-0,25%	1,59	0,30%	-1,15	-4,86%	-2,45
15	0,52%	0,18	0,27%	1,94	0,25%	-1,34	-4,62%	-2,39
16	0,14%	0,01	0,41%	2,10	-0,65%	-1,73	-5,28%	-2,83
17	-0,19%	-0,44	0,22%	1,84	-1,47%	-2,10	-6,77%	-3,54
18	-0,16%	-0,43	0,05%	1,65	0,02%	-1,34	-6,68%	-3,49
19	-0,57%	-0,34	-0,52%	1,48	-0,03%	-1,27	-6,69%	-3,54
20	0,32%	0,06	-0,20%	1,69	0,21%	-1,31	-6,50%	-3,48

CAAR of Acquirers by methods and payment (-10,+10)

Event Window	AAR other	T-Statistic AAR	CAAR other	T-Statistic CAAR	AAR cash	T-Statistic AAR	CAAR cash	T-Statistic CAAR
-10	0,56%	0,26	0,56%	0,26	-0,90%	-0,62	-0,96%	-0,62
-9	-0,49%	-0,29	0,06%	-0,02	-0,08%	0,04	-0,99%	-0,57
-8	-0,30%	-0,03	-0,24%	-0,05	0,05%	0,23	-0,98%	-0,34
-7	-0,02%	-0,04	-0,26%	-0,10	-0,24%	-0,16	-1,22%	-0,51

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

-6	-0,04%	0,11	-0,30%	-0,00	-0,02%	-0,02	-1,20%	-0,54
-5	-0,58%	-0,35	-0,88%	-0,35	0,66%	0,44	-0,54%	-0,09
-4	0,65%	0,41	-0,24%	0,059	0,45%	0,14	-0,15%	0,05
-3	0,14%	-0,01	-0,10%	0,04	-0,03%	0,06	-0,14%	0,12
-2	-0,41%	-0,25	-0,51%	-0,20	0,28%	0,22	0,17%	0,35
-1	-0,60%	-0,57	-1,10%	-0,78	0,25%	0,27	0,43%	0,62
0	-1,32%	-0,89	-2,43%	-1,66	-0,05%	0,18	0,37%	0,80
1	0,30%	0,09	-2,12%	-1,57	-0,06%	0,08	0,27%	0,88
2	0,11%	0,17	-2,02%	-1,40	-0,14%	-0,09	0,15%	0,79
3	0,49%	0,14	-1,53%	-1,25	-0,34%	-0,05	-0,20%	0,74
4	-1,01%	-0,66	-2,53%	-1,92	0,55%	0,30	0,37%	1,04
5	-1,36%	-0,88	-3,89%	-2,81	-0,30%	-0,20	0,07%	0,83
6	1,11%	0,83	-2,78%	-1,97	-1,08%	-0,61	-1,02%	0,22
7	-0,77%	-0,57	-3,55%	-2,54	-0,33%	-0,07	-1,30%	0,15
8	-1,98%	-1,24	-5,52%	-3,79	-0,32%	-0,06	-1,71%	0,08
9	-1,07%	-0,79	-6,60%	-4,58	0,02%	0,02	-1,66%	0,09
10	-0,87%	-0,57	-7,47%	-5,16	0,57%	0,25	-1,11%	0,34

CAAR of Acquirers and methods of payment (-2,+2)

Event Window	AAR Acquires Cash	T-Statistic AAR Cash	CAAR acquirers Cash	T-Statistic CAAR Cash	AAR acquirers Other	T-Statistic AAR	CAAR acquirers Other	T-Statistic CAAR
-2	-0,07%	0,07	-0,07%	0,05	-0,51%	-0,39	-0,51%	-0,39
-1	0,10%	0,09	0,03%	0,13	0,04%	-0,30	-0,48%	-0,69
0	-0,07%	0,02	-0,03%	0,13	-1,95%	-1,29	-2,43%	-1,99
1	0,07%	0,08	0,06%	0,17	0,66%	0,42	-1,77%	-1,56
2	-0,14%	-0,16	-0,10%	0,00	-0,66%	-0,36	-2,43%	-1,93

Appendix B'

AAR and CAAR of Targets (-20,+20)

Event window	AAR Target	T-Sstatistics AAR	CAARS Target	T-Sstatistics CAAR
-20	-0,23%	-0,20	-0,36%	-0,15
-19	0,05%	0,09	-0,14%	-0,04
-18	-0,39%	0,05	-0,38%	0,01
-17	0,62%	0,16	0,64%	0,13
-16	1,12%	0,43	2,84%	0,53
-15	-0,44%	-0,07	3,34%	0,44
-14	-0,42%	-0,10	3,45%	0,31
-13	0,12%	0,09	4,30%	0,49
-12	0,16%	0,10	4,97%	0,59
-11	-0,44%	-0,10	4,90%	0,49
-10	-1,48%	-0,33	3,78%	0,16
-9	0,52%	0,14	4,69%	0,30
-8	0,29%	0,08	5,26%	0,34
-7	0,76%	0,32	6,93%	0,64
-6	-0,02%	0,05	7,88%	0,66
-5	-0,69%	-0,17	7,54%	0,46
-4	-0,22%	0,04	7,70%	0,42
-3	0,99%	0,37	9,61%	0,80
-2	-0,15%	0,02	10,28%	0,84
-1	0,49%	0,32	11,63%	1,16
0	6,58%	2,73	23,94%	3,94
1	2,35%	1,40	35,11%	5,36
2	-0,51%	-0,18	43,01%	5,19
3	-0,30%	-0,18	50,71%	5,04
4	0,29%	0,06	59,09%	5,10
5	0,26%	-0,03	67,63%	5,02

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

6	-0,12%	-0,10	75,72%	4,93
7	-0,37%	-0,26	83,27%	4,65
8	-0,66%	-0,21	89,99%	4,44
9	0,21%	-0,08	97,58%	4,38
10	0,09%	-0,06	105,00%	4,31
11	0,37%	0,30	113,18%	4,56
12	-0,32%	-0,33	120,18%	4,43
13	-0,32%	-0,10	126,57%	4,33
14	0,44%	0,28	133,98%	4,60
15	0,53%	0,16	142,13%	4,77
16	0,33%	0,05	150,35%	4,89
17	-0,64%	-0,18	156,73%	4,72
18	0,08%	0,00	163,57%	4,73
19	0,12%	-0,05	170,49%	4,65
20	-0,12%	-0,03	177,21%	4,64

AAR and CAAR of Targets (-10,+10)

Event Window	AAR Targets	T-Statistic AAR	CAAR Targets	T-Statistic CAAR
-10	-1,57%	-0,31	0,55%	0,18
-9	0,67%	0,22	0,96%	0,33
-8	0,45%	0,07	1,52%	0,39
-7	0,70%	0,32	2,44%	0,70
-6	0,06%	0,13	2,88%	0,81
-5	-1,58%	-0,23	2,24%	0,55
-4	-1,06%	0,23	2,32%	0,79
-3	-0,69%	0,32	2,90%	1,06
-2	-2,40%	-0,27	2,73%	0,91
-1	-1,37%	0,28	2,56%	1,04
0	4,20%	3,04	9,14%	4,15
1	-0,07%	1,22	11,49%	5,42

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

2	-2,32%	0,13	11,17%	5,49
3	-2,70%	-0,14	10,94%	5,37
4	-2,46%	-0,02	11,10%	5,36
5	-3,08%	-0,01	11,27%	5,32
6	-2,98%	-0,16	11,20%	5,18
7	-3,42%	-0,28	10,65%	4,88
8	-4,37%	-0,24	9,99%	4,65
9	-4,46%	-0,12	10,15%	4,54
10	-3,99%	0,10	10,69%	4,63

AAR and CAAR of Targets (-2,+2)

Event window	AAR Targets	t-Statistic AAR	CAAR Targets	t-Statistic CAAR
-2	0,39%	-0,04	9,16%	-0,08
-1	0,08%	0,15	9,33%	0,06
0	6,82%	4,14	22,34%	4,19
1	2,91%	1,35	33,41%	5,43
2	-0,57%	-0,08	39,71%	5,29

AAR and CAAR for Targets for Cross-border and Domestic M&A deals (-20,+20)

Event Window	AARs Crossborder	T-Statistic AAR	CAAR Crossborder	T-Statistic CAAR	AAR Domestic	T-Statistic AAR	CAARS Target	T-Statistic CAAR
-20	0,38%	0,05	0,26%	0,05	-0,73%	-0,39	-0,76%	-0,33
-19	0,59%	0,09	1,04%	0,14	-0,31%	0,13	-1,12%	-0,20
-18	-0,22%	0,11	1,48%	0,24	-0,55%	0,02	-1,65%	-0,18
-17	-0,25%	0,00	1,72%	0,24	1,26%	0,29	-0,31%	0,04
-16	0,50%	0,15	2,74%	0,39	1,68%	0,73	1,41%	0,71
-15	-0,79%	-0,20	2,34%	0,19	-0,10%	0,06	1,32%	0,77
-14	-0,05%	-0,05	2,20%	0,14	-0,72%	-0,20	0,57%	0,51
-13	0,16%	0,13	2,57%	0,28	0,09%	0,01	0,64%	0,73
-12	-0,38%	-0,05	1,84%	0,23	0,64%	0,18	1,28%	0,98

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

-11	-0,06%	-0,04	1,45%	0,19	-0,79%	-0,14	0,44%	0,80
-10	-3,41%	-0,90	-2,38%	-0,70	0,12%	0,13	0,56%	0,97
-9	1,86%	0,58	-0,32%	-0,13	-0,55%	-0,14	-0,01%	0,78
-8	1,24%	0,27	1,66%	0,15	-0,51%	-0,05	-0,56%	0,60
-7	0,65%	0,19	3,12%	0,33	0,86%	0,41	0,31%	1,00
-6	-0,41%	-0,12	3,40%	0,22	0,31%	0,20	0,63%	1,17
-5	-0,21%	-0,03	3,69%	0,19	-1,14%	-0,34	-0,53%	0,78
-4	-0,52%	-0,19	3,38%	0,01	0,09%	0,21	-0,46%	0,87
-3	0,45%	0,38	4,06%	0,38	1,40%	0,32	0,90%	1,21
-2	-0,91%	-0,23	2,74%	0,15	0,50%	0,23	1,37%	1,48
-1	0,80%	0,44	3,15%	0,59	0,25%	-0,01	1,63%	1,72
0	8,32%	3,03	16,55%	3,63	5,15%	2,00	6,48%	4,09
1	2,02%	0,88	26,80%	4,51	2,22%	1,51	8,74%	5,68
2	-0,13%	0,01	34,73%	4,52	-0,77%	-0,25	7,96%	5,41
3	-0,09%	0,01	42,34%	4,54	-0,46%	-0,34	7,48%	5,12
4	0,24%	0,01	50,32%	4,54	0,39%	0,18	7,91%	5,29
5	0,27%	0,10	59,78%	4,64	-0,31%	-0,13	7,60%	5,06
6	-0,28%	-0,11	67,91%	4,53	0,02%	-0,11	7,61%	4,97
7	-0,41%	-0,30	75,42%	4,23	-0,35%	-0,15	7,25%	4,68
8	-0,75%	-0,29	81,73%	3,94	-0,55%	-0,22	6,67%	4,52
9	0,03%	-0,10	89,01%	3,85	0,41%	-0,01	7,08%	4,50
10	0,72%	0,15	97,83%	4,00	-0,48%	-0,27	6,59%	4,18
11	0,59%	0,16	106,21%	4,15	0,65%	0,52	7,26%	4,57
12	-0,70%	-0,16	113,60%	3,99	-0,27%	-0,54	6,97%	4,44
13	-0,89%	-0,30	119,23%	3,70	0,14%	0,04	7,10%	4,51
14	1,11%	0,45	127,44%	4,15	-0,06%	0,13	6,99%	4,63
15	0,67%	0,11	136,40%	4,26	0,40%	0,20	7,33%	4,83
16	0,59%	0,11	145,65%	4,36	0,15%	0,02	7,49%	4,98
17	-1,22%	-0,37	151,25%	4,00	-0,09%	0,06	7,41%	4,97
18	0,17%	0,09	158,03%	4,09	0,05%	-0,10	7,44%	4,94
19	1,00%	0,39	166,79%	4,47	-0,65%	-0,43	6,76%	4,45

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

20	-0,50%	-0,15	173,77%	4,32	0,25%	0,02	6,97%	4,54
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AAR and CAAR for Targets for Cross-border and Domestic M&A deals (-10,+10)

Event Window	AAR Crossborder	T-Statistic AAR	CAAR Crossborder	T-Statistic CAAR	AAR Domestic	T-Statistic AAR	AAR Domestic	T-Statistic CAAR
-10	-2,84%	-0,68	1,10%	0,27	-0,26%	0,09	-0,03%	0,09
-9	1,81%	0,48	2,30%	0,62	-0,50%	-0,06	-0,46%	0,03
-8	1,45%	0,25	3,73%	0,85	-0,58%	-0,11	-0,81%	-0,09
-7	0,92%	0,22	4,51%	1,04	0,48%	0,43	0,26%	0,35
-6	0,84%	0,10	4,97%	1,09	-0,75%	0,17	0,68%	0,51
-5	0,24%	-0,01	5,14%	1,02	-3,45%	-0,46	-0,81%	0,06
-4	-0,14%	-0,08	5,02%	0,95	-2,01%	0,56	-0,53%	0,62
-3	0,57%	0,44	5,26%	1,30	-1,98%	0,19	0,41%	0,81
-2	-0,45%	-0,11	5,70%	1,41	-4,40%	-0,44	-0,39%	0,37
-1	1,12%	0,68	5,62%	1,80	-3,93%	-0,13	-0,66%	0,24
0	7,04%	3,52	13,29%	5,46	1,28%	2,54	4,77%	2,78
1	2,71%	1,47	16,32%	7,02	-2,94%	0,95	6,39%	3,73
2	0,02%	-0,02	15,80%	6,89	-4,72%	0,28	6,29%	4,01
3	-0,10%	0,03	16,00%	6,96	-5,37%	-0,33	5,61%	3,68
4	0,25%	-0,02	16,35%	6,98	-5,24%	-0,03	5,56%	3,65
5	0,83%	0,09	16,97%	7,01	-7,09%	-0,11	5,26%	3,54
6	-0,19%	-0,12	16,85%	6,93	-5,84%	-0,21	5,23%	3,33
7	-0,25%	-0,25	16,49%	6,65	-6,69%	-0,31	4,50%	3,02
8	-0,40%	-0,09	16,21%	6,58	-8,44%	-0,40	3,43%	2,61
9	-0,49%	-0,27	15,88%	6,34	-8,53%	0,04	4,10%	2,65
10	0,31%	0,01	16,07%	6,34	-8,41%	0,19	5,02%	2,84

AAR and CAAR for Targets for Cross-border and Domestic M&A deals (-2,+2)

Event window	AAR Domestic	T-Statistic AAR Domestic	CAAR Domestic	t-Statistic CAAR Domestic	AAR Cross-border	T-Statistic Cross-border	CAAR Cross-border	T-Statistic CAAR cross-border
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The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

-2	0,75%	-0,05	17,17%	-0,11	-0,02%	-0,04	-0,02%	-0,04
-1	-0,54%	-0,27	16,78%	-0,37	0,78%	0,63	0,78%	0,54
0	5,72%	3,56	34,12%	3,13	8,07%	4,81	8,84%	5,39
1	2,70%	1,17	52,40%	4,10	3,15%	1,56	11,62%	6,97
2	-0,87%	-0,11	65,87%	4,01	-0,23%	-0,05	9,70%	6,77

AAR and CAAR of Targets and methods of payment (-20,+20)

Event Window	AAR Other	T-Statistic	CAAR Other	T-Statistic	AAR Cash	T-Statistic	CAAR Cash	T-Statistic
		AAR Other		CAAR Other		AAR Cash		CAAR Cash
-20	-0,30%	-0,21	-0,52%	-0,07	-0,31%	-0,23	-0,21%	-0,24
-19	0,41%	0,18	-0,31%	0,11	-0,23%	0,07	-0,38%	-0,15
-18	-0,25%	0,04	-0,76%	0,15	-0,47%	-0,04	-1,03%	-0,19
-17	0,55%	0,20	-0,33%	0,36	0,84%	0,17	-0,25%	-0,07
-16	2,02%	0,86	1,64%	1,18	0,41%	0,12	0,22%	0,04
-15	-0,67%	-0,10	0,53%	1,07	-0,44%	-0,12	-0,15%	-0,11
-14	0,04%	-0,01	0,41%	1,01	-0,69%	-0,14	-0,90%	-0,26
-13	0,56%	0,21	1,16%	1,48	-0,11%	0,02	-1,08%	-0,26
-12	-0,18%	0,15	0,95%	1,63	0,42%	0,07	-0,64%	-0,19
-11	-0,09%	-0,04	1,02%	1,57	-0,60%	-0,10	-1,31%	-0,28
-10	-3,26%	-0,69	-2,23%	0,87	-0,40%	-0,08	-1,47%	-0,35
-9	1,09%	0,14	-1,34%	1,05	0,13%	0,18	-1,32%	-0,20
-8	0,62%	0,11	-0,71%	1,05	0,04%	0,05	-1,28%	-0,13
-7	1,17%	0,46	0,52%	1,47	0,61%	0,29	-0,71%	0,16
-6	0,24%	0,27	0,72%	1,66	-0,16%	-0,07	-0,85%	0,11
-5	-0,70%	-0,39	-0,19%	1,18	-0,67%	-0,01	-1,54%	0,12
-4	-0,13%	0,13	-0,17%	1,12	-0,43%	-0,10	-1,94%	0,01
-3	0,50%	0,20	0,35%	1,39	1,35%	0,43	-0,67%	0,41
-2	-1,41%	-0,39	-1,04%	0,97	0,70%	0,30	0,08%	0,75
-1	-0,40%	0,05	-1,33%	1,04	1,25%	0,59	1,36%	1,33
0	5,03%		3,42%	3,80	7,37%	2,52	8,79%	3,82

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

1	3,36%	1,92	6,69%	5,78	1,68%	0,75	10,03%	4,59
2	-0,66%	-0,37	5,99%	5,41	-0,56%	-0,12	9,49%	4,48
3	-1,21%	-0,64	4,75%	4,77	0,33%	0,15	9,84%	4,67
4	0,30%	0,15	5,06%	4,89	0,24%	-0,02	10,12%	4,68
5	-0,12%	-0,08	4,96%	4,69	0,51%	0,00	10,68%	4,67
6	-0,46%	-0,27	4,37%	4,45	0,14%	0,02	10,81%	4,68
7	-0,71%	-0,39	3,60%	4,01	-0,16%	-0,19	10,66%	4,49
8	-1,39%	-0,54	2,29%	3,49	-0,10%	0,02	10,51%	4,51
9	-0,18%	-0,23	2,14%	3,28	0,50%	0,03	11,03%	4,55
10	-0,62%	-0,24	1,53%	3,05	0,69%	0,06	11,65%	4,59
11	1,45%	0,65	2,99%	3,60	-0,51%	0,03	11,19%	4,60
12	-0,90%	-0,78	2,02%	3,25	0,09%	0,00	11,27%	4,61
13	-1,35%	-0,41	0,60%	2,85	0,55%	0,14	11,76%	4,75
14	1,15%	0,56	1,78%	3,37	-0,13%	0,07	11,66%	4,84
15	0,91%	0,40	2,67%	3,77	0,25%	-0,04	11,87%	4,82
16	0,40%	0,00	3,03%	3,87	0,24%	0,09	12,16%	4,94
17	-1,99%	-0,58	0,97%	3,24	0,37%	0,10	12,50%	5,08
18	-0,18%	-0,16	0,80%	3,06	0,30%	0,11	12,76%	5,22
19	-0,30%	-0,22	0,39%	2,82	0,37%	0,08	13,21%	5,26
20	0,04%	0,00	0,35%	2,85	-0,28%	-0,08	12,93%	5,20

AAR and CAAR of Targets and methods of payment(-10,+10)

Event Window	AAR Cash	T-Statistic AAR Cash	CAAR Cash	T-Statistic CAAR Cash	AAR Other	T-Statistic AAR Other	CAAR Other	T-Statistic CAAR Other
-10	-0,14%	0,01	-0,04%	0,01	-3,63%	-0,81	1,50%	0,47
-9	0,56%	0,30	0,45%	0,31	0,98%	0,08	1,78%	0,38
-8	0,37%	0,00	0,88%	0,31	0,89%	0,19	2,56%	0,54
-7	0,74%	0,24	1,59%	0,55	1,40%	0,46	3,82%	0,96
-6	0,55%	0,02	2,01%	0,57	0,78%	0,32	4,30%	1,20

The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.

-5	-0,49%	-0,13	1,63%	0,44	-0,78%	-0,39	3,24%	0,74
-4	-0,16%	0,12	1,47%	0,56	0,42%	0,41	3,69%	1,16
-3	1,26%	0,47	2,74%	1,03	-0,09%	0,07	3,15%	1,12
-2	0,18%	-0,06	2,94%	0,97	-1,91%	-0,62	2,41%	0,80
-1	1,00%	0,46	3,91%	1,44	-0,45%	-0,01	0,37%	0,39
0	8,56%	3,72	12,52%	5,16	2,51%	1,93	3,65%	2,52
1	1,79%	0,95	14,28%	6,11	2,83%	1,65	6,97%	4,29
2	0,27%	0,38	14,47%	6,49	-0,54%	-0,29	5,83%	3,86
3	0,24%	0,19	14,82%	6,68	-1,39%	-0,68	4,66%	3,23
4	0,30%	0,02	15,08%	6,70	-0,21%	-0,10	4,64%	3,18
5	0,55%	0,06	15,67%	6,77	-0,17%	-0,12	4,12%	2,97
6	0,18%	-0,04	15,79%	6,73	-0,58%	-0,36	3,76%	2,66
7	-0,12%	-0,14	15,66%	6,59	-1,07%	-0,51	2,53%	2,12
8	-0,24%	-0,04	15,45%	6,55	-1,51%	-0,56	1,14%	1,58
9	0,41%	0,01	15,89%	6,55	-0,45%	-0,33	0,84%	1,29
10	0,56%	0,02	16,40%	6,57	0,68%	0,22	1,43%	1,49

AAR and CAAR of Targets and methods of payment(-2,+2)

Event window	AAR cash	t-Statistic AAR Cash	CAAR Cash	t-Statistic CAAR Cash	AAR Other	T-Statistic AAR Other	CAAR Other	T-Statistic CAAR Other
-2	0,71%	0,21	0,71%	0,21	0,31%	-0,29	21,66%	-0,29
-1	1,20%	0,58	1,93%	0,78	-0,92%	-0,18	20,93%	-0,47
0	11,05%	7,23	12,97%	8,00	5,05%	2,69	41,09%	2,22
1	0,57%	0,20	13,13%	8,20	4,36%	1,79	65,71%	4,02
2	-0,07%	0,19	11,13%	8,39	-1,34%	-0,48	83,00%	3,54

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The impact of mergers and acquisitions on shareholders' value: An empirical analysis of European banks.