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The Evolution of M&A. Does it create value?

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Abstract

Scholars defend that target firms are the winners when it comes to the analysis of the short-term gains of Mergers and Acquisitions and acquirers usually present negative or non-significant abnormal returns around the event date. However, these conclusions are argued among the finance community with arguments such as the fact that the Event Study analysis not being a good analysis to understand the gains for the acquirers that these profit on the long term, and that the markets cannot reflect these potential synergies on the short term. We then do a general analysis of the occurrence of the M&A deals taking place between 2000-2017 in an attempt to draw some conclusions regarding the tendencies. We also run an event study analysis to obtain the Cumulative Abnormal Returns (CARs) for targets and acquirers, with our conclusions being very similar to those found in previous analyses, however we went deeper to understand how these CARs diverge from industry to industry (obtained from the companies SIC codes) as well as from deals done between acquirers and targets from the same Industry or from different industries. Lastly we run some regressions to understand the average CARs for the -15/15 days before and after the announcement, excluding the companies' specific effects, in this last analysis we obtained interesting results that showed that during the financial crisis the average for the targets is smaller when compared to the figures before and after the crisis; for the acquirers the average found was positive arguing in favor of the thesis that the acquirer firms are able to explore the crisis period to have positive CARs when acquiring potentially fragilized targets.

Keywords: M&A; mergers and acquisitions, event studies, CAR, cumulative abnormal returns

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Resumo

Os investigadores defendem que as empresas-alvo são as vencedoras no que toca à análise dos ganhos a curto prazo em casos de M&A, por outro lado os compradores apresentam retornos anormais negativos ou não significativos em intervalos fixos antes e depois do anúncio da transação. No entanto estas conclusões são debatidas no meio académico com argumentos como o facto de a análise de Event Studies sendo vista como uma forma não muito correcta para compreender os ganhos para os compradores, é defendido que estes lucram no longo prazo e que os mercados não têm a capacidade de refletir, no curto prazo, os efeitos positivos destas sinergias. Nós fazemos uma análise geral da ocorrência de negócios de M&A realizados entre 2000 e 2017 com o objectivo de concluir relativamente a algumas tendências. Para além disto, também corremos uma análise de Event Study para obter os Cumulative Abnormal Returns (CARs) para empresas-alvo e compradores, encontrando conclusões muito semelhantes às encontradas na literatura, no entanto, querendo ir mais a fundo decidimos compreender como estes CARs variam de Industria para Industria(usando os SIC codes para identificar as indústrias) bem como de negócios feitos entre empresas da mesma indústria e negócios feitos entre empresas de indústrias de indústrias diferentes. Finalmente corremos algumas regressões para compreender a médias dos CARs para os -15/15 dias antes e depois do anúncio da transação, excluindo os efeitos específicos das empresas, nesta última análise obtivemos resultados interessantes que mostraram que durante a crise a média para as empresas-alvo é menor quando comparada com os resultados para antes e depois da crise; para os compradores a média encontrada é positiva argumentando a favor da tese que as empresas compradoras foram capazes de explorar o período de crise para ter CARs positivos quando adquirindo empresas-alvo potencialmente fragilizadas.

Keywords: M&A, fusões e aquisições, event studies, CAR, cumulative abnormal returns

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Contents

1. Introduction **1**

1.1 Research Question 2

2 Literature Review

2.1 Performance in M&A deals 2

2.1.1 The Abnormal Returns analysis 2

2.1.2 Event Studies 3

2.1.3 Analysis of Targets and Acquirers: what is a Successful deal? 5

2.2 Waves of Mergers 7

3 Data and Methodology **10**

4 The Evolution of the M&A activity **12**

5 Cumulative Abnormal Returns for Targets and Acquirers **15**

6 Regression Analysis **19**

7 Conclusions **20**

List of Figures

1 Cumulative abnormal returns for an earnings announcement using the market model 26
2 Timeline for the realization of an event study 27
3 Evolution of the number of deals per year 30
4 Evolution of the number of acquirers per year for the U.S.A and Europe 31
5 Evolution of the number of targets per year for the U.S.A and the rest of the world 32
6 Evolution of the total value of transactions per year 33
7 Evolution of the total value of transactions per year for the U.S.A and Europe 34
8 Evolution of the average value per deal for the entire sample 35
9 Evolution of the average value per deal for the U.S.A and Europe 36
10 Evolution of the number of acquirers per industry 37
11 Evolution of the number of targets per industry 38
12 Evolution of the Non-Conglomerate deals 44
13 Evolution of the number of deals in the financial industry 45
14 Evolution of the CARs for the crisis and non- crisis period (2006-2009) 58

List of Tables

1 Number of Acquirers and Targets per country (General Analysis) 28
2 Number of Deals per year 30
3 Number of Acquirers per year for the United States and Europe 31
4 Number of Targets per year for the United States and the Rest of the world 32
5 Total value of transactions per year 33
6 Total value of transactions per year for the United States and Europe 34
7 Average value per deal (Entire Sample) 35
8 Average value per deal for the United States and Europe 36
9 Number of acquirers per Industry 37
10 Number of targets per Industry 38
11 Number of Acquirers per Industry per country 39
12 Number of Targets per Industry per country 40

13 Total Conglomerate and Non-Conglomerate deals 42
14 Evolution of the number of deals in the financial industry 45
15 Results of the Target's CARs analysis for the different time scopes- Targets 2006-2009 46
16 Results of the CARs analysis for the different time scopes- Acquirers 2006-2009 50
17 Results of the CARs analysis for the different time scopes- Targets 2016-2017 54
18 Results of the CARs analysis for the different time scopes- Acquirers 2016-2017 56
19 Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Targets 2006-2009 60
20 Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Targets 2007-2008 (Crisis time) 61
21 Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Targets 2006 and 2009 (non- crisis time) 62
22 Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Acquirers 2006-2009 63
23 Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Acquirers 2007-2008 (crisis time) 64
24 Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Acquirers 2006 and 2009 (non-crisis time) 65

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1 Introduction

Research and analysis in the M&A area is something abundant in the existent literature, regarding performance (Papadakis and Thanos (2010); Zollo and Singh (2004); Beccali and Frantz (2009)), regarding the past waves of Mergers and Acquisitions (Brakman, Garretsen and Marrewijk (2008); Marrewijk(2005)), regarding integration of the targets (Weber, Tarba and Bachar (2011); and numerous other aspects. This large amount of investigation is driven by the importance of these deals, its total value and number of occurrences[1]. However even with the vast literature, opinions diverge on the true value creation of these transactions, this because each individual case has its own history and each acquirer can have its own objectives to acquire a particular target, however, a single intersection in all deals is the attempt to create synergies. In the past, the occurrence of this types of transactions came in clusters, basically, there are two easily identifiable types of periods: one of significant M&A activity and one of M&A slumber (Sudarsanam (2003); Lipton (2006))[2]. Regarding industries, generally a first acquisition starts a wave that will lead to the consolidation of an industry (Berg and Smit (2007)); scholars have been trying to explain why these happen, with two different main justifications: (1) the *neoclassical theory*, which defends that mergers are reactions to industry shocks [antirust policy, deregulation (Mitchell and Mulherin (1996); Jovanovic and Rousseau (2002)), social, politics, economics (Sudarsanam (2003), basically the size a company should have within an industry changes and therefore it is beneficial to restructure; (2) the *behavioral theory* is related with the valuation in the stock market, defending that this is what drives M&A waves (Rhodes-Kropf and Viswanathan (2004), basically periods of Merger activity have a correlation with high market valuation.

Despite the vast literature mentioned above, there is no significant analysis done regarding the evolution of M&A activities in different industries, as well as a comparison between these occurrences throughout time.

Given the written above some aspects that should be explored arise: Can we see any relevant trends in the M&A market in the 2000-2017 period? Do sectors present different trends regarding M&As? Was the M&A market affected by the 2007-2008 financial crisis?

[1] 50.600 deals announced in the year of 2017 with a value of €2.9 trillions. (Source: imaa institute).
[2] Literature acknowledges the existence of five waves of M&As, from 1893-1904, from 1910-1929, from 1955-1975, from 1984-1989 and from 1993-2000

Do Conglomerate and Non-Conglomerate M&As present the same trends in the 2000-2017 period and particularly in the 2006-2008 financial crisis? Can we observe different abnormal returns (alpha) for the different sectors and for the conglomerate and non-conglomerate given the crisis period and the overall period?

1.1 Research Question

In an attempt to continue the analysis that was developed in previous research this thesis tries to provide a clearer understanding of the trends of the M&A market, particularly in the different industries analyzed. By using an event study analysis we also try to understand the different reactions of the market to the announcement of M&A deals.

Hypothesis 1: Target firms during the Financial Crisis have lower CARs

Hypothesis 2: Acquirers present very low negative CARs or even non-significant ones

Hypothesis 3: Acquirers present positive CARs during the Crisis times

Previous literature focuses their analysis on the occurrence of M&A deals, however, none goes deep on this occurrences during the financial crisis, current literature also doesn't agree on the results of these events, continuing to argue that long-term justifications might be present for the occurrence of M&A deals from the side of the acquirers. However, in Hypothesis 3 we raise the question of whether or not acquirers are able to profit from the crisis times to acquire firms in problems at "cheaper" prices.

2 Literature Review

2.1 Performance in M&A deals

2.1.1 The Abnormal Returns analysis

When looking at performance measure there are three widely used measures: accounting-based measures, cumulative abnormal returns and managers' subjective assessments. Papadakis and Thanos (2010) found accounting-based measures to be positively correlated to managers' subjective assessments, however, the cumulative abnormal returns analysis doesn't present any correlation to the other two methods, this lack of correlation can also explain the vast and divergent literature regarding this subject. Papadakis and Thanos

(2010)[3] continuing the work of Schoenberg (2006), also found no correlation between the subjective assessments of managers and the other objective measures, moreover they added the cumulative abnormal returns analysis[4], which was done accordingly to the adjusted-market model and the market-adjusted model (Sudarsanam (2003)), in this context abnormal returns are computed as[5]

$$AR_{it} = R_{it} - (a_i + b_i R_{mt})$$

with AR_{it} being the abnormal share price return of the acquiring firm i on day t, R_{it} being the observed share price return of acquiring firm i on day t, a_i being the market model constant for acquiring firm i, b_i being the beta of acquiring firm i and R_{mt} being the return on the market portfolio on day t (Papadakis and Thanos (2010)). By using this method it was found that in 52% of all acquisitions studied, the announcement of the acquisition presented negative abnormal returns for the acquiring firms, however this results are not backed by other studies, namely: 1)Maquieira, Megginson and Nail (1998)[6], who found that the announcement of the acquisition presented positive abnormal returns for 61,8% of the acquiring firms.

2.1.2 Event Studies

Generally, scholars defend that short-term event studies[7] are the best way to understand whether or not M&A deals create value for shareholders (Hackbarth and Morellec (2008); Andrade, Mitchell, and Stafford (2001)), in these event studies are analyzed abnormal returns around the date of the announcement of the deal. In Mackinlay (1997) it is thoroughly explored the interest of studying the impact of a general event on the value of a specific firm, basically the effects of the event will have an immediate effect on stock prices and throughout the literature stock prices are used for understanding the performance of M&A deals since they are the only "direct measure of stockholder value" and also because it is a kind of data

[3] Data consists of acquisitions made by Greek listed companies in the Athens Stock Exchange, during the period of 1997-2003

[5] Some scholars (Haleblian and Finklestein (1999)) present a preferable method to calculate the Abnormal (ARs), calculating as $AR_{it} = R_{it} - R_{mt}$

[6] Data consists of 55 acquisitions realized in the United States of America with a event window of -60/60 days

[7] Probably the first ever-published event study was done by James Dolley (1933), where he analyses the effects of stock splits on stock prices.

which is easily accessible (Lubatkin and Shrieves (1986); Campa and Hernando (2004) *(Check Annex 1)*.

The procedure for an event study (Mackinlay (1997)) is described as not having a unique structure but a general flow of analysis, however, if we wanted to define a step by step methodology to run an event study it would be: "*Selection of the event and identification of the specific event dates"; "Definition of the event window":* this is generally larger than the period of interest, allowing for an analysis of the time before and after the specific event*; "Definition of the estimation window"; "Selection of the sample of firms to be analyzed"; "Calculation of the normal returns*[8]*"; "Calculation of the abnormal returns as":*

$$AR_{it} = R_{ib} - E(R_{ib}|X_b)$$

where, for firm i and event date b, AR_{it} are the abnormal returns, R_{ib} are the actual returns, $E(R_{ib}|X_b)$ are the normal returns for time period b and X_b is the conditioning information for the normal return; "*Calculation of the cumulative abnormal returns"; "Testing for the significance of the abnormal returns"*. It is also of extreme importance to refer the Market model[9] that compares the return of a firm to that of the market portfolio and is presented a

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

$$E(\varepsilon_{it} = 0) \qquad var(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2$$

where R_{it} and R_{mt} are the returns at time t for security i and the market portfolio (m), ε_{it} is the errors term or as Mackinlay (1997) describes it, the "mean disturbance term". The usage of such a model in very common is event studies' analysis, since the model removes the part of the overall return that is related to variation in the market's return, the variance of the abnormal returns is therefore reduced, this can lead to a better detection of the effects of a certain event.

Also using the analysis of Mackinlay (1997), an important aspect of an event study is the choice of the timeline, we can simply define the event date at $\tau = 0$, then, the event window will be]T1;T2], the estimation window will be]T0;T1][10], with lengths of, respectively, $L_{event} = T2 - T1$ and $L_{event} = T1 - T0$. *(Check Annex 2)*

[8] We understand normal returns as being the expected returns without conditioning on the event taking place

[9] The model assumes a joint normality/multivariate normal distribution of asset returns. Basically, a constant and linear relation between the assets' returns and the Market return.

[10] At (Mackinlay (1997)) we see the event window defined as being between $\tau = T1 + 1$ and $\tau = T2$ and the estimation window as being between $\tau = T0 + 1$ and $\tau = T1$.

2.1.3 Analysis of Targets and Acquirers: what is a Successful deal?

M&A deals are made between two parties, the acquirer and the target; literature done in this area has found that the effects for bidders and for targets are different (Ma, Pagán and Chu (2009). In Bruner (2004)[11] some light is shunned on who really benefits from an M&A deal, the analysis suggests that target's shareholders earn positive market returns and that bidders, earn zero adjusted returns, however, the total result is a positive combined adjusted return. These conclusions indicate that executives from acquirer firms should look at M&A deals as a potential destroyer of value, Grubb and Lamb (2000) even refer that only 20% of all mergers really succeed, whilst most of them only erode shareholder value failing to achieve any real financial return. Even though these findings may show M&A as being a very risky and maybe not worthwhile transaction, there is still a big confusion regarding what it truly means for a deal to "pay". In a response to this Bruner (2004) defined three possible outcomes: *Value conserved,* when the investment's return equals the required return[12], the investment has an NPV=0, therefore this is not a failure and the investor can be pleased with the deal; *Value created,* when the investment's return exceeds the required investment, the investment has an NPV>0, given the market situation it is hard to sustainably deliver this kind of performance, in this case there is a positive abnormal return; *Value destroyed*, when the investment's return is less that the required return, the investment has an NPV<0, the investor could have obtained a better performance by investing in another option with the same risk, therefore, the investor should not be pleased with the deal. With these clearly defined outcomes, it became possible to more easily define if a deal was successful, being it when it didn't destroy any value. Nevertheless, it is arguable that by using just this economic factor to define the result of a deal, we are ignoring numerous other more qualitative variables. Against this argument is the fact that manager's motives might not be the best ones or even that the managers themselves are not the best ones, Bruner (2004) gives the example of vague strategic benefits, the creation of special capabilities, the achievement of competitive scale, or the case of two organizations or CEOs being especially friendly, referring that there is no clear way to look at these aspects and concluding whether they created value other than looking at the economic outcome of the deal.

[11] Data consists of 130 studies from 1971 to 2001.

[12] This required rate of return refers to rate the investor could have received on other investment opportunities that carried the same risk.

Referring yet again to the different returns for targets and bidders, earlier literature strengthened the position that targets tend to be the "winners" of these transactions by agreeing unanimously that acquisitions create value for targets. Jensen and Ruback (1983) show abnormal returns of 20-30%[13] at the time of announcement; Mulherin and Boone (2000) show a median abnormal return of 18.4% with an analysis period of -1/+1 days around announcement date.

Bidder's/Acquirer's returns have also been analyzed by numerous scholars however findings are not so conclusive as those of target firms, different scholars found returns to be positive, negative and even insignificant. Namely, Morck, Shleifer, Vishny (1990) and Hackbarth and Morellec (2008) found bidders to have systematic negative announcement period returns, with the first analyzing 326 acquisitions of U.S. firms ranging from 1975 to 1987 and the second, 1086 takeovers from 1985 to 2002, Hackbarth and Morellec (2008) found a -0,52% 3 day cumulative abnormal return; Mulherin and Boone (2000) [14] and Tichy (2001) studies allowed them to conclude that bidders experience an insignificant mean change, whilst, Jensen and Ruback (1983)[15], Bradley, Desai and Kim (1988)[16] and Jarrel, Brickley and Netter (1988)[17] all found returns for bidders to be positive. Despite all this divergence in opinion, there is a consistency in the majority of the analysis, referring to the positive combined abnormal returns (Servaes (1991), Bradley, Desai and Kim (1988), Mulherin and Boone (2000), Moeller, Schlingemann, and Stultz (2005))

These results make it very hard for any person trying to compare any results obtained with the consensus of the literature, given that there is no consensus in the literature. Some scholars even defend that when looking at M&A deals, more specifically at the value creation for bidders, a long-term view should be employed, going against the view present above in Bruner (2004). The reasoning is that if the deal is a long-term strategy the full value is not comprehended by market reactions in a small time period around the announcement date but using accounting-based measures makes it easier for the results to be manipulated as defended by both Bruner (2004) and McWilliams and Siegel (1997).

[13] Results obtained from 13 empirical studies from 1956 to 1981.
[14] A negative return of -0,37%.
[15] The results obtained were that there was a 4% gain in tender offers and no gain in mergers.
[16] The results obtained were that there was less than a 1% gain.
[17] The results obtained were that there was a 1% to 2% gain, which was found to be statistically significant.

2.2 Waves of Mergers

When scholars discuss M&A deals, there are 5 periods that are considered to be the ones where the number of deals was larger, this analysis is developed in Sudarsanam (2003) therefore the analysis is only defined until the publishing of the book, which is 2003. In the past century, according to the literature M&A deals come in waves, with very distinguishable periods of numerous deals, as well as periods of relative deal inactivity. Sudarsanam (2003) defines the following periods: "*1893-1904*; *1910-1929; 1955-1975; 1984-1989; 1993-2000".*

Going deeper in each of the merger it is understandable that each one has its own characteristics and then it is important to analyze each one:

1893-1904: *This period can be described as a period of horizontal integration within the manufacturing industry which led to the Merger of firms in the Oil, steel, and other commodity sectors, creating the first very big firms operating in these fields. The dimension of this wave of M&A amounted to more than 15% of the Assets in the United States of America. This period of creation of giant firms was supported by the fact that there was no strong force limiting the creation of monopolies, even with the creation of the Sherman Antitrust Act*[18] *in 1890, whose purpose and measures were not yet visible. The end of this wave came due to multiple factors, namely, the stronger implementation of the Anti Trust laws defined in the Sherman Antitrust Act, because of the stock market crash of 1905 and also because of the political environment that was being set worldwide in preparation for the First World War.*

1910-1929: *This period of intense deal-making was a period of vertical integration that saw most of its activity in sectors such as food, iron and paper. During this period companies adapted to the antitrust laws that were in place, therefore, the result is not the creation of monopolies but the creation of some very big firms in each sector that coexisted among them; companies that didn't merge with the monopolistic reacted by doing friendly deals in order to take advantage of economies of scale. The dimension of this wave of deals was around 10% of the Assets in the U.S.A. The end of this wave came because of the 1929's crash, opening the doors to the Great Depression*[19]*, which lasted until 1939.*

[18] The Sherman Antitrust Act was a federal statute passed by the United States' Congress in 1890 with the objective of prohibiting any contract or partnership that reduced economic competition.

[19] The Great Depression was a worldwide crisis that started in the U.S.A. and is considered to be the worst and most widespread depression in the 20th century. It started from a crash in the stock market, known as Black Tuesday (29th October 1929).

1955-1975: *This period started only after the Great Depression and the Second World War were finished, basically, only when favorable conditions were in place. This period was the first wave where deals were very focused in "diversification", therefore, whereas in the first merger monopolies were created, here, we see the formation of conglomerates, this allowed firms to diversify from industry-specific risks but also made them enter in businesses that they didn't, sometimes, understand*[20]*. Accordingly to Sudarsanam (2003) in this wave, among all Fortune 500 companies, the percentage of firms involved in businesses that were not their main one, raised from 9% to 21%. This wave came to an end because of the oil crisis that culminated in 1981.*

1984-1989: *This merger can be defined as a period of divestment from the firms that had created big conglomerates in the last wave; the market was in a depressed state so other firms were trying to buy, at a low price, the divisions that the conglomerates were trying to sell. Sudarsanam (2003) defends that the buying firms were trying to increase their economic power whereas the selling firms were looking to sell their unprofitable businesses, or just the ones they didn't understand. In this period the usage of Leveraged Buyouts* [21]*(LBOs) arose. These conglomerate M&A deals have been previously studies and scholars have vastly concluded about it, namely, Berger and Ofek (1995) found a positive correlation between the similarity of the businesses and the returns of the transaction, the average loss from diversification amounted to 13-15%*[22]*. The end of this wave came yet again from a slowing of the stock market and consequent market crash.*

1993-2000: *This period was a period of serious globalization accordingly to Crafts (2004), this gave a strong support to cross-border mergers, companies still wanted to grow but the creation of conglomerates, in numerous cases ended up as failed attempts, therefore, entering new markets was a way for companies to grow. Sudarsanam (2003) argues that what opened the door to this wave was a technologic development paired with an attempt of companies to refocus on their resources and capabilities and using them to gain a competitive*

[20] Some literature defends that companies should not diversify, that entering into industries it doesnt understand, the firm will become more fragile. This reasoning defends that diversification should be left in the end of investors, if they want to diversify they can invest in two or more companies, instead of in a diversified company.

[21] A leverage buyout is an acquisition of a firm using a high amount of debt to do it. A particular aspect of this operation is that the assets of the target firm and bidder are usually used as collateral to the loan.

[22] Obtained in the period between 1986 and 1991.

advantage. What originated the end of this wave was the crash caused by the burst of the Internet bubble.

It is important to refer that the amount of deals starts to slow down before completely crashing, generally with the crash of the economy. On the other hand, when the number of M&A deals increases, it is accompanied with economic growth and a bullish market.

The literature associated with M&A waves also spans far, with numerous models having been developed and conclusions put forward, these models are very related with changes in the company's environment, such as product demand or industry's growth, also, agency problems, as well as a very positive financial environment, Lambrecht (2004) concluded that firms have a tendency to merge in periods of economic expansion, the scholars ended up relaxing the assumption that firms are price takers, with this they found out that market power strengthens the firms' incentive to merge and speeds up merger activity. In Lambrecht (2004) it is also shown that mergers motivated by economies of scale are positively correlated to product market demand. With this, the authors concluded that empirical evidence is consistent with the fact that cyclical product markets will generate a pattern of merger waves. Regarding Industry demand and not only product demand, Maksimovic and Phillips (2001) conclude that when demand in an industry increases, M&A deals tend to happen because more efficient providers tend to buy the assets of not so efficient firms, the probability of M&A deals taking place is higher when the selling firm is less productive and the industry experiences a positive demand shock. Basically what Maksimovic and Phillips (2001) conclude is that the "market for corporate assets eases the process of shifting of assets from firms with a lower ability to exploit them to firms with a higher ability to do it".

Moreover, Andrade and Stafford (2004) explain the increases of M&A activity with industry and firm-specific shocks, with this reasoning, by looking at general accounting or financial factors we may not be able to predict a merge or even understand one when it happens, an industry look should be taken.

3 Data and Methodology

The Databases used to build this research were Thompson One Banker and Datastream. Two groups of data samples were used, one for an initial and more general analysis and another one for a more detailed qualitative analysis as well as to do the event study analysis present in this research; the data was initially filtered according to some criteria very similar to those present in Faccio and Masulis (2005).

The first sample consists of (1) all acquisitions occurred between 2000 and 2017(inclusive), the dates used for this analysis were the effective dates of the merger. By using Thompson One Banker, the data was filtered accordingly to some criteria: (2) the bidders selected were from 14 different countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, the U.K and the U.S.A; (3) the deal attitude could be friendly or hostile; (4) both the acquirer and the target have to be public firms; (5) the percentage of shares owned after the transaction could range from 5% to 100%. Afterwards, a general analysis was done to try to understand any kind of tendencies taking place from 2000 to 2017 that would support or go against the conclusions found. The finalized dataset had 7818 transactions with 4209 different acquiring companies and 7019 different target companies, in this case the dataset was not very filtered since the objective was simply to have a general idea of the trends of the M&A market, the evolution of the number of deals per year and also how were the deals distributed in terms of industries, an analysis still lacking in the current literature.

For the second sample (1) two ranges of dates were used: from 2016 to 2017(inclusive) and from 2006 to 2009(inclusive), the dates used for this analysis were the announcement dates of the merger; (2) the bidders selected were from the same 14 different countries present above; (3) the deal attitude could be friendly or hostile; (4) both the acquirer and the target have to be public firms; (5) the percentage ownership after the transaction could range between 50% and 99%.

For both datasets we removed the acquisitions that didn't have the "primary SIC code" for either the acquirer or the target; this is justified by the need to understand the industry of the firms, which are the following:

0100-0999: Agriculture, Forestry and Fishing

1000-1499: Mining

1500-1799: Construction

1800-1999: Not Used

2000-3999: Manufacturing

4000-4999: Transportation, Communications, Electric, Gas and Sanitary Services

5000-5199: Wholesale trade

5200-5999: Retail Trade

6000-6799: Finance, Insurance and Real Estate

7000-8999: Services

9100-9729: Public Administration

9900-9999: Not Used

From One Banker we also extracted the Datastream codes for each company, both acquirers and target firms, this data was extracted with the purpose of doing the event study analysis, the years of 2007 and 2008 are the crisis years and the others, namely 2006, 2009, 2016 and 2017 are the non crisis years and the ones we will use to compare with the results obtained in 2007 and 2008. Any deal whose companies don't present a Datastream code is automatically deleted from the sample; we ended up with 243 deals for the timeline 2006-2009 and 44 deals for the timeline 2016-2017. The following analysis consisted in using the MSCI as the Market Return in order to compute the abnormal returns and subsequently the cumulative abnormal returns, after building the dataset used to compute the CARs a calculation of the average of the CARs as well as its standard errors had to be computed to get the t-statistic and understand if the abnormal returns are significantly different from 0

To sum up, we used the Thompson One banker to extract the basis of our dataset and followed to use Datastream to extract both the returns of the Acquiring firms and target firms.

In the general analysis, with the purpose of understanding the evolution of the deals in the different industries multiple tables were built: to understand the country distribution of deals and another to understand yearly distribution; this reasoning was done for targets and for acquirers.

In the event study analysis, different timelines were tested in order to understand the significance of the returns, basically if the abnormal returns that we discovered are significantly different from zero.

The timeline was chosen to provide us with results that took place during the financial crisis (2007-2008) and others that took place before (2006) and after (2009; 2016-2017) the financial crisis. This allowed us to take our entire conclusions based solely on our database instead of relying on the finding of others about the non-crisis time.

As our objective was also to understand if there was any change in the average CARs during the crisis and non crisis times for the acquirers we decided to do a regression analysis to understand the average CARs our sample ranging between 2006-2009, we then build a regression using as the sole variable the CARs for the time scope -15/15 for all acquirers and targets, we controlled for company specific effects by using a company indicator and then regressing using the Stata Software (Check Annexes 21, 22, 23, 24, 25 and 26: Tables A) with this we are able to obtain the average CARs for all firms for the entire 31 days period instead of focusing on the cumulative abnormal return on a single day. The regression imputed in Stata was the following:

$$Areg\ var2, absorb(var1)$$

with var 2 being the CARs for all companies in the time scope -15/15 and var1 the company identifier.

4 The Evolution of the M&A activity

In this dissertation, we tried to follow the reasoning of the literature and therefore discover the trends in the M&A market. As already explained both in this work and in Sudarsanam (2003): the market experiences an occurrence of merger waves intercalated with periods of significant decrease of deals. By looking at our results from analyzing the first Dataset[23] we can understand that in the entire period 2000 was the year with the highest amount of deals, 1014, as well as the year with the highest amount of value of transactions, $1 724 667,52 (Check Annex 4: Table A and Annex 7: Table A). This value in 2000 is explained by a concentration of the markets by use of M&A deals; Du Boff and Herman (2001) concluded that in 1999 the worldwide value of these deals reached approx. $3,4trillion, which is equivalent to 34% of the value of industrialized assets[24] in the U.S.A for the same year; however scholars predicted that in this period the merger wave was reaching its end, which ended up being the truth, in our analysis, in the next 3 years the number of deals fell 70,9% [25] and the total value of transactions fell 124%(Check Annex 4: Table A, Annex 7: Table A)[26]; for the value separated in U.S.A and Europe as well as in the different

[23] The dataset from 2000 to 2017 with 7818 deals.
[24] Equivalent to PP&E: product, plants and equipment
[25] **2001:** -27,2%; **2002:** -32,8%; **2003:** -10,9%
[26] **2001:** -52,1%; **2002:** -65,8%; **2003:** -6,5%

industries check *Annex 8: Table A*. Therefore we can conclude that the high relative values for 2000 are just the continuation of the wave of deals; this wave ended with the burst of the "dot-com bubble" as well as with the terrorist attacks that took place in 2001 in the U.S.A, basically, for the dot-com crash, only one out of 2 "internet companies" survived, however even the survivors were very weakened by the burst, Amazon, a success story, saw its share price go down from $100 during the bubble to $7 after the burst.

As already mentioned, the merger waves that took place in the past had different characteristics, ones where the deals were mostly conglomerate deals, others where the deals were of firms in the same industry, given this we also did an analysis of the evolution of the conglomerate and non conglomerate deals from 2000 to 2017, the evolution as seen in Annex 14 *Figure A* is very similar to that of the total deals, basically, it moves in the same direction in almost every period, moreover the number of non-conglomerate deals dominates the conglomerate ones in most cases, in particular, in the industries with the most amount of deals: "Manufacturing" and "Finance Insurance and Real Estate".

We were also able to discover three peaks in M&A deals that the literature defines as the peaks of three merger waves (Liner (2016)), these happened around the years of 2000, 2007 and 2015. We can observe this by looking at the *Annexes 4,5,6,7,8,9,10 Figures A.* When we divide the analysis into U.S.A and Europe for the Acquirers or U.S.A and "Rest of the World" for the targets the peak taking place in 2015 is much more observable in the U.S.A. This increase in the numbers are pushed by the "Mining"(14% of the total change of 42 deals), "Manufacturing"(67% of the total change of 42 deals), "Transportation, Communications, Electric, Gas and Sanitary service"(12% of the total change of 42 deals) and "Finance Insurance and Real Estate"(19% of the total change of 42 deals)[27]. In an overall analysis, the total amount of acquirers and targets in the U.S.A is higher than the sum of all the other countries in the analysis (U.S.A acquirers=4472; Europe acquirers = 3346; U.S.A targets=4009; Europe acquirers = 3745) this shows that the M&A market in the U.S.A is much more active than that those of other countries.

As mentioned "Manufacturing" and "Finance Insurance and Real Estate" were the two industries with the highest number of firms acquiring and being acquired (Check Annex 11: Table A, Annex 12: Table A and Annex 12: Table A and B), this reality will continue for the rest of the years.

[27] Important to notice that other industries also saw the number of deals decreasing, namely, "Services".

The justification behind the manufacturing industry having a very high number of deals (acquirers of this sector engaging in transactions) rests in numerous facts, namely: The automation process that has been taking place in the past years, companies, in order to continue to be competitive, they have to promptly adapt to the changes in the market and to become more efficient in an ever-changing industry. Companies, therefore, acquire other companies that develop technologies that can be used to improve their own operations, given the fact that changes happen fast, it may be more costly in terms of competitive advantage and R&D to try to develop the technologies by themselves; this fact is particularly true for this industry. An example of this is the automotive and aerospace industries, which are included in the manufacturing industry, with the SIC codes 371 and 372; these areas are always in the forefront of innovation, Aerospace particularly is being driven by an increasing demand for aircrafts, PWC projected in 2013 that the overall demand for aircrafts would be around $4800 billion.

In this industry, we can understand a negative tendency from 2000 onwards with two peaks, in 2005 (161 acquirers, 32% change from previous year) and 2007 (173 acquirers, 16% change from previous years), after the financial crisis of 2007-2008, the number of deals fell intensely[28]. When we look at the number of targets in the deals, the outlook is more or less the same as the analysis made for the acquirers, the changes are just more pronounced: it had the same peaks in 2005(154 deals 43% change from previous year) and 2007(188 deals, 29% from previous year), the crisis also affected the number of targets[29]. The decrease that took place from 2007 to 2009 (Check Annex 11: Table A, Annex 12: Table A) is a reaction of the market to the financial crisis, an important portion of this industry is the automobile industry, which suffered the 2008-2010 “automotive industry crisis”, this crisis affected the European, American and Asian markets and was caused by an increase in fuel prices, this lead to a slow down in the purchases of cars with high consumption levels which by the time were the focus of numerous producers, namely the SUV’s; another supporting factor was the boom in commodity prices, particularly the raw materials needed for the manufacturing process, some scholars explain this increase in prices as investors escaping from more risky investments into the commodity markets (Conway(2008)). All the mentioned above led companies to refocus on their essential operations, leading to a decrease in the number of acquisitions taking place.

In the Financial Industry, we can also observe a similar trend to that of the manufacturing industry, with peaks in 2000(278 acquirers), 2007(210 deals, 26% change

[28] **2008:** -21%; **2009:** -29%

[29] **2008:** -25%; **2009:** -32%

from previous year) and 2015(105 acquirers, 8% change from previous year); after the financial crisis, the number of deals decreased[30], this goes somewhat against the idea that the amount of deals increased derived of banks considered to be healthy, acquiring poorly performing banks to try to reduce the systematic risk (Maslak, Senel (2018)), however we observed this tendency during the year of 2007, the number of deals in the Financial industry increased 26% with the total amount of deals increasing 19,5% to 607(the number of acquirers from Europe and the U.S.A both increased, 20,2% to 291 and 18,8% to 316, respectively; this similarity hadn't happened in the previous years where the U.S.A saw the number of acquirers decrease[31] whereas the numbers in Europe increased substantially[32]. We also did an analysis of this industry between 2005-2011 (Check Annex 15: Table A), the results found in this analysis allow us to understand that, basically, from 2005 to 2012, European acquirers reacted with 1 year of delay comparatively to was done in the United States, for example, whilst the United States reached a peak in 2007, in Europe, this only happened in 2008; this effect can be understood from the fact that the crisis spread from the United states to Europe, with the Real Estate crisis being a big source of the problems (note that "Real Estate" is included in this industry: SIC code 65).

5 Cumulative Abnormal Returns for Targets and Acquirers

As already mentioned, accordingly to the literature, we are expecting positive CARs for the target firms and negative or insignificant for the acquirers, however we raised the hypothesis (*Hypothesis 3)* that acquirers during crisis time might have positive CARs due to the fact that targets firms are fragilized and may be bought at cheaper prices. The justification behind this reasoning is that target firms' investors, generally are the target of very generous offers to have their shares acquired, therefore, their shares will tend for the price the market tends will end up being paid by the shares, in most cases this change in price happens with a positive sign. The same reasoning doesn't apply to the acquirers, in this case, the result for the firms is not so straightforward, leading us to think that there are numerous other factors that are not understood by a simple event study analysis; we come back again to the possibility of long-term gains. In the acquirers' case, the results are in most cases negative.

[30] **2008:** -11%; **2009:** -33%; **2010:** -21%

[31] **2005:** -0,3%; **2006:** -7,6%

[32] **2005:** 39%; **2006:** 13,1%

We used multiple time scopes to build our analysis, takeovers usually have some planning previous to the announcement date, therefore the usage of more days happens in case the information was leaked and some investors are trading accordingly to that information.

Analyzing our results, they correspond to the general findings that have been found by previous scholars. In the targets analysis of 2016-2017, the results were found to be significant, with very high t-stats and therefore very low p-values (Check Annex 18: Tables A, B, C and D). For the analysis of -15/15 days the sample mean for the CAR's was 4,93%[33], comparatively to the analysis for -15/0 the sample mean for the CARs is much lower, with this second analysis presenting a result of 8,21%[34], the difference between the two is of 66,62%. When we look at other analysis, namely: -5/5 and -5/0, the smallest intervals in our sample, with CAR's of 11,28% and 12,67%, respectively, we see a much smaller difference of 12,37%, this allows us to conclude on multiple things: (1) the sample mean of the CAR's for the analysis concerning only the time before the announcement is generally higher that that concerning the period before and after (Check Annex 18: Tables A, B, C and D), this is caused by negative abnormal returns in the days after the announcement, a justification might be that the integration of the target in the bidder might not have been so positive and therefore the share value of the target decreases, another positive justification is that the market is outperforming the firm and therefore the abnormal returns disappear. (2) If when we decrease the time scope the difference between the "before the event" analysis and the "before and after the event" analysis decreases it means that the extremes are the ones contributing to the difference, for example, on average, the values observed after the analysis when the timeline is short don't have such a negative weight on the CAR's as when we increase the timeline, yet again, on average, the days far from the announcement date, after the event, negatively impact the CAR's. (3) The more we decrease the time scope the higher are the CARs:

-15/15 days: ***CAR****= 4,93%*

-10/10 days: ***CAR****= 9,61%*

-7/7 days: ***CAR****= 10,65%*

-5/5 days: ***CAR****= 11,28%*

-15/0 days: ***CAR****= 8,21%*

-10/0 days: ***CAR****= 11,18%*

-7/0 days: ***CAR****= 11,63%*

-5/0 days: ***CAR****= 12,67%*

Continuing our analysis of the results of the target firms, for our sample of 2006-2009, in this sample we divided the analysis, having results for the crisis period (2007-2008)

[33] t-stat=3,75

[34] t-stat=3,38

separated from the non-crisis period (2006 and 2009). (Check Annex 16: Table A, B, C and D). For the non-crisis period some of the conclusions continue to apply, namely: (1) Regarding the fact that the sample mean of the CAR's for the analysis concerning only the time before the announcement is generally higher than that concerning the period before and after; (3) The more we decrease the time scope the higher are the CARs:

-15/15 days: ***CAR****= 9,77%*

-10/10 days: ***CAR****= 18,64%*

-7/7 days: ***CAR****= 26,46%*

-5/5 days: ***CAR****= 28,50%*

-15/0 days: ***CAR****= 23,26%*

-10/0 days: ***CAR****=28,52%*

-7/0 days: ***CAR****= 31,73%*

-5/0 days: ***CAR****=33,29%*

(2) For the period of 2006 and 2009 as we increase the time scope the difference between the "before the event" analysis and the "before and after the event" analysis increases, for example, in the -15/15 and -15/0, the difference is 145% decreasing in the other time scopes to 53%(-10/10), 20%(-7/7) and then 17%(-5/5).

When we refer to the crisis period, the reasoning changes a little bit to that found in the non-crisis period, the 2006 and 2009, as well as 2016-2017. For the period of 2007-2008, the conclusions change: (1) In this period the sample mean of the CARs concerning only the time before the announcement in lower when compared to the sample with time before and after the announcement in every time scope but the -15/15 and -15/0, which equal 4,78% and 6,32%, respectively; this happens by having average positive abnormal returns after the event, which will lead to a higher CAR, it can be justified because the target firm was well integrated and investors think that synergies were more than those estimated, another possible justification is that the firm is outperforming the market which will lead to an abnormal return when compared to the return of the market. (2) If we decrease the time scope of the analysis the difference the difference between "before the event" analysis and the "before and after the event" becomes more negative, by this we mean that the "before the event" sample mean of the CARs become smaller when compared to the sample mean of the "before and after the event" analysis:

-15/15 days: ***CAR****= 4,78%*

-10/10 days: ***CAR****= 10,43%*

-7/7 days: ***CAR****= 12,26%*

-5/5 days: ***CAR****= 9,64%*

-15/0 days: ***CAR****= 6,32%*

-10/0 days: ***CAR****=8,83%*

-7/0 days: ***CAR****= 9,73%*

-5/0 days: ***CAR****=6,61%*

The differences are: 32%, -15%, -21%, -32%, respectively. (3) Regarding the relationship with the time scope and the size of the CAR's, we don't have a clear tendency, from the 15-days analysis to the 7-days analysis; the relation is the same as in the other samples, basically the CAR's increase with the decrease of the time scope, however in the time scope of -5/5 and -5/0 this doesn't apply. A possible justification is that there are, on average, abnormal returns, which are not so close to the event date, namely days -7, -6, 6 and 7, those contribute to a higher CAR. An interesting observation from comparing the crisis and non-crisis time scopes, in this sample is that, whilst, for the non-crisis period the average cumulative abnormal returns before the event are mostly negative and with very high absolute values, being compensated by the abnormal returns at the event date and after; during the crisis, the CARs before the announcement are mostly positive and even when negatives the absolute values are very small, we basically can observe a continuation of a trend whilst before and after the crisis, there is a clear shock at the event date (Check Annex 20: Figure A, B, C and D).

Referring to the acquirers? analysis, we also have a division of data between crisis and non-crisis, being the first the period of 2007-2008 and the latter, the period of 2006, 2009 and 2016-2017. In our analysis of the CARs of these firms, our results presented much lower t-stats, meaning that our abnormal returns may end up being insignificant, basically that the mean that we are testing to be different than zero is actually zero (Check Annex 17 and 19: Tables A, B, C and D).

For the sample with a timeline between 2016 and 2017, the sample mean of the CARs is negative in all time scopes but the -15/15, -15/0 and -7/0 ones, which is also the one with the lowest t-stat; in all cases the CARs are very small in absolute terms, which is consistent with what the literature defends. Again, the abnormal returns are "not significant" in most cases unless we use a very high p-value, we can try to explain this by looking at the way we are testing the "significance" of these abnormal returns; the t-stat can be driven to be very low when the sample mean of the CARs is very low compared to the Standard Error (which depends on the Standard Deviation), or when the standard Error is very high compared to the sample mean of the CARs; in our particular case we understand that the standard error is not big, being even very low when compared to the value for the target firms, however, the sample mean of the CARs is very close to zero.

6 Regression Analysis

Looking at the regression found in Annexes 21, 22, 23, 24, 25 and 26 we can take some conclusions. Its important to understand that, in the way the regression was built *(; var1=company identifier; var2= CARs for all companies in the time scope -15/15)* the coefficient found in the regressions is the average of the cumulative abnormal returns controlled for the firms' specific effects. Regarding the analysis of the targets, the findings support what we had already mentioned; basically the average is positive in the two periods tested, 2007-2008 (check Annex 22: Table A) and 2006&2009 (check Annex 23: Table A), as well as being significant with a very low p-value (check Annex 22: Table A; check Annex 23: Table A). Moreover, the averages during the crisis year were smaller when compared to the non-crisis years, this can be justified by investors being more conservative regarding their future prospects of the firms which caused these firms abnormal returns to be smaller.

This regression analysis was also done with the objective to understand the results previously found about the acquirers, looking at the results of the regressions we understand that for the crisis period the average of the CARs ended up being very small but nonetheless positive, this is consistent with the *Hypothesis 3* raised regarding the fact that during the crisis acquirers may be able to have better results from acquisitions resulting from being able to profit from a not so healthy situation of the target firms. For the non-crisis period, the average is negative as we also expected and as the current scholars have been concluding. For the crisis time, the results are considered to be significant given the very low p-values (Check annex 25 table A).

7 Conclusions

In this thesis, we take a look at the trends of the M&A market and at the Abnormal returns for acquirers and target firms. The current literature is non-consistent with regards to the gains for acquirers and targets originated from M&A deals; whilst it is consistent that target firms tend to obtain positive abnormal returns, for acquirers scholars argue about the quality of this analysis. Building on the previous literature we study this abnormal returns for the crisis period and for the non-crisis period, trying to find any difference. We compare the timeline 2006, 2009 and 2016-2017 with the period 2007-2008, finding some important differences both in the amount of the abnormal returns, its evolution in the time scope chosen and the differences between time scopes. We concluded that, as expected, the Cumulative Abnormal Returns for the target firms are positive and significant (very high t-stats) and the Cumulative Abnormal Returns for acquirers are negative, with very low absolute values, however, they generally present very low t-stats, making us question their significance. Going further in this analysis we ran some regressions to find the averages of the -15/15 CARs whilst controlling for the companies' specific effects. The major conclusion taken was the fact that the average for the acquirers during the crisis time was positive and with a very low p-value; supporting the possibility raised in this dissertation that during the crisis period acquirers might take advantage of the fragilized targets.

Lastly, not satisfied with the previous analysis we decided to question someone that had experience in M&A in order to understand what guides acquirers to do M&As and if the understanding of the success must be done with a long-term look. We decided then to ask the former CEO of a Portuguese bank- "Caixa Económica Montepio Geral", Mr. José Felix Morgado. The question asked was: "What is, in your opinion, the motives that lead acquiring firms to do M&A deals when researchers continue to argue that markets tend to penalize the share price (accordingly to the Event study analysis)?" The answer was:

"Companies decide to buy others for gaining market quota taking advantage of scale economies and synergies (dilution of fixed costs or the increase of the bargaining power with suppliers and clients); to improve the management process of the target, leading to efficiency gains (in case the target has a bad management capability); also to promote a geographic expansion utilizing the knowledge of the business or to diversify its holdings.

Normally acquirers are penalized because they don't have a robust business case that identifies the levers of value generation or because, even having a robust business case, they

communicate poorly to the market their intentions. Other cases are also the dilution of results in a first phase, which should be justified in the business case, the need for investment can decrease the Cash Flows and therefore decrease the capability to distribute dividends (causing a decrease in the Dividend Yield, an important factor for investors)"(Mr. José Felix Morgado- Former CEO of Caixa Económica Montepio Geral) . The opinion of Mr. Felix Morgado is therefore that if an acquirer does everything to signal to the market the objective of the M&A and the potential benefits the market will respond accordingly instead of penalizing the share price.

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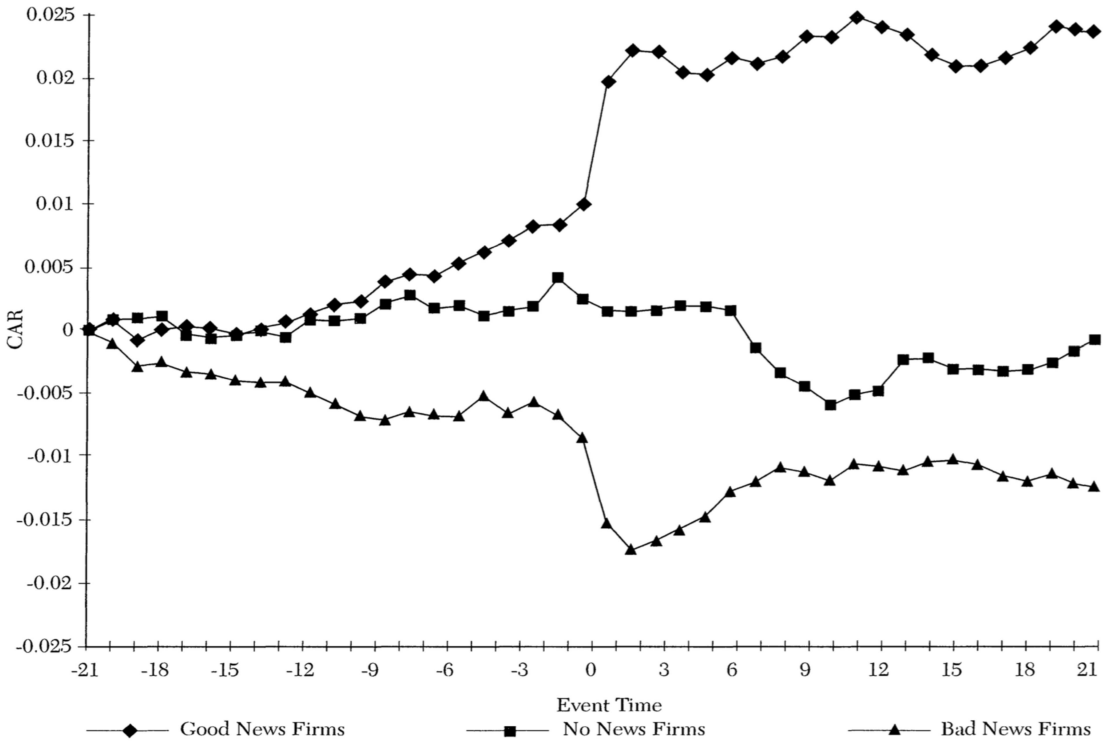
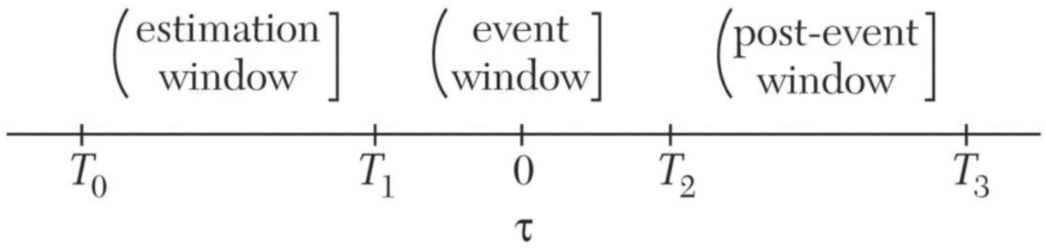
Annex 1: Cumulative abnormal returns for an earnings announcement using the market model.

In Annex 1, we present a general example of what is a possible reaction of a firm to Good, Bad or no news at all, as it can be observed for good news the CARs saw a serious increase, for bad news the CARs decreased substantially, whereas in the situation with no news no particular change was observed. *Picture from Mackinlay(1997).*



Annex 2: Timeline for the realization of an event study

In the realization of an event study 3 periods are generally considered, one before the event called the estimation window, then the event window and afterwards the post-event window. *Picture from Mackinlay(1997).*



Annex 3: Number of Acquirers and Targets per country (General Analysis)

In the general analysis, as already mentioned in the Methodology chapter, we used 14 acquiring countries as a filter for our collection of data, however we didn't filter the data accordingly to the country of the target firms, given this we can have an understanding of the diversity of countries where the 14 acquiring regions are making acquisitions.

	Acquirer		Target	
Country	N	%	N	%
United States	4472	57,20%	4009	51,28%
United Kingdom	928	11,87%	642	8,21%
France	561	7,18%	447	5,72%
Germany	454	5,81%	359	4,59%
Sweden	291	3,72%	225	2,88%
Switzerland	221	2,83%	114	1,46%
Italy	202	2,58%	149	1,91%
Spain	190	2,43%	115	1,47%
Norway	159	2,03%	173	2,21%
Belgium	103	1,32%	48	0,61%
Finland	82	1,05%	50	0,64%
Austria	75	0,96%	48	0,61%
Ireland-Rep	43	0,55%	22	0,28%
Portugal	37	0,47%	41	0,52%
Canada			341	4,36%
Australia			168	2,15%
India			85	1,09%
Netherlands			64	0,82%
Poland			58	0,74%
Russian Fed			45	0,58%
Brazil			38	0,49%
Japan			36	0,46%
South Africa			34	0,43%
South Korea			33	0,42%
Israel			31	0,40%
China			30	0,38%
Denmark			25	0,32%
Hong Kong			22	0,28%
Bermuda			20	0,26%
Taiwan			20	0,26%
Singapore			19	0,24%
Indonesia			18	0,23%
Turkey			17	0,22%
Mexico			16	0,20%
Chile			15	0,19%
Luxembourg			15	0,19%
Czech Republic			13	0,17%
Greece			13	0,17%
New Zealand			11	0,14%
Romania			11	0,14%
Peru			11	0,14%
Colombia			11	0,14%
Hungary			10	0,13%

(Continues in the next page)

Argentina				10	0,13%
Estonia				9	0,12%
Malaysia				9	0,12%
Egypt				8	0,10%
Lithuania				8	0,10%
Jersey				7	0,09%
Thailand				7	0,09%
Morocco				7	0,09%
Guernsey				6	0,08%
Croatia				5	0,06%
Ukraine				5	0,06%
Cyprus				5	0,06%
Jordan				4	0,05%
Slovenia				4	0,05%
Vietnam				3	0,04%
Serbia				3	0,04%
Malta				3	0,04%
Ecuador				3	0,04%
Latvia				3	0,04%
Montenegro				2	0,03%
Nigeria				2	0,03%
Bulgaria				2	0,03%
Venezuela				2	0,03%
Utd Arab Em				2	0,03%
Kazakhstan				2	0,03%
Bosnia				2	0,03%
Slovak Rep				2	0,03%
Iceland				2	0,03%
Serbia & Mont.				2	0,03%
British Virgin				2	0,03%
Reunion				1	0,01%
Cameroon				1	0,01%
Sri Lanka				1	0,01%
Panama				1	0,01%
Antigua				1	0,01%
Jamaica				1	0,01%
Falkland Is				1	0,01%
Isle of Man				1	0,01%
Zimbabwe				1	0,01%
Bolivia				1	0,01%
Faroe Islands				1	0,01%
Georgia				1	0,01%
Neth Antilles				1	0,01%
Philippines				1	0,01%
Kenya				1	0,01%
Total	7818	100%	0,00	7818	100,00%

Annex 4: Number of Deals per year

Year	Nº of Deals	% growth
2000	1014	-
2001	738	-27,2%
2002	496	-32,8%
2003	442	-10,9%
2004	443	0,2%
2005	502	13,3%
2006	508	1,2%
2007	607	19,5%
2008	487	-19,8%
2009	364	-25,3%
2010	338	-7,1%
2011	291	-13,9%
2012	248	-14,8%
2013	265	6,9%
2014	251	-5,3%
2015	293	16,7%
2016	269	-8,2%
2017	262	-2,6%

Table A

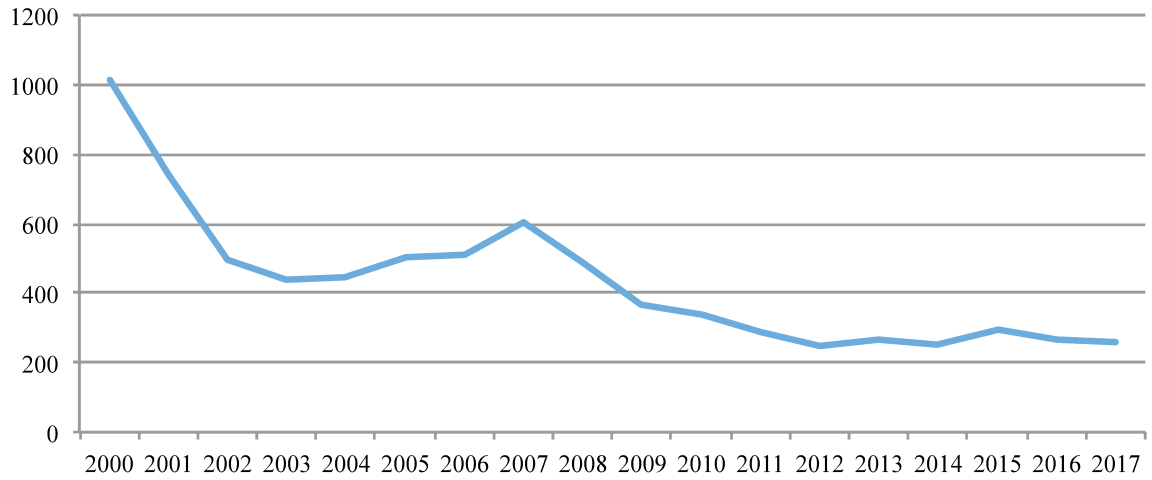


Figure A: Evolution of the number of deals

Annex 5: Number of Acquirers per year for the United States and Europe

	United States	% growth	Europe	% growth	Total
2000	570	-	444	-	1014
2001	442	-22,5%	296	-33,3%	738
2002	283	-36,0%	213	-28,0%	496
2003	267	-5,7%	175	-17,8%	442
2004	289	8,2%	154	-12,0%	443
2005	288	-0,3%	214	39,0%	502
2006	266	-7,6%	242	13,1%	508
2007	316	18,8%	291	20,2%	607
2008	232	-26,6%	255	-12,4%	487
2009	179	-22,8%	185	-27,5%	364
2010	181	1,1%	157	-15,1%	338
2011	141	-22,1%	150	-4,5%	291
2012	141	0,0%	107	-28,7%	248
2013	160	13,5%	105	-1,9%	265
2014	156	-2,5%	95	-9,5%	251
2015	196	25,6%	97	2,1%	293
2016	185	-5,6%	84	-13,4%	269
2017	180	-2,7%	82	-2,4%	262
Total	**4472**		**3346**		

Table A

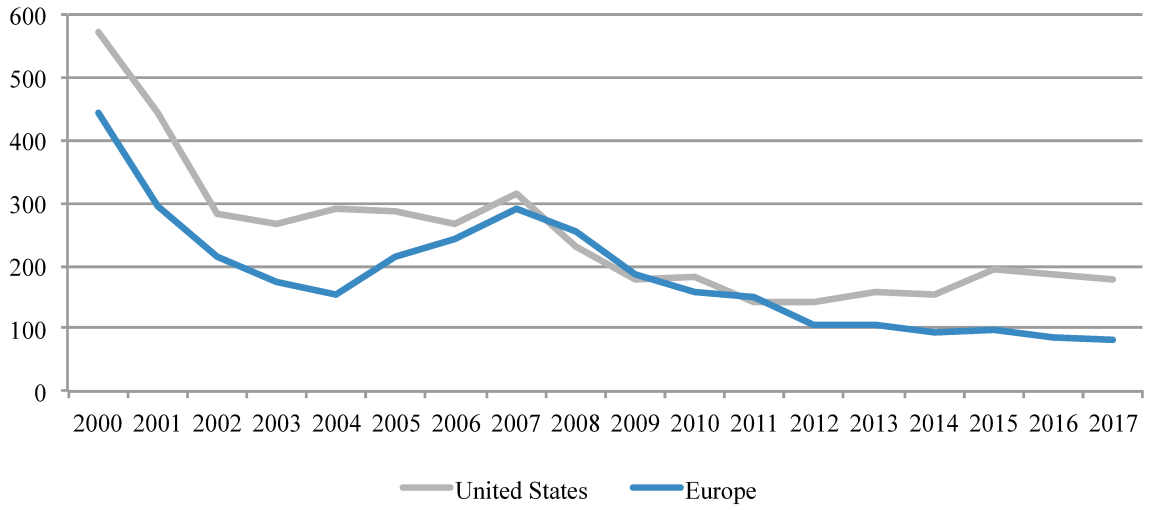


Figure A

Annex 6: Number of Targets per year for the United States and the Rest of the world

	United States	% growth	Rest of the World	% growth	Total
2000	564	-	450	-	1014
2001	427	-24,3%	311	-30,9%	738
2002	249	-41,7%	247	-20,6%	496
2003	235	-5,6%	207	-16,2%	442
2004	244	3,8%	199	-3,9%	443
2005	251	2,9%	251	26,1%	502
2006	239	-4,8%	269	7,2%	508
2007	286	19,7%	321	19,3%	607
2008	204	-28,7%	283	-11,8%	487
2009	147	-27,9%	217	-23,3%	364
2010	137	-6,8%	201	-7,4%	338
2011	115	-16,1%	176	-12,4%	291
2012	118	2,6%	130	-26,1%	248
2013	141	19,5%	124	-4,6%	265
2014	145	2,8%	106	-14,5%	251
2015	180	24,1%	113	6,6%	293
2016	165	-8,3%	104	-8,0%	269
2017	162	-1,8%	100	-3,8%	262
Total	**4009**		**3809**		

Table A

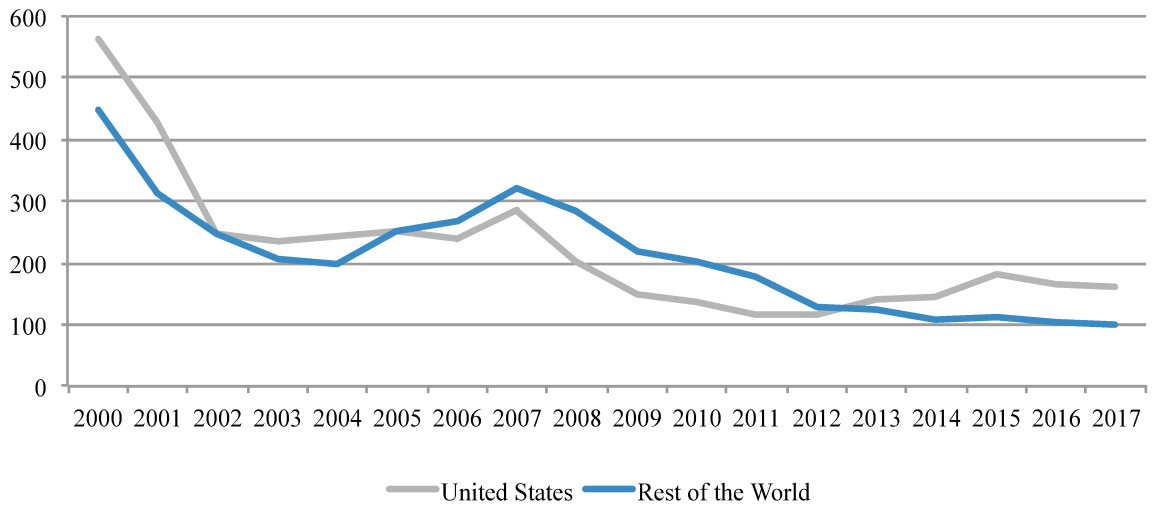


Figure A

Annex 7: Total value of transactions per year

	Value of Transaction ($mil)		%growth
2000	$	1 724 667,52	-
2001	$	825 695,40	-52,1%
2002	$	282 091,63	-65,8%
2003	$	263 801,28	-6,5%
2004	$	405 143,37	53,6%
2005	$	504 758,51	24,6%
2006	$	690 245,49	36,7%
2007	$	668 061,41	-3,2%
2008	$	437 935,76	-34,4%
2009	$	384 093,04	-12,3%
2010	$	296 872,91	-22,7%
2011	$	283 190,89	-4,6%
2012	$	284 735,07	0,5%
2013	$	245 627,19	-13,7%
2014	$	327 785,97	33,4%
2015	$	666 081,18	103,2%
2016	$	703 689,29	5,6%
2017	$	491 089,65	-30,2%
Total	**$**	**9 485 565,55**	

Table A

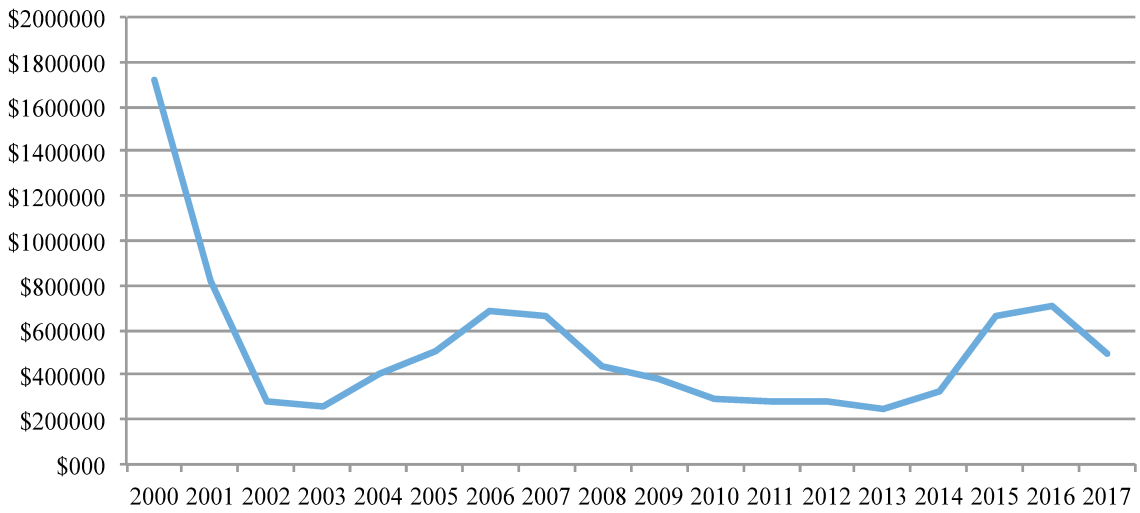


Figure A

Annex 8: Total value of transactions per year for the United States and Europe

acquirer country ($mil)	United States	% growth	Europe	% growth	Total
2000	$ 887 109,93	-	$ 837 557,59	-	$ 1 724 667,52
2001	$ 619 490,45	-30,2%	$ 206 204,95	-75,4%	$ 825 695,40
2002	$ 186 830,23	-69,8%	$ 95 261,40	-53,8%	$ 282 091,63
2003	$ 158 298,82	-15,3%	$ 105 502,47	10,8%	$ 263 801,28
2004	$ 282 367,74	78,4%	$ 122 775,63	16,4%	$ 405 143,37
2005	$ 344 881,85	22,1%	$ 159 876,66	30,2%	$ 504 758,51
2006	$ 447 091,17	29,6%	$ 243 154,33	52,1%	$ 690 245,49
2007	$ 316 656,86	-29,2%	$ 351 404,55	44,5%	$ 668 061,41
2008	$ 207 313,37	-34,5%	$ 230 622,40	-34,4%	$ 437 935,76
2009	$ 256 167,32	23,6%	$ 127 925,73	-44,5%	$ 384 093,04
2010	$ 224 682,20	-12,3%	$ 72 190,71	-43,6%	$ 296 872,91
2011	$ 162 611,40	-27,6%	$ 120 579,50	67,0%	$ 283 190,89
2012	$ 244 622,98	50,4%	$ 40 112,09	-66,7%	$ 284 735,07
2013	$ 180 487,48	-26,2%	$ 65 139,71	62,4%	$ 245 627,19
2014	$ 249 166,58	38,1%	$ 78 619,39	20,7%	$ 327 785,97
2015	$ 531 763,91	113,4%	$ 134 317,27	70,8%	$ 666 081,18
2016	$ 441 032,70	-17,1%	$ 262 656,60	95,5%	$ 703 689,29
2017	$ 372 798,19	-15,5%	$ 118 291,46	-55,0%	$ 491 089,65
Total	**$ 6 113 373,13**		**$ 3 372 192,42**		**$ 9 485 565,55**

Table A

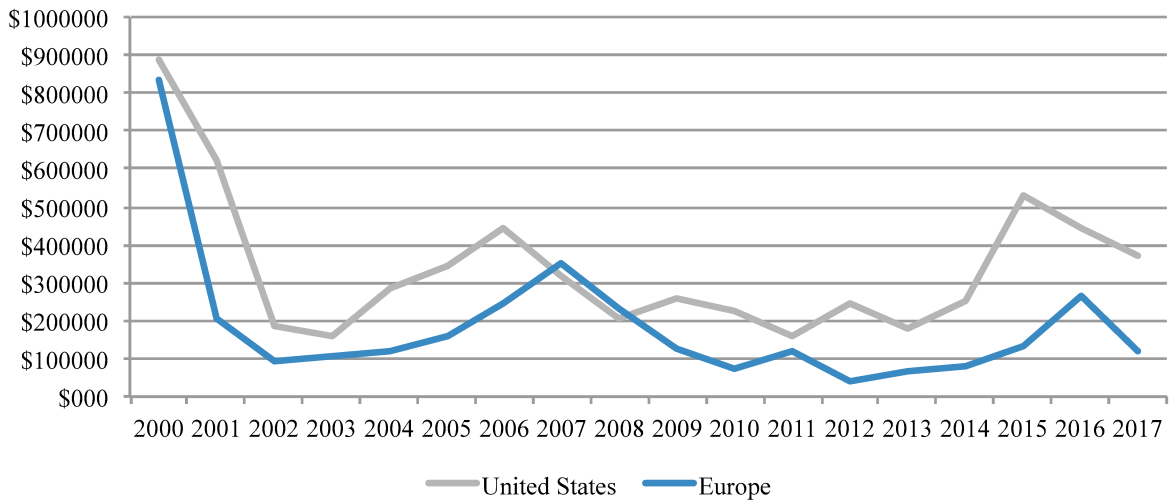


Figure A

Annex 9: Average value per deal (Entire Sample)

		Total	% change
2000	$	1 700,86	-
2001	$	1 118,83	-34%
2002	$	568,73	-49%
2003	$	596,84	5%
2004	$	914,54	53%
2005	$	1 005,50	10%
2006	$	1 358,75	35%
2007	$	1 100,60	-19%
2008	$	899,25	-18%
2009	$	1 055,20	17%
2010	$	878,32	-17%
2011	$	973,16	11%
2012	$	1 148,13	18%
2013	$	926,90	-19%
2014	$	1 305,92	41%
2015	$	2 273,31	74%
2016	$	2 615,95	15%
2017	$	1 874,39	-28%

Table A

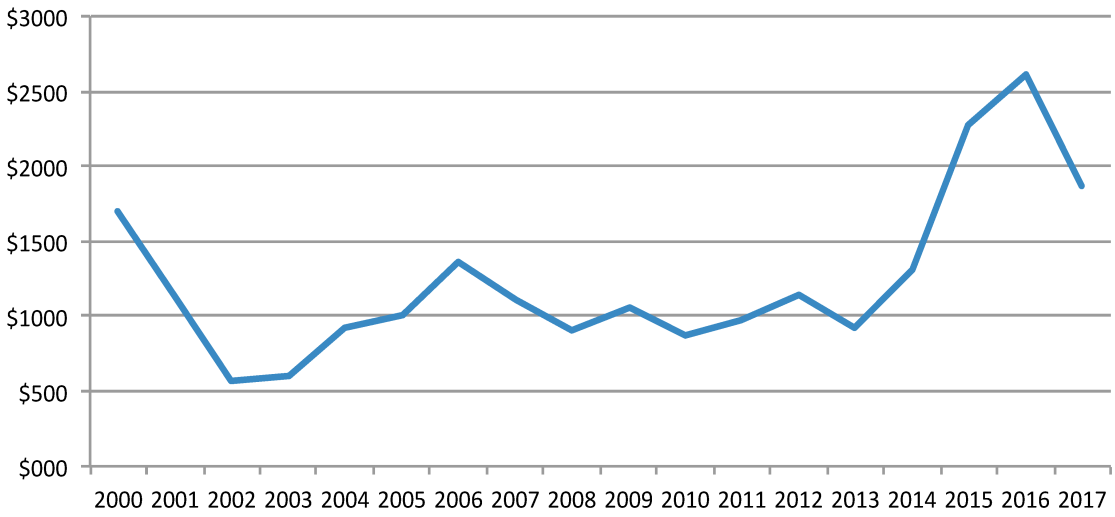


Figure A

Annex 10: Average value per deal for the United States and Europe

	United States	% change	Europe	% change
2000	$ 1 556,33	-	1886	-
2001	$ 1 401,56	-10%	697	-63%
2002	$ 660,18	-53%	447	-36%
2003	$ 592,88	-10%	603	35%
2004	$ 977,05	65%	797	32%
2005	$ 1 197,51	23%	747	-6%
2006	$ 1 680,79	40%	1005	34%
2007	$ 1 002,08	-40%	1208	20%
2008	$ 893,59	-11%	904	-25%
2009	$ 1 431,10	60%	691	-24%
2010	$ 1 241,34	-13%	460	-34%
2011	$ 1 153,27	-7%	804	75%
2012	$ 1 734,91	50%	375	-53%
2013	$ 1 128,05	-35%	620	65%
2014	$ 1 597,22	42%	828	33%
2015	$ 2 713,08	70%	1385	67%
2016	$ 2 383,96	-12%	3127	126%

Table A

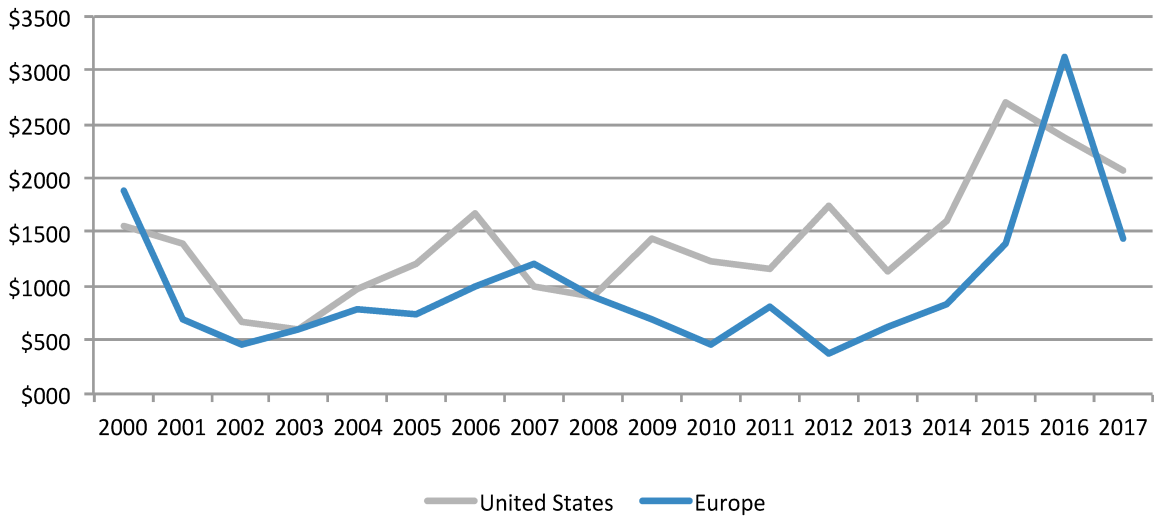


Figure A

Annex 11: Number of acquirers per Industry

	Agriculture Forestry and Fishing	%	Mining	%	Construction	%	Manufacturing	%	Transportation, Communications, Electric, Gas and Sanitary service	%	Wholesale Trade	%	Retail Trade	%	Finance Insurance and Real Estate	%	Services	%	Total
2000	0	-	32	-	27	-	322	-	133	-	10	-	39	-	278	-	173	-	1014
2001	2	-	37	16%	10	-63%	226	-30%	73	-45%	12	20%	23	-41%	218	-22%	137	-21%	738
2002	1	-50%	20	-46%	13	30%	136	-40%	52	-29%	5	-58%	17	-26%	169	-22%	83	-39%	496
2003	0	-100%	22	10%	4	-69%	126	-7%	35	-33%	6	20%	13	-24%	149	-12%	87	5%	442
2004	0	-	25	14%	4	0%	122	-3%	32	-9%	4	-33%	11	-15%	166	11%	79	-9%	443
2005	3	-	29	16%	0	-100%	161	32%	45	41%	7	75%	10	-9%	153	-8%	94	19%	502
2006	2	-33%	38	31%	12	-	149	-7%	46	2%	4	-43%	7	-30%	167	9%	83	-12%	508
2007	1	-50%	54	42%	5	-58%	173	16%	44	-4%	7	75%	21	200%	210	26%	92	11%	607
2008	0	-100%	40	-26%	3	-40%	136	-21%	33	-25%	2	-71%	14	-33%	186	-11%	73	-21%	487
2009	1	-	40	0%	8	167%	97	-29%	38	15%	0	-100%	5	-64%	124	-33%	51	-30%	364
2010	2	100%	36	-10%	4	-50%	109	12%	22	-42%	4	-	11	120%	98	-21%	52	2%	338
2011	1	-50%	33	-8%	4	0%	87	-20%	27	23%	3	-25%	10	-9%	91	-7%	35	-33%	291
2012	0	-100%	20	-39%	1	-75%	85	-2%	23	-15%	8	167%	7	-30%	69	-24%	35	0%	248
2013	1	-	21	5%	4	300%	66	-22%	23	0%	3	-63%	2	-71%	104	51%	41	17%	265
2014	0	-100%	11	-48%	2	-50%	68	3%	22	-4%	5	67%	7	250%	97	-7%	39	-5%	251
2015	1	-	17	55%	1	-50%	96	41%	27	23%	3	-40%	8	14%	105	8%	35	-10%	293
2016	1	0%	16	-6%	2	100%	95	-1%	17	-37%	0	-100%	4	-50%	99	-6%	35	0%	269
2017	0	-100%	8	-50%	5	150%	71	-25%	19	12%	0	-	7	75%	120	21%	32	-9%	262
Total	**16**		**499**		**109**		**2325**		**711**		**83**		**216**		**2603**		**1256**		**7818**

Table A

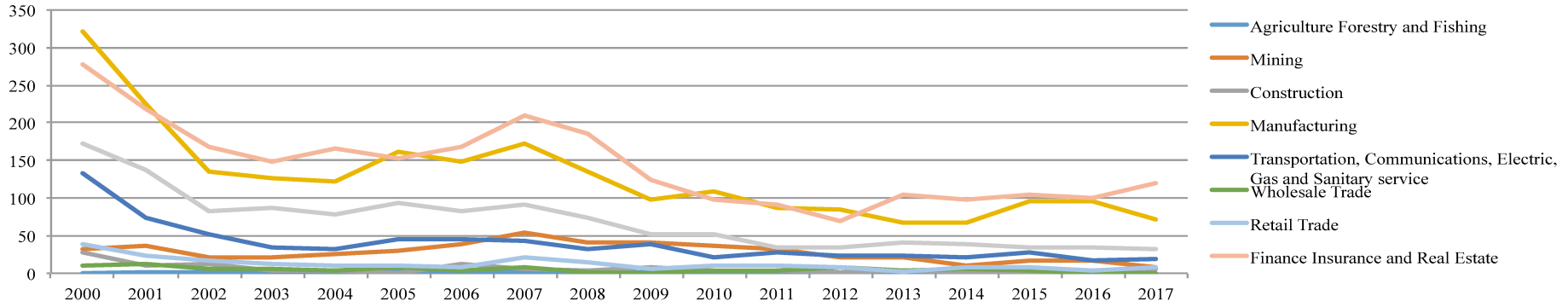


Figure A

Annex 12: Number of targets per Industry

	Agriculture Forestry and Fishing	%	Mining	%	Construction	%	Manufacturing	%	Transportation, Communications, Electric, Gas and Sanitary service	%	Wholesale Trade	%	Retail Trade	%	Finance Insurance and Real Estate	%	Services	%	Total
2000	2	-	30	-	25	-	340	-	108	-	21	-	33	-	252	-	203	-	1014
2001	2	0%	37	23%	10	-60%	226	-34%	73	-32%	12	-43%	23	-30%	218	-13%	137	-33%	738
2002	1	-50%	22	-41%	15	50%	139	-38%	51	-30%	5	-58%	20	-13%	135	-38%	105	-23%	496
2003	1	0%	21	-5%	4	-73%	132	-5%	30	-41%	8	60%	14	-30%	121	-10%	111	6%	442
2004	0	-100%	25	19%	5	25%	108	-18%	35	17%	6	-25%	10	-29%	151	25%	103	-7%	443
2005	4	-	33	32%	6	20%	154	43%	44	26%	12	100%	11	10%	128	-15%	110	7%	502
2006	3	-25%	40	21%	14	133%	146	-5%	54	23%	4	-67%	12	9%	141	10%	94	-15%	508
2007	2	-33%	58	45%	7	-50%	188	29%	47	-13%	6	50%	13	8%	156	11%	130	38%	607
2008	2	0%	40	-31%	3	-57%	141	-25%	45	-4%	10	67%	13	0%	125	-20%	108	-17%	487
2009	2	0%	52	30%	4	33%	96	-32%	45	0%	3	-70%	9	-31%	85	-32%	68	-37%	364
2010	6	200%	44	-15%	0	-100%	107	11%	27	-40%	6	100%	9	0%	70	-18%	69	1%	338
2011	0	-100%	46	5%	7	-	81	-24%	23	-15%	5	-17%	6	-33%	64	-9%	59	-14%	291
2012	2	-	23	-50%	1	-86%	89	10%	17	-26%	4	-20%	6	0%	61	-5%	45	-24%	248
2013	3	50%	24	4%	3	200%	72	-19%	22	29%	6	50%	1	-83%	88	44%	46	2%	265
2014	0	-100%	14	-42%	3	0%	75	4%	16	-27%	2	-67%	11	1000%	87	-1%	43	-7%	251
2015	0	-	26	86%	1	-67%	91	21%	27	69%	2	0%	10	-9%	86	-1%	50	16%	293
2016	1	-	16	-38%	4	300%	92	1%	21	-22%	7	250%	7	-30%	84	-2%	37	-26%	269
2017	0	-100%	11	-31%	3	-25%	74	-20%	19	-10%	4	-43%	5	-29%	108	29%	38	3%	262
Total	**31**		**562**		**115**		**2351**		**704**		**123**		**213**		**2160**		**1556**		**7818**

Table A

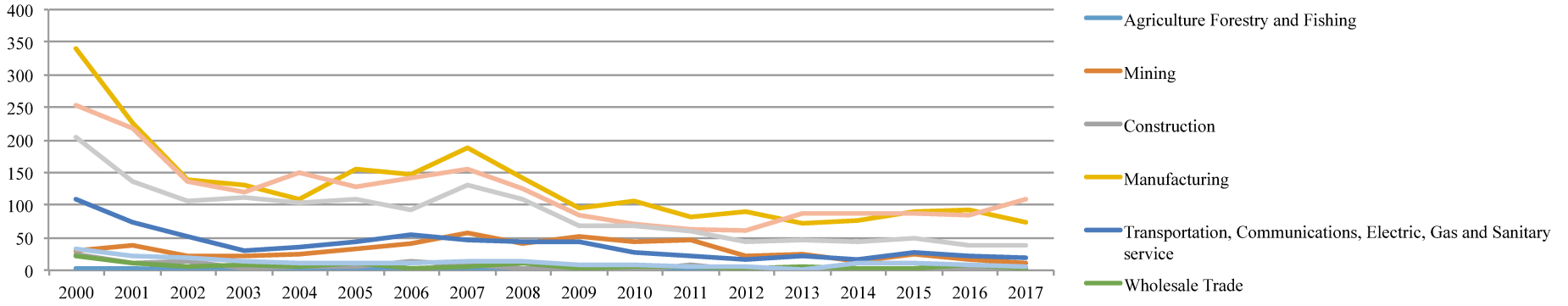


Figure A

Annex 13: Number of acquirers and targets per industry and per country

	Agriculture Forestry and Fishing	Mining	Construction	Manufacturing	Transportation, Communications, Electric, Gas and Sanitary service	Wholesale Trade	Retail Trade	Finance Insurance and Real Estate	Services	Total
United States	5	253	30	1372	388	55	115	1499	755	4472
United Kingdom	4	149	20	204	65	11	50	251	174	928
France	1	21	12	160	61	6	29	160	111	561
Germany	0	1	5	141	52	1	3	196	55	454
Sweden	2	7	15	69	24	0	6	114	54	291
Switzerland	0	6	3	109	7	4	1	71	20	221
Italy	0	10	0	60	28	1	4	84	15	202
Spain	0	0	19	28	41	0	2	93	7	190
Norway	3	39	3	39	23	3	0	24	25	159
Belgium	1	2	0	33	2	1	2	52	10	103
Finland	0	0	0	50	12	0	1	7	12	82
Austria	0	4	1	29	2	0	0	28	11	75
Ireland-Rep	0	7	0	23	0	1	0	6	6	43
Portugal	0	0	1	7	6	0	3	19	1	37
Total	**16**	**499**	**109**	**2324**	**711**	**83**	**216**	**2604**	**1256**	**7818**

Table A: Number of Acquirers per Industry per country

	Agriculture Forestry and Fishing	Mining	Construction	Manufacturing	Transportation, Communications, Electric, Gas and Sanitary service	Wholesale Trade	Retail Trade	Finance Insurance and Real Estate	Services	Public administration	Total
United States	6	168	28	1182	310	54	104	1312	845	0	4009
United Kingdom	4	51	24	144	60	14	37	132	176	0	642
France	1	10	10	118	30	14	19	110	132	3	447
Germany	1	0	11	117	38	3	6	90	93	0	359
Canada	1	142	4	90	17	4	6	16	61	0	341
Sweden	1	7	5	69	16	7	10	48	62	0	225
Norway	9	35	1	53	20	5	2	14	34	0	173
Australia	0	80	3	28	7	5	3	17	25	0	168
Italy	0	0	0	33	26	1	0	70	19	0	149
Spain	0	1	4	24	27	3	3	40	13	0	115
Switzerland	0	1	2	52	11	0	2	31	15	0	114
India	0	5	3	53	4	2	1	9	8	0	85
Netherlands	0	2	2	21	13	2	1	12	11	0	64
Poland	1	0	7	20	3	1	0	21	5	0	58
Finland	0	0	1	20	7	4	0	10	8	0	50
Austria	0	0	0	17	9	0	0	13	9	0	48
Belgium	1	1	3	15	4	0	0	15	9	0	48
Russian Fed	0	7	0	13	15	1	0	9	0	0	45
Portugal	0	0	4	11	6	0	2	16	2	0	41
Brazil	0	3	0	13	10	1	3	6	2	0	38
Japan	0	0	0	20	2	3	5	4	2	0	36
South Africa	0	15	0	7	1	3	1	1	6	0	34
South Korea	0	0	0	21	1	0	0	7	4	0	33
Israel	1	0	0	16	2	0	0	0	12	0	31
China	0	2	0	15	0	1	1	3	8	0	30
Denmark	0	0	1	8	3	0	0	6	7	0	25
Hong Kong	0	1	0	9	1	1	0	6	4	0	22
Ireland-Rep	0	2	0	7	4	1	0	6	2	0	22
Bermuda	0	6	0	0	7	0	0	7	0	0	20
Taiwan	0	0	0	12	0	0	0	5	3	0	20
Singapore	0	2	1	8	2	1	0	3	2	0	19
Indonesia	1	6	0	8	0	1	0	2	0	0	18
Turkey	0	0	0	9	1	0	2	5	0	0	17
Mexico	0	1	0	3	0	1	0	11	0	0	16
Chile	0	1	0	3	5	0	2	4	0	0	15
Luxembourg	0	2	0	1	3	0	0	7	2	0	15
Czech Republic	0	0	2	2	4	0	0	4	1	0	13
Greece	0	0	0	6	4	0	0	2	1	0	13
Colombia	0	0	0	4	1	0	2	3	1	0	11
New Zealand	1	0	0	5	1	1	0	0	3	0	11
Peru	0	0	0	6	2	0	0	3	0	0	11
Romania	0	2	0	7	0	1	0	0	1	0	11

Argentina	0	1	0	4	3	0	0	2	0	0	10
Hungary	0	2	0	3	1	0	1	0	3	0	10
Estonia	0	0	2	3	0	0	0	4	0	0	9
Malaysia	0	0	0	0	5	0	0	2	2	0	9
Egypt	0	0	0	8	0	0	0	0	0	0	8
Lithuania	0	0	0	4	2	0	0	2	0	0	8
Jersey	0	2	0	0	0	0	0	3	2	0	7
Morocco	0	0	0	3	0	0	0	4	0	0	7
Thailand	0	1	0	5	0	0	0	1	0	0	7
Guernsey	0	0	0	0	1	0	0	5	0	0	6
Croatia	0	0	0	3	0	0	0	2	0	0	5
Cyprus	0	3	0	0	1	0	0	0	1	0	5
Ukraine	1	0	0	0	0	0	0	4	0	0	5
Jordan	0	0	0	2	0	0	1	1	0	0	4
Slovenia	0	0	0	2	0	0	0	2	0	0	4
Ecuador	0	0	0	3	0	0	0	0	0	0	3
Latvia	0	0	0	2	0	0	0	1	0	0	3
Malta	0	0	0	0	0	0	0	2	1	0	3
Serbia	0	0	0	1	0	0	1	0	1	0	3
Vietnam	0	0	0	1	0	0	0	2	0	0	3
Bosnia	0	0	0	1	0	0	0	0	1	0	2
British Virgin	0	1	0	0	0	0	0	0	1	0	2
Bulgaria	0	0	0	0	0	0	0	2	0	0	2
Iceland	0	0	0	1	0	0	0	1	0	0	2
Kazakhstan	0	0	0	0	0	0	0	2	0	0	2
Montenegro	0	0	0	0	2	0	0	0	0	0	2
Nigeria	0	0	0	2	0	0	0	0	0	0	2
Serbia & Mont.	0	0	0	2	0	0	0	0	0	0	2
Slovak Rep	0	0	0	1	0	0	0	1	0	0	2
Utd Arab Em	0	0	0	0	1	0	0	1	0	0	2
Venezuela	0	0	0	0	1	0	0	1	0	0	2
Antigua	0	0	0	0	1	0	0	0	0	0	1
Bolivia	0	0	0	0	1	0	0	0	0	0	1
Cameroon	0	0	0	0	1	0	0	0	0	0	1
Falkland Is	0	1	0	0	0	0	0	0	0	0	1
Faroe Islands	0	0	0	1	0	0	0	0	0	0	1
Georgia	0	0	0	0	0	0	0	1	0	0	1
Isle of Man	0	0	0	0	0	0	0	1	0	0	1
Jamaica	0	0	0	1	0	0	0	0	0	0	1
Kenya	0	0	0	0	0	0	0	0	1	0	1
Neth Antilles	0	0	0	1	0	0	0	0	0	0	1
Panama	0	0	0	0	0	0	0	1	0	0	1
Philippines	0	0	0	0	0	0	0	1	0	0	1
Reunion	1	0	0	0	0	0	0	0	0	0	1
Sri Lanka	0	1	0	0	0	0	0	0	0	0	1
Zimbabwe	0	0	0	0	0	0	0	0	1	0	1
Total	**30**	**565**	**118**	**2324**	**697**	**135**	**215**	**2129**	**1602**	**3**	**7818**

Table B: Number of targets per industry, per country

Annex 14: Total Conglomerate and Non-Conglomerate deals

	Agriculture Forestry and Fishing	Mining	Construction	Manufacturing	Transportation, Communications, Electric, Gas and Sanitary service	Wholesale Trade	Retail Trade	Finance Insurance and Real Estate	Services	Total
conglomerate M&A	8	70	41	497	237	54	74	614	313	7818
% of total	50%	14%	38%	21%	33%	65%	34%	24%	25%	100%
Non-Conglomerate M&A(same industry)	8	429	68	1828	474	29	142	1989	943	0
% of total	**50%**	**86%**	**62%**	**79%**	**67%**	**35%**	**66%**	**76%**	**75%**	**0%**
Total	**16**	**499**	**109**	**2325**	**711**	**83**	**216**	**2603**	**1256**	**7818**

Table A

	Agriculture Forestry and Fishing	Mining	Construction	Manufacturing	Transportation, Communications, Electric, Gas and Sanitary service	Wholesale Trade	Retail Trade	Finance Insurance and Real Estate	Services	Total
2000										**0**
Conglomerate M&A	0	11	8	59	47	9	14	42	52	**242**
Non-Conglomerate M&A(same industry)	0	21	19	263	86	1	25	236	121	**772**
% of total	-	66%	70%	82%	65%	10%	64%	85%	70%	**76%**
Total deals	0	32	27	322	133	10	39	278	173	**1014**
2001										**0**
Conglomerate M&A	2	6	2	59	30	7	6	43	27	**182**
Non-Conglomerate M&A(same industry)	0	31	8	167	43	5	17	175	110	**556**
% of total	0%	84%	80%	74%	59%	42%	74%	80%	80%	**75%**
Total deals	2	37	10	226	73	12	23	218	137	**738**
2002										**0**
Conglomerate M&A	0	2	3	24	17	4	2	37	10	**99**
Non-Conglomerate M&A(same industry)	1	18	10	112	35	1	15	132	73	**397**
% of total	100%	90%	77%	82%	67%	20%	88%	78%	88%	**80%**
Total deals	1	20	13	136	52	5	17	169	83	**496**
2003										**0**
Conglomerate M&A	0	5	1	25	13	4	4	37	19	**108**
Non-Conglomerate M&A(same industry)	0	17	3	101	22	2	9	112	68	**334**
% of total	-	77%	75%	80%	63%	33%	69%	75%	78%	**76%**
Total deals	0	22	4	126	35	6	13	149	87	**442**

2004											**0**
Conglomerate M&A		0	3	0	27	11	1	4	25	17	**88**
Non-Conglomerate M&A(same industry)		0	22	4	95	21	3	7	141	62	**355**
% of total	-		88%	100%	78%	66%	75%	64%	85%	78%	**80%**
Total deals		0	25	4	122	32	4	11	166	79	**443**
2005											**0**
Conglomerate M&A		1	1	0	36	16	5	4	35	21	**119**
Non-Conglomerate M&A(same industry)		2	28	0	125	29	2	6	118	73	**383**
% of total		67%	97%	-	78%	64%	29%	60%	77%	78%	**76%**
Total deals		3	29	0	161	45	7	10	153	94	**502**
2006											**0**
Conglomerate M&A		1	5	5	39	12	3	1	38	26	**130**
Non-Conglomerate M&A(same industry)		1	33	7	110	34	1	6	129	57	**378**
% of total		50%	87%	58%	74%	74%	25%	86%	77%	69%	**74%**
Total deals		2	38	12	149	46	4	7	167	83	**508**
2007											**0**
Conglomerate M&A		0	8	2	35	17	4	10	66	20	**162**
Non-Conglomerate M&A(same industry)		1	46	3	138	27	3	11	144	72	**445**
% of total		100%	85%	60%	80%	61%	43%	52%	69%	78%	**73%**
Total deals		1	54	5	173	44	7	21	210	92	**607**
2008											**0**
Conglomerate M&A		0	9	2	35	10	2	9	70	18	**155**
Non-Conglomerate M&A(same industry)		0	31	1	101	23	0	5	116	55	**332**
% of total	-		78%	33%	74%	70%	0%	36%	62%	75%	**68%**
Total deals		0	40	3	136	33	2	14	186	73	**487**
2009											**0**
Conglomerate M&A		0	3	5	22	10	0	2	47	19	**108**
Non-Conglomerate M&A(same industry)		1	37	3	75	28	0	3	77	32	**256**
% of total		100%	93%	38%	77%	74%	-	60%	62%	63%	**70%**
Total deals		1	40	8	97	38	0	5	124	51	**364**
2010											**0**
Conglomerate M&A		1	7	4	26	6	1	6	36	12	**99**
Non-Conglomerate M&A(same industry)		1	29	0	83	16	3	5	62	40	**239**
% of total		50%	81%	0%	76%	73%	75%	45%	63%	77%	**71%**
Total deals		2	36	4	109	22	4	11	98	52	**338**
2011											**0**
Conglomerate M&A		1	2	0	24	10	1	5	31	6	**80**
Non-Conglomerate M&A(same industry)		0	31	4	63	17	2	5	60	29	**211**
% of total		0%	94%	100%	72%	63%	67%	50%	66%	83%	**73%**
Total deals		1	33	4	87	27	3	10	91	35	**291**
2012											**0**
Conglomerate M&A		0	2	1	20	8	6	1	17	18	**73**
Non-Conglomerate M&A(same industry)		0	18	0	65	15	2	6	52	17	**175**
% of total	-		90%	0%	76%	65%	25%	86%	75%	49%	**71%**
Total deals		0	20	1	85	23	8	7	69	35	**248**

2013											**0**
Conglomerate M&A		1	0	3	13	7	1	1	24	14	**64**
Non-Conglomerate M&A(same industry)		0	21	1	53	16	2	1	80	27	**201**
% of total		0%	100%	25%	80%	70%	67%	50%	77%	66%	**76%**
Total deals		1	21	4	66	23	3	2	104	41	**265**
2014											**0**
Conglomerate M&A		0	2	2	6	9	5	1	13	9	**47**
Non-Conglomerate M&A(same industry)		0	9	0	62	13	0	6	84	30	**204**
% of total	-		82%	0%	91%	59%	0%	86%	87%	77%	**81%**
Total deals		0	11	2	68	22	5	7	97	39	**251**
2015											**0**
Conglomerate M&A		1	0	0	18	7	1	0	21	6	**54**
Non-Conglomerate M&A(same industry)		0	17	1	78	20	2	8	84	29	**239**
% of total		0%	100%	100%	81%	74%	67%	100%	80%	83%	**82%**
Total deals		1	17	1	96	27	3	8	105	35	**293**
2016											**0**
Conglomerate M&A		0	3	0	16	2	0	1	17	12	**51**
Non-Conglomerate M&A(same industry)		1	13	2	79	15	0	3	82	23	**218**
% of total		100%	81%	100%	83%	88%	-	75%	83%	66%	**81%**
Total deals		1	16	2	95	17	0	4	99	35	**269**
2017											**0**
Conglomerate M&A		0	1	3	12	5	0	3	15	7	**46**
Non-Conglomerate M&A(same industry)		0	7	2	59	14	0	4	105	25	**216**
% of total	-		88%	40%	83%	74%	-	57%	88%	78%	**82%**
Total deals		0	8	5	71	19	0	7	120	32	**262**
TOTAL		**16**	**499**	**109**	**2325**	**711**	**83**	**216**	**2603**	**1256**	**7818**

Table B: Total conglomerate and Non-conglomerate deals per year

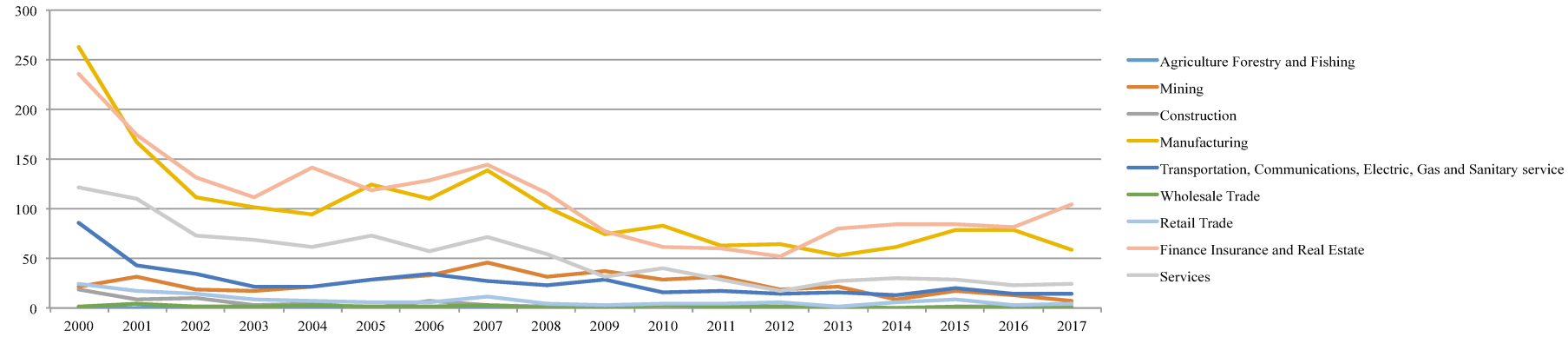


Figure A: Evolution of Non-conglomerate deals

Annex 15: Evolution of the number of deals in the financial industry

	United States	%	Europe	%	Total
2005	90	-	77		167
2006	101	12%	52	-32%	153
2007	118	17%	92	77%	210
2008	78	-34%	108	17%	186
2009	50	-36%	74	-31%	124
2010	34	-32%	64	-14%	98
2011	45	32%	46	-28%	91
2012	36	-20%	33	-28%	69
2013	61	69%	43	30%	104
2014	64	5%	33	-23%	97
2015	73	14%	32	-3%	105
2016	77	5%	22	-31%	99
2017	87	13%	33	50%	120
Total	914		709		1623

Table A

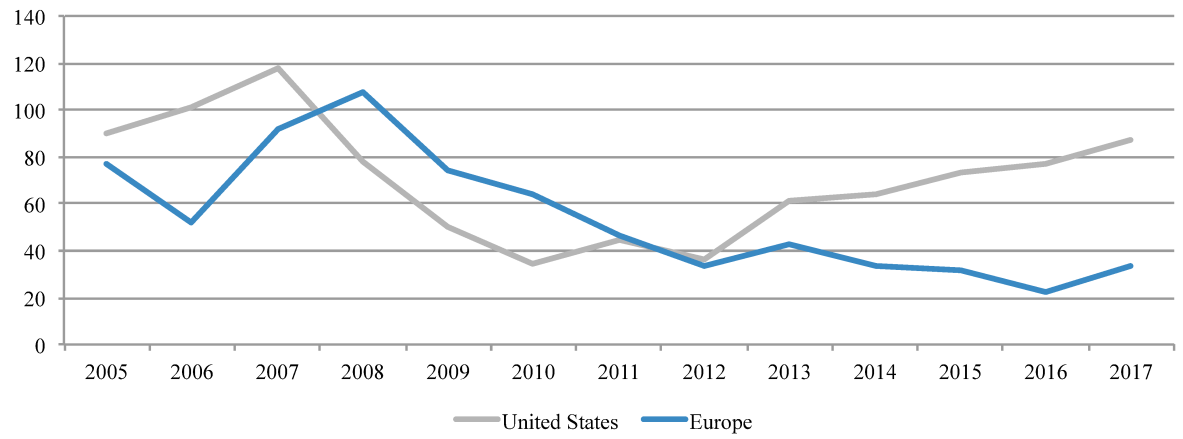


Figure A

Annex 16: Results of the Target's CARs analysis for the different time scopes- Targets 2006-2009

2006 e 2009	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	9,77%
ste error	5,80%
Test: mean=0 (two tails)	
t stat	1,68586

2007 e 2008	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	4,78%
ste error	2,64%
Test: mean=0 (two tails)	
t stat	1,80979

Total	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	7,00%
ste error	2,96%
Test: mean=0 (two tails)	
t stat	2,36273

2006 e 2009	
Event Window: 16 days- 15 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	23,96%
ste error	16,37%
Test: mean=0 (two tails)	
t stat	1,46370

2007 e 2008	
Event Window: 16 days- 15 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	6,32%
ste error	2,41%
Test: mean=0 (two tails)	
t stat	2,62600

Total	
Event Window: 16 days- 15 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	14,16%
ste error	7,40%
Test: mean=0 (two tails)	
t stat	1,91362

Table A: -15/15 and -15/0 days results

2006 e 2009	
Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	18,64%
ste error	13,21%
Test: mean=0 (two tails)	
t stat	1,41082

2007 e 2008	
Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	10,43%
ste error	2,14%
Test: mean=0 (two tails)	
t stat	4,88545

Total	
Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	14,08%
ste error	5,98%
Test: mean=0 (two tails)	
t stat	2,35443

2006 e 2009	
Event Window: 11 days- 10 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	28,52%
ste error	19,99%
Test: mean=0 (two tails)	
t stat	1,42713

2007 e 2008	
Event Window: 21 days- 11 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	8,83%
ste error	2,88%
Test: mean=0 (two tails)	
t stat	3,06872

Total	
Event Window: 11 days- 10 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	17,59%
ste error	9,02%
Test: mean=0 (two tails)	
t stat	1,94853

Table B: -10/10 and -10/0 days results

2006 e 2009	
Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	26,46%
ste error	17,46%
Test: mean=0 (two tails)	
t stat	1,51505

2007 e 2008	
Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	12,26%
ste error	2,21%
Test: mean=0 (two tails)	
t stat	5,55169

Total	
Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	18,57%
ste error	7,85%
Test: mean=0 (two tails)	
t stat	2,36546

2006 e 2009	
Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	31,73%
ste error	21,86%
Test: mean=0 (two tails)	
t stat	1,45149

2007 e 2008	
Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	9,73%
ste error	2,68%
Test: mean=0 (two tails)	
t stat	3,63812

Total	
Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	19,51%
ste error	9,83%
Test: mean=0 (two tails)	
t stat	1,98501

Table C: -7/7 and -7/0 days results

2006 e 2009	
Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	28,50%
ste error	19,71%
Test: mean=0 (two tails)	
t stat	1,44573

2007 e 2008	
Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	9,54%
ste error	2,31%
Test: mean=0 (two tails)	
t stat	4,12299

Total	
Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	17,97%
ste error	8,85%
Test: mean=0 (two tails)	
t stat	2,02959

2006 e 2009	
Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	33,29%
ste error	23,03%
Test: mean=0 (two tails)	
t stat	1,44556

2007 e 2008	
Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	6,51%
ste error	1,80%
Test: mean=0 (two tails)	
t stat	3,61573

Total	
Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	234
sample mean	18,41%
ste error	10,29%
Test: mean=0 (two tails)	
t stat	1,78874

Table D: -5/5 and -5/0 days results

Annex 17: Results of the CARs analysis for the different time scopes- Acquirers 2006-2009

2006 e 2009	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,15%
ste error	0,76%
Test: mean=0 (two tails)	
t stat	0,20095

2007 e 2008	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,76%
ste error	0,75%
Test: mean=0 (two tails)	
t stat	1,00737

Total	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,48%
ste error	0,54%
Test: mean=0 (two tails)	
t stat	0,90352

2006 e 2009	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-0,97%
ste error	1,30%
Test: mean=0 (two tails)	
t stat	-0,75085

2007 e 2008	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-1,28%
ste error	0,63%
Test: mean=0 (two tails)	
t stat	-2,03459

Total	
Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-1,14%
ste error	0,68%
Test: mean=0 (two tails)	
t stat	-1,67958

Table A: -15/15 and -15/0 days results

2006 e 2009	
Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,31%
ste error	0,92%
Test: mean=0 (two tails)	
t stat	0,33820

2007 e 2008	
Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	1,12%
ste error	1,12%
Test: mean=0 (two tails)	
t stat	0,99749

Total	
Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,75%
ste error	0,74%
Test: mean=0 (two tails)	
t stat	1,01638

2006 e 2009	
Event Window: 11 days- 10 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,41%
ste error	0,80%
Test: mean=0 (two tails)	
t stat	0,51901

2007 e 2008	
Event Window: 21 days- 11 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-1,12%
ste error	0,64%
Test: mean=0 (two tails)	
t stat	-1,75222

Total	
Event Window: 11 days- 10 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-0,43%
ste error	0,50%
Test: mean=0 (two tails)	
t stat	-0,84297

Table B: -10/10 and -10/0 days results

2006 e 2009	
Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	1,38%
ste error	0,69%
Test: mean=0 (two tails)	
t stat	1,99546

2007 e 2008	
Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	1,92%
ste error	1,47%
Test: mean=0 (two tails)	
t stat	1,30182

Total	
Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	1,67%
ste error	0,86%
Test: mean=0 (two tails)	
t stat	1,93864

2006 e 2009	
Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,43%
ste error	0,67%
Test: mean=0 (two tails)	
t stat	0,64161

2007 e 2008	
Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-0,57%
ste error	0,59%
Test: mean=0 (two tails)	
t stat	-0,96711

Total	
Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-0,12%
ste error	0,44%
Test: mean=0 (two tails)	
t stat	-0,26137

Table C: -7/7 and -7/0 days results

2006 e 2009	
Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-0,02%
ste error	0,86%
Test: mean=0 (two tails)	
t stat	-0,02460

2007 e 2008	
Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,43%
ste error	0,80%
Test: mean=0 (two tails)	
t stat	0,53816

Total	
Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	0,23%
ste error	0,59%
Test: mean=0 (two tails)	
t stat	0,38637

2006 e 2009	
Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-0,76%
ste error	0,68%
Test: mean=0 (two tails)	
t stat	-1,12330

2007 e 2008	
Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-2,11%
ste error	1,27%
Test: mean=0 (two tails)	
t stat	-1,66292

Total	
Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	236
sample mean	-1,50%
ste error	0,76%
Test: mean=0 (two tails)	
t stat	-1,97573

Table D: -5/5 and -5/0 days results

Annex 18: Results of the CARs analysis for the different time scopes- Targets 2016-2017

Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	4,93%
ste error	1,31%
Test: mean=0 (two tails)	
t stat	3,751797113

Event Window: 16 days- 15 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	8,21%
ste error	2,43%
Test: mean=0 (two tails)	
t stat	3,38065006

Table A: -15/15 and -15/0 days results

Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	9,61%
ste error	2,41%
Test: mean=0 (two tails)	
t stat	3,99421234

Event Window: 11 days- 10 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	11,18%
ste error	3,12%
Test: mean=0 (two tails)	
t stat	3,587226253

Table B: -10/10 and -10/0 days results

Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	10,65%
ste error	1,60%
Test: mean=0 (two tails)	
t stat	6,671359484

Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	11,63%
ste error	1,67%
Test: mean=0 (two tails)	
t stat	6,960868762

Table C: -7/7 and -7/0 days results

Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	11,28%
ste error	2,57%
Test: mean=0 (two tails)	
t stat	4,390462286

Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	12,67%
ste error	3,00%
Test: mean=0 (two tails)	
t stat	4,224282165

Table D: -5/5 and -5/0 days results

Annex 19: Results of the CARs analysis for the different time scopes- Acquirers 2016-2017

Event Window: 31 days- 15 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	0,79%
ste error	0,79%
Test: mean=0 (two tails)	
t stat	0,998337174

Event Window: 16 days- 15 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	0,14%
ste error	0,71%
Test: mean=0 (two tails)	
t stat	0,191260565

Table A: -15/15 and -15/0 days results

Event Window: 21 days- 10 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	-0,49%
ste error	1,08%
Test: mean=0 (two tails)	
t stat	-0,450480329

Event Window: 21 days- 10 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	-0,55%
ste error	0,71%
Test: mean=0 (two tails)	
t stat	-0,777376085

Table B: -10/10 and -10/0 days results

Event Window: 15 days- 7 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	-0,03%
ste error	0,73%
Test: mean=0 (two tails)	
t stat	-0,045620845

Event Window: 8 days- 7 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	0,11%
ste error	0,71%
Test: mean=0 (two tails)	
t stat	0,158516567

Table C: -7/7 and -7/0 days results

Event Window: 11 days- 5 days before and after the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	-0,40%
ste error	0,75%
Test: mean=0 (two tails)	
t stat	-0,535888597

Event Window: 6 days- 5 days before the announcement	
Result for Sample analysis: Target firms 2016-2017	
Summary measures	
Sample size	44
sample mean	-0,53%
ste error	0,65%
Test: mean=0 (two tails)	
t stat	-0,812306055

Table D: -5/5 and -5/0 days results

Annex 20: Evolution of the CAR's for the Crisis and Non-crisis period (2006-2009)

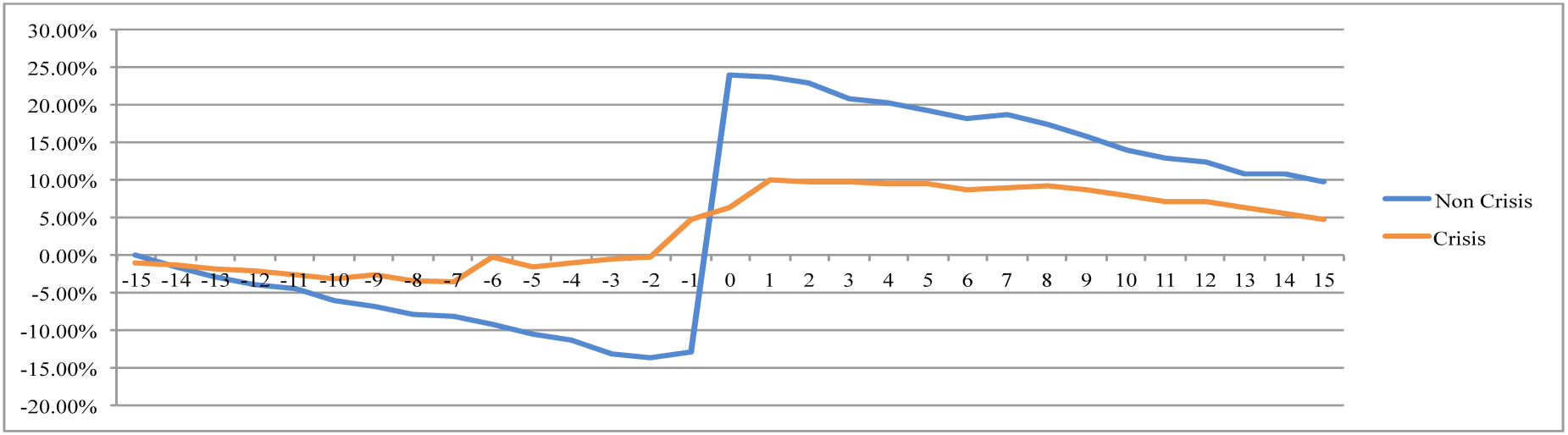


Figure A: -15/15 days Analysis

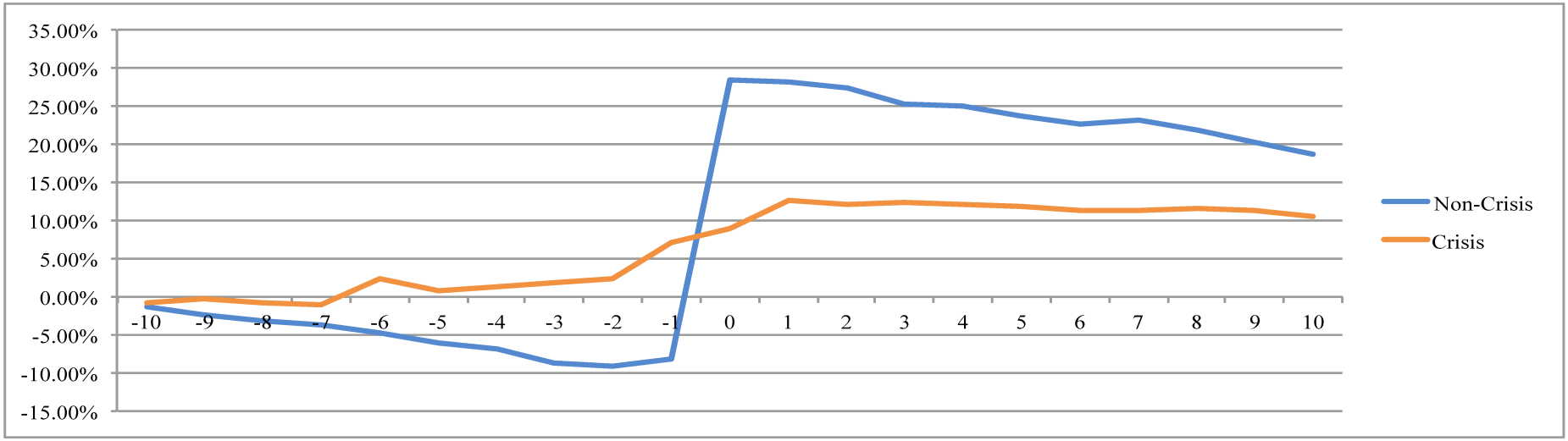


Figure B: -10/10 days Analysis

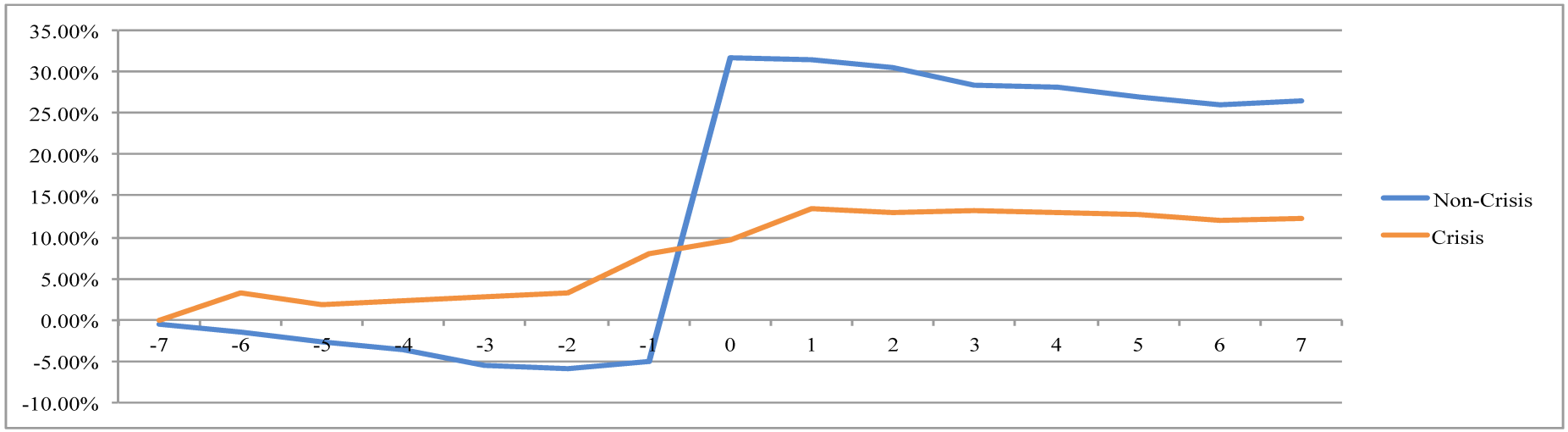


Figure C: -7/7 days Analysis

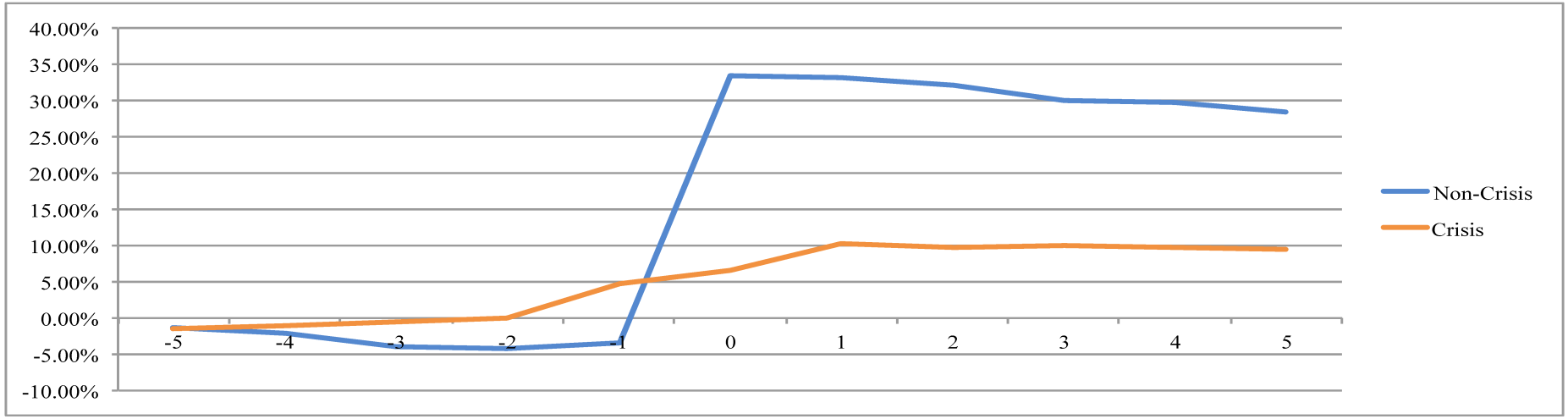


Figure D: -5/5 days Analysis

Annex 21: Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Targets 2006-2009

Linear regression, absorbing indicators

Number of obs	**7254**
F(0, 7020)	.
Prob > F	.
R-squared	**0.1274**
Adj R-squared	**0.0984**
Root MSE	**0.6327**

var2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	**.0421447**	**.0074283**	**5.67**	**0.000**	**.027583**	**.0567064**
var1	F(233, 7020) =		**4.398**	**0.000**	(234 categories)	

Table A

Annex 22: Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Targets 2007-2008 (Crisis time)

Linear regression, absorbing indicators

Number of obs	**4061**
F(0, 3930)	.
Prob > F	.
R-squared	**0.2966**
Adj R-squared	**0.2734**
Root MSE	**0.1781**

var2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	**.0348297**	**.002795**	**12.46**	**0.000**	**.0293499**	**.0403095**
var1	F(130, 3930) =		**12.750**	**0.000**	(131 categories)	

Table A

Annex 23: Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Targets 2006 and 2009 (non-crisis time)

Linear regression, absorbing indicators

Number of obs	=	**3193**	
F(0, 3090)	=	**.**	
Prob > F	=	**.**	
R-squared	=	**0.1174**	
Adj R-squared	=	**0.0882**	
Root MSE	=	**0.9322**	

var2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	**.0514482**	**.0164973**	**3.12**	**0.002**	**.0191015**	**.0837949**
var1	F(102, 3090) =	**4.028**	**0.000**	(103 categories)		

Table A

Annex 24: Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Acquirers 2006 and 2009

Linear regression, absorbing indicators

Number of obs	**7316**
F(0, 7080)	.
Prob > F	.
R-squared	**0.5939**
Adj R-squared	**0.5804**
Root MSE	**0.0793**

var2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	**-.0000685**	**.0009272**	**-0.07**	**0.941**	**-.0018862**	**.0017492**
var1	F(235, 7080) =		**44.056**	**0.000**	(236 categories)	

Table A

Annex 25: Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Acquirers 2007-2008 (crisis time)

Linear regression, absorbing indicators

Number of obs	**3999**
F(0, 3870)	.
Prob > F	.
R-squared	**0.4685**
Adj R-squared	**0.4509**
Root MSE	**0.0927**

var2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	**.0038869**	**.0014655**	**2.65**	**0.008**	**.0010138**	**.0067601**
var1	F(128, 3870) =		**26.645**	**0.000**	(129 categories)	

Table A

Annex 26: Regression of the CARs on the CARs excluding for company specific effects; using -15/15 CARs- Acquirers 2006 and 2009 (non-crisis time)

Linear regression, absorbing indicators

Number of obs	**3317**
F(0, 3210)	.
Prob > F	.
R-squared	**0.7596**
Adj R-squared	**0.7516**
Root MSE	**0.0593**

var2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	**-.0048372**	**.0010301**	**-4.70**	**0.000**	**-.0068569**	**-.0028174**
var1	F(106, 3210) =		**95.670**	**0.000**	(107 categories)	

Table A