Do M&As Create Value for US Financial Firms Post the 2008 Crisis?

By

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Abstract

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This study is conducted to examine the impact of M&As post 2008 crisis on firm value. Specifically, we highlight the impact of M&As on the acquirer and target of the US financial firms in addition to their combined effect. My research attempts to answer the following questions: Do M&As after the 2008 crisis create positive value for US financial firms? Has the impact changed in comparison with M&As evidence prior to the 2008 crisis? To answer such questions, I employed an event study methodology to examine the average abnormal return (AAR) and average accumulative abnormal return (ACAR). I included two datasets: an event dataset that contains financial firms' M&As announcements from 2010 to 2014, and the CRSP dataset that contains daily stock return along with market index return (S&P 500). The results show that M&As create positive value for US financial firms, and the results are statistically significant at the 1% level for target firms, acquirer firms and both combined. The results also show that the post-crisis value impact of M&As on US financial firms is higher than the average impact of M&A across all industries prior to the crisis.

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Chapter 1

Introduction

Overview

Mergers and Acquisitions (M&As) involve deals where an acquirer firm makes a proposal to take over a percentage or an entire target firm. The target firm then decides whether to approve such a proposal. The typical reason of such a transaction is related to value maximization, or to economies of scale to be more competitive; otherwise, the proposal shall be rejected (Jensen, 1988). Several empirical studies have been conducted for those deals that have been approved, and the conclusions drawn are controversial.

On average, evidence on M&As has shown a stable value effect across time for target firms and acquirer firms, which is supported by different studies by Andrade, Mitchell, Stafford (2001), Jensen and Ruback (1983), and Jarrell, Brickley and Netter (1988). Mergers revealed a positive value effect to the target firms and when target and acquirer were combined, whereas it is negative for the acquirer alone. The general conclusion applied to all M&As is still unclear whether or not to be applied to a particular sector. It could be argued that (1) different sectors should experience different corporate value changes due to M&As, and (2) such sector-experienced crisis should show different results. The impact of the 2008 crisis on the US financial firms raises the question whether the M&As announcements yielded different results. In this paper, we will investigate if M&As activity after the 2008 crisis creates positive value for US financial firms, and whether the impact differs form previous findings prior to the 2008 financial crisis.

Background

Information is and has been one of the most valuable assets in the financial market when the market is not perfectly efficient (Grossman and Stiglitz, 1980). The financial market is highly sensitive to the arrival of new information. . Scholars who believe in conventional finance (that the market is efficient) and in behavioral finance (consider social sciences) have conducted several studies to explain how investors react to various conditions of new information releases. Even with high technology advancement, scholars who believe in behavioral finance have shown evidence against the belief of market efficiency (Shiller, 2003). The Efficient Market Hypothesis (EMH) and The Random Walk Hypothesis have been employed to support such arguments. Using the three EMH forms: weak form, semi-strong form, and strong form, one can derives different conclusions about the significance of market generated information (weak form test), publically available information (semi-strong form test), and private information (strong form test).

The announcement of information is transforming the information from private to public. However, will it positively impact the shareholder? A corporate event is any action that impacts its shareholders. Such events include dividend announcements, Mergers and Acquisitions (M&As), earnings, stock splits, spin-offs, and right issues. Thus, there are indicators to confirm the speed as well as the accuracy of market reaction to the released information. The common indictors of the impact resulted from the announcement are often the abnormal return (AR) and accumulative abnormal return (CAR) around the event which are analyzed to test the level and direction of the impact.

Corporate actions also can be used to test the strong form of EMH to determine whether insiders can benefit from private information prior to the event announcement by obtaining higher abnormal return. The financial market is driven by a clear objective that is value maximization. Therefore, identifying which event is more likely to increase the corporate value will ideally be the investors' priority. Various corporate events have been subject to empirical studies to investigate whether the events generate positive average abnormal return (AAR) or positive average cumulative abnormal return (ACAR), and the additional return is statistically significant.

Overview of M&As

The impact of M&As announcements across all industries and for the entire market has always been stable. (Andrade, Mitchell, and Stafford 2001). Most researchers use daily returns to analyze the performance of the long term and short term impact of M&As announcements while others use accounting information. The focus of many researchers is toward the wealth gain for target and acquirer firms using the abnormal return and cumulative abnormal return as a performance measure. Loughran and Vijh (1997) pointed out some finding patterns for M&As, which are positive and significant abnormal return for target from overall M&As, and Negative abnormal return for acquirer from all M&As.

Nevertheless, the finding patterns for M&As are debatable due to several factors: (1) data range applied to the study and its availability that restricts the time horizon of the study, (2) deal status (proposed, pending, completed, withdraw, or terminated) may generate discrepancy in the results, and therefore, which type is specified should be clarified in the study, (3) deal size (small market capitalization, medium market capitalization, and large

market capitalization) is a crucial factor because it could be argued that the small market capitalization can be excluded in the studies since it is not economically significant, (4) payment type (cash only, stock only, cash and stock, debt only, stock and debt, or the three types of debt, cash and stock together) is an important investment indicator of the deal; for example, paying a stock rather than cash to acquire is appealing when the stock is overvalued, and is not appealing when the stock is undervalued, (5) types of merger: horizontal merger that is mergers within its competitors companies, vertical merger that is mergers within its supply chain, and conglomerate merger that is mergers with a company from a different business line, (6) method of a takeover: friendly takeover occurs where both parties arrange the M&As, and a hostile takeover takes place when the target company is forced rather than taken over through an agreement with the management of the target company, (7) the study benchmark: the index specified in the study to represent the market portfolio is an issue, as the total market return may not be reflected totally in the index level. (8) The sector/industry or region/country of M&As where it is possible that M&As in one sector may outperform the others, or, one region is doing better for M&As than other regions, (9) emerging market vs. developed market where M&As in a different market may not show the same result, (10) cross-border M&As impact, which is increasing rapidly thanks to globalization, is another reason for M&As to show a different evidence.

The above specifications, which vary amongst different studies, are very crucial when drawing a robust conclusion regarding M&As. The ultimate objective of developing M&As strategies is to be strong and ready for future completion and future opportunity growth. The M&As are corporate actions that aim to benefit the shareholder one can be

perceived as positive or negative to investors. Thus, the question whether the action is good for stockholders is still open, as there are case by case analyses or average impact analyses. For the short run, one can analyze the impact during the announcement day, and how the market reacts. The general results to M&As are meant to be positive, otherwise why should M&As take a place, given the objective is value maximization. Consequently, the expected result for the announcements of M&As should be positive, and the risk level is greater, as the action generates a level of uncertainty.

Organization of the study

The study is represented in chapters. The introduction (chapter 1) contains the overview, background, and the overview of M&As. The following chapters are represented as follows: (Chapter 2) Literature review and Hypothesis Development, (Chapter 3) Data and Methodology, (Chapter 4) Result Analysis, and (Chapter 5) Conclusion.

Chapter 2

Literature Review and Hypothesis Development

Literature in M&A

There are numerous studies that show the impact of M&As on shareholders, yet not all arrive at the same conclusion. Some discourage M&As for the poor impact on specific shareholders such as for acquirer firms, while other support M&A for their positive impact on target firms' shareholders. For example, Langetieg (1978) found that the gain of M&A does support the managements's objective, which is value maximizations, toward shareholders. Average Abnormal return (AAR) and average cumulative abnormal return (ACAR) have been the main analyzed performance measures for several studies.

Dodd and Ruback (1977) showed that the target firms earned high and significant average abnormal return during the month of the announcement. Even though the study distinguishes between successful and unsuccessful offers; both of which indicate positive and significant abnormal return. They found that the abnormal return for a successful offer was 20.85%, and 18.96% for unsuccessful offers for target firms. An earlier study by Mandelker (1974) also confirms that the winners of M&As on average are the target firms. In the same study, Dodd and Ruback also showed that the acquirer firms generated a small gain at the announcement day, which was 2.83%.

Asquith and Kim (1982) also investigated whether M&As have any value impact on shareholders for conglomerate mergers. The study suggested that both stockholders

benefit when they are combined; however, only target firms benefit from mergers when analyzed separately, and bidding firms are neither winners nor losers. They also concluded that their results were consistent with prior literature.

Jensen and Ruback (1983) summarized many studies regarding corporate control. The summary is that M&As generate positive and significant average abnormal returns for successful target firms and fall from 6.2% to 13.4%. Successful bidders also obtained positive and significant average abnormal returns that range between 2.4% to 6.7%. However, for all bidders, successful and unsuccessful, the average abnormal return is statistically zero. Jarrell, Brickley and Netter (1988) review is consistent with Jensen and Ruback (1983).

Andrade, Mitchell, and Stafford (2001) had updated the evidence of M&As. They clearly show that target firms are the winners of mergers and acquisition's announcements. The event window period examined in the study is 3 days: the announcement day, one-day prior, and one day after. For M&As events that took place from 1973 to 1998, the average abnormal return of the announcement period is 16% for the target firms, and it is statistically significant at the 5% level. For acquirers during the same period, the average abnormal return is - 0.7%; however, it is not statistically different from zero at the 5% level. For target and acquire combined, the average abnormal return is 1.8%, and it is significant at the 5% level. They also showed that the return for target firms and acquirer firms is greater during the announcement period when the payment method is cash rather than stocks. Their conclusion was that M&As have positive and significant impact on shareholders for the short term.

Hypotheses

The literatures show positive expectations for target firms. However, for acquirer firms, it is hard to answer the question whether they are the winners, or they should not be involved in mergers and acquisitions. Economically and theoretically, both the target and acquirer should gain positive and significant abnormal returns. Jensen (1988) stated, "Economic analysis and evidence indicate that the market for corporate control is benefiting shareholders, society, and the corporate form of organization." In this paper, the expected result is to see positive and significant average abnormal return, and positive and significant average cumulative abnormal return for target and acquirer firms. The following hypotheses are developed so that the expected result is to reject the null ($H0$) for both. H_0

$$H_0 : AAR_t = 0 \qquad\qquad H_0 : ACAR_t = 0$$

$$H_1 : AAR_t \neq 0 \qquad\qquad H_1 : ACAR_t \neq 0$$

The Null Hypotheses (H_0) indicate that M&As have no impact on firm value, whereas the alternative hypotheses (H_1) suggest that M&As create value when positive and significant, and destroy the firm value when negative and significant.

Chapter 3

Data and Methodology

Datasets Descriptions

There are two datasets required to conduct such a study: an event dataset, and a CRSP dataset. The first dataset contains the announcement date and a company identifier while the second dataset includes the daily stock return and its company identifier as well as the market index return. The benchmark used as the market return is S&P 500. Then, the two datasets will be finally merged in STAT with one identifier for each security.

The Event Dataset:

The two variables, which are the announcement date and the company name, in the first set were combined form Bloomberg and Securities Data Company (SDC) for a period rage from January 2010 to December 2014. For any duplication events, one event was taken while merging the two sources of events announcements. Companies that experienced more than one event within the estimation period, only the earliest observation was included so that the estimation period will not be impacted.

The final dataset obtained should meet the following certain conditions, which are: (1) the target and the acquirer are US firms, (2) all firms are with the financial sectors (filtered by SIC code), (3) the deal type is a company takeover (M&As), (4) The status of the deal is completed, and (5) the stock prices are available from the Centre for Research in Security Prices (CRSP).

The CRSP Dataset:

The second dataset was obtained through the CRSP for the period from 2009 to 2014. The daily holding period return for each security described as "a return is the change in the total value of an investment in a common stock over some period of time per dollar of initial investment. RET (I) is the return for a sale on day I. It is based on a purchase on the most recent time previous to I when the security had a valid price. Usually, this time is I - 1". Therefore, the holding period return [r(t)] equation is the following:

$$r(t) = \left[\frac{p(t)*f(t)+d(t)}{p(t')} \right] - 1 \text{ (Eq.1)}$$

t	Time of last available price < t
p(t)	Time of last available price < t
d(t)	Cash adjustment for t
f(t)	Price adjustment factor for t
P (t?)	Last sale price or closing bid/ask average at time of last available price < t.

"https://wrds-web.wharton.upenn.edu/wrds/query_forms/variable_documentation.cfm?vendorCode=CRSP&libraryCode=crspa&fileCode=dsf&id=ret"

The daily return of S&P 500 was calculated as follows:

$$R(t) = \left[\frac{S\&P(t)}{S\&P(t-1)} \right] - 1 \text{ (Eq. 2)}$$

Where the S&P (t) is the index level at time (t).

The final samples are included in the study for the first event window (-1, 0, 1) are 155 target firms, and 684 acquirer firms resulting in a total of 834 combined firms that met the criteria of data collection and the following estimation. In the second event window (-5, 0, 5), 154 target firms and 683 acquirer firms met the conditions of the following estimation method.

Methodology

After merging the datasets, the variables are ready to be employed for the event study methodology. The following steps are required to conduct the US financial firms` M&As announcements study: (a) calculating the estimation return (Estimation Window), (b) estimating the AAR, and ACAR returns, (c) testing the significant of AAR, and ACAR.

In this paper, the focus will be on the short term impact of M&As announcement for financial firms in the US; the first employed event window is one day prior and one day after the announcement day (-1, 0, 1), and the second event window is employed 5 days prior and 5 days after the announced day (-5, 0, 5), where 0 is the announcement day. Next, the estimation return of the financial firms will be computed. The estimation window is 90 days (-120, -30), which is 4 months prior to the announcement day. The mode employed is the market return model where the stock return is a function of the market return:

$$R_{i,t} = \alpha + B_i R_{m,t} + \varepsilon_{i,t} \quad (Eq. 3)$$

Where:

$R_{i,t}$ is the return of stock (i) at time (t) daily.

α is the constant term

B_i is [covariance between $(R_{i,t}$ and $R_{m,t})$] / [Variance of $(R_{m,t})$]

$R_{m,t}$ is the market return (S&P 500) at time (t) daily.

$\varepsilon_{i,t}$ is the model error term for security I on time t.

In such an estimation period, the parameters α and B_i should be estimated. Once the estimation return is calculated, the actual return is obtained from the CRSP, and the event window is specified, and then, one can find the abnormal return (AR) of each security and the average abnormal return (AAR) for each event window using the following equations:

$$AR_{i,t} = Actual_{i,t} - Estimated_{i,t} \text{ (Eq. 4)}$$

$$AAR = \frac{\sum AR_{i,t}}{N} \text{ (Eq. 5)}$$

Where:

The $Actual_{i,t}$ is the daily return obtained from CRSP

The $Estimated_{i,t}$ is the daily return obtained from the market model.

N is the number of estimated stocks

The Cumulative Abnormal Return ($CAR_{i,t}$) (at time t for stock i) is the sum of all previous abnormal return ($AR_{i,t}$) within the event window up to time (t). On the first period of the event window, for example, the CAR of each security is equal to the

abnormal return (AR) of that security. Therefore, the average cumulative abnormal return

(ACAR) for each window is calculating as follow:

$$ACAR = \frac{\sum CAR_{i,t}}{N} \text{ (Eq. 6)}$$

To support whether or not M&As for this sector have a positive impact on shareholders of acquirer and target firms as well as the impact when the two are and combined, the averages (AAR, and ACAR) should be statistically significant. The following hypotheses will be employed:

$H_0: AAR_t = 0$ $\qquad\qquad\qquad\qquad H_0: ACAR_t = 0$

$H_1: AAR_t \neq 0$ $\qquad\qquad\qquad\qquad H_1: ACAR_t \neq 0$

Chapter 4

Results and Analysis

The results are derived from 834 horizontal mergers that took place during the period from 2010 to 2014 where all mergers are US financial firms. Within the sample, there are 684 acquirer firms and 155 target firms. Two events windows are applied to examine the short-term impact on shareholders due to the announcement of M&As. Within each window, the AAR and ACAR are analyzed for target firms, acquirer firms, and target and acquirer combined, respectively. We use STAT to come up with the following results.

Target firms

For the target firms the AAR and the ACAR are positive and statistically significant at the 1% level. The results imply that the M&A announcements do positively impact the return of shareholders for the target firms, and the average return is statistically different from zero for the two event windows.

In Graph 4.1, the evidence from the 3-days event window (-1, 0, 1) indicates that the average abnormal return for the target firms one day before the announcement is very low in comparison with the AAR on the day of the announcement. Graph 4.1 also shows the movement of the average abnormal return for the 3-days window.

Graph 4.1 (Target Announcement Return)
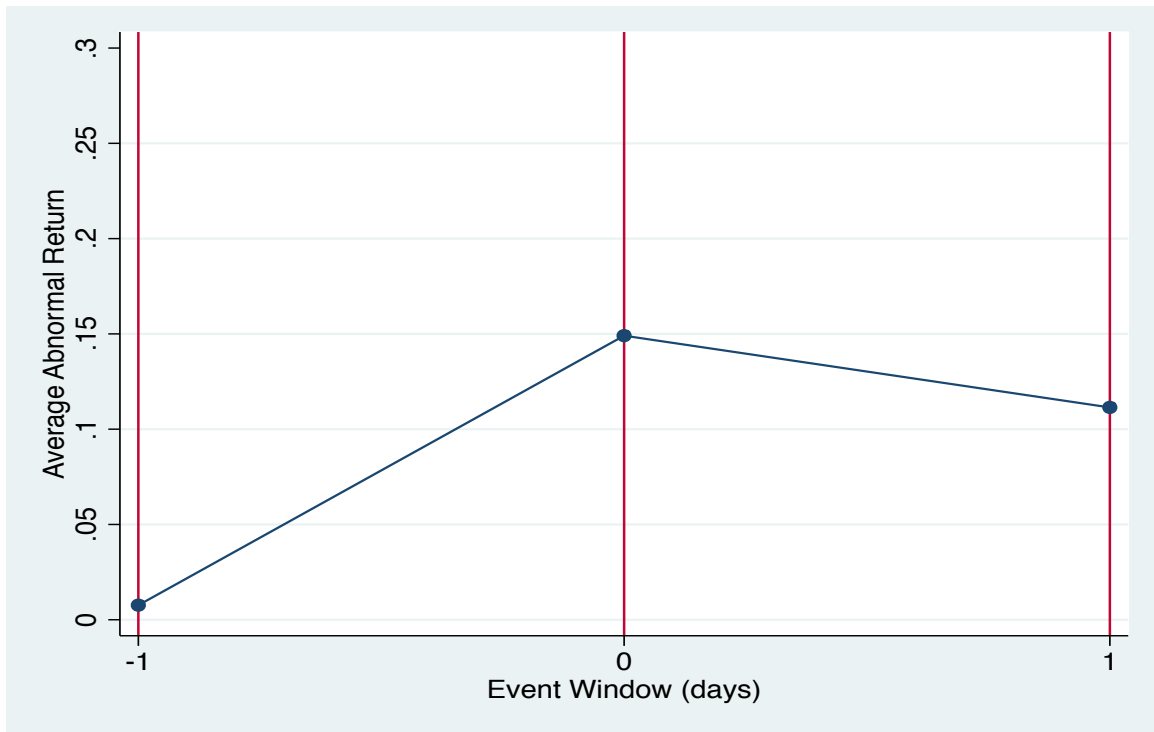
One day before the announcement (-1), the AAR is between 0 to 5%. Then, the AAR follows an increasing movement, due to leakage of information, up to 14.9% on the day of announcement (0). One day after the announcement, the AAR fell slightly to around 11%.

Table 4.1 shows the significance of the result and the hypotheses; the t-statistics is as high as 8.55, and the p-value is zero. Thus, we reject the null that suggests the AAR is zero ($H_0: AAR_t = 0$) on the announcement day, and support the alternative ($H_1: AAR_t \neq 0$) that indicates the AAR is different form zero. Moreover, there is a zero chance (p-value is zero) that we reject the null while it is true.

Table 4.1 (Target AAR)

```
. reg abnormal_return if dif==0, robust

Linear regression                                  Number of obs =     155
                                                   F(  0,   154) =    0.00
                                                   Prob > F      =       .
                                                   R-squared     =  0.0000
                                                   Root MSE      =  .21694
```

abnormal_r~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
_cons	.1490585	.0174248	8.55	0.000	.114636	.1834811

When considering the 11-days event window (-5, 0, 5), the evidence of positive average abnormal return is very clear (Graph 4.2). For this event window, the abnormal return is very stable and close to zero for a period starting 5 days before the event (-5), and starting to change enormously one day before the event (-1) to a maximum ARR on the announcement day.

Graph 4.1 (Target Announcement Return)
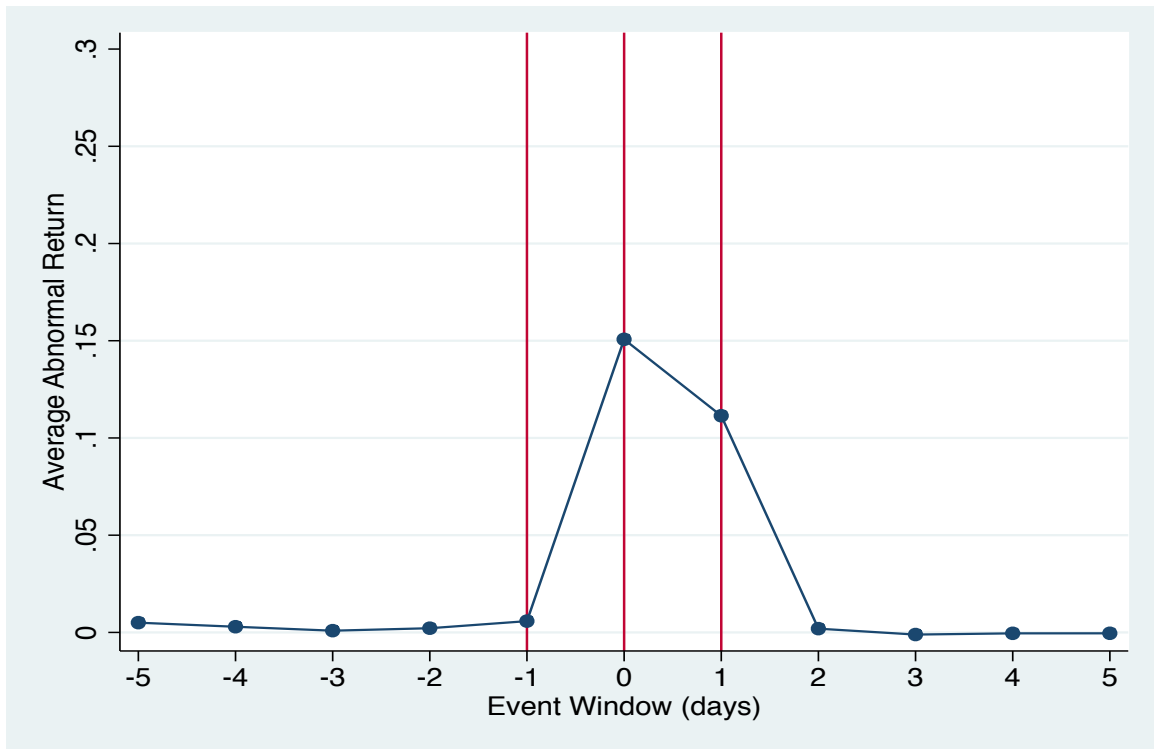
Two days after the announcement, the AAR restored to its original level where the AAR is very small, but still positive. Graph 4.2 also shows that the impact of M&As on target firms started one day before the announcement, reached a peak on the event day, and then declined in the following two days after the announcement day to reach the stable level. The ACAR will capture the change in AAR during the announcement period.

The ACAR is another performance measure that we considered in this study. Given the AAR is positive, then the ACAR must be positive as well. Graph 4.3 shows that the ACAR is rising which was close to zero before the start of the 3-day event window (-1).

Graph 4.2 (Target Announcement Return)
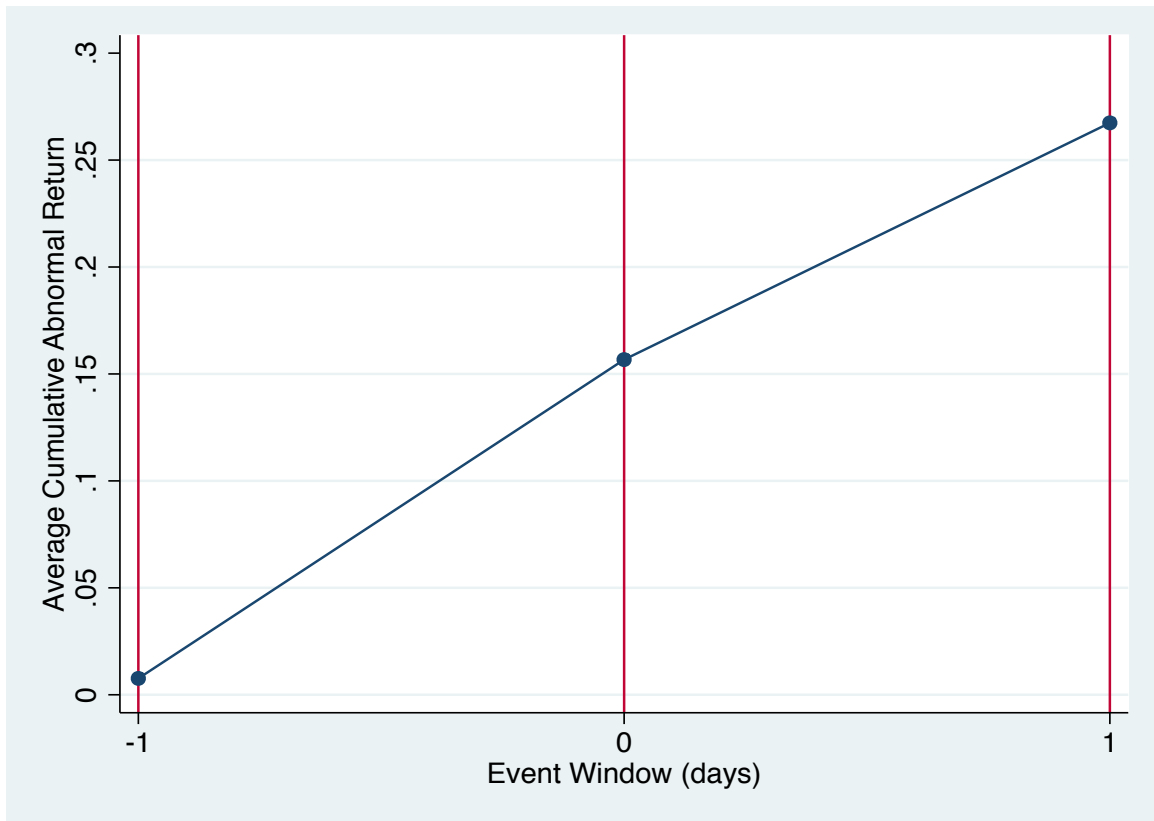
In Table 4.2, it is also confirmed that the ACAR for the 3-days window is 26.7%, and highly significant with a high t-statistic of 12.82 and zero p-value. The confidence interval indicates, on average, the lower expected ACAR, which is 22.6% in this case, and the highest expected ACAR which is 30.8%.

Table 4.2 (Target ACAR)

```
. reg cumulative_abnormal_return if dif==0, robust
```

```
Linear regression                                 Number of obs =      155
                                                  F( 0,   154) =    0.00
                                                  Prob > F      =       .
                                                  R-squared     =  0.0000
                                                  Root MSE      = .25972
```

cumulative~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
_cons	.2673792	.0208614	12.82	0.000	.2261676	.3085907

The ACAR is consistent with the AAR, and apparently the ACAR for target firms has improved significantly due to the M&As. The ACAR is 27.8%, which is also significant statically, for the large event window (Table 4.3). The 11-days event window displayed in Graph 4.4 shows that the ACAR before and after the lag day of the announcement ranges between 0 to 5%. During the short event window (-1, 0, 1), the ACAR is increasing sharply. Then, after the small event window, the ACAR ranges from 25 to 30%. The results for target firms are consistent with the ones prior to the literature that shows positive AAR and ACAR. Andrade, Mitchell, and Stafford (2001) found that the AAR is 16% with the 5% significant level for all M&As across all industries, which is very close to the findings in this study for US financial firms except that the significant level in this study is 1%.

Table 4.3 (Target ACAR)

```
. reg cumulative_abnormal_return if dif==0, robust

Linear regression                                    Number of obs =       154
                                                     F(  0,    153) =      0.00
                                                     Prob > F       =        .
                                                     R-squared      =    0.0000
                                                     Root MSE       =   .28212
```
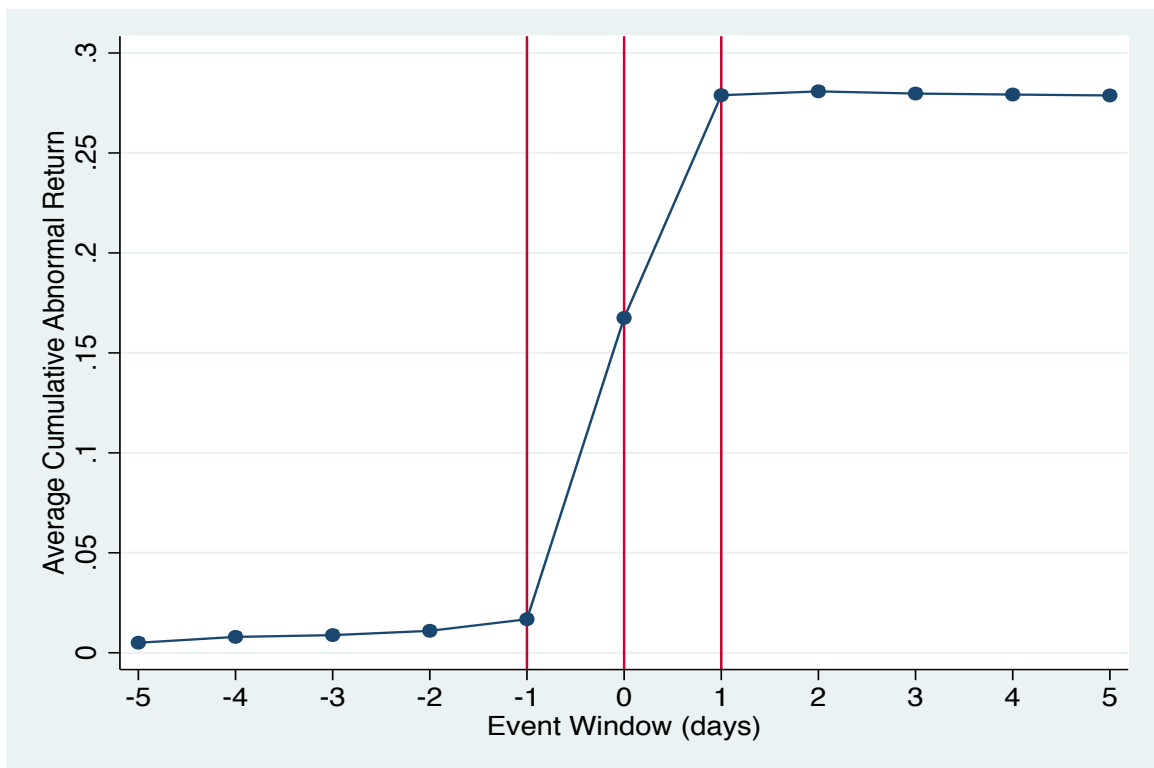
cumulative~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
_cons	.2787513	.0227336	12.26	0.000	.233839	.3236637

Graph 4.3 (Target Announcement Return)

Acquirer firms

684 M&As events were identified during the period of 2010 to 2014 where all acquirers are US financial firms. Most of the literature findings indicate that the acquirers neither benefit form M&As significantly nor do they lose. For the small event window (-1, 0, 1), the average abnormal return for the acquirer firms that occurred from 1973 to 1998 is -0.7%, which is not statistically different from zero at the 5% level (Andrade, Mitchell, and Stafford 2001). However, the case is different in the US financial firms. Table 4.4 confirms that the average abnormal return is 0.43%, and indeed, the AAR is statistically significant at the 1% level. The confidence interval at the 1% level of significance is 0.13 to 0.73%.

Table 4.4 (Acquirer AAR)

```
. reg abnormal_return if dif==0, robust

Linear regression                        Number of obs =      684
                                         F( 0,   683) =     0.00
                                         Prob > F      =        .
                                         R-squared     =   0.0000
                                         Root MSE      =   .03981
```

abnormal_r~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
_cons	.0043172	.0015222	2.84	0.005	.0013284	.0073061

One day before the announcement, the AAR is negative for the acquirer firms, and the AAR is increasing as the announcement day approaches (Graph 4.5). After the event day, the AAR is still positive. The impact of M&As is then also positive for US financial acquirer firms.

Graph 4.4 (Acquirer Announcement Return)
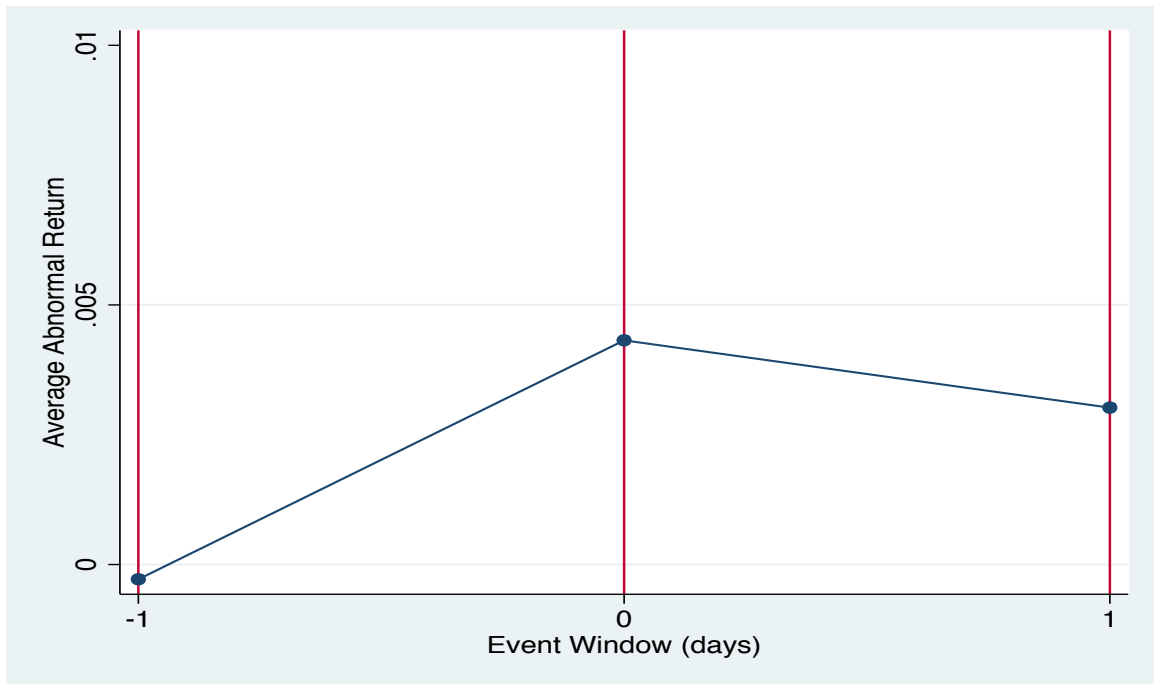
For the same event window, the average cumulative abnormal return is consistently confirms that the acquirer firms of this sector enjoy positive return, and the event in the best interest of the shareholders. The following table (Table 4.5) summarizes the result, during the small window, for the ACAR, which is 0.7% and statistically significant as well. Graph 4.6 that represents the movement of ACAR and also supports the impact is positive, and ACAR is ascending.

Table 4.5 (Acquirer ACAR)

```
. reg cumulative_abnormal_return if dif==0, robust

Linear regression                                    Number of obs =      684
                                                     F(  0,    683) =     0.00
                                                     Prob > F       =        .
                                                     R-squared      =   0.0000
                                                     Root MSE       =  .05428

                              Robust
cumulative~n      Coef.    Std. Err.      t     P>|t|     [95% Conf. Interval]

      _cons     .0070537   .0020755      3.40   0.001     .0029786     .0111288
```
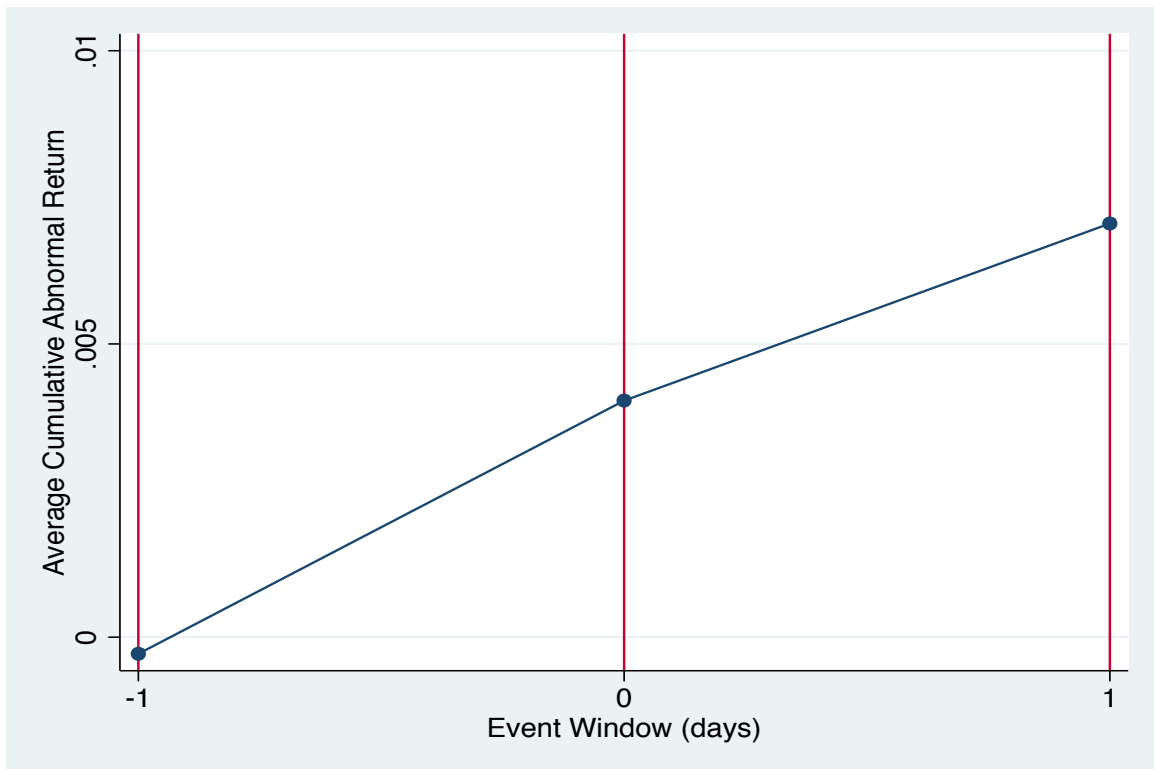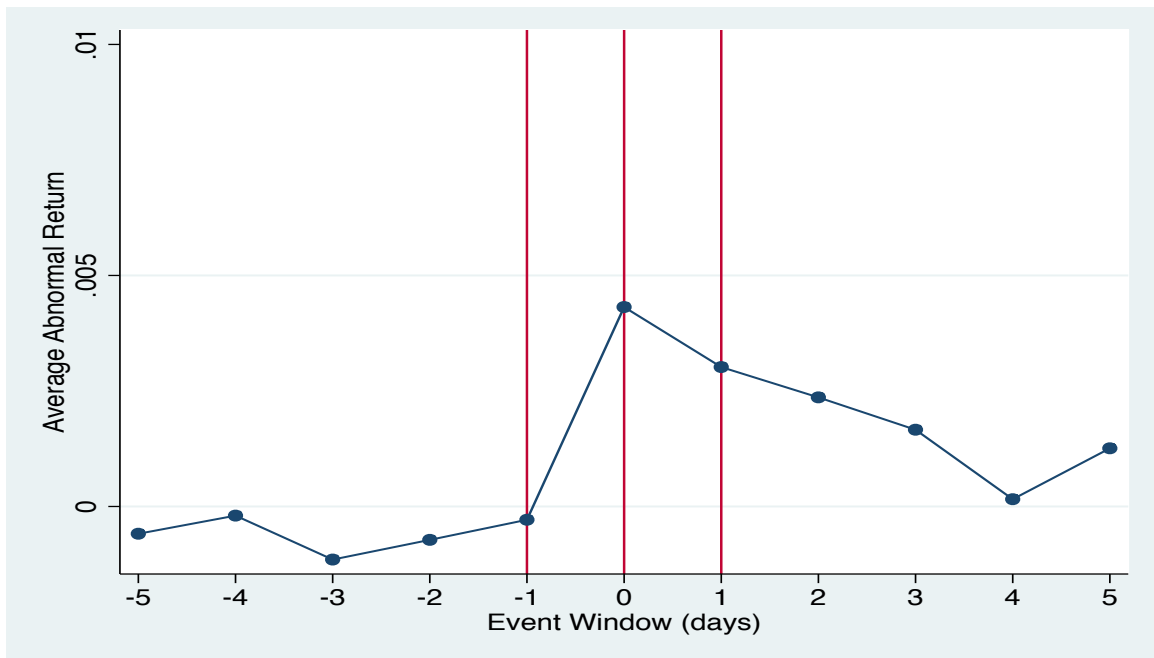
Graph 4.6 (Acquirer Announcement Return)

A Closer look at the large event window provides a better insight of whether the positive impact is the result of the M&As or not. The event window (-5, 0, 5) of 11-days was applied again for the acquirer firms. In Graph 4.7, the AAR undoubtedly shows that prior to day (-1), which is one day before the announcement, the AAR is negative. The Graph

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also confirms that the reaction to the M&As events has incorporated the highest in day 0, which is the announcement day. However, the positive impact continues, but the AAR is diminishing after the event day. Graph 4.8 represents the ACAR for the large window. The change in the ACAR before and after the event day is astonishing. Prior to the event, shareholders of acquirer firms have negative ACAR; however, shareholders enjoyed the positive ACAR on the announcement day and the following days.

Graph 4.7 (Acquirer Announcement Return)

Graph 4.8 (Acquirer Announcement Return)
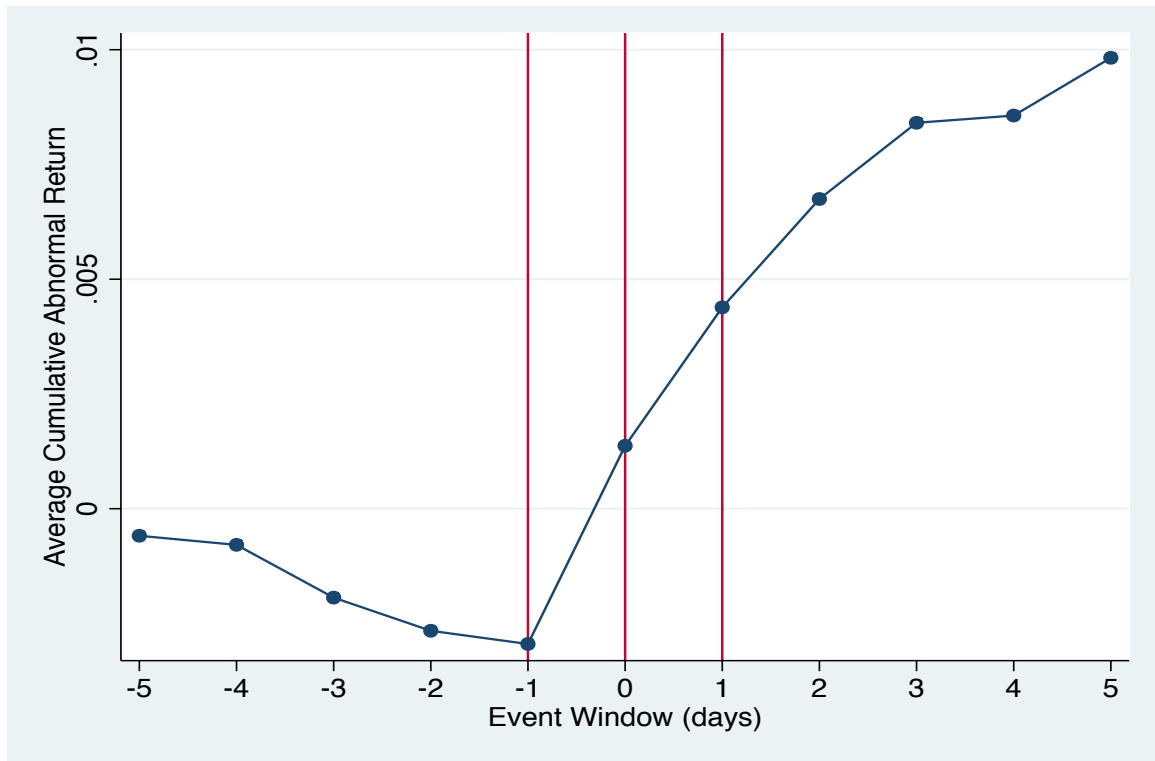
Combined firms

Most importantly, we should analyze the aggregate impact of M&As announcement on combined firms' shareholders: target and acquirer. The US financial firms that identified in this study combined in one file, and the AAR and the ACAR are calculated for the two event windows: (-1, 0, 1) and (-5, 0, 5). Table 4.6 and 4.7 summarize the results of AAR and ACAR for the small window, respectively. During the study period 2010 to 2014, the aggregate AAR that both experienced on the event day is about 3%: the AAR is statistically significant at the 1% level with confidence interval of 2.3 to 3.9%. The ACAR is around 5.4%, and statically significant at the 1% level. The confidence interval for the ACAR is 4.3 to 6.5%.

Table 4.5 (Combined AAR)

```
. reg abnormal_return if dif==0, robust

Linear regression                                    Number of obs =      834
                                                     F(  0,    833) =     0.00
                                                     Prob > F       =        .
                                                     R-squared      =   0.0000
                                                     Root MSE       =  .11426
```

abnormal_r~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
_cons	.0307585	.0039566	7.77	0.000	.0229923	.0385247

Table 4.6 (Combined ACAR)

```
. reg cumulative_abnormal_return if dif==0, robust

Linear regression                                    Number of obs =      834
                                                     F(  0,    833) =     0.00
                                                     Prob > F       =        .
                                                     R-squared      =   0.0000
                                                     Root MSE       =  .15793
```

| cumulative~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
_cons	.0544831	.0054686	9.96	0.000	.0437492	.065217

Both averages show high t-statistics of 7.77 for AAR and 9.96 for ACAR, and zero p-value for both which supports the null and support the alternative.

Accordingly, the impact of M&As on US financial firms' shareholders is positive, and statistically significant at the 1% level. For M&As events across all industries that occurred from 1973 to 1998, the AAR for the combined is 1.8% (Andrade, Mitchell, and Stafford 2001). The 1.8% is statistically significant at the 5% level. Thus, the confidence level for M&As for the US financial firms is stronger. Moreover, the AAR is higher with

3% for US financial firms whereas the AAR is 1.8% across all industries. These averages correspond to the same event window (-1, 0, 1).

The 11-days event window captures how the M&As announcement can influence the AAR and the ACAR that shareholders experience. The movement of the AAR in Graph 4.9 tells us that the AAR, from day (-5) up to day (-1) is close to zero. -5 day is 5 days before the event day while day 5 is 5 days after the announcement day. During the announcement day, the AAR is around 3%. The major impact of the M&As occurred with the small event window (3-days event window). One day prior to the event and up to the event day, the AAR was increasing, and returned to the original level in 2 days after the event day. The ACAR in Graph 4.10 confirms the stability of the AAR before and after the 3 days event window which indicates that the change of AAR is due the announcement of M&As.

Graph 4.9 (Combined Announcement Return)
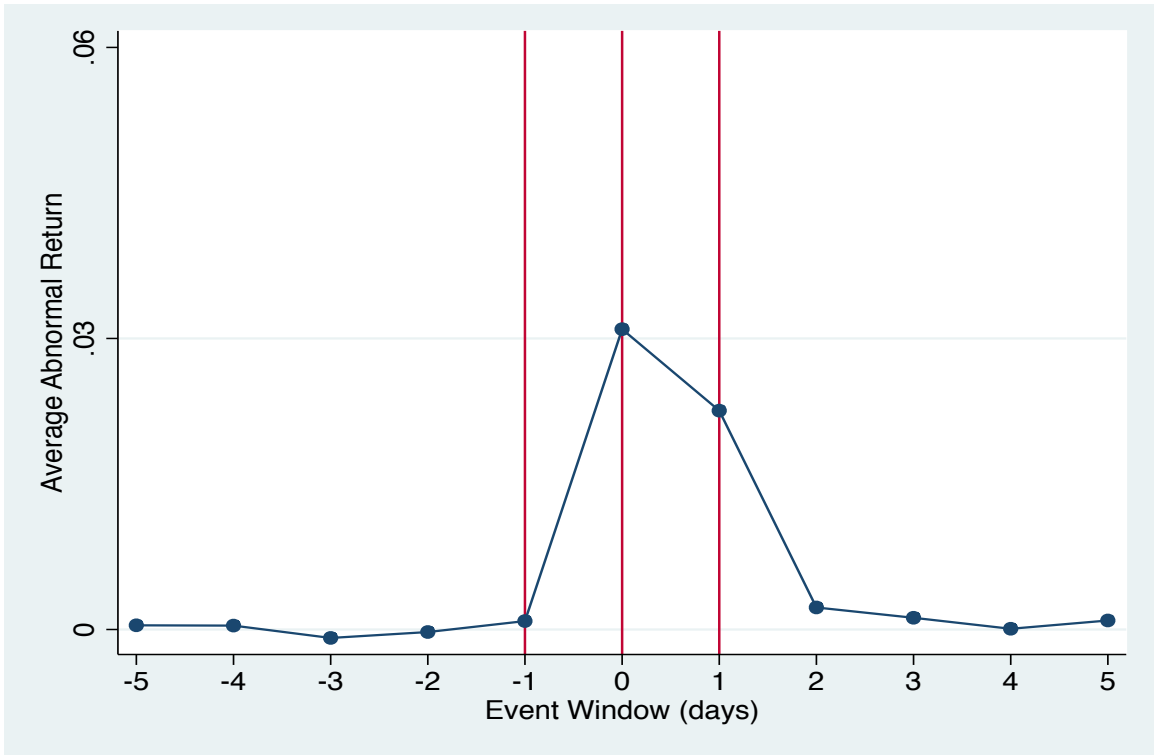
Graph 4.10 (Combined Announcement Return)
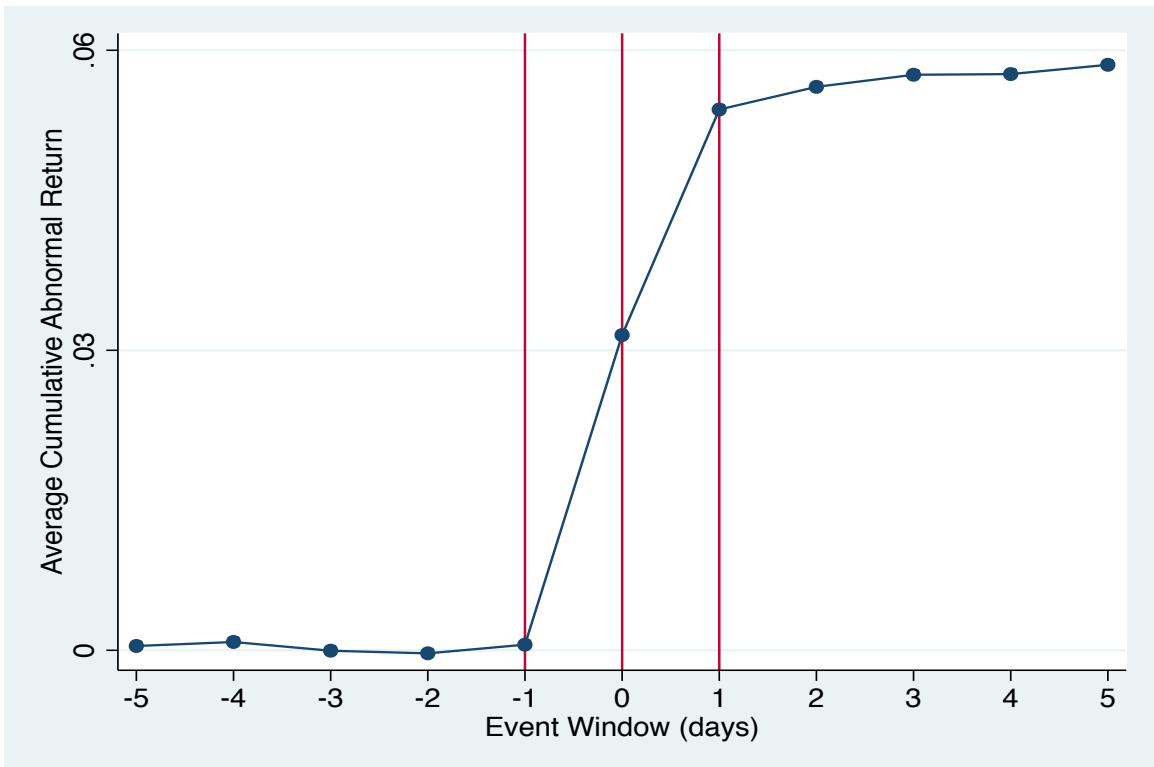
Chapter 5

Conclusion

In conclusion, we have examined if M&As post 2008 crisis create positive firm value for US financial firms. The study focuses on M&As that took place from January 2010 to December 2014 in US financial firms. Using event study methodology, we calculated the average abnormal return (AAR) and the average cumulative abnormal return (ACAR) for two event windows: a short event window (-1, 0, 1), and a larger event window (11-days). We found that the M&As for target firms, acquirer firms, and target and acquirer combined do create positive and significant AAR and ACAR. With enough support, we show that the results for target firms is consistent with previous studies, but the significant level is higher for M&As in US financial firms post 2008 financial crisis compared to the significant level for M&As across all industries prior to the 2008 financial crisis (1% versus 5% significant level, respectively). We also showed that acquirer firms in our study have a positive and significant AAR and ACAR, whereas a great number of studies showed that the acquirer neither loses nor gains from M&As prior to the 2008 crisis. The impact of target and acquirer firms combined shows an overall positive and significant AAR and ACAR at the 1% level. The AAR and the ACAR in the US financial industry are above average across all industries in which all M&As took place from 1973 to 1998. Additionally, the combined M&As impact on target and acquirer firms in the US financial industry is statistically more significant compared to all industries.

Discussion

The results of this paper call for further investigations. We need to study whether results of M&As in firms other than the financial firms support our results, or our results are only applied to the US financial firms. We also need to investigate why we are statistically and positively more confident in M&As after the 2008 financial crisis compared to M&As prior to the crisis for other sectors. The results show high t-statistics and zero p-value whereas previous studies show that the AAR and ACAR are not statistically significant for acquire firms. Specifically, we show positive AAR and ACAR and significant at the 1% level for acquirer firms. Why are these results different? And how do most of the findings show that the acquirer firms neither loses nor do they gain from M&As prior to the 2008 financial crisis?

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