MARKET REACTION TO ACQUISITION ANNOUNCEMENTS AFTER THE 2008 STOCK MARKET CRASH

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ABSTRACT

Market reaction to mergers and acquisitions is a popular research topic in finance. It has been well documented in empirical literature that target companies earn significant abnormal market returns in corporate acquisitions. However, the effects of stock market crashes, and the effects of whether the acquirer is a domestic firm or a foreign firm, on target firm abnormal returns have not been studied sufficiently. In this paper, we make a contribution to the extant literature on these subjects by studying the abnormal market returns earned by U.S. target firms acquired by domestic and foreign firms after the 2008 stock market crash. Our test results indicate that U.S. targets that were acquired by other U.S. firms earned significantly higher abnormal returns, compared with targets acquired by foreign firms, after the crash. We also find that the target companies earned greater abnormal returns in non-friendly acquisitions than in friendly acquisitions during this period.

JEL: G01; G34

KEYWORDS: Financial Crisis, Mergers and Acquisitions

INTRODUCTION

Mergers and acquisitions (M&As) have been a popular research topic in finance. The notion becomes more appealing during the financial crisis times. For example, according to a New York Times article, M&A activity rose 23% in 2010 (Merced, et. al., 2011). Not just the number of M&A activities but also the characteristics of the crisis-time acquirers become interesting and need to be further evaluated. Literature provides preliminary explanations for mergers during financial crisis, for the cases of Asian and European cases (Baek, et. al. 2004; Mariana, 2013), however studies on US financial crisis intervals is left out.

Regarding the US markets, it has been well documented in empirical literature that target companies earn significant abnormal market returns in corporate acquisitions. However, the effects of stock market crashes on target firm abnormal returns have not been studied sufficiently. In addition, literature lacks studies examining the effects of the type of the acquirer, i.e. the acquirer being a domestic or a foreign firm, on target firm abnormal returns.

In this paper, we make a contribution to the extant literature on these subjects by studying the abnormal market returns earned by U.S. target firms acquired by domestic and foreign firms after the 2008 stock market crash.

The remainder of the paper is organized as follows. Next section presents the literature review for the topic. Data and methodology is described in the following section. We present our empirical findings in the section titled "Results". In the last section of the paper, we summarize our findings and conclusions.

LITERATURE REVIEW

The synergistic benefits of mergers and market reaction to merger announcements have been studied extensively. The empirical literature documents evidence that the shareholders of target companies experience substantial gains after an acquisition. However, the shareholders of bidder companies generally experience either a small gain or a loss (Sudarsanam et al., 1996).

The findings regarding bidder returns are inconsistent. For example, Jensen and Ruback (1983) find that bidding firm shareholders do not lose value in acquisitions. However, value destruction for acquiring firms has also been well-documented. These studies argue that the reason for the value loss could be various managerial actions such as hubris (Roll, 1986), managerial entrenchment (Morck et al., 1988; Jensen, 1986), or wrong managerial decision-making (Morck et al., 1990). Some additional factors that may also influence the bidder value after an acquisition include the effect of the payment method (Martin, 1996; Harford, 1999), growth/investment opportunities (Lang et al., 1991; Martin, 1996), and past bidder performance (Morck et al., 1990). In addition, Akdogu (2007) suggests that bidders overpay due to competition during the bidding process.

Cross-border mergers is another area in need of further research. Among the rare papers available, Starks and Wei (2013) provides evidence that bidder abnormal returns increase with the quality of the corporate governance of the bidder. Approaching the topic from another perspective, Becher, et. al. (2010) shed light to the merger gains in the very much neglected industry of utilities. There are also many studies on how the target firms benefit from mergers. Overall, the consensus in the literature appears to be that the shareholders of target firms enjoy value increases (Dodd and Ruback, 1977; Jensen and Ruback, 1983). Dodd and Ruback, for example, provide empirical evidence that the stockholders of target firms can earn large positive abnormal returns regardless of the acquisition being successful or unsuccessful. Competition among bidders appears to increase target returns (Bradley et al, 1988) and targets with poor prior performance appear to benefit even more (Lang et al., 1989). The ownership structure also appears to have an impact on target returns. While more managerial ownership increases, more institutional ownership decreases, target gains (Stulz et al., 1990). Offenberg et. al. (2012) evaluates the effect of poor acquisition history of the targets on the premium received by that target.

Although mergers and acquisitions are among the most extensively studied subjects in finance, the effects of stock market crashes on merger and acquisition activities have not been studied sufficiently. The market values of all companies fall sharply during stock market crashes. Therefore, many companies become attractive acquisition targets to both domestic and foreign buyers. Sherman and Badillo (2010) report that weak dollar and low company valuations made U.S. targets cheaper and encouraged foreign buyers after the 2008 stock market crash.

The 2008 stock market crash was the worst stock market crash in U.S. history since the Great Depression. U.S. stocks lost 55 percent of their market value from October 9, 2007 to March 9, 2009. Our objective in this paper is to study the market reaction to domestic and foreign acquisitions of U.S. target firms after the October 9, 2007-March 9, 2009 stock market meltdown which lowered the market valuations of many U.S. firms drastically making them attractive acquisition targets for both domestic and foreign buyers. For comparison, we study three time periods of equal length: the pre-crash period (January 1, 2005-October 8, 2007), the crash period (October 9, 2007-March 9, 2009), and the post-crash period (March 10, 2009-December 31, 2011).

DATA AND METHODOLOGY

Our data collection process consists of three steps. First, we identify the U.S. public firms acquired by domestic and foreign firms during the January 1, 2005–December 31, 2011 period. Secondly, we group the

target firms into three groups based on their merger announcement dates: Announcements between January 1, 2005-October 8, 2007 are considered as pre-crash-period announcements, those between October 9, 2007-March 9, 2009 are consider as crash-period announcements, and those between March 10, 2009-December 31, 2011 are considered post-crash-period acquisitions. Lastly, we collect the balance sheet data from the COMPUSTAT database and the market data from the CRSP database for the target companies. Since the financial characteristics of financial firms differ from industrial firms, financial firms with a SIC code 6000-6999 are excluded from the study.

The acquisitions data are extracted from the Capital IQ database. After identifying the U.S. public firms acquired by domestic and foreign firms during the January 1,2005-December 31, 2011 period, we obtained the financial data of these companies from their year-end financial statements in the COMPUSTAT database for the fiscal year one year prior to the year of the acquisition. In order to mitigate the influence of the outliers on the results, we winsorized the sample at the 1% and 99% levels.

As the final step of our data collection process, we obtained the daily returns data of the target companies from the CRSP database. CRSP value-weighted index returns were used as a proxy for market returns (see: Servaes, 1991; Louis, 2005). To assess the impact surrounding the merger announcement date, the cumulative abnormal returns (CARs) are calculated (see: Song and Walking, 2000). We use the five-day period [-2,2] surrounding the announcement day as the event window in the calculation of the CARs (To check the robustness of the results, CARs over the three-day period around announcements [-1,1] was also used. In addition, we also calculated CARs by using log returns. The results were similar.) Our sample includes 132 U.S. target firms with no missing data over the study period. Eighty-seven of these companies were acquired by other U.S. firms and 45 were acquired by foreign firms. The break-down of the target firms, based on the acquisition announcement date, is presented in Table 1. The summary statistics for the target firms are presented in Table 2.

Table 1: Sample Information

	Before the Crash	During the Crash	After the Crash	Full Sample
Targets acquired by Domestic Firms	25	20	42	87
Targets acquired by Foreign Firms	10	14	21	45
All Targets	35	34	63	132

Table 1 displays the breakdown of the target firms, based on the acquisition announcement date and the type of the acquirer. It provides the number of target firms acquired by domestic acquirers and those acquired by foreign acquirers. Also for each group, the firms are classified as those with merger announcement date before, during or after the financial crisis.

Table 2: Summary Statistics for the Targets Acquired by Domestic and Foreign Firms

Variables	Targets Acquired by Domestic Firms			Targets Acquired by Foreign Firms		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Total Assets	2,233.9	469.07	6,489.5	6,840.8	798.78	25,396
Current Assets	1,267.4	289.93	3.845.7	3,414.6	577.01	11,722
Net Fixed Assets	966.55	59.110	3,421.4	3,426.2	123.24	13,860
Sales	1,689.5	434.53	4,770.6	5,226.5	503.07	18,050
Net Income	133.59	12.780	580.54	298.44	23.501	1,029

Table 2 presents the summary statistics for the target firms, while grouping those target firms based on the type of the acquirer. Mean, median and standard deviation figures are displayed for the target firms acquired by domestic firms and for those acquired by foreign firms. The main variables reported in the table are Total Assets, Sales and Net Income. Total Assets value is also broken down to Current Assets and Net Fixed Assets values. The values are in thousands of dollars.

Our methodology is as follows. First, we examine the CARs at the univariate level, by comparing the mean values of the two groups and then testing the significance of the differences. Next, we use multivariate linear regression analysis to further examine the target company CARs by controlling for important factors such as firm characteristics, year effects and industry effects.

RESULTS

Table 3 presents the summary statistics for the CARs of the target firms around the acquisition announcement dates. Panel A shows the CAR results for the three periods. Panel B shows the CAR results for the targets acquired by domestic and foreign buyers.

The results in Panel A indicate that targets get a positive market reaction and receive an average of 12.5% positive abnormal return during the five-day event window around the announcement date. The returns appear to decrease during the crash period along with increased volatility in market reaction.

The results in Panel B show that, in general, the targets acquired by domestic buyers receive more favorable market reaction compared with those acquired by foreign buyers. Both reactions are positive. On average, the targets acquired by domestic buyers receive an average of 14% abnormal positive return, while the targets acquired by foreign buyers receive an average of only 9% abnormal positive return.

Table 3: Summary Statistics for the Cumulative Abnormal Returns (CARs) of the Target Firms

Panel A: CARs for the Targets during the Three Time Periods					
Variables	**Mean**	**Median**	**Std. Dev.**	**10th Percentile**	**90th Percentile**
Cumulative Abnormal Returns (CARs)					
All Three Periods	0.1256	0.0909	0.1757	-0.0469	0.3469
Pre-Crash Period	0.1202	0.1173	0.1387	-0.0350	0.2747
Crash Period	0.1101	0.0534	0.2279	-0.0789	0.4322
Post-Crash Period	0.1370	0.0861	0.1635	-0.0264	0.3469
Panel B: CARs for the Targets Acquired by Domestic and Foreign Buyers					
Variables	**Mean**	**Median**	**Std. Dev.**	**10th Percentile**	**90th Percentile**
Cumulative Abnormal Returns (CARs)					
All Targets	0.1256	0.0909	0.1757	-0.0469	0.3469
Targets Acquired by Domestic Buyers	0.1436	0.1135	0.1705	-0.0350	0.4110
Targets Acquired by Foreign Buyers	0.0908	0.0593	0.1823	-0.0632	0.3158

Table 3 presents the summary statistics for the cumulative abnormal returns (CARs) of the target firms around the acquisition announcement dates. Panel A shows the CAR results for the three periods, pre-crash, crash, and post-crash periods. Panel B shows the CAR results for the target firms acquired by domestic and foreign buyers. Mean, median, standard deviation, 10th and 90th percentile values of the CARs are displayed for the relevant group of firms.

Next, we conduct a mean difference test for the CARs of the targets acquired by domestic buyers vs. those acquired by foreign buyers. The results are presented in Table 4.

Table 4: CARs Mean Difference Test: Targets Acquired by Domestic Buyers vs. Targets Acquired by Foreign Buyers

	Mean Values			
Variables	**Targets Acquired by Domestic Buyers**	**Targets Acquired by Foreign Buyers**	**Difference**	**t value**
Cumulative Abnormal Returns (CARs)				
All Three Periods	0.1436	0.0908	0.0528	1.65 *
Pre-Crash Period	0.1019	0.1661	-0.0640	-1.25
Crash Period	0.1521	0.0500	0.1021	1.30
Post-Crash Period	0.1645	0.0822	0.0823	1.92 **

*Table 4 reports the mean differences of cumulative abnormal returns (CARs) of the target firms acquired by domestic buyers and those acquired by foreign buyers. T statistics and the relevant significance levels are reported at the last column. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.*

The results indicate that, in general, the targets acquired by domestic buyers earned significantly higher CARs compared with those acquired by foreign buyers. The difference is significant at the 5-percent level

for the post-crash period and at the 10-percent level for all three periods. The mean CARs of the targets acquired by foreign buyers is higher compared with that of the targets acquired by domestic buyers in the pre-crash period. However, the difference is not statistically significant.

We use multivariate linear regression analysis to further examine the effect of the time period, and whether the buyer is a domestic firm or a foreign firm, on target company CARs. The regression model used in the analysis is as follows:

$$(1)$$

$$CARs = \alpha_0 + \alpha_1(DOMESTIC\ BUYER\ DUMMY) + \alpha_2(CASH\ MERGER\ DUMMY)$$
$$+ \alpha_3(FRIENDLY\ MERGER\ DUMMY) + \alpha_4(FIRM\ SIZE) + \alpha_5(DEBT\ RATIO)$$
$$+ \alpha_6(PERFORMANCE) + \sum \alpha_i(Industry\ Dummy) + \sum \alpha_j(Year\ Dummy) + \varepsilon$$

CARs	=	Cumulative Abnormal Returns [-2,2] of target companies, the dependent variable in the regressions.
DOMESTIC BUYER DUMMY	=	1 if the buyer is a domestic firm, 0 otherwise.
CASH ACQUISITION DUMMY	=	1 if the target was paid cash, 0 otherwise.
FRIENDLY ACQUISITION DUMMY	=	1 if the acquisition was friendly, 0 otherwise.
FIRM SIZE	=	Natural log of total assets.
DEBT RATIO	=	Total debt divided by total assets.
PERFORMANCE	=	Return on Assets: Net income divided by total assets.

To assess the impact of the acquisition announcement on target returns, following Song and Walking (2000), the *CAR* variable is calculated as the cumulative abnormal returns over the five-day period [-2,2] surrounding the acquisition date. In order to capture the impact of the type of the buyer, we use a *DOMESTIC BUYER DUMMY* variable that equals 1 if the buyer is a domestic firm and zero otherwise.

Previous studies suggest that acquisition announcements tend to result in higher positive CARs for targets in cash mergers (see: Martin, 1996). To capture this effect, we use a *CASH ACQUISITION DUMMY* variable in our regressions that equals 1 if the target company is paid in cash and zero otherwise. Previous studies also suggest that acquisition announcements tend to result in higher positive CARs for targets in friendly mergers (see: Morck et al., 1988). To capture this effect, we use a *FRIENDLY ACQUISITION DUMMY* variable in our regressions that equals 1 if the acquisition is friendly and zero otherwise.

Our model also includes three additional control variables representing key firm characteristics that have been used in previous merger studies: *FIRM SIZE* (see: Servaes, 1991), the natural log of total assets, *DEBT RATIO* (see: Bruner, 1988), total debt divided by total assets, and *PERFORMANCE* (see: Lang et al., 1989), the return-on-assets ratio.

The regression results are presented in Table 5. The results with the full sample are presented in the first column of the table. The results for the three time periods are presented in the next three columns.

The regression coefficient of the *DOMESTIC BUYER DUMMY* has a positive sign and it is statistically significant at the 10-percent level for the post-crash period. This result indicates that the U.S. target firms that were acquired by domestic firms earned significantly higher abnormal returns, compared with those that were acquired by foreign firms, in the post-crash period.

The regression coefficient of the *FRIENDLY ACQUISITION DUMMY* has a negative sign and it is statistically significant at the 5-percent level for the post-crash period. This result indicates that U.S. target firms earned significantly higher abnormal returns in non-friendly acquisitions than in friendly acquisitions

the post-crash period. The regression coefficient of the dummy variable is also statistically significant at the 10-percent level with a negative sign for the full sample.

Table 5: Multivariate Linear Regression Analysis

Explanatory Variables	Dependent Variable = Cumulative Abnormal Returns (CARs) of the Targets			
	All Acquisitions (1)	Acquisitions Before the Crash (2)	Acquisitions During the Crash (3)	Acquisitions After the Crash (4)
Intercept	0.2789 * (1.79)	0.2623 (1.14)	0.1812 (0.58)	0.1080 (0.54)
Domestic Buyer Dummy	0.0490 `(1.38)	-0.0383 (-0.52)	0.0168 (0.16)	0.0810 * (1.77)
Cash Acquisition Dummy	0.0619 (1.34)	0.0050 (0.06)	0.1254 (0.75)	0.0690 (1.17)
Friendly Acquisition Dummy	-0.0762 * (-1.78)	-0.0583 (-0.82)	0.0128 (0.11)	-0.1375 ** (-2.25)
Firm Size	-0.0018 (-0.14)	0.0073 (0.26)	-0.0182 (-0.45)	-0.0047 (-0.29)
Debt Ratio	0.0436 (0.47)	0.0642 (0.41)	-0.1927 (-0.74)	0.0939 (0.72)
Performance	0.1930 (1.41)	0.1543 (0.78)	0.6016 (0.99)	0.2371 (1.24)
Dummies for years	yes	yes	yes	yes
Dummies for industries	yes	yes	yes	yes
Adjusted R^2	0.0252	0.1624	0.1788	0.2327
F Value	0.80	0.57	0.54	1.14
Sample Size	132	35	34	63

Table 5 presents the regression analysis results with cumulative abnormal returns (CARs) as the dependent variable. The model used for the regression is as follows: $CARs = \alpha_0 + \alpha_1(DOMESTIC\ BUYER\ DUMMY) + \alpha_2(CASH\ MERGER\ DUMMY) + \alpha_3(FRIENDLY\ MERGER\ DUMMY) + \alpha_4(FIRM\ SIZE) + \alpha_5(DEBT\ RATIO) + \alpha_6(PERFORMANCE) + \sum \alpha_i(Industry\ Dummy) + \sum \alpha_j(Year\ Dummy) + \varepsilon$. Coefficient estimates are displayed and the relevant t statistics are given in parenthesis underneath. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

The regression coefficients for the *CASH ACQUISITION DUMMY*, *FIRM SIZE*, *DEBT RATIO*, and *PERFORMANCE* variables are not statistically significant for the total sample and for none of the three periods. These results indicate that these variables were not significant determinants of abnormal target returns during the period studied.

CONCLUDING COMMENTS

Market reaction to corporate acquisitions is a popular research topic in finance. It has been well documented in the empirical literature that the stockholders of target companies earn positive abnormal market returns in corporate acquisitions. However, the effects of stock market crashes on corporate acquisitions have not been studied sufficiently.

The 2008 stock market crash is the worst stock market crash in U.S. history since the Great Depression. U.S. stock prices fall by 55 percent from October 2007 to March 2009. The lower market valuations of U.S. companies after the crash made them attractive acquisition targets for both domestic and foreign buyers. In this paper, we study the market reaction to acquisition announcements after the 2008 stock market crash with the event-study methodology.

Our findings indicate that, in the post-2008 crash period, the stockholders of U.S. target firms earned significantly higher abnormal market returns if the acquirer was a domestic firm compared with a foreign buyer. We also find that the abnormal market returns earned by the stockholders of U.S. target firms were significantly higher in non-friendly acquisitions than in friendly acquisition during this period.

REFERENCES

Akdogu, E., 2011. Value-maximizing managers, value-increasing mergers, and overbidding. *Journal of Financial and Quantitative Analysis*. Volume 46, Issue 1, Page 83.

Baek, J., J. Kang, and K. S. Park, 2004. Corporate governance and firm value: Evidence from the Korean financial crisis. *Journal of Financial Economics*. Volume 71, Issue 2, Pages 265-313.

Becher, D. A., J. H. Mulherin, and R A. Walkling, 2012. Sources of gains in corporate mergers: Refined tests from a neglected industry. *Journal of Financial and Quantitative Analysis*, Volume 47, Issue 1, Page 57.

Bradley, M., A. Desai, E. H. Kim, 1988. Synergistic Gains from Corporate Acquisitions and Their Division Between The Stockholders Of Target And Acquiring Firms. *Journal of Financial Economics*, Volume 21, Issue 1, Pages 3–40.

Bruner, R. F., 1988. The Use of Excess Cash and Debt Capacity as a Motive for Merger. *Journal of Financial and Quantitative Analysis,* Volume 23, Issue 2, Pages 199-217.

Dodd, P. and R. S. Ruback, 1977. Tender Offers And Stockholder Returns: An Empirical Analysis. *Journal of Financial Economics*, Volume 5, Issue 3, Pages 351–373.

Harford, J., 1999, Corporate Cash Reserves And Acquisitions. *Journal of Finance*, Volume 54, Pages 1969-97.

Jensen, M. C. and R. S. Ruback, 1983. The Market For Corporate Control: The Scientific Evidence. *Journal of Financial Economics*, Volume 11, Issues 1–4, Pages 5–50.

Jensen, M. C. 1986. Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, Volume 76, Issue 2, Page 323.

Lang, L., R. Stulz, R. Walkling, 1989. Managerial Performance, Tobin's Q, and The Gains From Successful Tender Offers. *Journal of Financial Economics*, Volume 24, Pages 137–154.

Lang, L., R. Stulz, R. Walkling, 1991. A Test Of The Free Cash Flow Hypothesis: The Case Of Bidder Returns. *Journal of Financial Economics*, Volume 29, Issue 2, Pages 315–335.

Louis, H., 2005. Acquirers' Abnormal Returns and The Non-Big 4 Auditor Clientele Effect. *Journal of Accounting and Economics*, Volume 40, Issues 1–3, Pages 75–99.

Mariana, V., 2013. Mergers And Acquisitions Waves From The European Union Perspective. *Annals of Faculty of Economics*. Volume 1, Issue 2, Pages 272-283.

Martin, K. J., 1996. The Method of Payment in Corporate Acquisitions, Investment Opportunities, and Management Ownership. *Journal of Finance,* Volume 51, Pages 1227-1246.

Merced, D. L., Michael J., and J. Cane, 2011. Confident Deal Makers Pulled Out Checkbooks in 2010. New York Times, Mergers & Acquisitions, January 3.

Morck, R., A. Shleifer, and R. W. Vishny, 1988, *Characteristics of Targets of Hostile and Friendly Takeovers. Corporate Takeovers: Causes and Consequences* (University of Chicago Press, Chicago, IL).

Morck, R., A. Shleifer, and R. W. Vishny. 1988. Management Ownership And Market Valuation: An Empirical Analysis. *Journal of Financial Economics*, Volume 20, Issue 3, Pages 293-315.

Morck, R., A. Shleifer, and R. W. Vishny. 1990. Do Managerial Objectives Drive Bad Acquisitions? *Journal of Finance*, Volume 45, Issue 1, Pages 31-48.

Offenberg, D., M. Straska, and H. G. Waller, 2012. Who gains from buying bad bidders?. Journal of Financial and Quantitative Analysis. Volume 106, Issue 2, Pages 247-261.

Roll, R. 1986. The Hubris Hypothesis of Corporate Takeovers. *Journal of Business*, Volume 59, Issue 2, Pages 197-216.

Servaes, H.,1991. Tobin's Q and The Gains from Takeovers. *Journal of Finance*, Volume 46, Pages 409-419.

Song M. and R. Walking, 2000. Abnormal Returns To Rivals Of Acquisition Targets : A Test Of The 'Acquisition Probability Hypothesis'. *Journal of Financial Economics*, Volume 55, Issue 2, Pages 143-171.

Starks, L. T. and K. D. Wei., 2013. Cross-Border Mergers and Differences in Corporate Governance. *International Review of Finance*. Volume 13, Issue 3, Pages 265-297.

Stulz, R.M., R. A. Walkling, M. H. Song, 1990. The Distribution Of Target Ownership And The Division Of Gains In Successful Takeovers. *Journal of Finance*, Volume 45, Pages 817–833.

Sudarsanam, S., P. Holl, A. Salami, 1996. Shareholder Wealth Gains In Mergers: Effect Of Synergy And Ownership Structure. *Journal of Business Finance and Accounting*, Volume 23, Issue 5-6, pages 673–698.

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