Target Firm Characteristics: What Do Investors Value During Recessions?

Christi Wann
University of Tennessee at Chattanooga

Nai H. Lamb
University of Tennessee at Chattanooga

Prior merger and acquisition (M&A) literature assumes that investors respond to deal announcements in the same way, regardless of the business cycle. The results of this study provide unique insight into investor reactions to M&A activity during recessions when resources are constrained. The results show that target cumulative abnormal returns are 3.53% to 5.72% significantly higher during recessions than in non-recessions. During recessions, the market rewards target firms with smaller market capitalization, lower risk, and lower book-to-market ratios at premiums of 5.68%, 5.65%, and 7.26%, respectively over those earned in non-recessions.

INTRODUCTION

Diversification is considered a challenging, yet invaluable corporate-level strategy; thus it remains one of the most influential and debated research topics (Bergh, 2001; Wan, Hoskisson, Short, and Yiu, 2011). Mergers and acquisitions (M&As) are an important method to achieve diversification in a firm (Hitt, Freeman, and Harrison, 2001). Financial economists, in general, have supported the efficient market hypothesis (e.g., Fama, 1970), and the central thesis is that investors are rational and can consider any market conditions (Lee and Verbrugge, 1996). In this vein, the market is "efficient" and investors are able to determine the value of the firms after M&As are announced without any bias. However, research has suggested that this view may be inaccurate (Zajac and Westphal, 2004; Zuckerman, 2004).

Many studies have been conducted to examine the influence of M&As on stock price (Bruner, 2002; McQueen and Roley, 1993; Shleifer and Vishny, 2003). Traditional M&A studies, however, generally overlooked the link between M&A announcements and the underlying economic conditions that are present at the announcement. As a result, little research has examined target firm performance across the business cycles. This paper addresses two unanswered questions. First, are abnormal returns to M&A deals state-dependent relative to the business cycle? Second, which characteristics of target firms are rewarded by investors during recessions? The paper uses an event study methodology to examine the relationship between firm characteristics and stock returns related to M&A activities across the business cycle. Specifically, the study examines whether state-dependent target cumulative abnormal returns are related to risk, book-to-market, and size. A sample of M&A deals from 1971 to 2013 is used as a proxy for one of the most important investment decisions that a firm can make, which has implications for the firm's future performance.

Mergers and acquisitions represent a reallocation of resources. Such decisions are important economically and their relationship to the business cycle gives us insight into strategic priorities under

constrained resources. Therefore, investor reactions to M&A activity should be more informative during the recessions which represent times of constrained resources. Most research studies involving M&A's have studied investor reactions absent the significant context that can be provided by recessions.

In calm economic periods, due diligence is likely to be upheld on the part of acquiring firms resulting in lower failure rates. During recessions, due diligence may be neglected as strong firms view their smaller counterparts as opportunities to obtain larger portions of market share at bargain prices despite potential difficulties in combining organizational structure and operations. In particular, bankruptcy acquisition deals are completed very quickly compared to other deals, especially during economic recessions (Carapeto, Moeller, and Faelten, 2009). In contrast, financially strong companies may strategically wait for recessions leading to increased acquisitions. Dobbs, Karakolev, and Malige (2002) found that top companies made 63% fewer deals during economic growth periods. However, during recessions, these same companies used excess cash for acquisitions that were actually larger in size than deals made by other companies during non-recessions.

Potential target companies are typically financially attractive small to midsize companies that may have "strong fundamentals, yet they face difficulty gaining access to capital markets" (Dobbs, Giordano, and Wenger, 2009). Companies most at risk are those with "weak cash flows, high funding needs, poor ratings, high cyclical risks, or unstable investor bases" (Dobbs, Giordano, and Wenger, 2009). Market interpretations of investor-perceived merger success can be captured by studying the abnormal returns of target firms using size, risk, and book-to-market characteristics.

In recessions, target firms experience positive cumulative abnormal returns (CARs) that range from 3.53% to 5.72% larger than CARs gained during non-recessions. More specifically, the market rewards M&As during recessions involving firms with smaller market capitalization, lower risk, and lower book-to-market ratios at premiums of 5.68%, 5.65%, and 7.26%, respectively over those earned in non-recessions. Up to 5 days after the announcement, both low beta target firms and low book-to-market firms experience significantly more positive returns during recessions than during non-recessions.

In Section 2, relevant literature is reviewed and recent trends are discussed. Section 3 describes the sample and Section 4 discusses the methodology. In Section 5, the hypotheses are empirically tested and the results are discussed. Finally, in Section 6, the authors conclude with implications, limitations, and directions for future research.

LITERATURE REVIEW

Lambrecht (2004) proposed a theoretical model where the best time to merge is in a rising stock market, thus resulting in a pro-cyclical nature of M&A activity. There have been six documented merger waves since 1895 which all ended with market crashes or recessions (Martynova and Renneboog, 2005; Dieudonne, Cretin, and Bouacha, 2014; Maksimovic and Philips, 2001; Andrade and Stafford, 2004; Harford, 2005). There is a positive relationship between merger waves and acquirer stock overvaluations (Jovanovic and Rousseau, 2001). Further, firms that make acquisitions during stock overvaluations tend to underperform in the long run, possibly due to managerial herding (Bouwman, Fuller, and Nain, 2009).

In 2015, third quarter early-stage M&A activity in North America has decreased due to uncertainty related to interest rate increases and what is viewed as a lack of a clear monetary policy (Porzio, 2015). There are also conflicting economic signals. Although the U.S. economy appears to be growing, the economic slowdown in China and the January 2016 dip in equity markets have taken a toll on investor sentiment. Out of 680 North American dealmakers surveyed during the 4th quarter of 2015, 48% reported being "optimistic about the current deal environment" compared to 43% in the previous quarter (Intralinks©, 2016). Prior to this survey, Deloitte's M&A Trends Report on 2015 expectations finds that 85% of surveyed corporate leaders expect sustained or increased M&A activity. And, 94% of private equity investors predict average to very high deal activity. These high expectations are attributed to available excess cash, good stock market conditions, a growing economy, and low interest rates.

Ironically, nine out of ten corporate survey respondents and 96% of private equity investors said they didn't achieve the intended return on their M&A investments (Deloitte, 2015). Reasons cited for

underperformance include "economic forces, market forces, gaps in execution and integration, and failure to achieve synergy targets." Effective deals consisted of "accurate target valuation based upon revenue forecasts, expense expectations, and capital needs." Further, effective deals contained "effective integration, due diligence, and responsible growth issues." Prior theoretical research proposes that acquisitions made during market prosperity are lower in quality than acquisitions made during economic downturns (Rhodes-Kropf and Viswanathan, 2004).

Ding and Rahaman (2010) find that firms increase their risks with each consecutive merger or acquisition during times of economic prosperity. This is attributed to firms making deals based upon overvalued stock instead of deals that are based upon synergies. These additional risks remain dormant during non-recessions but expose the company to its true position of inefficiency. In fact, recessionary time periods can have a "cleansing" effect on former acquirers who were previously hidden in the crowd by causing them to exit due to bad performance. Most former acquirer firms that "exit" are acquired themselves during subsequent recessions. In contrast, acquiring firms that make deals during recessions experience good performance and remain viable in subsequent recessions.

Although M&A activities tend to occur less often in recessions (Cools, Gell, Kengelbach, and Roos, 2007), scholars argue that M&As in recessions often result in better deals (Rhodes and Stelter, 2009). During recessions, firm values drop. Thus, the acquiring firm may be able to buy the target firm at a discount (from its actual market value). There is mixed evidence regarding whether M&A announcements have the same influence for both the acquirer firms and target firms in recessions and non-recessions. For instance, Goergen and Renneboog (2004) find that M&A announcements have a positive impact on target firms' stock prices, but have no real impact on acquirer firm's stock price during non-recessions. Ishii and Xuan (2014) find that target firms experience roughly 20% abnormal returns surrounding merger announcements. Similarly, Wang and Xie (2009) also find an average target cumulative abnormal return of 21.52% within 11 days surrounding the announcement date. Bhagat, Dong, Hirshleifer, and Noah, (2005) study M&A stock returns over various time periods and find that average target cumulative abnormal returns have been found to range from 17.96% (July 1962-June 1968) to 44.78% (April 2000-December 2001). Other scholars, however, find negative results for acquirer firm's stock price (Moeller, Schlingemann, and Stulz, 2005). Acquiring firms tend to lose value in M&As (King, Dalton, Daily, and Covin, 2004), while gains accrue to the target firm's shareholders (Ruback and Jensen, 1983).

There are compelling reasons to expect M&A announcements to be perceived differently in different phases of the business cycle. For instance, Fama and French (1989) find that expected returns for stocks and bonds are higher when economic conditions are weak (e.g., during recessions) and vice versa. Distressed firms are more likely to be sold during recessions (Baird and Rasmussen, 2003). There has been evidence that M&As can be affected by a recession (Aguiar and Gopinath, 2005) and Gaughan (2011) finds that the recession of 2008 caused a decline in most firms' M&A activities. When economic conditions are weak and resources are constrained, firms are more likely to experience performance problems. Jensen (1991) argues that M&As can be an effective tool to help firms in financial distress. Even though M&As can be a tool for firms to cope with recessions, few studies have yet examined the impact of M&As on stock price in recessions.

In summary, scholars have not fully investigated whether M&A announcements have a positive impact on a target firm's stock price across business cycles. Investors should react differently to M&A announcements in different economic cycles due to changing preferences and expectations.

DATA

The sample includes firms with annual data from the Thompson One database from January 1, 1971, to December 31, 2013. The Thompson One database is only used to collect M&A dates. The sample excludes M&As that are incomplete, involved share repurchases, and lacked CRSP daily stock return data. The entire sample consists of 4,049 target firms and 28,050 acquirer firms. There are fewer target firms because many of these firms were not listed on a U.S. stock exchange. Business cycles are defined by the National Bureau of Economic Research (NBER).

Table 1 reports descriptive statistics for M&A announcements by business cycle phase and merger type. There are 3,520 firms involved in M&As during recessions versus a total of 28,579 firms during non-recessions. The percentage of firms involved in M&A activities during recessions and non-recessions is 11% and 89%, respectively. As commonly expected, merger activities are reduced during economic downturns (Aguiar and Gopinath, 2005). The number of sample target firms is 391 or 12.6% of the sample. The number of acquirer firms is 28,050 or 87.4% of the sample. The limited availability of target stock return data is due to the lack of publicly traded shares for a majority of these firms.

TABLE 1
DESCRIPTIVE STATISTICS ON M&A ANNOUNCEMENTS DURING RECESSIONS AND NON-RECESSIONS

	Target	Acquirer	Total	Percentage
Recessions	391	3,129	3,520	11.0%
Non-recessions	3,658	24,921	28,579	89.0%
Total	4,049	28,050	32,099	100.0%
Percentage	12.6%	87.4%	100.0%	

METHODOLOGY

Daily cross-sectional expected returns predicted by the Fama-French (Fama and French, 1993) three-factor model are estimated using the following equation:

$$R_{i,t} - Rf_t = \alpha_i - \beta_i (Rm_t - Rf_t) - \gamma_i \, SMB_t - \delta_i \, HML_t + \varepsilon_{i,t} \quad (1)$$

where t = -100, …., -11. The symbol t is the day relative to the announcement, $R_{i,t}$ is stock i's return, Rf_t is a risk-free rate, and ($Rm_t - Rf_t$, SMB_t, HML_t) represents the market risk premium, firm size, and book-to-market factors in period t, respectively. Since there is no standard agreement on the length of the estimation period, we follow Cox and Peterson (1994) who use 100 days. We use short-horizon tests because they are the "cleanest evidence we have on efficiency" (Fama, 1991, p.1602). Khotari and Warner (2008) find that when the length of the event window is short (less than 12 months) specification is good. Further, they find that power is high when abnormal performance is concentrated in the event window, such as in M&A activities. Finally, the sensitivity of power to the sample size and firm characteristics is high with shorter event windows.

Fama and French (1992) found that small market capitalization and high book-to-market firms tend to outperform the market historically. The addition of these two factors to the traditional CAPM provides significantly better explanations of the variations in stock returns. The value-weighted return on all NYSE, AMEX, and NASDAQ stocks minus the one-month T-bill rate is represented by $Rm_t - Rf_t$. The historical premiums in returns on small market capitalization firms are captured by SMB (i.e. small minus big). The historical premiums of high book-to-market returns are captured by HML (i.e. high minus low). Abnormal returns are calculated using the estimated coefficients with the following equation for t= -5, …, 0, 1, …, 5:

$$AR_{it} = R_{i,t} - Rf_t - \hat{\alpha}_i - \hat{\beta}_i (R_{mt} - Rf_t) - \hat{\gamma}_i \, SMB_t - \hat{\delta}_i \, HML_t \quad (2)$$

Next, excess cumulative abnormal returns (CARs) are calculated for each firm over event time (t=-5, …, 0, 1, …, 5):

$$CAR_t = \sum_{t=-5}^{5} AR_{i,t} \quad (3)$$

EMPIRICAL RESULTS

There is a possible context-dependent market reaction to target and acquirer firms during recessions versus non-recessions. The first research question asks: Are abnormal returns to M&A deals state-dependent relative to the business cycle? Prior M&A literature assumes that investors respond to deal announcements in the same way, regardless of the business cycle. However, other recent literature also confirms finding a difference in stock returns during "good times" and "bad times" (Soroka, 2006; Veronesi, 1999). McQueen and Roley (1993) examine good news and bad news in media releases and find differences in stock market reactions. Specifically, good economic news has a positive effect on stock prices during a weak economy, but that same news has a negative effect during economic prosperity. The unexpected "good news" during a down economy increases future cash flow estimations, and therefore stock prices. The study examines if this effect holds true for M&A announcements during recessions. Since target firms experience premiums, it is expected that target firms will experience larger positive abnormal returns during recessions than during non-recessions.

To answer this question, the sample is segregated into those firms that are targets and acquirers during recessions and non-recessions. Since acquiring firms typically experience very small or even negative returns (Moeller, Schlingemann, and Stulz, 2004), the research questions are not focused on these firms. However, this paper does provide the results in Panel B of Table 2.

TABLE 2
EXCESS CUMULATIVE ABNORMAL RETURNS BY ECONOMIC STATE

Days Relative to AD	**0**	**1**	**5**
A. Target Firms			
I. Non-Recession (A1)			
CAR (%) (-5, t)	15.82%	20.06%	20.17%
p-value *(n= 3,568)*	0.00	0.00	0.00
II. Recession (A2)			
CAR (%) (-5, t)	19.35%	25.54%	25.89%
p-value *(n=391)*	0.00	0.00	0.00
Difference in CARs (A2) - (A1)	3.53%	5.48%	5.72%
p-value	0.05	0.00	0.00
B. Acquiring Firms			
I. Non-Recession (B1)			
CAR (%) (-5, t)	0.16%	0.33%	0.38%
p-value *(n= 24,921)*	0.00	0.00	0.00
II. Recession (B2)			
CAR (%) (-5, t)	0.04%	0.09%	0.17%
p-value *(n=3,129)*	0.76	0.52	0.36
Difference in CARs (B2) - (B1)	-0.12%	-0.24%	-0.22%
p-value	0.37	0.11	0.25

The cumulative abnormal returns [-5,t] are examined across non-recessions and recessions. The results in Panel A of Table 2 indicate that target firms experience large positive cumulative abnormal returns in both phases of the business cycle. This is consistent with the prior literature (Goergen and Renneboog ,2004). However, the abnormal returns across the business cycle are significantly different. In particular, target firms during recessions experience an extra 3.53% to 5.72% in positive cumulative abnormal returns than target firms during non-recessions for days 0 through 5 after the announcement. In

other words, it appears that good news in recessions (bad times) is worth more than good news in non-recessions (good times). Also, the trend for the difference in cumulative abnormal returns increases as the time from the announcement increases. Therefore, the results show that investors respond differently to M&A announcements based upon the phase of the business cycle. During recessions, target firm CARs are significantly larger.

Although acquirer firms are not emphasized in the study, acquirers do experience very small positive cumulative abnormal returns across the business cycle phases. The CARs for acquirer firms (Panel B) during recessions are smaller than those during non-recessions. However, these small returns are close to zero and not significantly different from each other. Therefore, the market does not appear to react differently to acquirer firms based upon the phase of the business cycle or the days relative to the announcement. Therefore, this paper does not concentrate on examining acquirer returns.

Target Firm Characteristics and Abnormal Returns

The second research question posed is: Which characteristics of target firms are rewarded by investors during recessions? Thus, the research question is examined in terms of the target firm's size, risk, and book-to-market ratio.

Are state-dependent target returns related to firm size?

The state-dependent nature of target firm CARs should be related to firm size. In Table 3, target firms are separated into two size groups (small and large) at the median market capitalization value at the beginning of the announcement year. Specifically, it is expected that small market capitalization firms will experience larger CARs than large market capitalization firms during both non-recessions and recessions. Small firms suffer from information deficiencies due to the neglected firm effect and pricing inefficiencies due to a lack of information (Arbel, Carvell, and Strebel (1983). Further, both small and large market capitalization firms should experience larger CARs during recessions than during non-recessions consistent with the overall results found in Table 2.

Table 3 reveals that small market capitalization firms (Panel A) experience larger positive CARs during recessions than in non-recessions. Small firm CARs increase monotonically with days relative to the announcement. Further, there are significant differences in the CARs for small market capitalization firms across the business cycle. The excess CARs range from 5.42% to 7.45% over days 0 to 5 relative to the announcement day during recessions. These findings are consistent with the findings in Table 2. The results do not show strong evidence for a difference in CARs for large firms across economic states. Therefore, the results obtained in Table 2 may be influenced by small market capitalization firms.

During recessions, small firms earn a 5.68% premium over large firms on the announcement day at the 10% significance level (Panel C). Premiums earned by small firms during both recessions and non-recessions could also be explained by the hubris hypothesis (Roll, 1986). The hubris hypothesis explains that the bidding firm pays too much for the target, due to pride. Additionally, this finding is consistent with the neglected firm effect and lack of analyst coverage. The differences between small and large firm CARs are fairly large (1.07% to 5.68%) during recessions. However, they are only statistically different on the announcement day.

Table 3 confirms that there is a significant difference between the CARs of small firms and large firms during non-recessions (Panel D). On days 0 and 1 relative to the announcement day, small firms earn an extra 2.65% and 2.07%, respectively. Moeller, Schlingemann, and Stulz (2004) also find that smaller firms experience larger abnormal returns than large firms by about 2.24% during the announcement day.

Are state-dependent target cumulative abnormal returns related to risk?

The relative degree of a stock's riskiness could be perceived differently by market participants during different phases of the economic cycle. In Table 4, firms are split into two risk groups (low and high) based on the median market beta estimated in the event study regressions. Again, cumulative abnormal returns that accrue to both high and low-risk target firms in recessions and non-recessions. Since beta is a

measure of systematic risk, such risk cannot be managed and it is determined by market trends. Therefore, during economic downturns, higher CARs for both low and high beta target firms should occur. However, low beta target firms should experience higher CARs than high beta target firms during recessions and non-recessions. This is expected because the market perception of acquiring a high-risk target firm is possibly more value-destroying than a low-risk target firm.

TABLE 3
CUMULATIVE ABNORMAL RETURNS BY TARGET FIRM SIZE

Days Relative to AD	**0**	**1**	**5**
A. Small Cap Target Firms			
I. Non-Recession (A1)			
CAR (%) (-5, t)	17.13%	21.19%	21.10%
p-value *(n= 1,994)*	0.00	0.00	0.00
II. Recession (A2)			
CAR (%) (-5, t)	22.55%	28.07%	28.55%
p-value *(n=219)*	0.00	0.00	0.00
Difference in CARs (A2) - (A1)	5.42%	6.88%	7.45%
p-value	0.02	0.01	0.00
B. Large Cap Target Firms			
I. Non-Recession (B1)			
CAR (%) (-5, t)	14.48%	19.12%	19.55%
p-value *(n= 1,529)*	0.00	0.00	0.00
II. Recession (B2)			
CAR (%) (-5, t)	16.87%	24.34%	24.56%
p-value *(n=161)*	0.00	0.00	0.00
Difference in CARs (B2) - (B1)	2.39%	5.22%	5.01%
p-value	0.36	0.10	0.13
C. Difference in CARs (A2) - (B2)	5.68%	3.73%	3.99%
p-value	0.10	0.36	0.34
D. Difference in CARs (A1) - (B1)	2.65%	2.07%	1.55%
p-value	0.00	0.01	0.10

The results in Table 4 indicate that low beta firms (Panel A) experience significantly different CARs for days 0 to 5 relative to the announcement day based upon the economic phase. The difference in CARs are 6.81%, 9.07%, and 8.46% on days 0, 1, and 5, respectively, relative to the announcement date. High beta firms experience no difference in returns based upon the economic cycle (Panel B). Therefore, it appears that the market rewards M&As involving relatively lower risk firms significantly more during recessions than in non-recessions. Also, note that the CARs for low beta stocks during recessions are roughly 5% higher than the overall CARs reported during recessions in Table 2.

There is a statistical difference between the CARs for low and high beta target firms during recessions at the 10% level during Day 0 and Day 1 (Table 4 Panel C). On the announcement day and the day after, low beta stocks earn a higher premium than high beta stocks of 5.65% and 6.96%, respectively. Market participants reward low-risk targets during recessions more favorably than high-risk firms possible due to the decreased probability of a value-destroying deal.

TABLE 4
CUMULATIVE ABNORMAL RETURNS BY ECONOMIC STATE AND RISK

Days Relative to AD	**0**	**1**	**5**
A. Low Beta Target Firms			
I. Non-Recession (A1)			
CAR (%) (-5, t)	15.67%	20.33%	20.79%
p-value *(n= 1,994)*	0.00	0.00	0.00
II. Recession (A2)			
CAR (%) (-5, t)	22.48%	29.40%	29.25%
p-value *(n=219)*	0.00	0.00	0.00
Difference in CARs (A2) - (A1)	6.81%	9.07%	8.46%
p-value	0.00	0.00	0.00
B. High Beta Target Firms			
I. Non-Recession (B1)			
CAR (%) (-5, t)	16.63%	20.43%	20.10%
p-value *(n= 1,529)*	0.00	0.00	0.00
II. Recession (B2)			
CAR (%) (-5, t)	16.83%	22.44%	23.50%
p-value *(n=161)*	0.00	0.00	0.36
Difference in CARs (B2) - (B1)	0.20%	2.01%	3.40%
p-value	0.93	0.48	0.24
C. Difference in CARs (A2) - (B2)	5.65%	6.96%	5.75%
p-value	0.09	0.08	0.15
D. Difference in CARs (A1) - (B1)	-0.96%	-0.10%	0.69%
p-value	0.23	0.90	0.45

Finally, there is no statistical difference between the returns of high and low beta target firms during non-recessions (Table 4 Panel D). Therefore, it appears that market perceptions of acquisitions based upon target firm risk are state-dependent only in the case of recessions.

Are state-dependent target abnormal returns related to book-to-market?

The previously established state-dependent nature of target firm CARs should also be related to book to market ratios. Table 5 reports results for firms sorted into high and low book-to-market (BM) ratio (relative to the median at the beginning of the year) categories to examine differences in CARs for target firms during recessions and non-recessions. During recessions, low BM firms should experience higher CARs than high BM firms if the market perceives that these firms have higher potential future cash flows. However, if market participants seek safe, "value" investments, then high BM firms should experience higher CARs during recessions than low BM firms. This is based on the idea that value firms are a safer bet because they are typically firms with more reliable cash flows than those of growth firms. Growing firms have more uncertainty regarding their future growth rates in earnings and dividends. Finally, both low and high BM firms should experience larger CARs during recessions than during non-recessions, consistent with Table 2. In non-recessions, high BM firms (value) should experience larger CARs relative to low BM firms (growth), consistent with the findings of a value premium by Fama and French (1992).

Although the authors expected both high (Table 5 Panel A) and low (Table 5 Panel B) market to book firms to experience higher CARs during recessions, the results indicate that this is only true for low BM firms. Low BM firms experience significantly different CARs for days 0 to 5 relative to the announcement day based upon the economic phase. The differences in CARs range from 5.28% to 7.78% from days 0 to 5. Therefore, it appears that the market rewards M&As involving firms with high growth opportunities (low BM) significantly more during recessions than in non-recessions, consistent with prospect theory.

TABLE 5
CUMULATIVE ABNORMAL RETURNS BY ECONOMIC STATE AND BOOK-TO-MARKET

Days Relative to AD	**0**	**1**	**5**
A. High B/M Target Firms			
I. Non-Recession (A1)			
CAR (%) (-5, t)	16.03%	20.16%	20.62%
p-value *(n= 1,994)*	0.00	0.00	0.00
II. Recession (A2)			
CAR (%) (-5, t)	16.46%	24.49%	27.98%
p-value *(n=219)*	0.00	0.00	0.00
Difference in CARs (A2) - (A1)	0.43%	4.33%	7.36%
p-value	0.85	0.12	0.01
B. Low B/M Target Firms			
I. Non-Recession (B1)			
CAR (%) (-5, t)	16.15%	20.63%	20.38%
p-value *(n= 1,529)*	0.00	0.00	0.00
II. Recession (B2)			
CAR (%) (-5, t)	23.72%	28.41%	25.66%
p-value *(n=161)*	0.00	0.00	0.00
Difference in CARs (B2) - (B1)	7.57%	7.78%	5.28%
p-value	0.00	0.01	0.06
C. Difference in CARs (A2) - (B2)	-7.26%	-3.92%	2.32%
p-value	0.03	0.32	0.57
D. Difference in CARs (A1) - (B1)	-0.12%	-0.47%	0.24%
p-value	0.88	0.58	0.80

There is a statistical difference between the CARs for low and high BM target firms during recessions at the 1% level during Day 0 and Day 1 (Panel C). During the initial announcement, low BM (growth) stocks earn a higher premium than high BM (value) stocks. The differences in CARs are large and range from -7.26% to 2.32%. Investors appear to react positively to the acquisition of growth firms (low BM) more than value firms (high BM). In general, this can be attributed to the higher future anticipated returns provided by growth firms, if only in the short run. Finally, there is no statistical difference between the returns of high and low BM target firms during non-recessions (Panel D).

CONCLUSION

This study is novel in that it examines the effects of M&A announcements and target firm characteristics on abnormal stock returns during recessions and non-recessions. The study finds a significant difference between returns accruing to target firms across business cycles. In answer to the first question, abnormal returns to M&A deals are indeed state-dependent relative to the business cycle. Investors' responses to M&A announcements are context-dependent because target firms experience an additional 3.53% to 5.72% in positive cumulative abnormal returns during recessions than in non-recessions over a 5-day post-announcement time period.

The second question was: Which characteristics of target firms are rewarded by investors during recessions? Smaller size, lower beta, and a higher book-to-market (growth firms) tend to be important firm characteristics to investors during economic downturns. The results suggest that investors value lower risk deals which can be completed quickly while offering higher future growth opportunities.

During recessions, small firms earn a 5.68% premium over large firms on the announcement day as compared to a 2.65% premium over large firms during non-recessions. In accordance with the first research question, small firms experience larger positive CARs during recessions than non-recessions, ranging from 5.42% to 7.45% over days 0 to 5 relative to the announcement day. The study does not find strong evidence for a difference in CARs for large firms across economic states. Small firms tend to come with more information asymmetry, but they are much less expensive and typically quicker to close the deal on and integrate into the acquirer.

During recessions, low beta target firms earn a 5.65% to 6.96% higher premium than high beta target firms during the initial announcement period. Only low beta target firms experience 6.81% to 9.07% higher CARs during recessions than non-recessions. During non-recessions, there is no statistical difference between the returns of high and low beta target firms. High beta target firms do not experience different CARs based upon the economic state.

During recessions, low BM target firms earn a 7.26% higher premium than high BM target firms on the announcement day. Consistent with the findings of the first research question, low BM target firms experience 5.28% to 7.78% higher CARs during recessions than in non-recessions from days 0 to 5 relative to the announcement date. During non-recessions, there is no statistical difference between the returns of high and low BM target firms.

This paper is not without limitations. First, archival data is utilized. While the study provides a better understanding of the resulting stock market returns, investor survey results may reveal different perceptions as to what information is valued more in M&A activity during different business cycles. Further, this study reports short run stock returns and provides no insight as to the long run success of M&A activity conducted during recessions.

Future research will involve studying the long run performance of M&As occurring during recessions and non-recessions. Target firms acquired during recessions may improve acquirer firm performance more than those in non-recessions. This finding could be due to the positive signaling effects of the true worth of such target firms provided by making such a costly transaction in the midst of economic downturns. Additionally, the study of cross-industry versus same-industry acquisitions across the business cycles will also prove interesting.

REFERENCES

Aguiar, M., and Gopinath, G. (2005). Fire-sale foreign direct investment and liquidity crises. *Review of Economics and Statistics*, 87, (3), 439-452.

Andrade G., Stafford E., (2004). Investigating the economic role of mergers. *Journal of Corporate Finance*, 10, 1-36.

Arbel, A., Carvell, S., and Strebel, P. (1983). Giraffes, institutions, and neglected firms. *Financial Analysts Journal*, 39 (3), 57-63.

Baird, D. G., and Rasmussen, R. K. (2003). Chapter 11 at twilight. *Stanford Law Review*, 56, 673-699.

Bergh, D. D. (2001). Diversification strategy research at a crossroads: Established, emerging and anticipated paths. *The Blackwell handbook of strategic management*, 362-383.

Bhagat, S., Dong, M., Hirshleifer, D., and Noah, R. (2005). Do tender offers create value? New methods and evidence. *Journal of Financial Economics*, 76, 3-60.

Bouwman, C.H.S., K. Fuller, and A.S. Nain. (2009). Market valuation and acquisition quality: Empirical evidence. *Review of Financial Studies*, 22, 633-679.

Bruner, R. F. (2002). Does M&A pay? A survey of evidence for the decision-maker. *Journal of Applied Finance*, 12, (1), 48-68.

Carapeto, M., Moeller, S., and Faelten, A. (2009). The good, the bad, and the ugly: A survival guide to M&A in distressed times. Cass Business School, London. White Paper.

Cools, K., Gell, J., Kengelbach, J., and Roos, A. (2007). *The brave new world of M&A: How to create value from mergers and acquisitions*. Boston: Boston Consulting Group.

Cox, D. R. and Peterson, D. R. (1994). Stock returns following large one-day declines: Evidence on short-term reversals and longer-term performance. *Journal of Finance*, 49, 255-267.

Deloitte. (2015). M&A Trends Report 2015. Available at: http://www2.deloitte.com/us/en/pages/mergers-and-acquisitions/articles/ma-trends-report-2015.html

Dieudonne, S., Cretin, F., and Bouacha, S., (September 17, 2014). M&A activity: Where are we in the cycle? Available at SSRN: http://ssrn.com/abstract=2504412 or http://dx.doi.org/10.2139/ssrn.2504412

Ding, D. and Rahaman, M. M., (June 26, 2010). Booms, busts, and firm exit: Evidence from M&A activities across business cycles. Available at SSRN: http://ssrn.com/abstract=1630909 or http://dx.doi.org/10.2139/ssrn.1630909

Dobbs, R. F., Giordano, M. and Wenger, F. (2009, February). The CFO's role in navigating the downturn. *McKinsey & Company*, Available at: http://www.mckinsey.com/insights/corporate_finance/the_cfos_role_in_navigating_the_downturn

Dobbs, R. F., Karakolev, T., and Malige, F. (2002). Learning to love recessions. *The McKinsey Quarterly*, Available at: https://www.questia.com/library/journal/1G1-90701250/learning-to-love-recessions-current-research

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25, (2), 383-417.

Fama, E.F. (1991). Efficient capital markets: II. *Journal of Finance*, 46, 1575-1617.

Fama, E. F., and French, K. R. (1989). Business conditions and expected returns on stocks and bonds. *Journal of Financial Economics*, 25, (1), 23-49.

Fama, E. F., and French, K. R. (1992). The cross□section of expected stock returns. *The Journal of Finance*, 47, (2), 427-465.

Fama, E. F., and French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33, (1), 3-56.

Gaughan, P. A. (2011). *Mergers, acquisitions, and corporate restructurings*, New Jersey: John Wiley and Sons, Inc.

Goergen, M., and Renneboog, L. (2004). Shareholder wealth effects of European domestic and cross□border takeover bids. *European Financial Management*, 10, (1), 9-45.

Harford, J. (2005). What drives merger waves? *Journal of Financial Economics*, 77, (3), 529-560.

Hitt, M. A., Freeman, R. E., and Harrison, J. S. (2001). *The Blackwell handbook of strategic management*. Oxford: Blackwell Business.
Ishii, J., and Xuan, Y., (2014). Acquirer-target social ties and merger outcomes. *Journal of Financial Economics*, 112, (3), 344-363.
Intralinks©. (2016). Intralinks© Deal Flow Predictor. Available at: https://www.intralinks.com/resources/publications/deal-flow-predictor-2016q2
Jensen, M. C. (1991). Corporate control and the politics of finance. *Journal of Applied Corporate Finance*, 4, (2), 13-33.
Jovanovic, B., and Rousseau, P. (2001). Merger and technological change: 1885-1998. Working Paper No. 01-W16, Vanderbilt University.
Khotari, S.P., and Warner, J.B., (2008). *Handbook of Corporate Finance*, Amsterdam: North-Holland.
King, D. R., Dalton, D. R., Daily, C. M., and Covin, J. G. (2004). Meta□analyses of post□acquisition performance: Indications of unidentified moderators. *Strategic Management Journal*, 25, (2), 187-200.
Lambrecht, B. (2004). The timing and terms of mergers motivated by economies of scale. *Journal of Financial Economics*, 72, 41-62.
Lee, D. R., and Verbrugge, J. A. (1996). The efficient market theory thrives on criticism. *Journal of Applied Corporate Finance*, 9, (1), 35-41.
Maksimovic, V., and Phillips, G. (2001). The market for corporate assets: who engages in mergers and asset sales and are there efficiency gains? *Journal of Finance*, 56, 2019-2065.
Martynova, M., and Renneboog, L. (2008). A Century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking and Finance*, 32, (10), 2148-2177.
McQueen, G., and Roley, V. V. (1993). Stock prices, news, and business conditions. *The Review of Financial Studies*, 6, (3), 683-707.
Moeller, S. B., Schlingemann, F. P., and Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics*, 73, (2), 201-228.
Moeller, S. B., Schlingemann, F. P., and Stulz, R. M. (2005). Wealth destruction on a massive scale? A study of acquiring□firm returns in the recent merger wave. *The Journal of Finance*, 60, (2), 757-782.
Porzio, Matt. (October 22, 2015). Is record M&A activity sustainable? Available at: http://www.forbes.com/sites/mattporzio/2015/10/22/is-record-ma-activity-sustainable/#32d756cf5b44
Rhodes, D., and Stelter, D. (2009). Seize advantage in a downturn. *Harvard Business Review*, 87, (2), 50-58.
Rhodes-Kropf, M. and Viswanathan, S. (2004). Market valuation and merger waves. *Journal of Finance*, 59, 2685-2718.
Roll, R. (1986). The hubris hypothesis of corporate takeovers. *The Journal of Business*, 59, (2), Part 1, 197-216.
Ruback, R., and Jensen, M. (1983). The market for corporate control: The scientific evidence. *Journal of Financial Economics,* 11, 5-50.
Shleifer, A., and Vishny, R. W. (2003). Stock market driven acquisitions. *Journal of Financial Economics*, 70, (3), 295-311.
Soroka, S N (2006). Good news and bad news: Asymmetric responses to economic information. *Journal of Politics*, 68, (2), 372-385.
Veronesi, P. (1999). Stock market overreactions to bad news in good times: A rational expectations equilibrium model. *Review of Financial Studies*, 12, (5), 975-1007.
Wan, W. P., Hoskisson, R. E., Short, J. C., and Yiu, D. W. (2011). Resource-based theory and corporate diversification: Accomplishments and opportunities. *Journal of Management*, 37, (5), 1335-1368.
Wang, C., and Xie, F., (2009). Corporate governance transfer and synergistic gains from mergers and acquisitions. *Review of Financial Studies*, 22, (2), 829-858.

Zajac, E. J., and Westphal, J. D. (2004). The social construction of market value: Institutionalization and learning perspectives on stock market reactions. *American Sociological Review*, 69, (3), 433-457.
Zuckerman, E. W. (2004). Structural incoherence and stock market activity. *American Sociological Review*, 69, (3), 405-432.

MAILING INFORMATION:

Dr. Christi Wann
515 Canyon Edge Lane
Hixson, TN 37343
423-645-1600