



## The Performance of Failed Bidders in Mergers & Acquisitions



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### Abstract

*For the past three decades, the research compiled on mergers & acquisitions (M&A) activity has covered the performance of acquirers and targets through the lens of countless scenarios. The mass of research suggests that target shareholders earn substantial positive abnormal returns while acquirers earn negative or zero abnormal returns. However, empirical evidence suggests that M&A activity ultimately creates a small net gain. When looking at M&A activity in the short-term window preceding the consummation of a deal through the period following the deal's announcement, do acquiring shareholders truly "win" when involved in such activity? The fate of failed acquirers ("M&A losers") is a debatable topic and one that has limited historical research. The purpose of this empirical work is to study the abnormal returns to failed acquirers in mergers & acquisitions. The abnormal performance of failed acquirers was studied in three distinct circumstances. Namely, the transaction universe used in this study was classified in one of the following categories: 1) Challenged Deals: Competing or Multiple Bidder Situations, 2) Emergence of a White Knight, 3) Hostile & Withdrawn Acquirers. After collecting a transaction universe for each aforementioned category, the abnormal returns to failed & successful acquirers were studied throughout the M&A timeline. The analysis finds that in competitive M&A situations where two or more bidders attempt to acquire an identical target firm, the failed acquirer(s) outperforms the successful acquirer in the short-term window subsequent to the deal's announcement. Moreover, in situations where the failed acquirer's deal attitude is hostile, the bidder experiences negative abnormal returns for the period subsequent to disclosing its intention to acquire the target firm through the short-term window following its official withdrawal; when the failed acquirer terminates its hostile campaign.*

## **INTRODUCTION**

*“The sobering reality is that only about 20 percent of all mergers really succeed. Most mergers typically erode shareholder wealth.”*

*- Grubb and Lamb (2000)*

Is it always bad to lose? In the context of mergers & acquisitions (M&A), corporate Boards of Directors and Executive Management tout the benefits of such activity. These respective groups cite arguments including, among the myriad of others, the creation of special capabilities, access to new distribution channels and markets, the ability to exert control over a firm’s factors of production, the achievement of competitive scale, and the ability to leverage organizational skills. All of these reasons, though context-sensitive, are admirable. However, when looking at M&A in the short-term window preceding the consummation of a deal through the period following the deal’s announcement, do acquiring shareholders truly “win” when involved in such activity?

The fate of failed acquirers (“M&A losers”) is a debatable topic and one that has limited historical research. The purpose of this empirical work is to study the abnormal returns to failed acquirers in mergers & acquisitions. The abnormal performance of failed acquirers was studied in three distinct circumstances. Namely, the transaction universe used in this study was classified in one of the following categories:

1. *Challenged Deals: Competing or Multiple Bidder Situations*

- Competing (head-to-head) or multiple bidder situations where all potential acquirers are attempting to purchase the same target within a corresponding time period.

2. *Emergence of a White Knight*

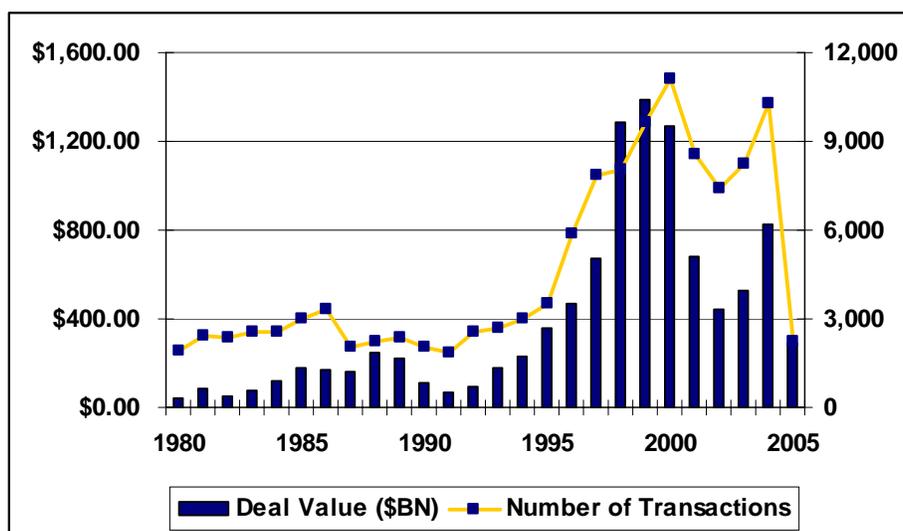
- Situations where the emergence of a white knight thwarts the target from being purchased by the failed acquirer(s).

3. *Hostile & Withdrawn Acquirers*

- Situations where the failed acquirer's deal attitude would be classified as "hostile" when attempting to purchase the target.

**THE M&A MARKET**

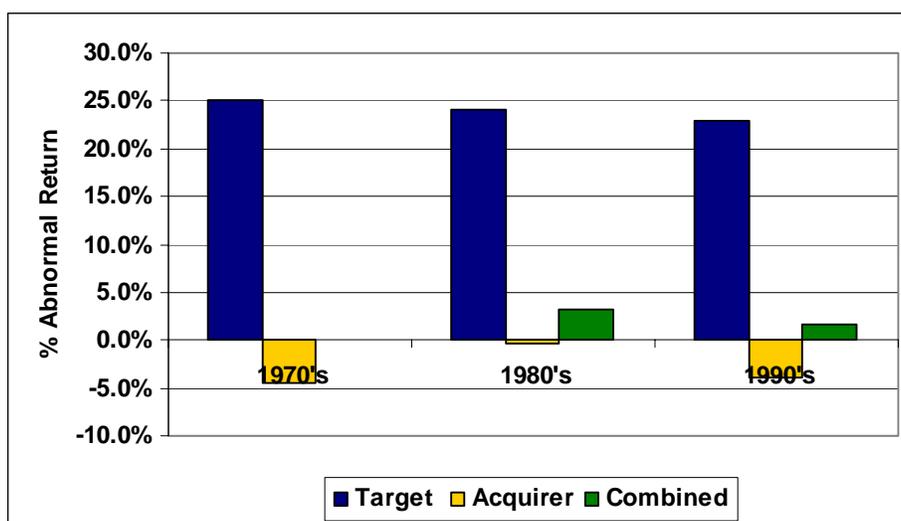
M&A activity for U.S. firms involved in domestic and cross-border acquisitions has varied significantly for the past 25 years (1980-2004), largely influenced by the performance of the domestic and international equity markets. With 1,889 announced transactions valued at \$44.3 billion in 1980, consistent growth over two decades led the M&A market to a peak of activity in 1999 when 9,628 transactions were announced for an aggregate value of \$1,387.4 billion. During the period of 1980-1989, the CAGR (USD value) of U.S. firms involved in domestic and cross-border acquisitions was 17.44% while the period between the years 1990-1999 indicates a CAGR of 29.06%. However, following 2000, the recessionary US economy dampened such corporate activity and the market fell to pre-1998 levels. Looking at the following graph, one is able to see the variability in the domestic M&A market over the past 25 years.



Source: FactSet Mergerstat

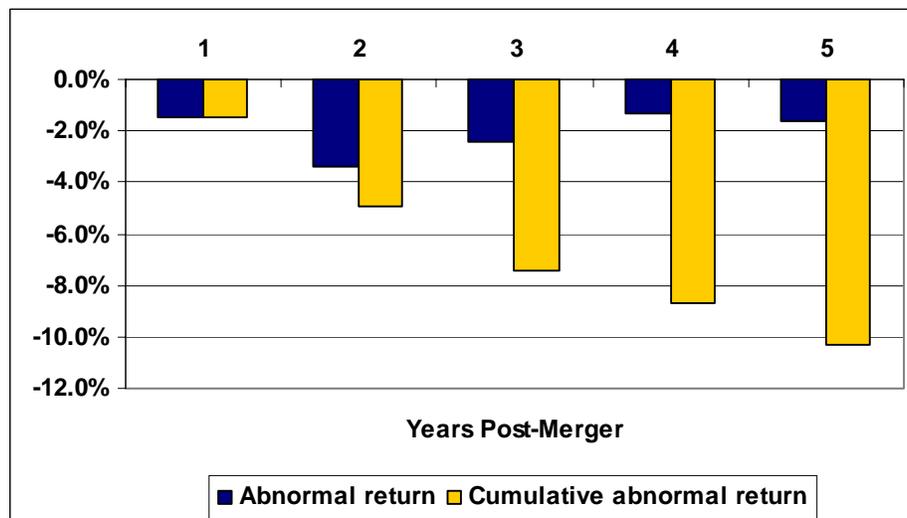
## **EMPIRICAL EVIDENCE: SUCCESSFUL ACQUIRERS**

Empirical evidence suggests that mergers create a small *net* gain; rewarding target shareholders often at the expense of acquiring shareholders (Bruner 2002). In the bar chart below, measuring the abnormal return twenty days prior to deal announcement through deal closing over the course of three decades, this trend is apparent. Though the average target gains have steadily declined during each respective decade following the 1970's, acquirers have seen negative average abnormal returns during this time window (-20, Deal Closing) in each decade (1970's, 1980's, 1990's).



*Source: Professor Jarl Kallberg, New York University*

The performance of successful acquirers comes under further scrutiny when looking at the long-term gains post - M&A activity. The average merger does not yield positive abnormal returns to the acquirer and the post-announcement five-year cumulative average abnormal return (CAAR) is -10.3%.



Source: Professor Jarl Kallberg, New York University

Furthermore, the compromised abnormal performance of acquirers relative to target firms is evident when studying varying event windows surrounding the announcement date (day 0) of an M&A transaction. The following information was compiled from the research of prior authors attempting to measure the performance of firms involved in such activity.

<b>Returns to Target Shareholders</b>				
<u>Authors</u>	<u>CAR (%)</u>	<u>Study Period</u>	<u>Event Window</u>	<u>Comments</u>
Smith & Kim	15.8%	1980-1986	(-1, 0)	Tender Offers
Dennis & McConnell	8.6%	1962-1980	(-1, 0)	--
Servaes	23.6%	1972-1987	(-1, Close)	Mergers & Tender Offers
Schwert	26.3%	1975-1991	(-42, 126)	--
Kaplan & Weisbach	26.9%	1971-1982	(-5, 5)	Mergers & Tender Offers
Lang, Stulz & Walkling	40.3%	1968-1986	(-5, 5)	Tender Offers Only
Langetieg	10.6%	1929-1969	(-120, 0)	Mergers

<b>Returns to Acquiring Shareholders</b>				
<u>Authors</u>	<u>CAR (%)</u>	<u>Study Period</u>	<u>Event Window</u>	<u>Comments</u>
Schwert	1.4%	1975-1991	(-42, 126)	Mergers, Tender Offers
Varaiya & Ferris	(3.9%)	1974-1983	(-20, 80)	--
Sirower	(2.3%)	1979-1990	(-1, 1)	--
Walker	(0.8%)	1980-1996	(-2, 2)	--
Asquith	(0.9%)	1973-1983	(-1, 0)	--
Lang, Stulz, & Walkling	0.9%	1968-1986	(-5, 5)	Tender Offers Only
Langetieg	(1.6%)	1929-1969	(-120, 0)	Mergers

<b>Total Returns: Acquiring &amp; Target Shareholders</b>				
<b>Authors</b>	<b>CAR (%)</b>	<b>Study Period</b>	<b>Event Window</b>	<b>Comments</b>
Mulherin & Boone	3.6%	1990-1999	(-1, 1)	--
Servaes	3.7%	1972-1987	(-1, Close)	Mergers & Tender Offers
Franks, Harris, & Titman	3.9%	1975-1984	(-5, 5)	Mergers & Tender Offers
Smith & Kim	8.8%	1980-1986	(-5, 5)	Tender Offers Only
Healy, Palepu, Ruback	9.1%	1979-1984	(-5, 5)	Largest US Mergers
Langetieg	0.0%	1950-1965	(0, 60)	Mergers

Though this empirical work does not comment on the post-merger accounting performance of failed acquirers versus successful acquirers; I deem it necessary to present the post-merger accounting performance of successful acquirers as researched by prior authors. This will allow the reader to better judge the prudence of such M&A activity.

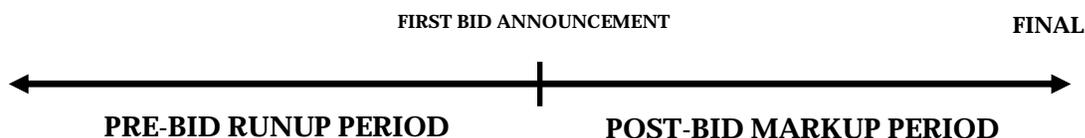
<b>Post-merger Accounting Performance: Successful Acquirers</b>			
<b>Authors</b>	<b>Study Period</b>	<b>Sample</b>	<b>Finding</b>
Ho & Sharma	1986-1991	36	3 years after, Return on Assets (ROA), Return on Equity (ROE), and profitability fell
Carline, Lin, Yadav	1985-1994	86	5 years after, better Operating Cash Flow (OCF) than peer group
Ghosh	1981-1995	315	No abnormal ROA, but better OCF for cash acquisitions than stock acquisitions
Dickerson	1948-1977	613	ROA for acquirers is 2% lower than ROA for non-acquirers
Mueller	1950-1992	471	Merging firms suffering loss in market share

## **LITERATURE REVIEW**

To infer the abnormal behavior of failed acquirers, it is important to employ the semi-strong form of the efficient markets hypothesis whereby the market price of equity reflects all publicly available information (Fama 1970). Schwert (1996) indicates that the intentions of bidders is private and therefore unknown until the emergence of a “tell” that would lead market participants to react accordingly. Prior to the first bid announcement, indications such as the filing of a 13D statement with the Securities and Exchange Commission (S.E.C.) after the bidder buys more than 5% of the target’s stock, unusual trading volumes, unusual price patterns, and

finally, public press releases and S.E.C. filings that directly address acquisition intentions would be classified as the emergence of a potential “tell.”

To better understand the performance of successful and unsuccessful bidders, it may be helpful to present the timeline of M&A events:



During the pre-bid runup period, the bidder is the sole party (excluding the bidder’s advisors) that knows its intentions to acquire the target. Though multiple bidders may be simultaneously considering an acquisition of an identical target, the intentions of each party are not publicly known. The abnormal return to the potential acquirer’s stock price in this period would be classified as the pre-bid movement (known as the pre-bid runup for the target firm). However, once the first bid announcement occurs, the public becomes cognizant of the bidder’s intentions. At this juncture, the performance of the bidder(s) will be vulnerable to the market’s sentiment toward the bid; capturing their belief about the prudence, timing, and probability of transaction success. The abnormal return to the potential acquirer’s stock price between the first bid announcement and the final outcome would be classified as the post-bid movement (known as the post-bid markup period for the target firm).

Though the empirical work done on failed acquirers is limited, G. William Schwert addresses the performance of bidders through the M&A timeline in his paper titled *Markup Pricing in Mergers & Acquisitions*. Schwert, in an attempt to study the relation between the premiums in takeover bids involving exchange-listed target firms from 1975-1991 and the pre-announcement stock price runups, discusses the CAR of bidders throughout the M&A timeline described above.

Compared with the target runups, the bidder runups are small, but most are positive. The largest positive bidder runups occur when the target firm has a poison pill (3.0%) and when the S.E.C. subsequently prosecutes insider trading (2.4%). Unlike the pattern with target firms, for which the average runup and markup are similar, the markups for bidder firms are generally negative. The average for the main sample is -1.0%. The most negative bidder markups are for unsuccessful takeovers (-5.3%), for cases with foreshadowing news (-3.7%), for auctions (-3.7%), for mergers (-3.4%), and for all-equity deals (-4.5%). To the extent that deal characteristics such as auctions are unanticipated at the time of the first bid, the bidder markups reflect negative information that was not known during the runup period.

## **HYPOTHESES**

Although all three scenarios look at the performance of failed acquirers, each circumstance was studied independently for the purposes of this paper.

For the “Challenged Deals: Competing or Multiple Bidder Situations” sample, the following hypotheses were tested: 1. Prior to the announcement date of the successful transaction, the failed acquirer(s) should, on average, outperform the successful acquirer; 2. Subsequent to the announcement date of the successful transaction, the failed acquirer(s) should, on average, outperform the successful acquirer.

For the “Emergence of a White Knight” sample, the following hypotheses were tested: 1. Prior to the first bid announcement made by the hostile (ultimately failed acquirer) bidder, the failed acquirer should, on average, under perform the White Knight; 2. In the time frame between the announcement of a hostile offer by the eventual failed acquirer and the successful consummation of a deal between the intended hostile target and the White Knight, the failed acquirer should, on average, outperform the White Knight; 3. Subsequent to the announcement date of the successful transaction between the White Knight and the intended target, the failed acquirer should, on average, outperform the White Knight.

For the “Hostile & Withdrawn Acquirers” sample, the following hypotheses were tested: 1. Prior to the first bid announcement made by the hostile (ultimately failed acquirer) bidder, the failed acquirer should have a negative mean compounded abnormal return; 2. In the time frame between the first bid announcement and the withdrawal date of the hostile bidder, the failed

acquirer should have a negative mean compounded abnormal return; 3. Subsequent to the withdrawal date of the hostile bidder, the failed acquirer should have a positive mean compounded abnormal return.

## **DATA SOURCES**

In order to extract the transaction universe for each circumstance, the SDC Platinum Database (Thompson Research) was used. After establishing the transaction universe for each circumstance, security returns and market indexes were extracted from the Center for Research in Security Prices (CRSP) via the Eventus database. The Eventus database performs event studies using data read directly from the CRSP databases. The CRSP and Eventus programs were accessed via the Wharton Research Data Services (WRDS), University of Pennsylvania.

## **DATA**

After extracting the transaction universe from SDC Platinum, I created several criteria for each circumstance in order to narrow down each respective transaction universe. Due to the dynamic nature of each M&A transaction, every transaction in each circumstance was diligently audited. Though the SDC database is a powerful tool for information about M&A activity, the database has its limitations. Namely, a great deal of information about individual transactions is readily available. However, in the context of this paper (specifically two of the three scenarios, “Emergence of a White Knight” and “Challenged Deals: Competing or Multiple Bidder Situations”), the performance of the failed acquirer is evaluated against the performance of the successful acquirer. Therefore, the process of “matching” transactions to ensure the attempt of the failed acquirer corresponded (from the perspective of time and competition) with the successful acquirer was a critical task.

***Challenged Deals: Competing or Multiple Bidder Situations***

The “Challenged Deals: Competing or Multiple Bidder Situations” circumstance is characterized as competing (head-to-head) or multiple bidder situations where all bidders compete for the same target within a corresponding time period. In order to be classified in this category, a transaction must have at least 2 potential acquirers competing for the same target firm. Furthermore, the target company must be successfully (announced & completed transaction) acquired by one of the parties within a reasonable time frame. Therefore, at the announcement date of the successful transaction, the bidders are identified as either a) a successful acquirer *or* b) one or more failed acquirer(s).

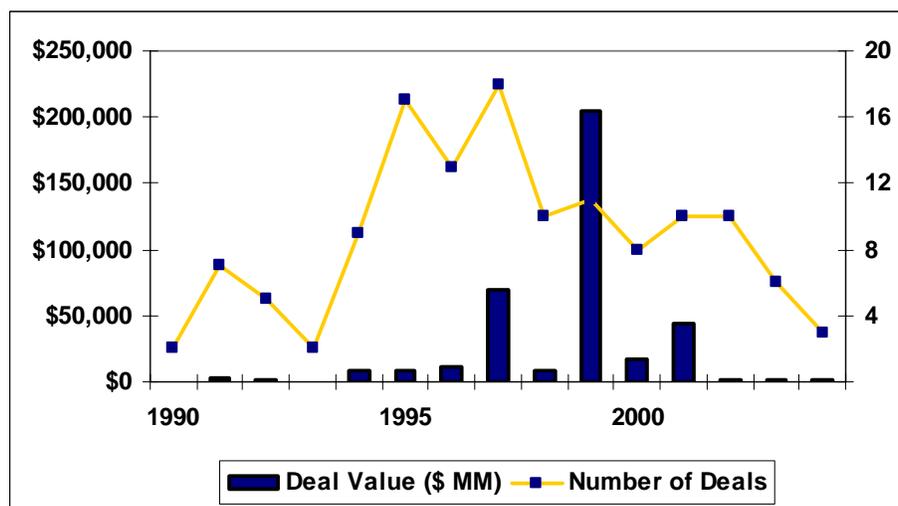
Due to the dynamic nature of each M&A transaction, several criteria were chosen to narrow down the transaction universe for this category so that each data point could be diligently audited. This process was undertaken to ensure that each transaction truly qualified to be included in the “Challenged Deals” sample. The process of auditing each individual transaction had two key objectives. First, to ensure the competing bidders were vying for the same target within a corresponding time frame. Second, to ensure the competing bidders had the intentions of acquiring a majority stake in the target company, thereby controlling the target firm if succeeding in the acquisition attempt.

The criteria used to narrow down the transaction universe of “Challenged Deals: Competing or Multiple Bidder Situations” is as follows:

1. Date Announced: 1990 – 2004 (Last 15 years)
2. Target & Acquirers (successful & failed) – U.S. Companies (Domestic)
3. Target & Acquirer (successful & failed) – Public Status
4. Deal Status – Completed, Unconditional

5. Challenged Deal Flag – multiple parties are bidding for an identical target (as classified by the SDC Platinum database)
6. Disclosed Value Mergers & Acquisitions activity (as classified by the SDC Platinum database)

The resulting sample was used as the universe of transactions for the “Challenged Deals: Competing or Multiple Bidder Situations” scenario. The sample consists of 131 transactions aggregating \$380.32 billion for the period of 1990-2004. Similar to the M&A activity for U.S. firms involved in domestic and cross-border transactions, though not as consistent a rise, the transaction value of M&A activity in this sample began at \$361.4 million in 1990 and peaked at \$204.58 billion in 1999. The CAGR (USD value) of the “Challenged Deals” category during the years 1990-1999 was 88.49%. However, as domestic M&A activity peaked in 1999, the years 2000-2004 marked a stark decline in the “Challenged Deal” category. The following chart summarizes the USD value of the “Challenged Deals” transaction sample.



Source: SDC Platinum Database, Thompson Research

### ***Emergence of a White Knight***

The “Emergence of a White Knight” circumstance is characterized by situations where the emergence of a White Knight thwarts the target from being purchased by the failed

acquirer(s). For this empirical study, a White Knight is defined as a company that makes a friendly takeover offer to a target company that is being faced with a hostile takeover from a separate party (the failed acquirer). Therefore, at the announcement date of the successful transaction, the bidders are identified as either a) the White Knight (successful acquirer) or b) the failed acquirer (hostile attitude).

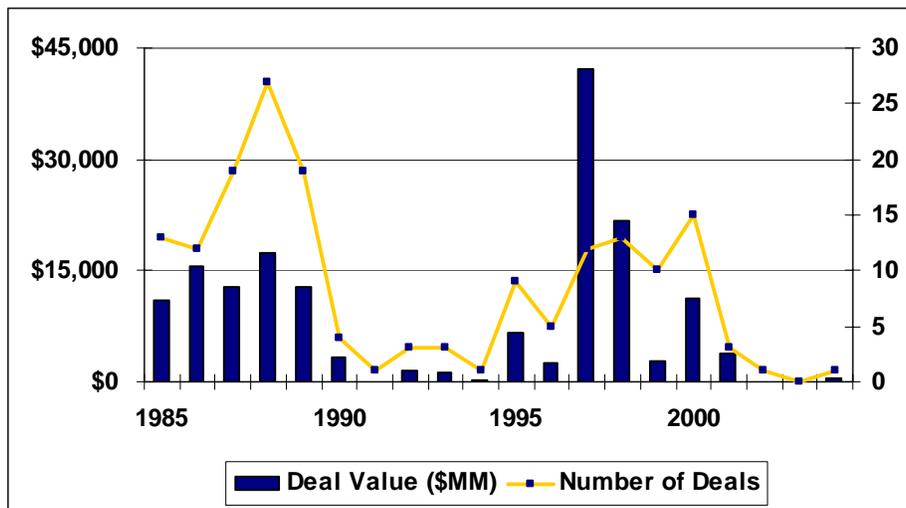
Due to the dynamic nature of each M&A transaction, several criteria were chosen to narrow down the transaction universe for this category so that each data point could be diligently audited. This process was undertaken to ensure that each transaction truly qualified to be included in the “Emergence of a White Knight” sample. The process of auditing each individual transaction ensured the hostile attempt by the eventual failed acquirer was the impetus for the emergence of a White Knight.

The criterion used to narrow down the transaction universe of “Emergence of a White Knight” is as follows:

1. Date Announced: 1985 – 2004 (Last 20 years)
2. Target & Acquirers (successful & failed) – Domestic & International
3. Target & Acquirer (successful & failed) – Public Status
4. Deal Status – Completed, Pending
5. Acquisition Techniques – “Acquirer is a White Knight” (as classified by the SDC Platinum database)
6. Disclosed Value Mergers & Acquisitions activity (as classified by the SDC Platinum database)

The resulting sample was used as the universe of transactions for the “Emergence of a White Knight” scenario. The sample consists of 123 transactions aggregating \$124.41 billion for

the period of 1985-2004. However, the trend of M&A activity in this category starkly differs from the trend of M&A activity for U.S. firms involved in domestic and cross-border transactions. The CAGR (USD value) of the “Emergence of a White Knight” category during the years 1985-2004 was -13.59%. However, M&A activity in this category peaked in 1997, indicating a CAGR (USD value) of 12.03% between the years 1985-1997. However, post-1998, M&A activity in this category decreased significantly, declining to sub-\$1.0 billion dollar levels in 4 of the 6 remaining years. The following chart summarizes the USD value of the “Emergence of a White Knight” transaction sample.



Source: SDC Platinum Database, Thompson Research

### *Hostile & Withdrawn Acquirers*

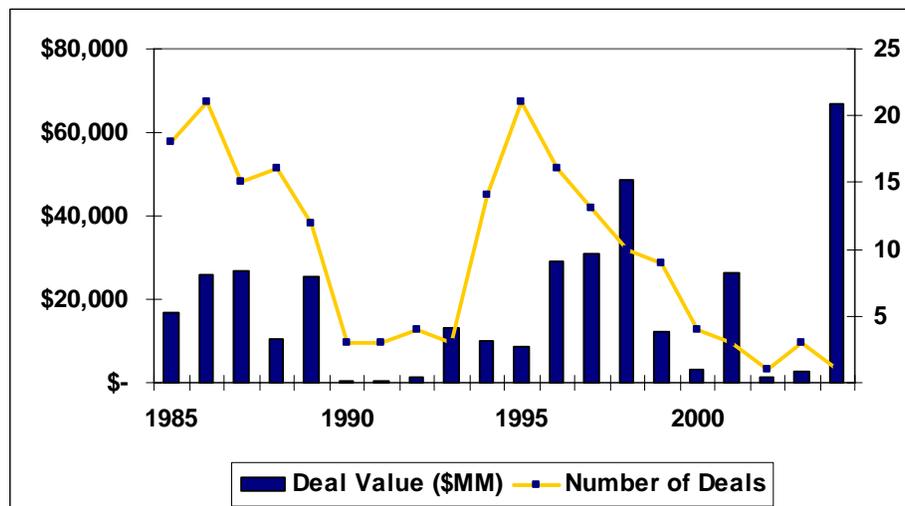
The “Hostile & Withdrawn Acquirers” circumstance is characterized by situations where the failed acquirer’s deal attitude would be classified as “hostile” when attempting to purchase the target. In order to be classified in this category, the failed acquirer must announce its intention to acquire the target (announcement date) and subsequently terminate their intentions on a formal withdrawal date. Therefore, this category isolates the performance of the failed acquirer prior to the first bid announcement through the withdrawal date and beyond.

Due to the dynamic nature of each M&A transaction, several criteria were chosen to narrow down the transaction universe for this category so that each data point could be diligently audited. This process was undertaken to ensure that each transaction truly qualified to be included in the “Hostile & Withdrawn Acquirers” sample.

The criterion used to narrow down the transaction universe of “Hostile & Withdrawn Acquirers” is as follows:

1. Date Announced (First Bid announcement): 1985 – 2004 (Last 20 years)
2. Target & Acquirers (failed) – U.S. Companies (Domestic)
3. Target & Acquirer (failed) – Public Status
4. Deal Status – Withdrawn
5. Deal Attitude – “Hostile” (as classified by the SDC Platinum database)
6. Disclosed Value Mergers & Acquisitions activity (as classified by the SDC Platinum database)

The resulting sample was used as the universe of transactions for the “Hostile & Withdrawn Acquirers” scenario. The sample consists of 190 transactions aggregating \$360.77 billion for the period of 1985-2004. M&A activity in this category varies significantly over the 20 year period studied. The CAGR (USD value) of the “Hostile & Withdrawn Acquirers” category during the years 1985-1989 was 8.60% while the CAGR (USD value) of this category during the year 1990-1998 was 79.34%. However, the CAGR throughout this period (1985-1998) is 7.30% indicating volatile increases and decreases in activity. However, post-1998, M&A activity in this category declined significantly but showed a sharp increase in 2004. The following chart summarizes the USD value of the “Hostile & Withdrawn Acquirers” transaction sample.



*Source: SDC Platinum Database, Thompson Research*

After establishing the aforementioned criteria, I created floors for the transaction values in each respective transaction universe in order to eliminate the noise that could arise in the abnormal performance of extremely small bidders (i.e. firms where the abnormal performance could be significantly affected by large insider transactions):

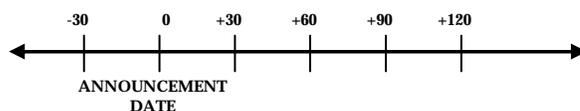
1. “Challenged Deals” – transaction value > \$100 million
2. “Emergence of a White Knight” – transaction value > \$50 million
3. “Hostile & Withdrawn Acquirer” – transaction value > \$100 million

Subsequent to collecting and auditing each transaction universe, I turned my attention to the bidder’s (both unsuccessful and successful) availability on the CRSP database. In order to accurately test a bidder’s availability on the CRSP database, I submitted queries to find each respective firm’s PERMNO. The PERMNO is an integer used to uniquely identify each security in the CRSP database. The PERMNO does not change historically if the security changes name or makes capital changes. If the bidder’s (successful or unsuccessful) returns were not available on the CRSP database, I eliminated the data point from the sample.

## **METHODOLOGY**

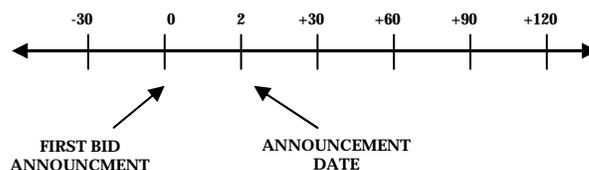
After finalizing the transaction universe for each respective circumstance, it was necessary to specify the timeline that would be used to measure the abnormal returns in each scenario.

***Challenged Deals: Competing or Multiple Bidder Situations***



In this circumstance, the abnormal returns of the successful and unsuccessful acquirer(s) were studied in the following intervals (-30, -2); (-1, 0); (-30, 30); (-30, 60); (-30, 90); (-30, 120); where day 0 is the announcement date of the target’s acquisition by the successful bidder.

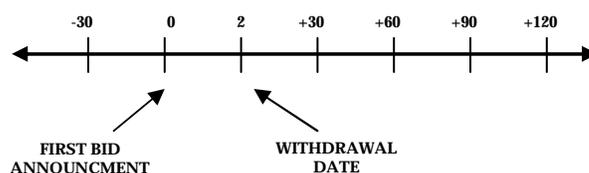
***Emergence of a White Knight***



In this circumstance, the abnormal returns to the successful and unsuccessful acquirers were looked at from the perspective of two benchmark dates. On the date of the first bid announcement, the hostile bidder (eventual failed acquirer) announces its intention to acquire the target firm. The abnormal returns to both the successful and unsuccessful acquirer(s) were studied in the following intervals (-30, -2); (-1, 0); (-30, 30); (-30, 60); (-30, 90); (-30, 120) where day 0 marks the date when the hostile bidder announces its intention to acquire the target firm. However, the time window between the first bid announcement made by the hostile acquirer and the announcement date when the White Knight successfully acquires the target differs significantly among the transaction universe. Therefore, to normalize this variance, the time window between the first bid announcement and the announcement date of the successful

transaction was treated as 1 day (1-day CAR). On the announcement date, the White Knight announces the successful acquisition of the target and consequently thwarts the hostile attempt by the failed bidder. The abnormal returns to the successful and unsuccessful acquirer(s) were studied in the following intervals (-30, -2); (-1, 0); (-30, 30); (-30, 60); (-30, 90); (-30, 120); where day 0 is the announcement date of the target's acquisition by the White Knight.

***Hostile & Withdrawn Acquirer***



In this circumstance, the abnormal returns to the hostile & withdrawn acquirers were looked at from the perspective of two benchmark dates. On the date of the first bid announcement, the hostile bidder (eventual failed acquirer) announces its intention to acquire the target firm. The mean compounded abnormal return of the unsuccessful acquirer(s) were studied in the following intervals (-30, -2); (-1, 0); (-30, 30); (-30, 60); (-30, 90); (-30, 120); where day 0 marks the date when the hostile bidder announces its intention to acquire the target firm. However, the time window between the first bid announcement made by the hostile acquirer and the official withdrawal date when the hostile acquirer officially ends its acquisition attempt of the target differs significantly among the transaction universe. Therefore, to normalize this variance, the time window between the first bid announcement and the withdrawal date was treated as 1 day (1-day CAR). On the withdrawal date, the hostile attempt officially ceases. The mean compounded abnormal return of the unsuccessful acquirer were studied in the following intervals (-30, -2); (-1, 0); (-30, 30); (-30, 60); (-30, 90); (-30, 120); where day 0 is the official withdrawal date, marking the conclusion of the failed hostile campaign.

### **Abnormal Returns**

The abnormal returns for the bidder's security prices were extracted from the CRSP equally-weighted index via Eventus software. For each bidder (both successful and failed), I calculate the market model regression. By default, the market model is estimated by ordinary least squares, using data from a 255 trading-day estimation period ending 46 trading days before the event date - the benchmark dates: first bid date, announcement date (successful acquisition), or withdrawal date:

$$R_{jt} = \alpha_j + \beta_j R_{mt} + \epsilon_{jt}$$

In the above equation,  $R_{jt}$  is the continuously compounded return to the stock of the bidder firm;  $R_{mt}$  is the continuously compounded return to the CRSP equally-weighted index (market index) on day  $t$ ;  $\epsilon_{jt}$  is a random variable that, by construction, must have an expected value of zero, and is assumed to be uncorrelated with  $R_{mt}$ ;  $\beta_j$  is a parameter that measures the sensitivity of  $R_{jt}$  to the market index. Estimates of the above equation are used to estimate the abnormal returns,  $\epsilon_{jt}$ , for the periods proceeding and subsequent to the aforementioned event dates.

### **OUTPUT**

#### *Challenged Deals: Competing or Multiple Bidder Situations*

<b>Winning Acquirers</b>						
<b>Days</b>	<b>N</b>	<b>Mean Compounded Abnormal Return</b>	<b>Positive</b>	<b>Negative</b>	<b>t-statistic</b>	
(-30,-2)	87	1.11%	48	:	39	0.614
(-1,0)	87	(1.81%)	32	:	55	-3.823 ***
(-30,+30)	87	(4.57%)	30	:	57	-1.750 *
(-30,+60)	87	(7.72%)	31	:	56	-2.417 **
(-30,+90)	87	(13.55%)	27	:	60	-3.679 ***
(-30,+120)	87	(17.36%)	28	:	59	-4.219 ***

*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

<b>Losing Acquirers</b>						
<b>Days</b>	<b>N</b>	<b>Mean Compounded</b>			<b>Negative</b>	<b>t-statistic</b>
		<b>Abnormal Return</b>	<b>Positive</b>			
(-30,-2)	56	(3.09%)	26	:	30	-1.662 *
(-1,0)	56	1.32%	37	:	19	2.702 **
(-30,+30)	56	(3.32%)	28	:	28	-1.230
(-30,+60)	56	(8.26%)	24	:	32	-2.509 **
(-30,+90)	56	(10.50%)	22	:	34	-2.766 **
(-30,+120)	56	(14.47%)	23	:	33	-3.412 ***

*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

In the above data outputs, day 0 denotes the date when the target was successfully acquired by the winning acquirer, thereby differentiating the successful and failed acquirers. When looking at the above data, several remarks can be made about the contrasting performance of the successful and failed acquirers:

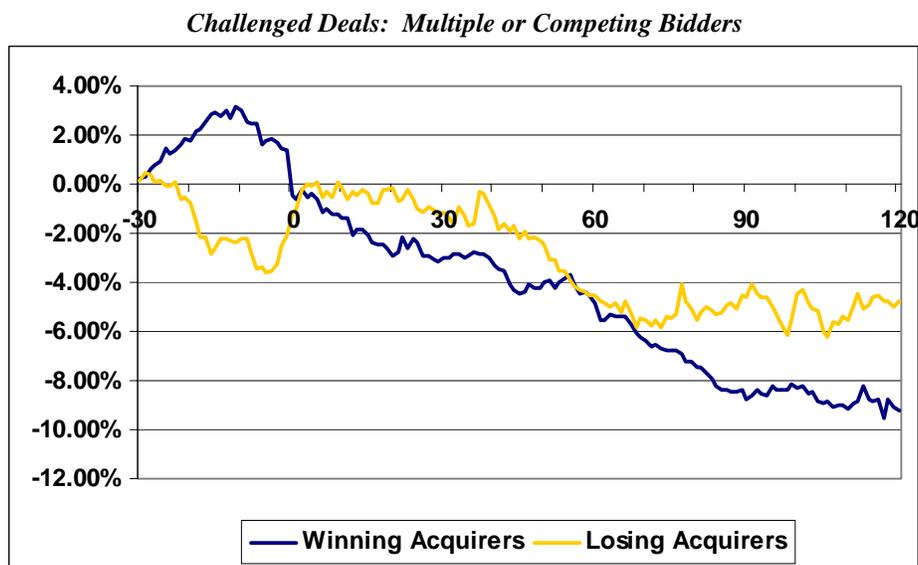
1. In the trading period prior to day 0 (-30,-2), the mean compounded abnormal return to successful acquirers is positive whilst the mean compounded abnormal return to failed acquirers is negative. However, neither t-statistics indicate statistical significance (t-statistic < 2.0).
2. The “announcement effect” of deal consummation as measured by the time window (-1, 0) is negative (-1.81%) for successful acquirers. The “announcement effect” for failed acquirers is positive (1.32%). The respective t-statistics for both successful acquirers (t-statistic = -3.823) and failed acquirers (t-statistic = 2.702) indicate statistical significance at the 0.1% and 1% levels, respectively. The negative abnormal returns to successful acquirers during the time window (-1, 0) are in-line with earlier research. Namely, Dodd (1980) found a -1.09% CAR announcement effect (-1, 0) to acquirers for mergers between the sample periods 1970-1977.

Moreover, Byrd & Hickman (1992) found a -1.2% CAR announcement effect (-1, 0) to acquirers for mergers between the sample periods 1980-1987.

3. The time windows (-30, 30); (-30, 60); (-30, 90); (-30, 120) were presented as a prudent measure of both successful and failed acquirers throughout the announcement date timeline. Though the failed acquirer outperforms (-3.32%) the successful acquirer (-4.57%) during the time frame (-30, 30), neither results are statistically significant (t-statistics < 2.0). However, when lengthening the time frame post-announcement, the failed acquirers outperform the successful acquirers in the time windows (-30, 90); (-30, 120) while the successful acquirers outperform the failed acquirers in the time window (-30, 60). For both successful and failed acquirers, the results in each of these respective time windows indicate strong statistical significance (t-statistics > 2.0). The negative abnormal returns to the successful acquirer are in-line with earlier research. Namely, Varaiya & Ferris (1987) found in the time window (-20, 80), a -3.9% CAR to successful acquirers where day 0 marks the announcement date. However, I was disturbed that successful acquirers outperform failed acquirers in the time window (-30, 60). I made a crude modification to the data to settle my uneasiness. When looking at the time window (-30, 60), it may be prudent to consider the contrasting performance of both bidders prior to announcement (-30, -2). Therefore, by simply subtracting the mean compounded abnormal return to both successful acquirers (1.11%) and failed acquirers (-3.09%) during the time window (-30, -2) from that of the time window (-30, 60), it is apparent that the failed acquirer outperforms the successful acquirer during the time window (-1, 60). Though I am not rebuking the data, it may be

prudent to attribute the time window (-30, 60) inconsistency with the time windows (-30, 90) and (-30, 120) to the pre-announcement performance of both bidders.

The mean compounded abnormal return throughout the announcement date time timeline is captured in the following graph where day 0 represents the announcement date of the transaction between the successful bidder and the target firm:



### *Emergence of a White Knight*

#### *First-Bid Announcement*

As mentioned earlier, the first benchmark date used to contrast the performance of the White Knight and failed acquirer was the date of the first-bid announcement when the hostile bidder (eventual failed acquirer) announces its intention to acquire the target firm.

<b>Winning Acquirer   First Bid Announcement</b>						
<u>Days</u>	<u>N</u>	<u>Mean Compounded</u>			<u>t-statistic</u>	
		<u>Abnormal Return</u>	<u>Positive</u>	<u>Negative</u>		
(-30,-2)	61	1.06%	27	:	34	0.766
(-1,0)	61	0.24%	30	:	31	0.656
(-30,+30)	61	(1.63%)	27	:	34	-0.814
(-30,+60)	61	(2.55%)	27	:	34	-1.044
(-30,+90)	61	(7.34%)	24	:	37	-2.602 **
(-30,+120)	61	(9.33%)	27	:	34	-2.959 **

*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

<b>Losing Acquirer   First Bid Announcement</b>						
<u>Days</u>	<u>N</u>	<u>Mean Compounded</u>			<u>t-statistic</u>	
		<u>Abnormal Return</u>	<u>Positive</u>	<u>Negative</u>		
(-30,-2)	47	(0.74%)	21	:	26	-0.411
(-1,0)	47	(0.67%)	16	:	31	-1.417 \$
(-30,+30)	47	(4.21%)	15	:	32	-1.603 \$
(-30,+60)	47	(7.96%)	17	:	30	-2.483 **
(-30,+90)	47	(12.55%)	14	:	33	-3.393 ***
(-30,+120)	47	(13.17%)	21	:	26	-3.189 ***

*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

In the above data outputs, day 0 denotes the date when the hostile bidder (eventual failed acquirer) disclosed its intention to acquire the target firm. When looking at the above data, several remarks can be made about the contrasting performance of the White Knight and failed acquirer around this benchmark date:

1. In the trading periods prior to day 0 (-30,-2) and (-1, 0), the mean compounded abnormal return to White Knights is positive whilst the mean compounded abnormal return to failed acquirers is negative. However, during these two time windows, the t-statistics indicate no statistical significance (t-statistic < 2.0).
2. The performance of the eventual White Knights and failed acquirers becomes interesting in the time frames (-30, 90) and (-30, 120). The mean compounded

abnormal return to the hostile bidder (eventual failed acquirer) during the time frame (-30, 60) is negative (-7.96%) and statistically significant (t-statistic = -2.483) at the 5% level. Though the White Knight outperforms the hostile bidder during the time frames (-30, 90) and (-30, 120), the White Knights and hostile bidders experience statistically significant negative mean compounded abnormal returns during these periods. I would hypothesize the White Knight's performance during these time windows would be attributed to the market's sentiment about the target's resistance of the hostile bidder's offer. Therefore, 90 and 120 days after the first-bid announcement, the market has already discovered the White Knight's friendly acquisition of the target or has an escalating inclination of the probability of such an action.

*Announcement Date*

The second benchmark date used to contrast the performance of the White Knight and the hostile bidder (eventual failed acquirer) was the announcement date of the successful acquisition of the target firm by the White Knight.

<b>Winning Acquirer   Announcement Date</b>						
<b>Days</b>	<b>N</b>	<b>Mean Compounded</b>			<b>t-statistic</b>	
		<b>Abnormal Return</b>	<b>Positive</b>			
(-30,-2)	61	(2.82%)	25	:	36	-1.912 *
(-1,0)	61	(1.38%)	17	:	44	-3.549 ***
(-30,+30)	61	(7.05%)	22	:	39	-3.295 ***
(-30,+60)	61	(8.98%)	19	:	42	-3.435 ***
(-30,+90)	61	(12.96%)	21	:	40	-4.299 ***
(-30,+120)	61	(13.67%)	24	:	37	-4.059 ***

*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

<b>Losing Acquirer   Announcement Date</b>						
<b>Days</b>	<b>N</b>	<b>Mean Compounded</b>			<b>t-statistic</b>	
		<b>Abnormal Return</b>	<b>Positive</b>	<b>Negative</b>		
(-30,-2)	46	(4.44%)	17	:	29	-2.434 **
(-1,0)	46	1.25%	27	:	19	2.614 **
(-30,+30)	46	(7.03%)	16	:	30	-2.657 **
(-30,+60)	46	(7.31%)	15	:	31	-2.264 *
(-30,+90)	46	(8.37%)	19	:	27	-2.248 *
(-30,+120)	46	(5.17%)	18	:	28	-1.242

*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

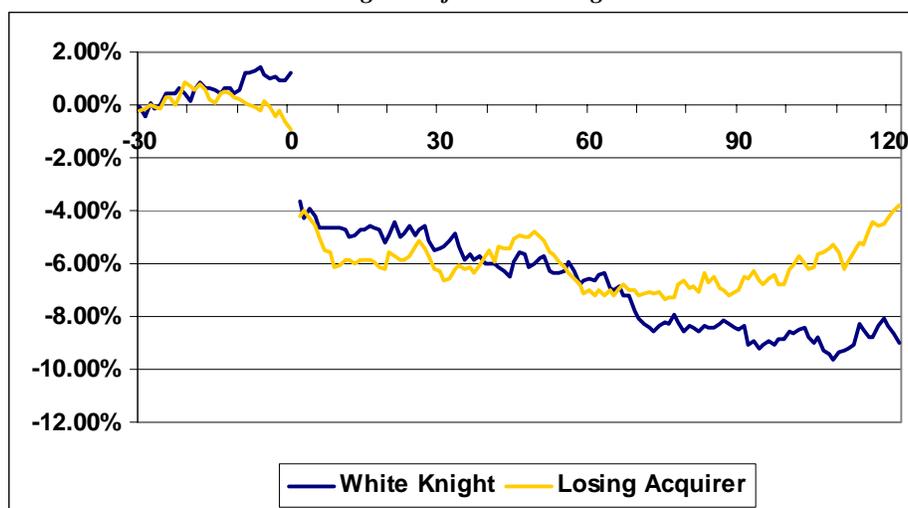
In the above data outputs, day 0 denotes the date when the White Knight announces its successful acquisition of the target firm, thereby thwarting the hostile bidder's (failed acquirer) attempt to acquire the target firm. When looking at the above data, several remarks can be made about the contrasting performance of the White Knight and failed acquirer around this benchmark date:

1. In the trading period prior to day 0 (-30,-2), the White Knight outperforms the failed acquirer. However, the "announcement effect" of the successful acquisition of the target by the White Knight is negative (-1.38%) and statistically significant (t-statistic = -3.549) for the White Knight while positive (1.25%) and statistically significant (t-statistic = 2.614) for the failed acquirer. Bannerjee & Owers (1992) found a similar result in their study of 57 White Knights between the sample periods 1978-1987. Specifically, White Knights experienced a -3.3% CAR in the time window (-1, 0), with only 21% of White Knights experiencing positive returns during this window.
2. The superior performance of failed acquirers in comparison with the White Knight sample becomes even more apparent when looking at the time windows (-30, 30); (-30, 60); (-30, 90). In each of these three time windows, statistically-significant (t-statistics > 2.0) results indicate failed acquirers outperform White Knights. While

both samples experience negative mean compounded abnormal returns, the White Knight sample experiences larger losses during each of the four time frames post-announcement. Therefore, I hypothesize the market's sentiment toward the White Knight is not favorable in the short-term window following the White Knight's friendly acquisition of the target firm. Meanwhile, the failed acquirer seems to be recovering as indicated by the improved mean compounded abnormal returns between the time frames (-30, 90) and (-30, 120).

The mean compounded abnormal returns to the White Knight and the failed acquirer throughout the *Emergence of a White Knight* timeline is captured in the following graph. The time window (-30, -1) marks the period preceding the first-bid announcement made by the hostile bidder (eventual failed acquirer) to acquire the target firm. Day 0 marks the date of the first-bid announcement. As mentioned earlier, the window between the first-bid announcement and the announcement date of the successful acquisition of the target firm by the White Knight varies significantly across the *Emergence of a White Knight* transaction universe. Therefore, the mean compounded abnormal returns to both parties during this period were treated as one day. Therefore, Day 1 represents the window between the first-bid announcement made by the hostile bidder and the successful acquisition of the target by the White Knight. Day 2 marks the announcement date of the successful acquisition of the target firm by the White Knight, thereby marking the date when the hostile bidder is identified as the failed acquirer.

Emergence of a White Knight



**Hostile & Withdrawn Acquirer**

*Announcement Date*

As mentioned earlier, the first benchmark date used to study the performance of *Hostile & Withdrawn Acquirers* was the announcement date when the hostile bidder publicly disclosed its intention to acquire the target firm.

Announcement Date							
Days	N	Mean Compounded		t-statistic			
		Abnormal Return	Positive			Negative	
(-30,-2)	130	0.20%	63	:	67	0.177	
(-1,0)	130	(0.64%)	48	:	82	-2.164	*
(-30,+30)	130	(3.75%)	56	:	74	-2.289	*
(-30,+60)	130	(6.43%)	45	:	85	-3.214	***
(-30,+90)	130	(9.00%)	48	:	82	-3.900	***
(-30,+120)	130	(11.31%)	54	:	76	-4.387	***

Market Model, Equally Weighted Index

The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test

In the above data output, day 0 denotes the date when the hostile bidder (eventual failed acquirer) disclosed its intention to acquire the target firm. When looking at the above data, several remarks can be made about the performance of the failed acquirer around this benchmark date:

1. In the trading period prior to day 0 (-30,-2), the failed acquirer has a slightly positive mean compounded abnormal return, however, this result is statistically insignificant. The “announcement effect” (-1, 0) of the hostile bidder’s intention to acquire the target firm is negative and statistically significant ( $t = -2.164$ ) at the 5% level.
2. The time frames post-announcement all indicate, with statistical significance ( $t$ -statistic  $> 2.0$ ), the negative mean compounded abnormal return to failed acquirers after the announcement of a hostile-campaign to acquire the target firm. This supports the notion that the securities market does not view hostile attempts favorably in the post-announcement time frame and the shareholders of hostile bidders consequently suffer. Dodd & Ruback (1977), in their study of 48 unsuccessful bidders through the sample periods 1958-1978 look at the CAR to failed parties who made direct tender offers for the target firm. Dodd & Ruback (1977) found that in the time window (0, 365) where day 0 marks the first-bid announcement, the CAR to these firms is -1.60%. The work of Bradley, Desai, and Kim (1983) confirmed the negative CAR to unsuccessful bidders involved in tender offers during the sample periods 1962-1980. In their study of 94 unsuccessful bidders, the authors found a CAR of -7.85% over the time window (0, 365).

#### *Withdrawal Date*

The second benchmark date used to study the performance of *Hostile & Withdrawn Acquirers* was the withdrawal date when the hostile bidder officially ceased its attempt to acquire the target firm.

<b>Withdrawal Date</b>						
<b>Days</b>	<b>N</b>	<b>Mean Compounded</b>			<b>Negative</b>	<b>t-statistic</b>
		<b>Abnormal Return</b>	<b>Positive</b>			
(-30,-2)	128	(1.68%)	64	:	64	-1.507 \$
(-1,0)	128	0.26%	68	:	60	0.883
(-30,+30)	128	(2.09%)	58	:	70	-1.290 \$
(-30,+60)	128	(4.36%)	53	:	75	-2.207 *
(-30,+90)	128	(7.59%)	48	:	80	-3.330 ***
(-30,+120)	128	(7.99%)	50	:	78	-3.138 ***

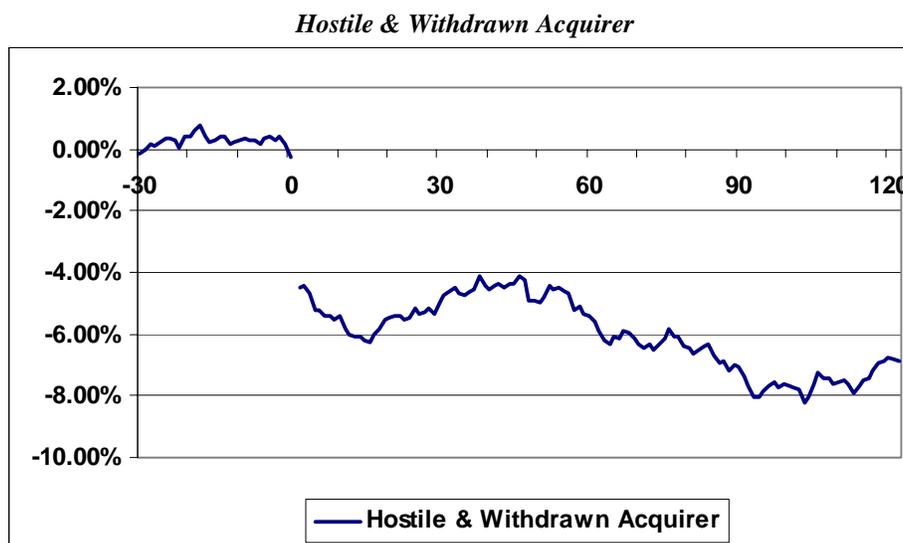
*Market Model, Equally Weighted Index*

*The symbols \$, \*, \*\*, and \*\*\* denote statistical significance at 10%, 5%, 1%, and 0.1% levels, respectively, using a 1-tail test*

In the above data output, day 0, the withdrawal date, denotes the date when the hostile bidder ceased its attempt to acquire the target firm. When looking at the above data, several remarks can be made about the performance of the failed acquirer around this benchmark date:

1. In the trading period prior to day 0 (-30,-2), the failed acquirer has a negative mean compounded abnormal return, however, this result is statistically insignificant (t-statistic < 2.0). The “announcement effect” (-1, 0) of the hostile bidder’s withdrawal, indicating the termination of the hostile-campaign, is slightly positive but also statistically insignificant.
2. The time frames (-30, 60); (-30, 90); (-30, 120) all indicate, with statistical significance (t-statistic > 2.0), the negative mean compounded abnormal return to failed acquirers after the withdrawal date marking the termination of the hostile-campaign. An interesting observation arises when considering the continued negative mean compounded abnormal return post-withdrawal date. One may hypothesize the market will continue to penalize the hostile bidder’s equity after the withdrawal date due to the firm’s increased potential to be an acquirer in the future due to its failed acquisition attempt of the target firm.

The mean compounded abnormal returns to the hostile & withdrawn acquirer throughout the *Hostile & Withdrawn Acquirer* timeline is captured in the following graph. The time window (-30, -1) marks the period preceding the announcement made by the hostile bidder (eventual failed acquirer) to acquire the target firm. Day 0 is the announcement date marking the beginning of the hostile-campaign. As mentioned earlier, the window between the announcement date and the withdrawal date of the failed acquisition of the target firm by the hostile bidder varies significantly across the *Hostile & Withdrawn Acquirer* transaction universe. Therefore, the mean compounded abnormal returns to the hostile & withdrawn acquirer during this period were treated as one day. Therefore, Day 1 represents the window between the announcement date of the commencement of the hostile campaign and the failed acquisition of the target by the hostile bidder marked by the withdrawal date. Day 2 marks the withdrawal date of the failed acquisition of the target firm by the hostile bidder, thereby marking the date when the hostile bidder is identified as the failed acquirer.

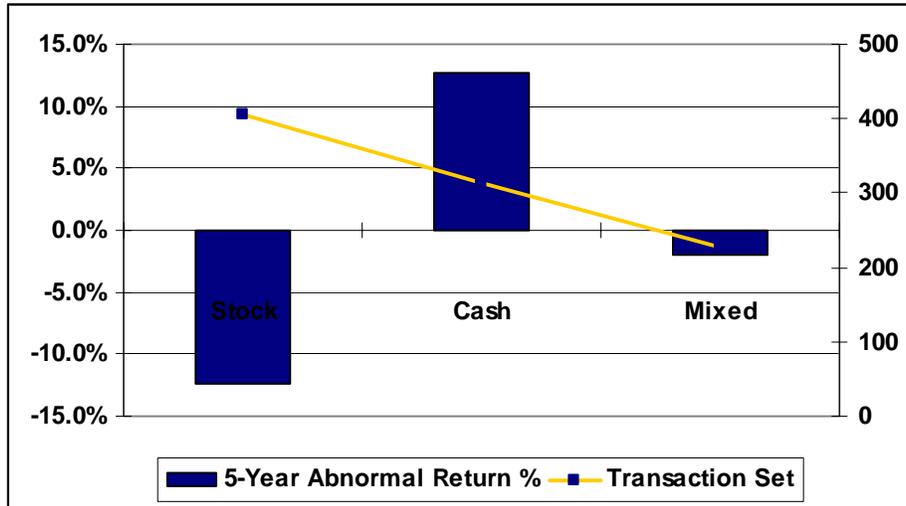


### ***Hostile & Withdrawn Acquirers – Consideration Impact***

Though this empirical study does not address the impetus for the performance of failed acquirers, I opted to use the largest data sample (N = 128) among the three circumstances (“Hostile & Withdrawn Acquirers”) to briefly address the consideration impact on the performance of failed acquirers. In this analysis, hostile & withdrawn acquirers were classified into one of two groups: 1) “Cash” - Hostile & Withdrawn acquirers offering cash to target shareholders or 2) “Stock & Mixed” - Hostile & Withdrawn acquirers offering strictly common stock (all-stock) or any combination of common stock, preferred stock, cash, warrants and hybrid securities such as convertibles (mixed). Though I recognize the above groups should be divided into three classifications, namely all-cash, all-stock, and mixed; the limitation of data points in the “Hostile & Withdrawn Acquirers” sample led me to create two classifications – consolidating those samples with a majority or sole equity component (“Stock & Mixed”).

Empirical results indicate that the medium of exchange used in a transaction communicates different signals about the acquirer’s inside information (“information story”). Asquith, Bruner, and Mullins (1987) found that stock-based deals are associated with significantly negative returns at deal announcement, whereas cash deals are zero or slightly positive. Ignoring two very important issues of taxes and feasibility, a broad deduction can be made about the acquirer’s desire to allow target shareholders to participate in the transaction gains when looking at the acquirer’s financing mechanism. Simply, by offering cash, the acquirer does not allow target shareholders to participate in future synergies. Moreover, common stock as an acquisition currency has implications in itself. Huang and Walkling (1987) and Yook (2000), all indicate that similar to a seasoned equity offering, the payment of shares in an acquisition could signal management’s belief about the stock’s overvaluation. The long-term,

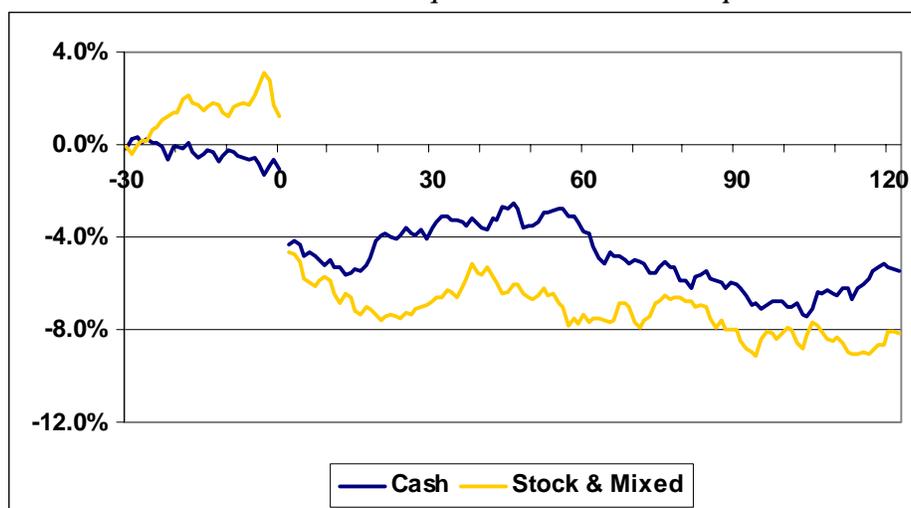
post-merger abnormal returns to successful acquirers using differing mediums of exchange correspond precisely with the information story.



Source: Professor Jarl Kallberg, New York University

The mean compounded abnormal returns to hostile & withdrawn acquirers using different financing mechanisms were captured in a format identical to earlier presentations, namely, the use of two benchmark dates. The time window (-30, -1) marks the period preceding the announcement made by the hostile bidder (eventual failed acquirer) to acquire the target firm. Day 0 is the announcement date marking the beginning of the hostile-campaign. As mentioned earlier, the window between the announcement date and the withdrawal date of the failed acquisition of the target firm by the hostile bidder varies significantly across the *Hostile & Withdrawn Acquirer* transaction universe. Therefore, the mean compounded abnormal returns to the hostile & withdrawn acquirer during this period were treated as one day. Therefore, Day 1 represents the window between the announcement date of the hostile campaign and the failed acquisition of the target by the hostile bidder (withdrawal date). Day 2 marks the withdrawal date of the failed acquisition of the target firm by the hostile bidder, marking the date when the hostile bidder is identified as the failed acquirer.

*Hostile & Withdrawn Acquirers – Consideration Impact*



As one can decipher, the “Stock & Mixed” sample outperforms the “Cash” sample prior to announcement of the hostile bidder’s intent to acquire the target firm. This finding is especially interesting when considering the argument set forth by Huang and Walking (1987) and Yook (2000) whereby the payment of shares in an acquisition could signal management’s belief about the stock’s overvaluation. However, between the start of the hostile campaign and the failed acquirer’s official withdrawal date and beyond, the stock & mixed sample continually underperforms the cash sample. The underperformance of the stock & mixed sample post-announcement (+120) is magnified even further when considering the sample’s performance pre-announcement (the stock & mixed sample outperformed the cash sample by 2.3% in the period preceding the announcement of the hostile campaign). Though definitive inferences about the performance of failed acquirers using different financing mechanisms cannot be made upon this data, the above analysis was performed for illustrative purposes.

## **CONCLUSION**

The purpose of this paper was to examine the performance of failed bidders in mergers & acquisitions. Based upon the three distinct scenarios presented, the performance of the failed

bidder was looked at independently (*Hostile & Withdrawn Acquirer*) and contrasted with the performance of the successful acquirer (*Challenged Deals: Competing or Multiple Bidders, Emergence of a White Knight*). Through the three scenarios, several hypotheses were proven:

*Challenged Deals: Competing or Multiple Bidders:*

1. In the short-term window (120 trading days) following the announcement date of the consummation of a deal between the successful acquirer and intended target, the failed acquirer(s), on average, outperforms the successful acquirer.

*Emergence of a White Knight*

1. In the short-term window (120 trading days) following the first-bid announcement made by the hostile bidder (failed acquirer) commencing its takeover attempt of the intended target, the White Knight, on average, outperforms the failed acquirer, though both parties experience negative mean compounded abnormal returns.
2. In the short-term window (120 trading days) following the announcement date of the consummation of a deal between the White Knight and the intended target, the hostile bidder (failed acquirer), on average, outperforms the White Knight.

*Hostile & Withdrawn Acquirer*

1. In the time frame between the first bid announcement and the withdrawal date of the hostile bid, the failed acquirer experiences negative mean compounded abnormal returns.
2. In the short-term window (120 trading days) following the withdrawal date of the hostile bid, the failed acquirer experiences negative mean compounded abnormal returns.

When looking at the aforementioned conclusions through the lens of each scenario, it can be inferred that in competitive M&A situations, the failed acquirer outperforms successful acquirers in the short-term window subsequent to the successful acquisition of the target firm. Moreover, in situations where the failed acquirer's deal attitude is hostile, the bidder experiences, on average, negative abnormal returns for the period subsequent to disclosing its intention to acquire the target firm through the short-term window following its official withdrawal, when the firm terminates its hostile campaign.

### Works Cited

- Asquith, P., R. Bruner, and D. Mullins, Jr., 1987, "Merger Returns and the Form of Financing," *Proceedings of the Seminar on the Analysis of Security Prices* 34 (No. 1, May) 115-146.
- Bebchuk, Lucian Arye and John C. Coates IV and Guhan Subramaniam. The Powerful Anti-takeover Force of Staggered Boards: Theory, Evidence and Policy. June 2002.
- Bradley, M., A. Desai, and E.H. Kim, 1983, "The Rationale Behind Interfirm Tender Offers: Information or Synergy?" *Journal of Financial Economics* 11 (Nos. 1-4, April), 183-206.
- Byrd, J. and K. Hickman, 1992, "Do Outside Directors Monitor Managers? Evidence From Tender Offer Bids," *Journal of Financial Economics* 32 (No. 2, October), 195-214.
- Carline, N.F., S.C. Linn, and P.K. Yadav. The Influence of Managerial Ownership on the Real Gains in Corporate Mergers and Market Revaluation of Merger Partners: Empirical Evidence, Working Paper, 2002.
- Dennis, D. and J. McConnell, 1986, "Corporate Mergers and Security Returns," *Journal of Financial Economics* 16 (No. 2, June), 143-187.
- Dickerson, A., H. Gibson, and E. Tsakalotos, 1997, The Impact of Acquisitions on Company Performance: Evidence From a Large Panel of U.K. Firms, *Oxford Economic Papers* 49 (No. 3, July), 344-361.
- Dodd, P., 1980, "Merger Proposals, Management Discretion and Stockholder Wealth," *Journal of Financial Economics* 8 (No. 2, June), 105-138.
- Dodd, P. and R. Ruback, 1977, "Tender Offers and Stockholder Returns: An Empirical Analysis," *Journal of Financial Economics* 5 (No. 3, December), 351-374.
- Franks, J., R. Harris, and S. Titman, 1991, "The Post merger Share-Price Performance of Acquiring Firms," *Journal of Financial Economics* 29 (No. 1, March), 81-96.

- Ghosh, A., 2001, Does Operating Performance Really Improve Following Corporate Acquisitions? *Journal of Corporate Finance* 7 (No. 2, June), 151-178.
- Grubb, T.M. and R.B. Lamb, 2000, *Capitalize on Merger Chaos*, New York, NY, Free Press.
- Healy, P., K. Palepu, and R. Ruback, 1992, “Does Corporate Performance Improve After Mergers?” *Journal of Financial Economics* 31 (No. 2, April), 135-175.
- Huang, Y. and R. Walkling, 1987, “Target Abnormal Returns Associated with Acquisition Announcements: Payment, Acquisition Form, and Managerial Resistance,” *Journal of Financial Economics* 19 (No. 2, December) 329-350.
- Kaplan, S. and M. Weisbach, 1992, “The Success of Acquisitions: Evidence From Divestitures,” *Journal of Finance* 47 (No. 1, March), 107-138.
- Lang, L., R. Stulz, and R. Walkling, 1989, “Managerial Performance, Tobin’s Q, and the Gains from Successful Tender Offers,” *Journal of Financial Economics* 24 (No. 1, September), 137-154.
- Langtieg, T., 1978, “An Application of a Three-Factor Performance Index to Measure Stockholders Gains from Mergers,” *Journal of Financial Economics* 6 (No. 4, December), 365-384.
- Mueller, Dennis C., Mergers: Theory and Evidence in Mergers, Markets and Public Policy. Kluwer Academic Publishers, 1995.
- Mulherin, J.H. and A.L. Boone, 2000, “Comparing Acquisitions and Divestitures,” *Journal of Corporate Finance* 6 (No. 2, July 1), 117-139.
- Rhodes-Kropf, Matthew and S. Viswanathan. Market Valuation and Mergers Waves. January 2004.
- Schwert, G. William. Markup Pricing in Mergers & Acquisitions. February 1996.

Servaes, H., 1991, "Tobin's Q and the Gains from Takeovers," *Journal of Finance* 46 (No. 1, March), 409-419.

Sharma, D. and J. Ho. The impact of acquisitions on operating performance: Some Australian evidence, *Journal of Business, Finance and Accounting*, Volume 29, Issues 1 and 2, pp 155 – 200.

Sirower, M., 1997, *The Synergy Trap: How Companies Lose in the Acquisition Game*, New York, NY: Free Press.

Smith, R. and J. Kim, 1994, "The Combined Effects of Free Cash Flow and Financial Slack on Bidder and Target Stock Returns," *Journal of Business* 67 (No. 2, April), 281-310.

Varaiya N. and K. Ferris, 1987, "Overpaying in Corporate Takeover: The Winner's Curse," *Financial Analysts Journal* 43 (No. 3, May/June), 64-70.

Walker, M., 2000, "Corporate Takeovers, Strategic Objectives, and Acquiring-firm Shareholder Wealth," *Financial Management* 29 (No. 1, Spring), 53-66.

Yook, K.C., 2000, "Larger Return to Cash Acquisitions: Signaling Effect or Leverage Effect?" John Hopkins University Working Paper.

