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# Governance and Merger Activity in Banking

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by

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Abstract

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One method of evaluating the success of management decisions regarding acquisitions is

to examine equity price movements as the news of the merger is made public. The price

movement of the acquiring firm's equity around the announcement of the acquisition

indicates if shareholders believe management has acted in their interest. In the banking

industry, researchers have found that on average equity values of the acquiring bank do

not display abnormal positive returns upon announcement, and often display statistically

significant negative returns. Another line of research has documented that CEOs are

better compensated for managing larger organizations, particularly when involved in

merger activity. This study investigates the possibility of a linkage between weak firm-

level corporate governance structures at banks and their propensity to make acquisitions

that produce negative reactions from equity holders. A commercially-sold governance

index from Institutional Shareholder Services is used to measure governance strength.

Acquisition events are from the comprehensive Thomson Reuters SDC merger database

and equity values are from CRSP. I find that weaker corporate governance is associated

with inferior stock market reactions upon announcement of an acquisition. This result should be of interest to regulators as they monitor corporate actions for covert motives, and to investors in their investment selection process. I then explore which aspects of corporate governance have the most significant connection to the equity market reception. Surprisingly, a parsimonious index of two factors has the explanatory power of the 55 available governance attributes in this bank merger context. I also show that in this dataset, which is composed of US banks purchasing US entities, acquirers with stronger (weaker) governance have a propensity to select targets with stronger (weaker) governance. Lastly, for cases in which the target firm is a bank that is publicly held or that has an ultimate parent that is publicly held, I investigate whether good governance at the target or its parent is associated with more positive movement of the acquirer's equity price at the time of the merger announcement. The results are robust to the use of a bank sector market index in place of the overall market index.

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Dedicated to Chun-Hsien, Iris and Ivory

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# Chapter 1

# Introduction

Mergers and acquisitions are one method of increasing the size, scope and profit potential of a firm. They can also enhance the prestige and power of the manager who oversees the deal. Theory suggests that shareholders would hire the agents that can produce the highest risk-adjusted returns net of compensation and monitoring costs. Yet the academic literature on mergers and acquisitions reveals an intriguing result. When considering publicly traded companies, returns that seem to be associated with the merger announcements are solidly positive for the target but are on either side of zero for the acquirer, with factors such as industry, public or private ownership, market conditions, transaction size, method of payment and country factors sometimes influencing the outcome. Andrade, Mitchell and Stafford (2001) characterize the research findings by writing, "In fact, acquiring firm shareholders appear to come dangerously close to actually subsidizing these transactions." When focusing on the banking industry, researchers have found that, on average, equity values of an acquiring bank do not display abnormal positive returns upon announcement, and often display statistically significant negative returns.

Considering all industries, Chari, Ouimet and Tesar (2006) provide the following list of some of the possible explanations:

(i) zero returns correspond to "normal" returns in the competitive process (Weston, Siu and Johnson, 2001)

(ii) difficulties exist in measuring announcement returns such as anticipation and the relative size of targets (Jarrell and Poulsen, 1989)

(iii) competing bids exist for the target

(iv) acquirer stock is used as a method of payment (Andrade, Mitchell, Stafford, 2001)

(v) negative returns are the result of bad acquisitions attributable to managerial hubris or overconfidence (Heaton, 2002; Roll, 1986).

As early as Manne (1965) and continuing through authors such as Roll (1986), Bliss and Rosen (2001), Heaton (2002), Cornett et al. (2003), Girma, Thompson and Wright (2006), and Harford and Li (2007), researchers have speculated that agents are pursuing acquisitions for their own purposes, and despite a lack of compelling financial benefit to the acquirer shareholders.  This study seeks to bring together two lines of academic research to investigate the question.  The first is the finding that merger announcements tend to result in no gain, or worse, for the acquirer.  The second is the research on the principal-agent conflict within the framework of corporate governance at the level of the firm.

Much of the relevant multi-industry research does not include banks. Some exclude all financial companies in order to focus more closely on the tangible side of the economy (Bruno and Claessens, 2007). Some exclude all regulated industries, such as banks and utility companies, in order to focus on the unconstrained decisions of market participants (Aggarwal et al., 2007 and also Doukas and Petmezas, 2007). In either case, banks are excluded.

Banks provide a compelling industry to study for a variety of reasons:

1) a well-developed and well-regulated banking system is necessary for the further development of the financial sector,

2) one requirement of regulators is to continually improve their understanding of the risks that banks are taking, including those associated with mergers and acquisitions,

3) to some degree the costs of distress or insolvency for banks is ultimately borne by taxpayers,

4) banks are important for the smooth functioning and the growth of the economy in countries with well-developed financial markets and are critical in countries with poorly-developed financial markets,

5) banks are often more subject to expropriation or self-dealing by the political elite,

6) insights gained by studying banks may be applicable to other industries,

7) due to their high level of regulation, banks generate somewhat more data than other industries.

Bank merger and acquisition activity is significantly different from that of other industries in several ways. They tend to be friendlier, with very few hostile takeovers, and they tend to be consummated more often than in other industries (Becher, 2000). Additionally, they must be approved by dedicated groups of regulators, and if cross-border they must be approved by regulators in both the home and host countries. As discussed in Amihud et al. (2002) and Buch and DeLong (2004), there is a possibility that firms may be motivated to merge in order to change their risk posture relative to the market and relative to their pre-merger positioning with regulators.

The study of how corporate governance issues relate to bank merger activity is important because of the possibility that the individual self-interest of managers is affecting not only shareholder wealth, but also national economic variables such as the level of risk in the economy, the pace of development, and taxpayer wealth. Regulators need to continually improve their understanding of, and ability to monitor, the risks that banks decide to take. With these larger constituencies in mind, an investigation into how principal-agent issues may be a component of merger and acquisition activity in the banking industry is compelling.

The focus of this study is on the acquirer's decision to enter into the transaction, and how the owners of the acquirer fare at announcement. Therefore I do not pursue the question of whether the merger of the two entities into one enterprise creates or destroys value relative to the valuations of the two firms as independent entities. That is an interesting, but different, research question that is separately pursued in the literature.

This study brings broad, commercial-quality, firm-level governance data to bear in the investigation of bank mergers.  It contributes to the literature by revealing that a linkage can be found for banks between weaker corporate governance and poorly received merger announcements.  It gives insight to regulators regarding where less constrained bank management may be creating larger organizations for their own purposes, and therefore be deserving of enhanced scrutiny.  It also highlights to investors the potential benefits of using this type of governance data in their investment selection process. Additionally, it gives some insight into which components of corporate governance are most closely associated with the equity market reception of an acquiring bank's merger announcement.  Furthermore, it shows that when public US banks choose to acquire other public US banks, or from a public ultimate parent, banks with stronger (weaker) governance have a propensity to select targets with stronger (weaker) governance. Lastly, it suggests that when considering acquisitions of banks, stronger governance of the target (or its parent) contributes positively to the market reaction as judged by the acquirer's equity value.

This study examines all US bank mergers from 2001 to 2006 for which firm-level governance data are available for the acquirer.  An event study methodology is used to construct a quantitative measure, the cumulative abnormal return or CAR, of the market reaction to the merger announcement.  In order to obtain many of the results in this study, the CAR is regressed against the governance data and against control variables that have been shown to be meaningful in previous research.  In order to investigate the tendency

of acquirers to select targets with similar governance strength, a regression of target governance strength against acquirer governance strength and control variables is done.

The organization of the sections below is as follows: Section 2 is a review of the literature. Section 3 contains a presentation of the hypotheses. Section 4 is an explanation of the methodology. Section 5 contains a review of the data sources. The results of the investigation of the linkage between governance strength and acquirer equity price movements are presented in section 6. Section 7 is an analysis of the various aspects of acquirer corporate governance and an examination of alternate measures. Section 8 is an examination of the role of the target's governance when the target is a bank. It also contains the results showing that acquirers tend to select targets with similar governance strength. Section 9 contains a robustness check. The major hypotheses of this study are re-examined using a different index to represent the overall market. The conclusion is in section 10.

Throughout this study the words merger and acquisition will be used interchangeably, as will the words acquirer and bidder. Also the words agents and management will be used interchangeably. Since this study focuses only on the wealth effects for the acquirer, and not of the target, the words owners, principals, shareholders, and stockholders will also be used interchangeably.

# Chapter 2

# Literature Review

In reviewing the literature on the effect on bidder wealth from the announcement of a merger, I focus below primarily on research from the year 2000 forward. Studies before 2000 tended to use significantly smaller samples, although the results are similar. Becher (2000) and Schmautzer (2006) contain informative reviews of studies before 2000. The effect of the announcement of the intent to merge on shareholder wealth is typically studied by applying an event study methodology. As mentioned above, there is a divide in the literature between the research that examines merger activity among the general population of business entities and the studies that focus on banks.

Reviewing the academic literature on market reactions to mergers in the general population of business entities is a beneficial starting point for several reasons. First, it contains the historical beginnings of this line of research. As such it addresses fundamental issues of methodology. It also displays the different style options that have developed.

Second, major findings regarding mergers and acquisitions are generally first made in the literature regarding the general population. Research on bank M&A then can highlight differences from the findings for the general population.

Third, there are some differences in governance tendencies between banks and the general corporate population. Bathala et al. (2007) contains an overview of differences. An exposure to the literature for the general population of entities involved in mergers helps to give meaning to the relevance of these differences.

Fourth, the volume of studies regarding the general population is much larger. Only reviewing the literature on bank-related activity would miss or under represent some aspects of this line of inquiry.

Similar to the literature on mergers, there is a divide in the literature regarding corporate governance between research focused on the general population and the much smaller amount of research focused on banks. I will review some of the literature on corporate governance regarding the general population, focusing on items that I believe will aid in giving context to this study regarding banks.

## 2.1 Literature Regarding the General Population

As mentioned above, CEO and management hubris has been advanced as a possible explanation of why acquirers enter into mergers that seem undesirable to their

shareholders, as evidenced by a destruction of value at announcement. In Hayward and Hambrick (1997) the authors construct measures of CEO hubris containing such items as CEO compensation, CEO media praise, and recent company performance. They find that acquirer shareholder wealth losses increased as their measures of CEO hubris increased. The effect was particularly strong if board oversight was weak. The strength of board oversight was measured by the percentage of insiders on the board, if the CEO served as the board chair, and the amount of equity holdings of the outside directors.

LaPorta et al. (2002) is an example of research in which the authors use country-level governance indicators, often referred to as investor protections, and show that they are relevant to corporate valuations and shareholder wealth. Although this article is not directly related to M&A, this country-level approach became used by researchers examining mergers involving entities in different countries.

Bris and Cabolis (2003) use country-level measures as an indicator of the quality of governance and apply them to cross-border mergers. Within a country they create governance indicators by industry. Their findings indicate that an entity that forms from a merger will tend to adopt the higher governance standard, either from the acquirer's or the target's country, even though it may not be necessary by law.

Mueller and Yurtoglu (2007) examine mergers grouped by country. They conclude that mergers in continental Europe do more poorly than those in the United States and countries such as Canada, Australia and New Zealand when performance is measured

over time. They suggest that management empire building may be at work given the weaker country governance framework in continental Europe as compared to the comparison countries.

Gompers, Ishii, and Metrick (2003) were some of the first researchers to use a numeric index to represent the quality of governance at an individual company. The index the authors created has become popular with academics investigating corporate governance. The authors find that firms with stronger corporate governance have better business results, and make fewer acquisitions.

Grinstein and Hribar (2004) find that CEOs with more power over the board of directors tend to do larger acquisitions and the acquisitions are received more negatively. They assess CEO power over the board via factors such as CEO membership on the nominating committee, if the CEO seems influential in selecting new board members, and if the CEO is the also the board chair. They also find that more powerful CEOs receive larger bonuses upon completion of the merger.

In a 2007 study of firms in the United Kingdom, Doukas and Petmezas focused on the theme of overconfidence and self-attribution bias. They used high order acquisition deals and insider dealings as indicators of overconfidence. They were able to find evidence supporting the view that overconfident bidders realize lower announcement-related returns. In another study of UK firms, Girma et al. (2006) document the link between

firm size and CEO compensation. The authors find that CEOs are able to increase their compensation via acquisitions.

Harford and Li (2007) investigate U.S. acquirers and also show that CEOs receive positive compensation effects from mergers. They find that even in mergers in which bidding shareholders are worse off, bidding CEOs are better off three quarters of the time. Additionally they find that following a merger, a CEO's pay and overall wealth become insensitive to negative stock performance, but a CEO's wealth rises in step with positive stock performance. In an interesting comparison, they find that CEOs are not rewarded for undertaking major capital expenditures. The authors also find that corporate governance plays a role in CEO compensation within the M&A context. Bidding firms with stronger boards relative to the CEO, defined as CEOs with below-average tenure at the time of the acquisition, retain the sensitivity of their CEOs' compensation to poor performance following the merger.

Bruno and Claessens (2007) find that firm-level indicators were much more helpful in revealing the effects of strong or weak corporate governance than country-level indicators. They find that firm-level indicators had a notable relationship with firm valuation whereas country-level indicators did not.

In Masulis et al. (2007), firm-level governance indicators are brought to bear on shareholder wealth changes upon the announcement of the intent to merge. The authors find that firms with more anti-takeover provisions (ATPs) generate greater destruction of

shareholder wealth upon announcement than firms with fewer ATPs. They also find that firms that separate the positions of chairman and CEO earn higher abnormal returns at announcement.

Choi and Huang (2008) use similar firm-level ATP data and examine cross-border mergers. Their findings do not confirm the findings of Masilus et al. (2007). Unexpectedly they find that firms with higher ATPs had higher cumulative abnormal returns (CARs) at the announcement of the cross-border deals. This is despite the fact that they paid higher premiums for the targets. There does not yet seem to be a cohesive line of reasoning to put these results into context with other research.

## 2.2 Literature Focused on Banks

In reviewing the literature regarding banks, I first review research that documents the tendency for acquirer abnormal returns to be on average near zero or negative, and research that highlights related, but not governance, considerations. I then review articles that incorporate issues of bank governance.

As an example of earlier bank merger research, Becher (2000) examines 558 US bank merger events from 1980 to 1997 and finds that over a 36-day event window cumulative returns to bidders are not significantly different from zero, but over a shorter, 11-day, window that bidder losses are negative and statistically significant.

DeLong (2001) finds that bidders involved in mergers that increase corporate focus in both geography and activity do not, on average, destroy shareholder wealth upon announcement. Bidders that were not pursuing this degree of focus, and bidders that were diversifying, fared worse.

Using a 12-day window, DeLong (2003 (a)) finds that the average returns to acquirers involved in US domestic bank mergers are negative and significant. Interestingly, she finds that in domestic bank mergers within countries with equity markets that are less well developed than that of the US, the average CAR is higher. This study is an indicator that the diverse and more portfolio-oriented nature of the equity holdings in more financially-developed countries may bring the associated effect of more difficulty controlling agents and so bring more mergers that reduce acquirer shareholder wealth.

Bank managers seem to learn from previous mergers. DeLong and DeYoung (2007), using 216 mergers between 1987 and 1999, were able to show that bank managers appear to learn from the previous mergers in the industry, and make the experiences in later years better than in earlier years.

Although the focus of DeLong and DeYoung (2007) is primarily on long-term bank accounting results, it also suggests that market participants may be improving their ability to evaluate, at announcement date, which mergers will result in improved results over time. In this regard, the authors make the point that the ability of market participants to foresee the ultimate effects of the bank merger is low generally. This learning by

observing on the part of market participants is an interesting extension of the work done in DeLong (2003 (b)) in which the author shows that market participants display some skill in predicting at the time of announcement the long-term benefits of mergers that build some types of enterprise focus but not the same skill when evaluating mergers that build other types of enterprise focus.

The following literature concerning banks contains aspects of bank corporate governance.

Bliss and Rosen (2001) find that mergers had a positive impact on CEO compensation, particularly via the effect of the size of the bank. They also find that compensation generally increased despite negative market reactions to the merger announcement. Interestingly, they additionally found that CEOs with more stock-based compensation entered into fewer mergers.

Cornett et al. (2003) investigate a possible linkage between governance variables surrounding CEO age, CEO equity exposure and incentive compensation, block ownership, and board characteristics to CARs resulting from a merger announcement. They find a relationship for focusing mergers but not diversifying mergers. For focusing mergers they find an average CAR near zero, and for diversifying mergers a significantly negative average CAR.

Hagendorff et al. (2007) review the existing literature on the linkage between the strength of corporate governance and bank merger results, and then call for more investigation

into the question. They characterize it as a compelling line of inquiry given the dependence on the banking sector for economic well being, and on the opacity of banking risk. It worth noting that their opinions and their call for further research were issued before the financial crisis that began in 2008.

Hagendorff et al. (2008) use country-level data and find that acquirers that purchase targets in countries with fewer investor protections tend to have less negative CARs at announcement. Although they do not highlight it as such, this result is consistent with the governance mechanisms of the acquirer (the party with the stronger governance mechanisms) being brought to bear on the combined entity, thereby enhancing the value of the combined entity more than if there was little difference in the governance of the two parties at the outset. The amount of the value enhancement is greater, the bigger the difference in governance between the two parties.

Hagendorff et al. (2009) again use country-level data and investigate whether board monitoring of bank management seems to be less attentive when there is a more stringent regulatory regime. They find that board monitoring seems to be more attentive when there is a more stringent regulatory regime. The two oversight entities seem to compliment the efforts of each other.

# Chapter 3

# Hypotheses

The empirical analysis in this study is primarily designed to test a component of the principal-agent hypothesis as it may be functioning in US banks, stated broadly as managers will act in their own interests rather than the interest of shareholders if they are not monitored and controlled. Specifically, the manifestation of the principal-agent hypothesis examined is that given weaker constraints by shareholders, bank managers display a higher propensity to make acquisitions that destroy shareholder value when announced.

The benefits to management of the acquirer from making an acquisition are well documented in the literature (e.g. Harford and Li, 2007). Yet in this study I choose to be cautious about making a blanket causal assertion between the existence of corporate governance mechanisms at a bank and the assumption that shareholders are constraining management. I want to allow for the theoretical possibility that there are some "good" corporate cultures or "good" managers that promote both better acquisitions and the use of stronger governance mechanisms. Even with this caution, investigating the linkage between governance and acquisitions is compelling because it is reasonable to believe

that in some, perhaps most, cases the constraints of the governance mechanism may be restraining or influencing management. At a minimum, strong corporate governance mechanisms serve as a signal to investors that either a "good" situation is in place or that "bad" managers would be somewhat constrained.

In order to examine the linkage between governance strength and acquirer wealth effects at announcement empirically, I create the following testable hypotheses:

**H1:** Bank mergers tend to destroy shareholder wealth at announcement on average.

A finding in support of this hypothesis would agree with the extant literature.

**H2:** Weaker corporate governance at the acquiring firm level is associated with a greater destruction of acquirer shareholder wealth at announcement on average.

A finding in agreement with this hypothesis would document that stronger corporate governance measures indicate on average a more positive reception of the announcement of an acquisition and less destruction of shareholder wealth. This result would be potentially significant to regulators and investors.

Additionally, I seek to build on the rather sparse literature regarding the significance of the governance environment at the target. I examine the following two hypotheses:

**H3:** Acquirers with stronger governance tend to acquire entities with weaker governance.

This hypothesis is motivated by the findings in Hagendorff et al. (2008) in which targets from countries with fewer investor protections tended to have less negative CARs at announcement. This tendency combines in an intriguing way with the finding in Bris and Cabolis (2003) that a combined entity will bring the higher of the two parties' governance standard to the new entity, and with the finding of Bruno and Claessens (2007) that stronger firm-level governance leads to higher firm valuation. In formulating the hypothesis in this way I am assuming that 1) there is a benefit to be garnered by seeking a merger partner at the opposite end of the governance spectrum, 2) that the motivation to garner that potential benefit for acquirer shareholders will be recognizable among the other motivations of the principals, and 3) that research findings generated using cross-border mergers would apply to US domestic mergers.

With similar motivation and foundation I test the following hypothesis:

**H4:** Targets with weaker governance relative to the average governance strength of targets are associated with less destruction of acquirer's shareholder wealth at announcement.

# Chapter 4

# Methodology

An event study methodology is used to evaluate the market reaction on acquirer equity to

the announcement of the merger.  To briefly review the terminology, the merger

announcement is the *event*, and is said to happen on day 0.  An observation *window*

measured in number of days is established around the date of the event.  Following

Masulis et al. (2007) this study uses a 5 day window around the announcement, 2 days

before the announcement date, day -2, and 2 days after, day +2.

The return that would have been expected during the announcement window if there had

been no announcement is calculated.  This study follows the literature in using the

Capital Asset Pricing Model (CAPM) to create the expected return.  The CAPM

parameters alpha and beta are estimated by considering the individual stock and market

movements during a period 255 trading days in length ending 46 trading days before the

event.  The CRSP equal-weighted market index is the benchmark market return.  The

expected individual stock return is compared to the actual return.  The difference is

designated as the *abnormal return*, attributable to the event.  This calculation is done on a

daily basis for each day in the event window.  The sum of the daily abnormal returns for the entire window is called the *cumulative abnormal return, or CAR.*

(1) $$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{Mt})$$

(2) $$CAR_i = \sum_{t=-2}^{2} AR_{it}$$

Where

$\alpha_i$ and $\beta_i$ are the parameters generated by the CAPM estimation process

$AR_{it}$ = the abnormal return for stock i on day t

$R_{it}$ = return on stock i on day t

$R_{Mt}$ = the return of the market on day t

$CAR_i$ = the cumulative abnormal return on stock i for the event

A comprehensive, commercially-marketed, governance index is used to indicate the strength of corporate governance.  The governance index value for each company is re-evaluated annually, and the value for the year of the event is used.  The data provider refers to this as the Corporate Governance Quotient, or CGQ.  In equation (3) below, it is referred to as the Industry CGQ because it is calculated relative to other firms in the banking industry.

With the CAR as the dependent variable and the governance indicator as the explanatory variable of particular interest, an OLS process is used to assess the relationship. Control variables that have proven helpful in other studies are included. Bruner (2005) provides a comprehensive review of the literature, which documents the importance of these control variables in previous research.

The control variables are:

1. The transaction size, as measured by the consideration paid divided by the total assets of the acquirer. Previous research (Moeller et al., 2004) has shown that larger transactions tend to receive a cooler, or more negative, reception by market participants.

2. A dummy variable for public targets. Previous research (Koeplin et al., 2000) has found that purchases of private targets are better received in the market. The common interpretation is that private companies are often acquired more cheaply than public companies.

3. A dummy variable for cash-only consideration and a dummy variable for shares-only consideration. This leaves the base case as those transactions with hybrid consideration, either a combination or a choice of cash and shares. Previous research (Travlos, 1987) has shown that cash-only consideration is correlated with a more positive reception by market participants upon announcement.

4. Dummy variables for each year 2001 through 2005. This leaves 2006 as the base case. Previous studies (Dong et al., 2006) have shown that merger and acquisition deals done in "hot markets" often result in overpayment, and a more negative reception upon announcement. Hot markets are characterized by a higher quantity of transactions and by higher average and total dollar volume. The amount of merger and acquisition activity in the economy moves in waves, with several years of high activity, or hot markets, followed by several years of lower activity, or cool markets.

5. Dummy variables for the most popular market index in which the acquiring company is a member. Brown and Caylor (2006) showed that corporate governance strength rises as company size increases. Rather than using the log of total acquirer assets in this study, I have chosen to use market indexes that are arranged by size: the S&P 500 for large capitalization companies, S&P 400 for mid-cap, S&P 600 small-cap, Russell 3000 for companies not within the S&P indexes, and, following the data providers lead, a remainder for others, called the CGQ Universe. The premise behind this choice is that investors may often compare corporate governance functioning within these groupings, rather than on a continuum of asset size. The data are coded so that the S&P 500 is the base case.

The regression equation used to test hypothesis 2, the linkage between CAR and governance strength, with i as the subscript representing the event and $\varepsilon$ representing the random effect, is:

(3) $CAR_i = a + \beta_1 Size_i + \beta_2 Public_i + \beta_3 Cash_i + \beta_4 Shares_i + \beta_5 2001_i + \beta_6 2002_i + \beta_7 2003_i + \beta_8 2004_i +$

$\beta_9 2005_i + B_{10} S\&P400_i + \beta_{11} S\&P600_i + \beta_{12} Russell3000_i + \beta_{13} CGQUniverse_i + \beta_{14} Industry$

$CGQ_i + \varepsilon_i$

The regression equation used to test hypothesis 4, the linkage between target governance

strength and CAR is similar but does not contain the public target indicator (because only

public targets can be examined for governance) and the year 2001 and 2002 indicators

due to data availability restrictions.  The target's CGQ is added to the equation, and is the

variable of interest.  To give context to the target's CGQ, I also add the target's index.

The equation is:

(4) $CAR_i = a + \beta_1 Size_i + \beta_2 Cash_i + \beta_3 Shares_i + \beta_4 2003_i + \beta_5 2004_i + \beta_6 2005_i +$

$\beta_7 Acq\ Industry\ CGQ_i + \beta_8 Acq\ S\&P\ 400_i + \beta_9 Acq\ S\&P\ 600_i + \beta_{10} Acq\ Russell\ 3000_i + \beta_{11} Acq$

$CGQUniverse_i + \beta_{12} Target\ Industry\ CGQ_i + \beta_{13} Target\ S\&P\ 400_i + \beta_{14} Target\ S\&P$

$600_i + \beta_{15} Target\ Russell\ 3000_i + \beta_{16} Target\ CGQUniverse_i + \varepsilon_i$

To test hypothesis 3, regarding the prediction of the target's governance strength from the

acquirer's governance strength and control variables, I use a regression with the target's

governance strength as the dependent variable, the acquirer's governance strength as the

independent variable of interest, and a variety of model specifications with various

control variables.

# Chapter 5

# Data Sources

Merger announcement events are taken from the Thomson Reuters SDC Platinum database. The following initial criteria are used to select the events:

1. The acquirer and the target must be US companies.

2. The acquirer must be a public company. This criterion removes private acquirers and acquirers that are wholly-owned or partially-owned subsidiaries of other companies.

3. The acquirer must have SIC code 6021, national-charter commercial bank, 6022, state-charter commercial bank or 6029, commercial banks not elsewhere classified.

4. Announcement date must be from January 1, 2001 to December 31, 2006.

5. Deal size must be at least $50 million. This criterion eliminates deals that may be too small to be actively followed by market participants.

6. The transaction must have closed. The deal status must be "Completed".

7. There must have been a change of control of the target. The acquirer must have held less than 50% of the target's shares before the transaction, and more than 51% after completion. In practice, the percentage of the target held by the acquirer almost always moves from 0 to 100%. In this study all the events fit that pattern except three, which moved from 0 to 62%, 75% and 86%.

8. Both acquirer's total assets and deal size values must be available.

Equity prices come from the Center for Research in Security Prices database, often know by its acronym CRSP. The Eventus software program from Cowan Research is used to access the CRSP data, perform the CAPM estimation, calculate the CARs, and generate some summary statistics. Eventus is designed to facilitate event studies that use CRSP data as the equity price input. The equal-weighted CRSP market index is used. The CRSP PERMNO and the event date are used together to uniquely identify each event and to link events to the associated equity prices.

After the events were identified and the equity price information was retrieved, each announcement event was then matched by bank name and announcement year to the governance data for the particular acquirer or target for the relevant year. CUSIPs are also used to identify the banks in 2003 through 2006. CUSIPs are not part of the

governance data for 2001 and 2002. There were 228 events for which all initial acquirer data are available.

To gauge the strength of corporate governance, the Industry Corporate Governance Quotient (CGQ) measure devised by Institutional Shareholder Services (ISS) is used. This measure gives a numeric assessment to each company, ranging from 0 to 100, versus a comparison group of companies in the same industry.

The availability of accessible governance data by company has traditionally been limited. The Investor Responsibility Research Center (IRRC), a commercial organization, was the first to gather and organize firm-level data. Gompers et al. (2003) use these data to create the first widely available index, or score, of governance by company. IRRC was purchased by Institutional Shareholder Services (ISS), which collects a wider range of governance data. In 2007 ISS was acquired by RiskMetrics. In 2010 RiskMetrics was acquired by MSCI Barra. For this study I actively pursued permission from the vendor to use the commercially-sold ISS data rather than use the more limited data in the older IRRC form.

ISS developed its own measure of corporate governance strength called the Corporate Governance Quotient (CGQ). The exact formula for the CGQ remains proprietary although we do know that the output of the calculation process is to rank companies from strongest to weakest governance. Then each company is given the score that corresponds to its ranking. For example, a company score of 25 indicates that the governance of 75%

of the comparison group is rated stronger. A score of 0 (100) indicates that the company is the worst (best) in the comparison group. ISS provides two CGQ values. The "Index CGQ" is for comparison to companies in the same market index. The indexes used by ISS are the S&P 500 (large cap), S&P 400 (mid cap), S&P 600 (small cap), Russell 3000 (comprehensive), and a remainder to the "CGQ Universe". The "Industry CGQ" is for comparison to companies in the same industry. Considering the 228 events that meet the criteria listed above, all but 12 have the Industry CGQ calculated versus the "Banks" peer group by ISS. The remaining 12 are calculated versus the "Diversified Financials" peer group. In this study the Industry CGQ is used and these 12 events are dropped in order to maintain the single-industry focus and the comparability between acquirers. There are 216 remaining events.

Chapter 6

# **Results of the Linkage between Acquirer Governance and Market Reaction**

The data are summarized in Table 1.

Table 1:  Summary of acquisition events and acquirer and target characteristics.

| N=216 | Mean | Median | Max | Min | Standard Deviation |
|---|---|---|---|---|---|
| CAR | -0.0105 | -0.0081 | 0.0963 | -0.1264 | 0.035 |
| Industry CGQ | 64.22 | 68.30 | 100.00 | 0.50 | 26.79 |
| Deal / Acquirer Total Assets, % | 3.40% | 1.78% | 48.48% | 0.02% | 5.05% |

| | Count |
|---|---|
| Public Target | 145 |
| Private Target | 71 |
| | |
| All Cash | 36 |
| Hybrid Payment | 111 |
| All Stock | 69 |

| Event Year | |
|---|---|
| 2001 | 28 |
| 2002 | 22 |
| 2003 | 41 |
| 2004 | 44 |
| 2005 | 34 |
| 2006 | 47 |

| Market Index | |
|---|---|
| S&P 500 | 62 |
| S&P 400 | 30 |
| S&P 600 | 29 |
| Russell 3000 | 86 |
| CGQ Universe | 9 |

In order to assess support for hypothesis 1, that mergers tend to destroy shareholder

wealth at announcement on average, the cumulative abnormal returns must be examined

to see if the anticipated negative market reactions are evident.  A finding of negative

CARs would confirm hypothesis 1.  The mean cumulative abnormal return, or average

shareholder loss attributable to the event, for the 216 events is -1.05%.  There were 79

events with positive CARs and 137 events with negative CARs. Recall that the CAR is a

difference, between the expected and actual stock return during the event window. In

examining the statistical significance of this difference, the null hypothesis is that the

expected difference is zero, reflecting that the event has no impact on stock returns. The

large-sample, generalized sign test for this division of 79 positive and 137 negative

results can be assessed using the formula and values below where,

q = the quantity of negative CAR results,

n = the number of observations, and

p = the probability, 0.5, associated with the null hypothesis that the expected division

between positive and negative CAR results is an even split.

(5)                     $z=(q-np)/\sqrt{(np(1-p))}=(137-216(0.5))/\sqrt{(216(0.5)(0.5))}\approx 3.9$

The test is significant at the 1% level. I would prefer not to rely simply on the terms one-

tailed or two-tailed test. Note that when a z-value of 3.9 is applied to one half of the

normal distribution, it covers an area of about .4990, leaving 0.001 in the tail. In an

application such as this, where a result of 137 negative values implies the necessity of 79

positive values (unless a CAR of exactly 0.00 is recorded), this amount of probability in

each of the two tails should be combined before assessing significance. Here, the sum of

the two probabilities, 0.002, allows a claim of significance at the conventional 1% level.


The Wilcoxon signed-rank test incorporates both the sign of the difference and its level,

and so uses more information than the generalized sign test above. Both tests are

nonparametric and so do not make an assumption about the underlying probability

distribution, but the Wilcoxon test adds the assumption that the distribution is symmetric

around the mean (Hogg et al., 2005). In this application the CARs are ranked by absolute

value from lowest to highest and given a rank number from 1 to 216. The rank number

of the negative CARs is totaled, in this case to 15,655. The expected value of this total

for the null hypothesis is n(n+1)/4 and the variance is n(n+1)(2n+1)/24 (Winkler and

Hayes, 1975). The Z value, appropriate for large samples, is given by the formula:

(6) $z = (\text{total negative rankings} - n(n+1)/4) / \sqrt{(n(n+1)(2n+1)/24)}$

$$= (15{,}655 - 216(217)/4) / \sqrt{(216(217)(432+1)/24)} \approx 4.3$$

This is significant at the 1% level. Clearly the results support H1 and confirm the

observations of other researchers that on average bank merger announcements tend to

cause a loss in the wealth of acquirer shareholders.

As to whether weaker corporate governance at the firm level is associated with a greater

destruction of shareholder wealth at announcement on average, hypothesis 2, the results

of the OLS regression are in Table 2. The independent variables in bold and marked

with asterisks are significant at the 1% (***) level or stronger. When considering the

coefficient results, note that the average CAR is in the format of 0.0105, which represents

1.05% of shareholder wealth.

In reviewing the results for the control variables, the coefficients for the consideration

type indicators, Cash and Shares, are extremely small and not statistically significant.

Conversely, the coefficient for the public target indicator is significant at the 1% level.

At -0.01400, the coefficient for the public indicator reveals an average predicted 1.400%

differential in shareholder wealth between transactions involving public and private

targets.  The actual breakdown of the average CAR values for this dataset is an average

of -0.0164 for the 145 public targets and 0.00116 for the 71 private targets.  This finding

is consistent with the findings concerning the "private firm discount" in the literature

regarding the general population of companies.  Capron and Shen (2007) explore this

discount in detail as it relates to the merger activity of the general population.  Their

results show that on average, shareholders lose more than one percent of value for

transactions involving public targets and an average return to shareholders that is positive

but less than one percent for transactions involving private targets.

The deal size indicator is also significant at stronger than the 1% level.  One approach to

considering the economic impact of an independent variable is to multiply its estimated

coefficient times its standard deviation, called "Effect Size" in Sanders (2002).  For the

deal size indicator, the coefficient of -0.19916 times the standard deviation of 0.0505

(about 5% of acquirer total assets) would create an expected change in shareholder

wealth of -0.1005 or -1.005% of shareholder wealth at announcement.  It is worth noting

that this variable has a mean value of 0.0340, or 3.4% of acquirer total assets, so a

hypothetical change of one standard deviation from the mean would have to be an

increase in deal size, to about 8.4% of acquirer total assets, not a decrease.

The dummy variables for each year yield one year in which the estimated coefficient is

statistically significant.  The 2002 coefficient of 0.03112 was significant at the 1% level.

Transactions that were announced in 2002 added on average 3.112% to shareholder wealth over transactions that were announced in 2006. 2002 was the trough of a cool acquisition market, after the wild markets of the late 1990s and the bust in Spring 2000. It is worth remembering that acquisitions take a long time to negotiate and then announce, particularly transactions involving banks which may involve pre-announcement communication with their associated regulators.

The S&P 400 and S&P 600 variables fall just short of the 5% significance level, while the Russell 3000 variable is not significant and the CGQ Universe is significant at the 1% level. Recall that the base case is the S&P 500. Results in Table 3 show that if just an S&P 500 indicator is used, it is closer to the 5% significance level, with a p-value of 0.0516. It is just within the 5% significance level, with a p-value of 0.0473, if the consideration type variables Cash and Shares, which add very little and have a very high p-value, are eliminated from the regression. Alternatively, if the log of total assets is used instead of an index indicator, it is helpful but not significant even at the 10% level. I have chosen to use an indicator for each market index with the belief it is the most informative arrangement.

The size of the coefficients indicates that transactions involving acquirers in the S&P 400 and S&P 600 would on average receive a 1.4% better reception than acquirers in the S&P 500. As motivation for future research, I offer the thought that acquisitions by companies in these categories show a capability and willingness to move toward being included in the S&P500, and then gaining the associated equity lift. Considering the CGQ Universe

of acquirers not listed in the other indexes, the sample size is small at 9 events, but perhaps these firms are garnering positive attention to their equity by making the acquisition. The acquisition may also move the acquirers toward inclusion in the Russell 3000.

The explanatory variable of interest, the Industry Corporate Governance Quotient, is significant at the 1% level. Recall that the CGQ is allowed to range from 0 to 100. The product of one standard deviation of this variable, 26.79, times its coefficient, 0.00028, produces an expected effect of 0.0075 or 0.75% of shareholder wealth. This measure of corporate governance quality is indicating a characteristic, or a set of characteristics, of the bank that is positively related to making acquisitions that are better received by market participants. In reviewing these results, clearly governance matters and weak governance can be costly. H2 is supported.

Table 2: The effect of governance strength as measured by the Industry CGQ on the cumulative abnormal return (CAR).

N=216

| | | |
|---|---|---|
| R Square | 0.23040 | |
| Adj R Square | 0.17679 | |
| Standard Error | 0.03214 | |
| F | 4.29816 | |
| F Significance | 0.0000012 | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.02796 | 0.01464 | ** |
| **Public Target** | **-0.01400** | **0.00449** | *** |
| Cash | 0.00149 | 0.81293 | |
| Stock | 0.00171 | 0.74414 | |
| **Deal Size** | **-0.19916** | **0.00008** | *** |
| **Industry CGQ** | **0.00028** | **0.00429** | *** |
| 2001 | 0.01033 | 0.22178 | |
| **2002** | **0.03112** | **0.00066** | *** |
| 2003 | 0.00222 | 0.75353 | |
| 2004 | 0.01069 | 0.12471 | |
| 2005 | -0.00064 | 0.93065 | |
| S&P 400 | 0.01412 | 0.05311 | |
| S&P 600 | 0.01435 | 0.06098 | |
| Russell 3000 | 0.00646 | 0.27271 | |
| **CGQ Universe** | **0.03912** | **0.00339** | *** |

*** (**), (*) significant at the 1%, (5%), (10%) level

Table 3: Regressions using an S&P 500 indicator or log of acquirer assets to differentiate acquirers. N=216

Regression results using a single S&P 500 indicator rather than individual indexes:

| | | |
|---|---|---|
| R Square | 0.19811 | |
| Adj R Square | 0.15487 | |
| Standard Error | 0.03257 | |
| F | 4.58178 | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.01550 | 0.10030 | |
| **Public Target** | **-0.01555** | **0.00158** | *** |
| Cash | 0.00021 | 0.97383 | |
| Stock | 0.00060 | 0.90908 | |
| **Deal Size** | **-0.16407** | **0.00049** | *** |
| **Industry CGQ** | **0.00026** | **0.00556** | *** |
| 2001 | 0.01044 | 0.20614 | |
| **2002** | **0.03077** | **0.00067** | *** |
| 2003 | 0.00206 | 0.77194 | |
| 2004 | 0.01062 | 0.13076 | |
| 2005 | -0.00082 | 0.91218 | |
| **S&P 500** | **-0.01034** | **0.05163** | * |

Regression results using a single S&P indicator rather than individual indexes and dropping the consideration type:

| | | |
|---|---|---|
| R Square | 0.19806 | |
| Adj R Square | 0.16302 | |
| Standard Error | 0.03241 | |
| F | 5.65302 | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.01518 | 0.09037 | * |
| **Public Target** | **-0.01555** | **0.00149** | *** |
| **Deal Size** | **-0.16404** | **0.00045** | *** |
| **Industry CGQ** | **0.00026** | **0.00451** | *** |
| 2001 | 0.01048 | 0.19575 | |
| **2002** | **0.03071** | **0.00060** | *** |
| 2003 | 0.00202 | 0.77449 | |
| 2004 | 0.01069 | 0.12464 | |
| 2005 | -0.00085 | 0.90756 | |
| **S&P 500** | **-0.01021** | **0.04734** | ** |

*** (**), (*) significant at the 1%, (5%), (10%) level

Table 3, continued

Regression results using log of acquirer assets instead of an index indicator

| R Square | 0.19173 |
| Adj R Square | 0.14815 |
| Standard Error | 0.03270 |
| F | 4.39920 |

| | Coefficients | P-value | |
| --- | --- | --- | --- |
| Intercept | 0.00489 | 0.75947 | |
| Cash | 0.00039 | 0.95123 | |
| Stock | -0.00013 | 0.97999 | |
| **Public Target** | **-0.01522** | **0.00210** | *** |
| **Deal Size** | **-0.17853** | **0.00043** | *** |
| **Industry CGQ** | **0.00026** | **0.00725** | *** |
| 2001 | 0.00928 | 0.26028 | |
| **2002** | **0.03079** | **0.00073** | *** |
| 2003 | 0.00223 | 0.75524 | |
| 2004 | 0.01082 | 0.12679 | |
| 2005 | -0.00098 | 0.89560 | |
| **Log Assets** | **-0.00558** | **0.14029** | |

Regression results using log of acquirer assets instead of an index indicator and no consideration type

| R Square | 0.19171 |
| Adj R Square | 0.15639 |
| Standard Error | 0.03254 |
| F | 5.42871 |

| | Coefficients | P-value | |
| --- | --- | --- | --- |
| Intercept | 0.00496 | 0.75477 | |
| **Public Target** | **-0.01524** | **0.00196** | *** |
| **Deal Size** | **-0.17886** | **0.00037** | *** |
| **Industry CGQ** | **0.00026** | **0.00532** | *** |
| 2001 | 0.00937 | 0.24681 | |
| **2002** | **0.03086** | **0.00062** | *** |
| 2003 | 0.00228 | 0.74756 | |
| 2004 | 0.01084 | 0.12263 | |
| 2005 | -0.00094 | 0.89916 | |
| **Log Assets** | **-0.00561** | **0.12838** | |

*** (**), (*) significant at the 1%, (5%), (10%) level

Chapter 7

## **Acquirer Governance Measurement and Individual Component Importance**

Thus far the CGQ has been used to represent the quality of corporate governance. The precise composition of the CGQ is proprietary, but the component data has been made available for this study. I now review the detailed data to gain insight into what might be the important drivers within it. The dataset starts in 2001, but the 2001 and 2002 data are much less detailed and not directly comparable to the 2003 through 2006 data. Therefore I only use the 2003 through 2006 data, for a total of 166 events. The 50 eliminated data points from 2001 and 2002 represent a 23% decrease in the size of the dataset from the original 216.

Following Aggarwal and Williamson (2006), I start with the data as it is gathered and arranged in 2003 and 2004. The authors arrange the data into logical groupings, reprinted in Appendix 1. I break their item numbered 33 into two separate items, one concerning blank check preferred stock and the other concerning poison pills, so that I have 65 items where they have 64. The data for 2005 and 2006 are in a slightly different format. I am

able to match most items between the 03-04 year format pair and the 05-06 year format pair, but 6 items must be dropped from the 03-04 pair because they do not appear in the later pair.  This is despite Aggarwal and Williamson identifying these items as part of their 2005 list.  They may have had access to data that ISS had not yet reformatted.  The six dropped items are in italics in the appendix list.  I also drop two items with which 100% of the companies in the dataset comply:

1. All directors attended 75% of board meetings or had a valid excuse

45. No interlocks among compensation committee members

Furthermore, I drop two items with which no companies in the dataset comply:

35. Poison pill with TIDE provision

37. Poison pill with sunset provision

There are 55 governance attributes remaining in the dataset.

The purpose of this portion of the study is not to reverse-engineer the CGQ, but rather to identify the important governance practices in a bank merger context.  ISS collects its data in a detailed way.  As an example, there might be 5 categories of board size such as 5 directors or less, 6 to 8 directors, 9 to 12, 13 to 15, and 16 or more, and each company is fit into one category.  ISS does not give a firm opinion on what is a minimum or acceptable strength of governance, but does publish a guide to best practices.  Using the

perspective within Brown and Caylor (2006), Aggarwal and Williamson (2006) and the ISS guide, a reasonable divide can be established between better and lesser governance practices.  I code each acquirer in the year of its acquisition as better or lesser (1 or 0) on each of the 55 attributes.  To continue with the board size example, all sizes between 6 and 15 are coded as better, a value of 1.  A finding of less than 6, more than 15, or no data available is coded as lesser, a value of 0.

As a first step in investigating the detailed governance information, I replace the Industry CGQ with a simple sum of the number of the better ratings attributed to a company.  The correlation between the two measures is 0.803.  The OLS regression using the CGQ has an adjusted R squared of 0.1803.  The same regression using the sum has an adjusted R squared of 0.1797, a small loss of only 0.0006, with statistical significance of the governance variable also little changed.  For this dataset and this application, the simple sum of the attributes and the CGQ are close substitutes.  Regression results using the two measures of governance strength are compared in Table 4.

Table 4: Comparison of regression results using Industry CGQ versus a sum of all the individual governance indicators that are coded as positive.

| N=166 | Sum of Attributes | | | CGQ | | |
|---|---|---|---|---|---|---|
| R Square | 0.23940 | | | 0.23987 | | |
| Adj R Square | 0.17974 | | | 0.18026 | | |
| Standard Error | 0.03100 | | | 0.03099 | | |
| F | 4.01307 | | | 4.02352 | | |
| F Significance | 0.00002 | | | 0.00002 | | |
| | Coefficients | P-value | | Coefficients | P-value | |
| Intercept | -0.06086 | 0.00669 | *** | -0.03197 | 0.01627 | ** |
| **Public Target** | **-0.01404** | **0.01049** | ** | **-0.01333** | **0.01503** | ** |
| Cash | -0.00253 | 0.73034 | | -0.00023 | 0.97503 | |
| Stock | -0.00250 | 0.65980 | | -0.00061 | 0.91537 | |
| **Deal Size** | **-0.20242** | **0.00006** | *** | **-0.20529** | **0.00005** | *** |
| 2003 | 0.01044 | 0.18696 | | 0.00291 | 0.67186 | |
| **2004** | **0.01700** | **0.02118** | ** | **0.01210** | **0.07511** | * |
| 2005 | 0.00120 | 0.86829 | | 0.00003 | 0.99692 | |
| S&P 400 | 0.00999 | 0.26650 | | 0.01065 | 0.23721 | |
| **S&P 600** | **0.01909** | **0.02754** | ** | **0.01978** | **0.02345** | ** |
| Russell 3000 | 0.00753 | 0.24902 | | 0.00847 | 0.20289 | |
| **CGQ Universe** | **0.04130** | **0.00212** | *** | **0.04142** | **0.00206** | *** |
| **Sum of Attributes** | **0.00173** | **0.00452** | *** | | | |
| **Industry CGQ** | | | | **0.00032** | **0.00429** | *** |

| | Std Deviation | Effect Size |
|---|---|---|
| Sum of Attributes | 5.3411 | 0.00922 |
| Industry CGQ | 26.0782 | 0.00823 |

*** (**), (*) significant at the 1%, (5%), (10%) level

I next use the investigation procedure in Brown and Caylor (2006), who use ISS governance data to investigate the linkage between governance strength and firm value represented by Tobin's q. The procedure is to use three methods to identify the variables within the 55 that seem to be the most important. Variables that are highlighted in at least two of the three methods are then combined into an index. Brown and Caylor's

work results in an index of 7 variables. The first one is not usable in my dataset because all the acquiring banks meet this criterion. The item in italics is not available in my dataset because it is not included in the 2005 and 2006 data.

1. All directors attended 75% of board meetings or had a valid excuse
13. Governance guidelines are publicly disclosed
14. Annually elected board (no staggered board)
15. Directors are subject to stock ownership requirements
33b. Company either has no poison pill or a pill that was shareholder approved
47. *No option repricing within last three years*
53. Options grants align with company performance and reasonable burn rate

I refer to the usable 5 items as the BC5 index. It is not particularly good as a representation of the entire governance dataset in this bank merger application. A regression using this BC5 index as the independent variable of interest produces an adjusted R squared of 0.13569, notably lower than that of the full sum, 0.1797. Full regression results are in Table 5.

Table 5:  Regression results substituting the BC5 index, similar to the Gov-7 index from Brown and Caylor (2006), for the industry CGQ.

| N=166 | | | |
|---|---|---|---|
| R Square | 0.19855 | | |
| Adj R Square | 0.13569 | | |
| Standard Error | 0.03182 | | |
| F | 3.15859 | | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.00262 | 0.78438 | |
| **Public Target** | **-0.01396** | **0.01315** | ** |
| Cash | 0.00090 | 0.90388 | |
| Stock | -0.00394 | 0.49789 | |
| **Deal Size** | **-0.20611** | **0.00007** | *** |
| 2003 | -0.00205 | 0.77155 | |
| 2004 | 0.00718 | 0.33387 | |
| 2005 | -0.00282 | 0.69895 | |
| S&P 400 | 0.00870 | 0.34666 | |
| S&P 600 | 0.01293 | 0.14466 | |
| Russell 3000 | 0.00124 | 0.84851 | |
| **CGQ Universe** | **0.03017** | **0.02417** | ** |
| BC5 | 0.00087 | 0.77158 | |

*** (**), (*) significant at the 1%, (5%), (10%) level

The first of the three approaches is to replace the CGQ with all of the 55 data items together.  Unlike Brown and Caylor (2006), I find no governance variables to be significant at the 5% level in this approach.

The second approach is a stepwise regression, often an informative technique in its own right.  I find three variables to be significant at the 5% level.  They are:

3. Board is controlled by more than 50% independent outside directors
30. Majority vote requirement to amend charter/bylaws (not supermajority)
39. Company has no pill or state does not endorse poison pills

The third approach is to replace the CGQ with one governance variable and a summed

index of the remaining 54 items. This is done 55 times, in 55 separate regressions, for

each variable in turn. I find 5 variables to be significant at the 5% level. They include:

30. Majority vote requirement to amend charter/bylaws (not supermajority)
33b. Company either has no poison pill or a pill that was shareholder approved
39. Company has no pill or state does not endorse poison pills
53. Options grants align with company performance and reasonable burn rate
59. Directors are required to submit resignation upon a change in job

In this study, the intersection of the results of the three approaches yields two variables

that are highlighted in the second and third approaches. They are:

30. Majority vote requirement to amend charter/bylaws (not supermajority) (34% of
sample)
39. Company has no pill or state does not endorse poison pills (80% of sample)

An index composed of the sum of these two items has only 3 possible outcomes: 0

(15.7%), 1 (54.8%) and 2 (29.5%), thereby dividing the acquirers into high medium and

low governance strength. The regression using this two-factor index as a replacement for

the 55-factor index or the CGQ, shown in Table 6, produces an adjusted R squared of

0.2388, substantially higher than that of the fuller measures.

Table 6: Regression results using a two-factor index to represent governance strength.

N=166

| | | |
|---|---|---|
| R Square | 0.29419 | |
| Adj R Square | 0.23883 | |
| Standard Error | 0.02986 | |
| F | 5.31435 | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.02011 | 0.01960 | ** |
| **Public Target** | **-0.01379** | **0.00912** | *** |
| Cash | -0.00046 | 0.94697 | |
| Stock | -0.00133 | 0.80859 | |
| **Deal Size** | **-0.21847** | **0.00001** | *** |
| 2003 | -0.00243 | 0.70642 | |
| 2004 | 0.00806 | 0.20742 | |
| 2005 | -0.00045 | 0.94722 | |
| S&P 400 | 0.00654 | 0.44946 | |
| S&P 600 | 0.01243 | 0.11947 | |
| Russell 3000 | 0.00081 | 0.88986 | |
| **CGQ Universe** | **0.02900** | **0.01748** | ** |
| **two-factor index** | **0.01635** | **0.00001** | *** |

*** (**), (*) significant at the 1%, (5%), (10%) level

In interpreting these results, it may first be helpful to make the common distinction

between external and internal governance attributes. External attributes relate to the

amount of power  outsiders to the company could exert.  Internal attributes relate to how

leadership decisions are made, including in areas such as corporate strategy,

compensation, tenure, and the deployment of company resources.

External attributes primarily come into play as defenses against proxy fights and against

hostile takeovers.  Defenses against proxy fights might include staggered 3-year terms for

board members rather than having members stand for election or re-election annually,

making it difficult for shareholders to call or introduce proposals at shareholder's

meeting, and not having shareholder cumulative voting rights. Defenses against hostile takeovers include poison pills, incorporation in a takeover-hostile state, and requiring a supermajority vote to approve mergers. The IRRC data, which I chose not to use in this study, is composed of 24 governance attributes, most of which are external.

Poison pills are a particularly potent anti-takeover defense, which can indicate weak governance. Note that the Brown and Caylor's (2006) list of 7 key attributes only contains two external attributes, one regarding poison pills and the other regarding annual election of board members. Recall that there are fewer hostile mergers in the banking industry than in the general corporate population. The existence of poison pills is a relevant governance attribute in both friendly and hostile takeovers, requiring that the selling management remove the pill so that the merger can proceed. In contrast, proxy fights are by definition a hostile tactic. Therefore it is not surprising that a poison pill attribute would be a particularly important external governance attribute in a bank merger context, and that annual election of directors would be less important.

The Brown and Caylor (2006) study highlighted the importance of the ISS data item: 33b - Company has no pill or a pill that was shareholder approved. This bank merger study reveals the importance of: 39 - Company has no pill or state does not endorse poison pills. Note that many banks are state-chartered and state-regulated. Although state banks do sometimes change their state of incorporation (sometimes via a merger), it may be the case that banks tend to be less inclined to change their state of incorporation than companies in the general population. Therefore the state's legal environment

regarding mergers may play more prominently into the effectiveness of external defenses. It also may be the case that states that do not endorse poison pills may be less inclined to support other anti-takeover measures.

One benefit of the ISS data is the large amount of detail on internal governance practices that had been difficult to access in the past. The other governance attribute that has been found to be particularly important in this study is: 30 - Majority vote requirement to amend charter/bylaws. This is clearly a critical internal attribute, relating to how the leaders of the organization are elected, constrained, and possibly removed. I would suggest that it also serves as an external attribute in that it allows a majority of shareholders to disassemble any anti-proxy fight defenses, perhaps at the urging of a corporate raider. It certainly is important to ease corporate restructuring – of selling the company in whole or in parts, or completely changing the location or focus of the bank, or changing its management. Taken together, the two attributes found in this study to be most related to the market reception of the announcement of a bank merger are key measures of management entrenchment, a critical concept in this line of research (e.g. Gompers et al. 2003).

Chapter 8

Target Governance

Thus far the focus of this study has been the governance strength and detailed governance

attributes of the acquirer. In this section I investigate the association between the market

reaction at announcement and the overall governance strength and detailed attributes of

the target. Of the 216 events used in the earliest sections, there was ISS governance

coverage of only a portion the targets, which are typically much smaller than the

acquirers. Sixty targets that were independent entities had data available the year of the

announcement. Fifteen more had an ultimate parent entity for which data were available

in the year of the announcement, for a total of 75. Another 19 were independent entities

that did not have data available in the year of the announcement but had it available in the

prior year. The majority of these transactions were announced early in their respective

year of announcement, suggesting that coverage for that year was not further pursued by

ISS. Thus the total was 94 targets with governance data. Of these 91 were classified as

banks by ISS and 3 were classified in other industries. I dropped these 3 for the benefit

of working with a single target industry. Of the 91 remaining observations, one is from

2001, three from 2002 and one is in 2003 but relies on 2002 data. The 2001 and 2002

data contain CGQ figures but have much less detail regarding the component governance

attributes.  I choose to drop these 5 observations so that the analysis of the detailed

attributes to follow can be directly compared to the overall results that make use of the

CGQ, resulting in a dataset of 86 observations.  The data are summarized in Table 7.

Table 7:  Summary of the data used to examine target governance and its effect on acquirer shareholder wealth at announcement of a merger.

| N=86 | Mean | Median | Max | Min | Standard Deviation |
|---|---|---|---|---|---|
| CAR | -0.0192 | -0.0137 | 0.0766 | -0.1264 | 0.0340 |
| Acquirer Industry CGQ | 70.26 | 77.00 | 100.00 | 0.50 | 25.99 |
| Target Industry CGQ | 59.36 | 61.85 | 100.00 | 0.50 | 25.71 |
| Deal / Acquirer Total Assets, % | 4.83% | 2.50% | 48.48% | 0.02% | 7.13% |

| | Count |
|---|---|
| All Cash | 10 |
| Hybrid Payment | 46 |
| All Stock | 30 |

| Event Year | |
|---|---|
| 2003 | 16 |
| 2004 | 30 |
| 2005 | 14 |
| 2006 | 26 |

| Acquirer Market Index | |
|---|---|
| S&P 500 | 36 |
| S&P 400 | 9 |
| S&P 600 | 11 |
| Russell 3000 | 30 |
| CGQ Universe | 5 |

| Target Market Index | |
|---|---|
| S&P 500 | 8 |
| S&P 400 | 5 |
| S&P 600 | 4 |
| Russell 3000 | 25 |
| CGQ Universe | 44 |

Knowing that smaller entities tend to have weaker governance structures (Aggarwal and Williamson 2006), we would expect the target group to have lower summary governance scores. The data show this with a median CGQ of 77.00 for the acquirers and 61.85 for the targets. Also, an inspection of the data at the detail level, rather than the summary level, reveals that 51 of the 86 have an acquirer CGQ higher than the target.

Knowing that these targets are public entities, or have public ultimate parents, we would expect a lower average CAR and the data display this. The average CAR of the 216 original events was -1.05% and this subset group of public banks buying public banks (or from a public parent) has an average CAR of -1.92%.

The correlation between the industry CGQ of the acquirers and that of the targets is 0.29. These data suggest that there is a tendency for acquirers with stronger governance to acquire targets with stronger governance. Of course larger acquirers tend to purchase larger targets, which could be a part of this correlation. I do a series of regressions with acquirer CGQ as the independent variable of interest, various control variables, and target CGQ as the dependent variable. Under all specifications of the model, the acquirer CGQ is always significant at either the 1% or 5% level. Results are listed in Table 8. The results show that in the context of this dataset, public US banks purchasing public US banks (or from a public parent), acquirers with stronger governance tend to choose targets with stronger governance. Hypothesis 3, that acquirers with stronger governance tend to acquirer entities with weaker governance, is not supported. Indeed, the opposite is shown to be true. One implication may be that the cost-benefit tradeoff of bringing stronger

governance to an entity in a different, often weaker, regulatory environment (cross-border mergers) may be distinctly different from the cost-benefit tradeoffs of bringing a US bank with weak governance up to a stronger level of governance.

Table 8: Regression results using target CGQ as the dependent variable. The three regressions on the left do not include deal size. Lower regressions include more control variables.

N=86

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| R Square | 0.08371 | | | R Square | 0.10087 | | |
| Adj R Square | 0.07280 | | | Adj R Square | 0.07921 | | |
| F | 7.67416 | | | F | 4.65587 | | |
| F Significance | 0.00689 | | | F Significance | 0.01212 | | |
| | Coefficients | P-value | | | Coefficients | P-value | |
| Intercept | 39.25266 | 0.00000 | *** | Intercept | 35.30006 | 0.00006 | *** |
| **Acq Ind CGQ** | **0.28618** | **0.00689** | *** | Deal Size | 47.97186 | 0.21168 | |
| | | | | **Acq Ind CGQ** | **0.30946** | **0.00403** | *** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| R Square | 0.26035 | | | R Square | 0.26859 | | |
| Adj R Square | 0.17276 | | | Adj R Square | 0.17107 | | |
| F | 2.97240 | | | F | 2.75417 | | |
| F Significance | 0.00440 | | | F Significance | 0.00603 | | |
| | Coefficients | P-value | | | Coefficients | P-value | |
| Intercept | 58.54898 | 0.00002 | *** | Intercept | 57.28072 | 0.00004 | *** |
| **Acq Ind CGQ** | **0.28277** | **0.01615** | ** | Deal Size | 40.51848 | 0.36099 | |
| Acq S&P 400 | 10.14348 | 0.27915 | | **Acq Ind CGQ** | **0.28109** | **0.01692** | ** |
| Acq S&P 600 | 4.28206 | 0.65492 | | Acq S&P 400 | 10.05946 | 0.28368 | |
| **Acq Russell** | **20.08204** | **0.00857** | *** | Acq S&P 600 | 2.67392 | 0.78382 | |
| Acq CGQ Univ | 1.28833 | 0.92024 | | **Acq Russell** | **17.79711** | **0.02631** | ** |
| Trgt S&P 400 | -14.62965 | 0.28064 | | Acq CGQ Univ | -5.59654 | 0.70758 | |
| **Trgt S&P 600** | **-31.27442** | **0.03714** | ** | Trgt S&P 400 | -17.01933 | 0.21886 | |
| **Trgt Russell** | **-27.35698** | **0.00998** | *** | **Trgt S&P 600** | **-31.14174** | **0.03817** | ** |
| **Trgt CGQ Univ** | **-34.18158** | **0.00149** | *** | **Trgt Russell** | **-27.29163** | **0.01025** | ** |
| | | | | **Trgt CGQ Univ** | **-32.31573** | **0.00311** | *** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| R Square | 0.28610 | | | R Square | 0.29103 | | |
| Adj R Square | 0.14533 | | | Adj R Square | 0.13910 | | |
| F | 2.03241 | | | F | 1.91561 | | |
| F Significance | 0.02698 | | | F Significance | 0.03592 | | |
| | Coefficients | P-value | | | Coefficients | P-value | |
| Intercept | 51.20163 | 0.00199 | *** | Intercept | 51.38588 | 0.00201 | *** |
| **Acq Ind CGQ** | **0.33838** | **0.00971** | *** | Deal Size | 32.06272 | 0.48789 | |
| Acq S&P 400 | 11.05174 | 0.25664 | | **Acq Ind CGQ** | **0.33109** | **0.01190** | ** |
| Acq S&P 600 | 5.30535 | 0.60087 | | Acq S&P 400 | 10.75669 | 0.27167 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Acq Russell** | **20.37071** | **0.01043** | ** | Acq S&P 600 | 3.68321 | 0.72419 |
| Acq CGQ Univ | 2.24962 | 0.86767 | | **Acq Russell** | **18.37978** | **0.02963** *** |
| Trgt S&P 400 | -16.35008 | 0.24631 | | Acq CGQ Univ | -3.62443 | 0.82050 |
| **Trgt S&P 600** | **-30.02674** | **0.05395** | * | Trgt S&P 400 | -18.24608 | 0.20613 |
| **Trgt Russell** | **-25.67110** | **0.02066** | ** | **Trgt S&P 600** | **-30.10795** | **0.05423** * |
| **Trgt CGQ Univ** | **-32.44469** | **0.00397** | *** | **Trgt Russell** | **-25.79063** | **0.02059** ** |
| 2003 | -0.62257 | 0.93750 | | **Trgt CGQ Univ** | **-30.96604** | **0.00698** *** |
| 2004 | 3.75776 | 0.58425 | | 2003 | -0.82323 | 0.91777 |
| 2005 | 0.00870 | 0.99917 | | 2004 | 3.20463 | 0.64409 |
| Cash | -8.04003 | 0.36132 | | 2005 | -0.33780 | 0.96813 |
| Stock | 4.18418 | 0.50182 | | Cash | -8.28765 | 0.34898 |
| | | | | Stock | 3.50016 | 0.58012 |

*** (**), (*) significant at the 1%, (5%), (10%) level

I next seek to examine the effects of target governance strength, and the difference between acquirer and target governance strength, on acquirer equity prices at announcement. I add the target governance to the regression model used to predict the market reaction for the complete dataset of 216 events. I drop the public target indicator since all companies followed by ISS are public. I also add the target's index group as a control variable, cognizant of the fact that it also represents the absolute size of the target. I believe that it is different enough from the *relative* deal size indicator in the model which is deal size / acquirer's total assets. Results of the regression are shown in Table 9. At 0.0022 the coefficient on the target's CGQ is about half of that on the acquirer's, 0.0050. Recall that both have about the same standard deviation of approximately 26, so that a change of one standard deviation in the target's governance measure would have just under half the effect of a one standard deviation change in the acquirer's governance measure. Although the coefficient on the target's CGQ is not significant at conventional levels, it does have a p-value of 0.147, lending some evidence to the notion that investors are more pleased with targets with strong governance than with weak governance. This

is different from the result in the literature in which, regarding cross-border mergers, the

market seemed to penalize the acquirer less the lower the governance strength of the

target (Hagendorff et al. 2008).

Table 9: Results of the regression including the target's governance strength and target index as a set of control variables.

N=86

| | | |
|---|---|---|
| R Square | 0.36319 | |
| Adj R Square | 0.21552 | |
| Standard Error | 0.03014 | |
| F | 3.06552 | |
| F Significance | 0.00524 | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.07718 | 0.00067 | *** |
| **Size** | **-0.22077** | **0.00032** | *** |
| Acq S&P 400 | 0.00732 | 0.55599 | |
| **Acq S&P 600** | **0.02295** | **0.08528** | * |
| Acq Russell 3000 | 0.00974 | 0.37128 | |
| **Acq CGQ Univ** | **0.04962** | **0.01613** | ** |
| **Acq Industry CGQ** | **0.00050** | **0.00410** | *** |
| Target S&P 400 | 0.00351 | 0.84823 | |
| Target S&P 600 | -0.02278 | 0.25750 | |
| Target Russell 3000 | 0.00499 | 0.72805 | |
| Target CGQ Univ | 0.00481 | 0.74675 | |
| **Trgt Industry CGQ** | **0.00022** | **0.14678** | |
| 2003 | 0.00917 | 0.36433 | |
| 2004 | 0.01258 | 0.15455 | |
| 2005 | 0.00094 | 0.92984 | |
| Cash | 0.00267 | 0.81158 | |
| Stock | 0.00165 | 0.83694 | |

*** (**), (*) significant at the 1%, (5%), (10%) level

Because the difference between the acquirer's CGQ and the target's CGQ is a linear

function of the two, replacing the target's CGQ with the difference in the regression does

not produce additional insight. A regression using neither the target's nor the acquirer's

CGQ, but only the difference, reprinted in Table 10, produces an extremely small

coefficient for the difference which is not statistically significant.

Table 10:  Results of a regression examining the effect of the difference between the target and acquirer CGQ on acquirer shareholder wealth at announcement.

N=86

| | |
|---|---|
| R Square | 0.23009 |
| Adj R Square | 0.06511 |
| Standard Error | 0.03291 |
| F | 1.39463 |
| F Significance | 0.17446 |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.00983 | 0.47185 | |
| **Deal Size** | **-0.19577** | **0.00282** | *** |
| Cash | 0.00390 | 0.74993 | |
| Stock | -0.00295 | 0.73283 | |
| 2003 | 0.00142 | 0.89537 | |
| 2004 | 0.00705 | 0.45604 | |
| 2005 | -0.00638 | 0.57877 | |
| Acq S&P 400 | 0.00747 | 0.58212 | |
| Acq S&P 600 | 0.00970 | 0.48572 | |
| Acq Russell | 0.00216 | 0.85312 | |
| Acq CGQ Univ | 0.02469 | 0.23819 | |
| Target S&P 400 | -0.00190 | 0.92422 | |
| Target S&P 600 | -0.03393 | 0.11979 | |
| Target Russell | -0.00690 | 0.65181 | |
| Target CGQ Univ | -0.00466 | 0.77121 | |
| **CGQ difference** | **0.00008** | **0.56032** | |

*** (**), (*) significant at the 1%, (5%), (10%) level

Finally I attempt to examine the question by using both the levels of the two CGQs and

the difference between them when they are formatted as standardized variables.  This

difference is the number of standard deviations one variable is from its mean minus the

number of standard deviations that the other variable is from its mean.  Recall that the

standard deviations of the two variables are almost the same.  The results, not presented,

indicate that this is too close to a linear combination of the variables to be useful.

These results show that hypothesis 4 is not supported.  Weaker governance at the target is not associated with less destruction of shareholder wealth.  In fact the opposite conclusion is suggested, although not at statistical significance.  US bank targets with stronger governance may be more attractive targets for acquirers.  Perhaps one reason for the lack of statistical significance is the sample size.  Statistical significance might emerge in future research with a larger sample size.

Next I examine the detailed data regarding the individual governance attributes of the targets to see if there are attributes that are particularly meaningful to the market at the time of a merger announcement.  I again follow the Brown and Caylor (2006) procedure for examining the detail target governance attribute data, similar to the process performed above for the acquirers.  This procedure involves putting the data through three statistical procedures and then focusing on attributes that at least two of the procedures designate as significant.

The first procedure is to replace the target CGQ with all 55 of the detailed attributes and see which, if any, are significant at the 5% level.  The result is two attributes:

  2. CEO serves on the boards of two or fewer public companies
  5. CEO is not listed as having a related-party transaction

Note that #2 is given a *negative* coefficient, -0.181, suggesting that for these small companies, a CEO that is more connected to other public companies may be have advantages that outweigh the disadvantages of the distraction.

The second procedure is a stepwise regression which includes the 55 attributes. Six

attributes are found to be significant:

3. Board is controlled by more than 50% independent outside directors
16. Executives are subject to stock ownership guidelines
17. Policy exists on outside directorships (four or fewer boards is the limit)
31. Poison pill with a trigger >= 20%
33b. Company has no pill or a pill that was shareholder approved
49. All stock-incentive plans adopted with shareholder approval

The third procedure is to perform 55 separate regressions and in each one use one

attribute on a stand-alone basis and also use an index of the sum of the remaining 54.

Five attributes are found to be significant using this procedure:

17. Policy exists on outside directorships (four or fewer boards is the limit)
28. Majority vote requirement to approve mergers (not supermajority)
49. All stock-incentive plans adopted with shareholder approval
50. The last time shareholders voted on an option plan, ISS deemed the cost reasonable
52. Repricing prohibited

The intersection of the results of these three procedures produces two attributes:

17. Policy exists on outside directorships (four or fewer boards is the limit)
49. All stock-incentive plans adopted with shareholder approval

Each attribute is satisfied by 8 banks in the sample (9.3% each) and there is no overlap,

so 70 banks of the 86 do not satisfy either. A regression using this two-factor index as

representative of what might be received positively by market participants at the time of

announcement, Table 11, shows no compelling or suggestive results.

Table 11: Results of a regression using a sum of target attributes number 17 and 49 as the indicator of target governance strength.

| N=86 | | |
|---|---|---|
| R Square | 0.39775 | |
| Adj R Square | 0.25810 | |
| Standard Error | 0.02732 | |
| F | 2.84821 | |
| F Significance | 0.00136 | |

| | Coefficients | P-value | |
|---|---|---|---|
| Intercept | -0.06332 | 0.00097 | |
| **Size** | **-0.23085** | **0.00004** | *** |
| Acq S&P 400 | 0.00765 | 0.49400 | |
| Acq S&P 600 | 0.01689 | 0.16732 | |
| Acq Russell 3000 | 0.01887 | 0.05237 | |
| **Acq CGQ Univ** | **0.04485** | **0.01803** | ** |
| **Acq Industry CGQ** | **0.00046** | **0.00312** | *** |
| Target S&P 400 | -0.00028 | 0.98655 | |
| **Target S&P 600** | **-0.03927** | **0.03171** | ** |
| Target Russell 3000 | -0.00290 | 0.82667 | |
| Target CGQ Univ | -0.00772 | 0.57555 | |
| **17+49** | **0.00347** | **0.71065** | |
| **2003** | **0.02226** | **0.01792** | ** |
| 2004 | 0.01416 | 0.07963 | |
| 2005 | 0.01646 | 0.09264 | |
| Cash | 0.01126 | 0.26984 | |
| Stock | 0.00622 | 0.40672 | |

*** (**), (*) significant at the 1%, (5%), (10%) level

Overall, this dataset does not yield statistically conclusive evidence about target governance playing a role in changes in acquirer shareholder wealth at the time of a merger announcement between US public banks. The dataset does definitively depict a pattern of acquirers with strong governance tending to select targets with strong

governance, the opposite of H3, and it does suggest that market participants may be viewing mergers involving targets with stronger governance more favorably at the time of announcement, the opposite of H4.

# Chapter 9

# Bank Index

In this section I perform a robustness check of the major results of the study by replacing the CRSP equal-weighted market return index with the Datastream US Bank total return index. By moving from an overall market index to an industry sector index, the effects of industry trends and shocks are brought to bear on the results.

My first step is to retrieve the raw CRSP data. I then manually reproduce the work done up to this point by Eventus to create the CAR values, using the CRSP equal-weighted market index to represent market movements. My calculated results match the Eventus results exactly. I then repeat the CAR calculations using the same raw stock return data but the Datastream US Bank total return index instead of the CRSP market index. A comparison of the two sets of CAR results is in Table 12 below.

Table 12:  A comparison of the CAR values created using the CRSP equal-weighted

market index and using the Datastream US Bank total return index.

N=216

| | CARs Using Datastream US Bank Index | | CARs Using Equal- Weighted CRSP Index |
|---|---|---|---|
| Mean | -0.0108 | | -0.0105 |
| Maximum | 0.0853 | | 0.0963 |
| Minimum | -0.1264 | * | -0.1264 |
| Standard Deviation | 0.0313 | * | 0.0313 |
| Number Negative | 144 | | 137 |
| Correlation | | 0.88 | |

* These numbers are equal simply by coincidence
The two minimums are not the same event

The first hypothesis of this study, H1, that bank mergers tend to destroy shareholder

wealth at announcement on average, is upheld.  The average CAR using the bank index is

-1.08% versus -1.05% for the overall market index.  The number of negative results is

144, two thirds of the sample, and is farther from the null hypothesis of an even split than

the 137 negative results using the market index.  Using the generalized sign test this

result is significant at the 1% level.  H1 is supported.

The second hypothesis, H2, that weaker corporate governance at the firm level is associated with greater destruction of shareholder wealth at announcement on average, is (re)examined via regressing the CAR on the governance indicator, the CGQ, and control variables. The results are shown in Table 13. The CGQ of the acquirer remains statistically significant with the new index, although at the 5% rather than the 1% level. H2 is supported.

Table 13: Results of regressing the cumulative abnormal return, CAR, on the governance strength indicator of the firm, the CGQ, and control variables. One regression uses the CRSP equal-weighted index to represent the market movements and the other uses the Datastream US Bank total return index.

| N=216 | Datastream US Bank Index | | | N=216 | CRSP Equal-Weighted Market Index | | |
|---|---|---|---|---|---|---|---|
| R Square | 0.23308 | | | R Square | 0.2304 | | |
| Adj R Square | 0.17966 | | | Adj R Square | 0.17679 | | |
| Standard Error | 0.02836 | | | Standard Error | 0.03214 | | |
| F | 4.36341 | | | F | 4.29816 | | |
| F Significance | 9E-07 | | | F Significance | 1.2E-06 | | |
| | Coefficients | P-value | | | Coefficients | P-value | |
| Intercept | -0.02300 | 0.02273 | ** | Intercept | -0.02796 | 0.01464 | ** |
| **Public Target** | **-0.01509** | **0.00055** | *** | **Public Target** | **-0.014** | **0.00449** | *** |
| Cash | 0.00204 | 0.71489 | | Cash | 0.00149 | 0.81293 | |
| Stock | 0.00477 | 0.30350 | | Stock | 0.00171 | 0.74414 | |
| **Deal Size** | **-0.19466** | **0.00001** | *** | **Deal Size** | **-0.19916** | **0.00008** | *** |
| **Industry CGQ** | **0.00018** | **0.03559** | ** | **Industry CGQ** | **0.00028** | **0.00429** | *** |
| **2001** | **0.01594** | **0.03332** | ** | 2001 | 0.01033 | 0.22178 | |
| **2002** | **0.02450** | **0.00230** | *** | **2002** | **0.03112** | **0.00066** | *** |
| 2003 | 0.00749 | 0.22984 | | 2003 | 0.00222 | 0.75353 | |
| 2004 | 0.00783 | 0.20234 | | 2004 | 0.01069 | 0.12471 | |
| 2005 | 0.00439 | 0.50019 | | 2005 | -0.00064 | 0.93065 | |
| S&P 400 | 0.01217 | 0.05892 | | S&P 400 | 0.01412 | 0.05311 | |
| S&P 600 | 0.00998 | 0.13889 | | S&P 600 | 0.01435 | 0.06098 | |
| Russell 3000 | 0.00758 | 0.14489 | | Russell 3000 | 0.00646 | 0.27271 | |
| **CGQ Universe** | **0.03235** | **0.00596** | *** | **CGQ Universe** | **0.03912** | **0.00339** | *** |

*** (**), (*) significant at the 1%, (5%), (10%) level

The third hypothesis, H3, that acquirers with stronger governance tend to acquire entities with weaker governance, is not reexamined because the testing of the hypothesis does not make use of the CAR values. Recall that the finding was just the opposite of the stated hypothesis and was statistically significant. Acquirers with strong governance tend to choose targets with strong governance.

The fourth hypothesis, H4, is that targets with weaker governance strength are associated with less destruction of shareholder wealth at announcement. The finding was the opposite of the stated hypothesis but was not statistically significant, only statistically suggestive. Switching to the bank index does not improve the statistical significance of the results. In fact the relevant p-value is slightly larger using the bank index, moving from 0.147 to 0.192. The results, shown in Table 14, suggest that targets with weaker governance strength are associated with more destruction of shareholder wealth at announcement.

Table 14:  Results of regressing CAR values on the governance strength indicators, CGQs, of both the acquirer and the targets, and on control variables.  The two sets of results use two different market indexes to create the CAR values.

| | Datastream US | | | | CRSP Equal-Weighted | | |
|---|---|---|---|---|---|---|---|
| N=86 | Bank Index | | | N=86 | Market Index | | |
| R Square | 0.41136 | | | R Square | 0.36319 | | |
| Adj R Square | 0.27487 | | | Adj R Square | 0.21552 | | |
| Standard Error | 0.02701 | | | Standard Error | 0.03014 | | |
| F | 3.01374 | | | F | 3.06552 | | |
| F Significance | 0.00077 | | | F Significance | 0.00524 | | |
| | | | | | | | |
| | Coefficients | P-value | | | Coefficients | P-value | |
| Intercept | -0.07209 | 0.00041 | *** | Intercept | -0.07718 | 0.00067 | *** |
| **Size** | **-0.23721** | **0.00002** | *** | **Size** | **-0.22077** | **0.00032** | *** |
| Acq S&P 400 | 0.00588 | 0.59752 | | Acq S&P 400 | 0.00732 | 0.55599 | |
| **Acq S&P 600** | **0.01703** | **0.15272** | ** | **Acq S&P 600** | **0.02295** | **0.08528** | * |
| Acq Russell 3000 | 0.01604 | 0.10270 | | Acq Russell 3000 | 0.00974 | 0.37128 | |
| **Acq CGQ Univ** | **0.04672** | **0.01164** | ** | **Acq CGQ Univ** | **0.04962** | **0.01613** | ** |
| **Acq Ind CGQ** | **0.00042** | **0.00728** | *** | **Acq Ind CGQ** | **0.00050** | **0.00410** | *** |
| Target S&P 400 | 0.00293 | 0.85829 | | Target S&P 400 | 0.00351 | 0.84823 | |
| Target S&P 600 | -0.03512 | 0.05353 | | Target S&P 600 | -0.02278 | 0.25750 | |
| Trgt Russell 3000 | 0.00010 | 0.99375 | | Trgt Russell 3000 | 0.00499 | 0.72805 | |
| Target CGQ Univ | -0.00408 | 0.75988 | | Target CGQ Univ | 0.00481 | 0.74675 | |
| **Trgt Ind CGQ** | **0.00018** | **0.19188** | | **Trgt Ind CGQ** | **0.00022** | **0.14678** | |
| 2003 | 0.02286 | 0.01329 | | 2003 | 0.00917 | 0.36433 | |
| 2004 | 0.01392 | 0.07988 | | 2004 | 0.01258 | 0.15455 | |
| 2005 | 0.01660 | 0.08620 | | 2005 | 0.00094 | 0.92984 | |
| Cash | 0.01234 | 0.22222 | | Cash | 0.00267 | 0.81158 | |
| Stock | 0.00630 | 0.38135 | | Stock | 0.00165 | 0.83694 | |

*** (**), (*) significant at the 1%, (5%), (10%) level

Overall the results using the bank index are close to those using the overall market index, indicating robustness of the results.

# Chapter 10

# Conclusion

The academic literature reveals that on average shareholders of banks either lose wealth or do not increase it upon the announcement of an acquisition. Academics have speculated that the reason this acquisition behavior continues is that shareholders have a difficult time controlling, or governing, their agents. Other academic research has documented the compensation incentives for CEOs to make acquisitions. This study asks whether we can determine that weak governance structures at the firm level are correlated with, and thus may contribute to, the selection of acquisitions that are more poorly received by market participants.

A unique dataset combining merger events with equity price movements and commercially-sold governance assessments was created to investigate the question. With statistically significant results, the finding is that stronger corporate governance by shareholders is associated with better acquirer shareholder wealth outcomes upon announcement.

An investigation is done to examine which governance attributes seem to be the most closely associated with the equity market reception of a merger announcement.  The surprising result is that an index of only two of the 55 variables carries at least the explanatory power of indexes containing all 55 attributes in this bank merger context.

Additionally, where governance data are available for the targets that are banks, it is examined for an association to the market reaction to the merger announcement.  It is also examined to discern which governance attributes may seem to be the most important in influencing the market reaction.  The results indicate that acquirers with relatively stronger governance tend to select targets with relatively stronger governance.  The results also somewhat suggest that market participants react more favorably to merger announcements involving targets with relatively stronger governance.

Appendix 1

Aggarwal and Williamson (2006) presented the detailed ISS data organized as below. I have compiled the data in the same way for the 216 acquiring banks in this study. I show Aggarwal and Williamson's 2003 and 2005 data from a broad range of companies, excluding financial companies, for comparison. I do not have 2005 and 2006 data for the items in italics. I have divided item 33 into its two component parts. The items that have 100% or 0% compliance will not be used in further regression analysis.

| | **2003** | **2005** | **Piskula Acquiring Banks** | **Difference Banks less A&W '05** |
|---|---|---|---|---|
| 1. All directors attended 75% of board meetings or had a valid excuse | | | | |
| | 93.0% | 99.8% | **100%** | 0.2% |
| 2. CEO serves on the boards of two or fewer public companies | | | | |
| | 95.9% | 98.4% | **96%** | -2.0% |
| 3. Board is controlled by more than 50% independent outside directors | | | | |
| | 69.3% | 88.4% | **96%** | 7.4% |
| 4. Board size is at greater than five but less than16 | | | | |
| | 81.1% | 82.4% | **69%** | -13.1% |
| 5. CEO is not listed as having a related-party transaction | | | | |
| | 75.3% | 81.3% | **95%** | 13.9% |
| 6. No former CEO on the board | | | | |
| | 81.6% | 78.3% | **82%** | 3.6% |
| 7. Compensation committee comprised solely of independent outsiders | | | | |
| | 62.1% | 75.4% | **55%** | -20.6% |
| 8. Chairman and CEO are separated or there is a lead director | | | | |
| | 52.6% | 73.8% | **46%** | -28.0% |
| 9. Nominating committee comprised solely of independent outsiders | | | | |
| | 22.6% | 62.2% | **48%** | -14.0% |
| 10. Outsider controlled board or board controlled by 50% to 75% of independent outsiders with officer and director ownership between 5% to 30% | | | | |
| | 45.5% | 59.8% | **34%** | -26.1% |
| 11. Governance committee exists and met in the past year | | | | |
| | 16.2% | 55.0% | **72%** | 17.3% |
| 12. Shareholders vote on directors selected to fill vacancies | | | | |
| | 33.6% | 53.0% | **39%** | -14.4% |
| 13. Governance guidelines are publicly disclosed | | | | |
| | 6.1% | 49.3% | **58%** | 8.5% |
| 14. Annually elected board (no staggered board) | | | | |
| | 44.5% | 47.3% | **43%** | -4.5% |

Appendix 1, continued

| | 2003 | 2005 | Piskula Acquiring Banks | Difference Banks less A&W '05 |
|---|---|---|---|---|
| 15. Directors are subject to stock ownership requirements | | | | |
| | 4.6% | 14.2% | **30%** | 15.3% |
| 16. Executives are subject to stock ownership guidelines | | | | |
| | 6.7% | 12.1% | **26%** | 13.8% |
| 17. Policy exists on outside directorships (four or fewer boards is the limit) | | | | |
| | 0.6% | 9.3% | **16%** | 6.4% |
| 18. Shareholders have cumulative voting rights | | | | |
| | 7.9% | 7.6% | **6%** | -1.6% |
| 19. Shareholder approval is required to increase/decrease board size | | | | |
| | 20.2% | 3.8% | **2%** | -1.4% |
| 20. Qualifies for proxy contest defenses combination points | | | | |
| | 1.0% | 1.6% | **5%** | 3.2% |
| *21. Director term limits exist* | | | | |
| | *0.6%* | *1.3%* | | |
| 22. Board controlled by 50% or more independent outsiders and all committees are comprised solely of independent outsiders | | | | |
| | 14.7% | 1.3% | **42%** | 40.9% |

*AUDIT*

| | 2003 | 2005 | Piskula Acquiring Banks | Difference Banks less A&W '05 |
|---|---|---|---|---|
| 23. Consulting fees paid to auditors are less than audit fees paid to auditors | | | | |
| | 64.0% | 98.0% | **94%** | -4.0% |
| 24. Audit committee comprised solely of independent outsiders | | | | |
| | 70.3% | 86.2% | **62%** | -24.2% |
| 25. Auditors ratified at most recent annual meeting | | | | |
| | 56.4% | 65.5% | **61%** | -4.1% |
| *26. Policy disclosed regarding auditor rotation* | | | | |
| | *2.8%* | *45.7%* | | |

Appendix 1, continued

| | 2003 | 2005 | Piskula Acquiring Banks | Difference Banks less A&W '05 |
|---|---|---|---|---|
| *CHARTER* | | | | |
| 27. Single class, common | | | | |
| | 91.9% | 94.1% | **55%** | -39.3% |
| 28. Majority vote requirement to approve mergers (not supermajority) | | | | |
| | 59.4% | 63.5% | **45%** | -18.9% |
| 29. Shareholders may call special meetings | | | | |
| | 39.6% | 44.3% | **57%** | 12.3% |
| 30. Majority vote requirement to amend charter/bylaws (not supermajority) | | | | |
| | 42.9% | 44.2% | **34%** | -9.9% |
| 31. Poison pill with a trigger >= 20% | | | | |
| | 26.1% | 24.4% | **5%** | -19.0% |
| 32. Shareholder may act by written consent | | | | |
| | 20.4% | 23.9% | **19%** | -4.6% |
| 33. Company is not authorized to issue blank check preferred and either has no poison pill or a pill that was shareholder approved. | | | | |
| | 10.5% | 11.2% | | |
| 33a. Company is not authorized to issue blank check preferred | | | | |
| | | | **14%** | 2.7% |
| 33b. Company has no pill or a pill that was shareholder approved | | | | |
| | | | **66%** | |
| 34. Poison pill with a qualified offer clause | | | | |
| | 3.0% | 7.5% | **2%** | -5.1% |
| 35. Poison pill with TIDE provision | | | | |
| | 1.6% | 4.3% | **0%** | -4.3% |
| 36. Board cannot amend bylaws without shareholder approval or can only do so under limited circumstances | | | | |
| | 2.0% | 2.1% | **36%** | 33.4% |
| 37. Poison pill with sunset provision | | | | |
| | 0.3% | 0.4% | **0%** | -0.4% |

Appendix 1, continued

| | **2003** | **2005** | **Piskula Acquiring Banks** | **Difference Banks less A&W '05** |
|---|---|---|---|---|

*STATE*

38. Incorporation in state w/o a control share cash-out statute, or with a control share cash-out statute but company has opted out

| | 97.5% | 98.1% | **92%** | -5.9% |

39. Company has no pill or state does not endorse poison pills

| | 88.4% | 89.4% | **80%** | -9.9% |

40. Incorporation in a state without stakeholder laws, or independent directors comprise 75% or more of the board

| | 77.7% | 79.3% | **75%** | -4.6% |

41. Incorporation in state w/o a control share acquisition statue, or with a control share acquisition statute but company has opted out

| | 77.3% | 78.8% | **67%** | -11.9% |

42. Incorporation in state with a fair price provision

| | 32.1% | 31.5% | **51%** | 19.7% |

43. Incorporation in state w/o a freezeout provision, or with a freezeout but company has opted out

| | 14.7% | 16.0% | **30%** | 13.5% |

44. Incorporation in state without any state anti-takeover provisions

| | 4.0% | 3.8% | **7%** | 3.4% |

Appendix 1, continued

| | 2003 | 2005 | Piskula Acquiring Banks | Difference Banks less A&W '05 |
|---|---|---|---|---|
| *COMPENSATION* | | | | |
| 45. No interlocks among compensation committee members | | | | |
| | 98.6% | 100.0% | **100%** | 0.0% |
| *46. Non-employee directors participate in pension plan* | | | | |
| | *96.6%* | *98.0%* | | |
| *47. No option repricing within last three years* | | | | |
| | *94.3%* | *91.6%* | | |
| 48. Directors receive all or a portion of their fees in stock | | | | |
| | 84.5% | 84.7% | **84%** | -1.0% |
| 49. All stock-incentive plans adopted with shareholder approval | | | | |
| | 92.4% | 84.3% | **90%** | 5.5% |
| 50. The last time shareholders voted on an option plan, ISS deemed the cost reasonable | | | | |
| | 62.9% | 69.8% | **70%** | 0.1% |
| *51. Company does not provide any loans to executives for exercising options* | | | | |
| | *82.0%* | *60.9%* | | |
| 52. Repricing prohibited | | | | |
| | 15.5% | 31.9% | **18%** | -13.8% |
| 53. Options grants align with company performance and reasonable burn rate | | | | |
| | 20.3% | 24.6% | **62%** | 37.4% |
| 54. Company expenses stock options | | | | |
| | 2.6% | 9.6% | **14%** | 4.9% |

Appendix 1, continued

| | 2003 | 2005 | Piskula Acquiring Banks | Difference Banks less A&W '05 |
|---|---|---|---|---|
| ***PROGRESSIVE PRACTICES*** | | | | |
| 55. Board has the express authority to hire its own advisors | | | | |
| | 5.3% | 90.7% | **79%** | -11.8% |
| 56. Performance of the board is reviewed regularly | | | | |
| | 6.8% | 61.0% | **67%** | 6.5% |
| 57. Board approved succession plan in place for the CEO | | | | |
| | 5.4% | 44.9% | **49%** | 3.9% |
| 58. Outside directors meet without CEO and disclose number of times met | | | | |
| | 1.7% | 42.4% | **62%** | 19.6% |
| 59. Directors are required to submit resignation upon a change in job | | | | |
| | 4.1% | 20.6% | **38%** | 17.4% |
| *60. Mandatory retirement age for directors* | | | | |
| | *7.8%* | *18.2%* | | |
| | | | | |
| ***OWNERSHIP*** | | | | |
| 61. Does not ignore shareholder proposal | | | | |
| | 99.6% | 99.2% | **99%** | 0.2% |
| 62. All directors with more than one year of service own stock | | | | |
| | 93.1% | 87.2% | **94%** | 6.8% |
| 63. Officers' and directors' stock ownership is at least 1% but not over 30% of total shares outstanding | | | | |
| | 69.1% | 72.3% | **91%** | 18.7% |
| | | | | |
| ***DIRECTOR EDUCATION*** | | | | |
| 64. Majority of directors have participated in a director education program. | | | | |
| | 0.1% | 2.2% | **2%** | 0.2% |

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