

# Does the Market Value the Acquisition of Nonpublic Firms the Same as Public Firms? Evidence from Bank M&A Activity

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## ***Abstract***

We investigate merger announcements in the banking industry to determine whether mergers involving acquisitions of private firms result in different market reactions than those of public firms. Existing literature finds that acquisitions of privately held firms yield higher returns, compared to public targets; however, research on banks is largely excluded. Focusing on mergers between firms in the same industry allows us to curtail inter-industry effects which could contaminate findings if the merger involves firms from different industries. This research provides a new look at shareholder returns and contributes significantly to existing literature in this area. We find five-day announcement CARs to be greater for acquisitions of nonpublic targets than that for public targets, even when considering acquirer and deal characteristics.

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## *Abstract*

We investigate merger announcements in the banking industry to determine whether mergers involving acquisitions of private firms result in different market reactions than those of public firms. Existing literature finds that acquisitions of privately held firms yield higher returns, compared to public targets; however, research on banks is largely excluded. Focusing on mergers between firms in the same industry allows us to curtail inter-industry effects which could contaminate findings if the merger involves firms from different industries. This research provides a new look at shareholder returns and contributes significantly to existing literature in this area. We find five-day announcement CARs to be greater for acquisitions of nonpublic targets than that for public targets, even when considering acquirer and deal characteristics.

## **1. Introduction**

The corporate landscape changes continuously and companies fight to gain strategic advantage, to remain competitive, stay relevant, and/or maintain autonomy. Firms may view a merger or acquisition as an attractive strategic option to reach these goals as it may have an instantaneous and considerable impact on the bidding firm. Gorton, Kahl, and Rosen (2009) suggest that management may undertake mergers and acquisitions to increase firm size. Larger firms are harder to takeover so this action decreases the firm's probability of being a takeover target. Even though these may not be value enhancing projects, the firm may embark on them anyway to maintain their independence. Of course the possibility exists that some firms may want to become a more appealing target and so will make acquisitions to increase their size. Gorton et al. (2009) note that these are generally profitable endeavors.

FDIC<sup>1</sup> data indicates that the total number of commercial banks and savings institutions dropped by more than 6,500 institutions during our sample period (a percentage decline of nearly

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<sup>1</sup> Source: <http://www.fdic.gov/bank/statistical/stats/2011dec/fdic.pdf>.

45%). The passage of the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (hereinafter referred to as the Act) ushered in one of the most important pieces of banking legislation in decades, resulting in substantial deregulation of the industry. Once implemented in 1997, the Act allowed for interstate banking, which was previously prohibited due to state specific laws<sup>2</sup>. The passage of the Act likely propelled firms into the merger and acquisitions market with the hope of growing to move into new markets via acquisition once implementation of the Act occurred or to prevent being acquired.

The number of acquisitions increased substantially leading up to and continuing after the implementation of the Act in 1997. The number of acquisitions declined somewhat two years after implementation but remained considerably higher than the period prior to the passage of the Act. Generally, existing research documents that mergers are value decreasing activities for the bidding firm. But, if this is true, then why do they continue. It seems possible that some mergers are, in fact, beneficial to acquiring firm shareholders. Gorton et al. (2009) suggest that mergers which are designed to increase the firm takeover potential are generally profitable. However, it is likely there are other types of mergers which benefit shareholders.

This study examines shareholder returns and wealth creation at merger announcement for two different groups of targets. We separate the sample into two subsamples based on whether the target is a publicly traded firm or is not a publicly traded firm (private and subsidiary firms). Our bidding firms are comprised of publicly traded banks in the United States. Our results clearly show that the market views these acquisitions differently and favors transactions involving nonpublic targets significantly.

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<sup>2</sup> States such as Arkansas, Colorado, Iowa, Kansas, Kentucky, Massachusetts, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, North Dakota, Ohio, Oklahoma, Tennessee, Texas, and West Virginia only allowed banks headquartered in other states to hold deposits ranging from 10%-30% of the state's total deposits. Hawaii allowed no out-of-state branching at all. Many other states had reciprocity agreements (either regionally or nationally).

Publicly-traded firms are subject to disclosure requirements by the Securities and Exchange Commission (SEC), and a great deal of information is available about the firm and its condition. Information about nonpublic firms (i.e., private and subsidiary firms) is much less readily available and, as a result, a firm's condition is much more opaque or ambiguous as compared to a publicly-traded firm. Transparency adds to the liquidity of an asset as well since its value can be more readily and accurately ascertained. As a consequence, acquirers do not pay as much for the less liquid and less transparent private and subsidiary firms as they do for publicly traded firms. Accordingly, the Liquidity Hypothesis (LH) suggests that acquirers of nonpublic targets will earn a higher return due to paying a smaller merger premium.

A few studies exist which study the effects of acquisitions of private and public targets. In a study of corporate mergers, Varaiya and Ferris (1987) suggest that, as ambiguity about the value of the target increases, the merger premium decreases. Fuller et al. (2002) find evidence of a liquidity discount for private and subsidiary targets and suggest that these types of targets are much less liquid than public targets. Moeller, Schlingemann, and Stulz (2003) also find positive announcement returns to bidders from acquisitions of private and subsidiary targets. Hansen and Lott (1996) document similar findings in a study of private and public target acquisitions; however, Chang (1998) finds no evidence of abnormal returns for acquisitions of private targets with cash, but a positive return when the form of financing is stock.

In this research, we look to extend previous research by specifically examining differences in announcement period returns for publicly traded banks acquiring publicly traded banks versus those which are privately held. First, although existing corporate studies have found positive benefits from acquisitions of privately held firms, they have not considered the firms in the financial industry specifically. Chang (1998) specifically excludes banks. Even

though Masulis, Wang, and Xie (2007) appear to incorporate financial firms, it is important to examine banks in isolation for three reasons: (1) The financial industry is highly regulated and subject to additional restrictions with respect to merging than other nonfinancial firms whose primary concern is essentially profit or value maximization. (2) Exploring our hypothesis on banks alone minimizes effects and interference from other industries as well as cross-industry contamination. (3) We can incorporate industry specific variables. In particular, banks hold loans (residential real estate, commercial, agricultural, and consumer) as their primary asset and Cole and White (2012) note that commercial loans can play a role in the probability of failure in addition to income from nontraditional activities. (4) Cornett and De (1991a) state “there may be factors unique to bank mergers that increase bidder returns relative to non-financial mergers” (p. 273).

Overall, existing research finds that acquisitions are beneficial (positive announcement returns) to shareholders of the target firm. However, evidence surrounding announcement period returns for acquiring firm shareholders is much less consistent. Former studies include many variables but yet a conclusive finding remains elusive. DeYoung, Evanoff, and Molyneux (2009) compare research results in financial institution literature published since 2000. Overall, their summary documents that shareholder returns from mergers and acquisitions have yet to find a consensus. We look add to the literature by focusing specifically on acquisitions by publicly traded banks and comparing the announcement returns for publicly traded targets and those targets which are not publicly traded.

Our paper continues as follows: Section 2 provides a review of relevant merger and acquisition literature. We present our data and methodology in Section 3. In Section 4, we provide our empirical results and conclude in Section 5.

## **2. Relevant Literature**

An extensive amount of literature exists which focuses on mergers and acquisitions. Previous studies explore assorted facets of mergers and acquisitions including form of financing, size, and the public status of the target. Generally, corporate studies omit financial firms, so we present relevant literature for both.

Varaiya and Ferris (1987) report that the merger premium, on average, exceeds the expected takeover gain which results in a negative abnormal return for the acquirer. This suggests that acquirers tend to overpay for their targets based on the bidder's value assessment. Further, they find that the merger premium decreases as the uncertainty about the target firm's value increases. Hansen and Lott (1996) study differences in shareholder returns based on the public status of the target. They find positive (negative) abnormal returns for acquisitions of private (public) targets. Conversely, in a study of acquisitions of private targets, Chang (1998) finds no evidence of abnormal returns for cash financed mergers but a positive abnormal return when stock is utilized. Our study differs from these studies mainly due to our focus on the banking industry as our sample. Studying the implications in this industry alone allows us to alleviate many of the inter-industry issues inherent in these other corporate based studies.

In an investigation of acquisitions by bank holding companies, Desai and Stover (1985) find gains to shareholders and positive market reactions to acquisition announcements. Contrary to much of the corporate literature (see for example, Asquith, Bruner, and Mullins (1987), Travlos (1987), and Moeller, Schlingemann, and Stulz (2004)), neither Desai and Stover (1985) nor Cornett and De (1991b) find firm size to be a significant factor in returns. However, in a later banking-based study, Houston and Ryngaert (1994) find form of financing to be an important factor in shareholder returns.

Cornett and De (1991a) finds positive abnormal returns for both bidding and target firms in a banking based study. The result for bidding firms contradicts some findings for studies of non-bank firms. See, for example, Desai and Stover (1985) and James and Wier (1987) who report positive abnormal returns for acquirers while Trifts and Scanlon (1987) report the opposite.

In an examination of bank acquisitions, Cornett and Tehranian (1992) find that merged banks perform better than the industry. They contend this performance superiority results from the aptitude of the new combined firm in creating new business, improving employee productivity, and growing assets. Houston, James, and Ryngaert (2001) examine the source of gains from bank mergers during the 1980s and 1990s and find that cost savings from the elimination of overlapping operations are the source of most of the projected merger gains. Interestingly, the authors document higher merger returns in the 1990s compared to the 1980s and conclude that merger methods and practices have likely improved over time.

In an investigation of commercial bank mergers, Cornett, McNutt, and Tehranian (2006) find that industry-adjusted operating performance rises after the merger with larger firms experiencing a greater gain than small firms. They believe improvements in operating efficiency occurred due to the allowance of interstate branch banking by the passage of the Riegle-Neal Act of 1994. Revenue increases and cost reductions resulting from the merger enhanced operating performance, as well. Egger and Hahn (2010) show that horizontal mergers have a positive influence on performance, especially with cost reductions.

### 3. Data and Methodology

#### 3.1. Data

The sample includes mergers and acquisitions announced between January 1, 1990 and December 31, 2007.<sup>3</sup> To be included in the sample, the announcement date, completion date, form of financing utilized, target status and deal value must be available for each merger.

- The acquirer must be a publicly traded, US based firm.
- The target may be a publicly traded, private or subsidiary firm. Additionally, the target may be US or foreign based.
- The transaction must result in the acquirer obtaining majority control with over 50% ownership in the target.
- The merger must be a completed deal with a deal value greater than \$1 million.
- The acquirer must have a three-digit SIC code of 602 or 603 (i.e., depository institutions) or be a bank holding company (SIC 6712 or 6719).
- The acquiring firms must have sufficient price information available on the Center for Research and Security Prices (CRSP) database to compute cumulative abnormal returns.
- The acquiring firms must have sufficient accounting information available in the Y-9 Bank Holding Company Reports (available from the Federal Reserve Bank of Chicago) to compute return-on-equity (ROE).

We estimate returns over a five-day window around the announcement day ( $\pm 2$  days).

If multiple announcements are made within the event window, those announcements are

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<sup>3</sup> We omit mergers and acquisitions announced during the 2008-2010 period due to the financial crisis which had a substantial impact on financial firms. Even institutions not directly involved in the areas which precipitated the crisis suffered unprecedented losses. By excluding acquisitions during this period, we avoid confounding effects of the world-wide economic turmoil.

excluded since it is impossible to differentiate between the effects of the events. To avoid bid-ask bias in the returns, announcements in which the stock price one month prior to announcement is less than two dollars per share are omitted. Further, we eliminate any mergers resulting from a bank failure (the FDIC failed bank list is utilized for this omission).

The final sample consists of 1,382 acquisition announcements made by 318 firms. The number of companies acquired by a firm in the final sample may not be the same as the number of companies acquired by the firm during the sample period. The final sample differs due to various reasons for omission (such as two or more announcements made within five days of one another). Table 1 reports the number of acquisitions by year. Approximately half of our sample comes from the 1993-1998 period.

Table 2 reports summary data for a variety of acquirer characteristics as well as deal value and acquisition counts for several acquisition details. All dollar values are in millions of US dollars and median values are reported below the means in parentheses. The average deal value is only \$266 million but ranges from \$1 million to nearly \$60 billion. Acquirer size, as measured by the market capitalization, is \$5,452 million. We see a similarly wide range in values here as well (\$10 million to \$270 billion). We define acquirer size as the market capitalization of the bidding firm one month prior to acquisition announcement. We also include total assets which averages \$29 million and ranges from less than \$1 million to nearly \$2 billion. On average, acquisitions result in wealth destruction of almost \$25 million over our sample period. Overall, we find that the bidding firms are profitable with a return-on-equity of almost 13 percent and a return-on-assets of 1.12 percent. Since our focus is on banks, we also look at the portion of their total assets which are comprised of real estate and commercial loans as well as the portion of income which is attributable to nontraditional activities (noninterest

income). We find that, on average, nearly 40 percent of the firm's assets are comprised of real estate loans and less than 15 percent are commercial loans. Acquirers garner over 17 percent of their income from nontraditional sources, on average.

There are 733 nonpublic targets and 649 public targets in our sample. Almost two-thirds of the acquisitions utilize equity. More than 50 percent of the acquisitions are conducted by nonserial acquirers with 543 acquisitions completed by frequent (serial) acquirers. Additionally, 759 acquisitions are intrastate (bidder and target in the same state) compared to only 623 which are interstate mergers.

### 3.2. Methodology

We use standard event study methodology to investigate the market's reaction to merger announcements where the target firm is nonpublic versus a public target. Our primary metric of analysis is the five-day cumulative abnormal return (CAR) observed over the two days before and the two days after a merger announcement. We utilize standard event methodology as suggested by Brown and Warner<sup>4</sup> (1985). We use an estimation window of (-210, -21) days before the merger announcement in our calculation of CARs. At least 30 days of security prices must be available for the transaction to be included in the sample. We compute CARs using the CRSP value-weighted index as the benchmark for the market.

The standard market model is:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}, \text{ where } t = -210, \dots, -21 \quad (1)$$

where  $\alpha_i$  is a constant term for the  $i$ th stock,  $\beta_i$  is the  $i^{\text{th}}$  stock's market beta,  $R_{mt}$  is the market return, and  $\varepsilon_{it}$  is the error term. We calculate abnormal returns as follows:

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt}, \text{ where } t = -2, \dots, +2 \quad (2)$$

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<sup>4</sup> Brown and Warner (1985) discuss using daily data in event studies in detail. The interested reader should review their work for additional discussion of event study methodologies.

where  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  are coefficients estimated in Equation (1).

We calculate cumulative abnormal returns<sup>5</sup> as follows:

$$CAR_i = \sum_{t=-2}^{+2} AR_{it}. \quad (3)$$

### 3.3. Cross-Sectional Analysis

Additionally, we perform cross-sectional analyses to identify key determinants of the cumulative abnormal returns since more than one factor could be contributing to overall shareholder returns. We include variables to account for deal and target characteristics as control variables that previous research suggests impact acquiring firm shareholder returns. Further, we include measures of acquirer performance, and deal size.

#### 3.3.1. Additional Control Variables

Existing corporate research finds that firm size is an important factor in returns (see, for example, Asquith, Bruner, and Mullins (1987) and Moeller, Schlingemann, and Stultz (2004)). Gorton, Kahl, and Rosen (2009) document an inverse relationship between firm size and acquisition profitability. We include the natural logarithm of the total assets of the acquiring firm as of the previous fiscal year end as a measure of acquirer size.

Previous corporate research by Asquith et al. (1987), Eckbo and Langohr (1989), and Travlos (1987) as well as a banking based study by Houston and Ryngaert (1994) find form of financing to be important to shareholder returns. Conversely, Cornett and De (1991b) in a banking based study find that bidder returns do not statistically vary with the medium of payment. The *SDC* database provides information with respect to method of payment to include cash only, equity only, or combination. We simplify this structure into only two groups: cash and equity used as the signaling hypothesis suggests that using equity sends a message to the

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<sup>5</sup> Fuller, Netter, and Stegemoller (2002) use a modified market model whereas Ismail (2008) uses the standard market model to estimate CARs. Ismail computed CARs using both approaches and found no significant difference. Therefore, we employ the standard market model in our analysis.

market of overvaluation. Consequently, in a combination financed acquisition, this would be the case as well.

In a study of publicly traded bank target firms, DeLong (2001) determined that location and activity focusing acquisitions increase shareholder value. We look solely at locational focus since our sample also includes nonpublic targets in which data is not always available to determine operational similarity between the bidder and the target. By acquiring an out of state bank, the acquiring firm is gaining assets that are likely to be less correlated, in terms of value, than assets acquired in their own state.

The acquisition behavior of the firm is also included through our serial acquirer variable. Fuller, Netter, and Stegemoller (2002) and Lee and Carter (2014) find that acquiring firm shareholders benefit (with higher, although not necessarily positive, announcement returns) when the firm makes frequent acquisitions or are “serial acquirers”<sup>6</sup>. Ismail (2008), however, reports that single acquirers outgain multiple acquirers. (Also Malatesta and Thompson (1985) conduct a small sample study of frequent acquirers and find positive effects.) Ooghe, De Langhe, and Camerlynck (2006) find that multiple acquirers prefer to obtain firms which will complement their own firm in growth and sales generating ability.

We also include two industry specific measures capturing the amount of commercial loans the bank has (as a function of total assets) as well as the amount of income earned from nontraditional activities (noninterest income percent of total interest and noninterest income). Cole and White (2012) show these two factors impact the likelihood of bank failure. This could affect bidder decisions regarding firm activities including whether to engage in mergers and acquisitions.

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<sup>6</sup> Fuller et al. (2002) define a serial acquirer is a firm which makes five or more successful bids within any three year window during the sample period; otherwise the acquirer is a nonserial acquirer.

Additionally, we incorporate return-on-equity for the bidding firm as a measure of acquiring firm profitability. This results in the following cross-sectional regression equation:

$$\begin{aligned}
 CAR_i = & \beta_0 + \beta_1 PUBLIC_i + \beta_2 EQUITY\ USED_i + \beta_3 SERIAL_i + \beta_4 INTERSTATE_i + \\
 & \beta_5 LN(TOTAL\ ASSETS)_i + \beta_6 ROE_i + \beta_7 COMMERCIAL\ LOANS\ PERCENT_i + \\
 & \beta_8 NONINTEREST\ INCOME\ PERCENT_i + e_i
 \end{aligned} \tag{6}$$

We report results using robust standard errors to account for any heteroskedasticity present in the data.

#### **4. EMPIRICAL RESULTS**

In this section, we present our empirical results. Table 3 reports t-tests of differences in means for the acquiring bank's five-day cumulative abnormal return (CAR) for mergers with nonpublic targets compared to those with public targets. Further, we also show comparisons of the five-day CARs for mergers based on other deal and acquirer characteristics. In Table 4 we reports the OLS results in which the five-day CAR for the acquiring firm is regressed against merger specific measures, including whether the target is public or nonpublic.

In Table 3, we report mean and median five-day CARs. For all acquirers, we find negative, mean CARs, regardless of the deal characteristic included or the bidder's acquisition frequency. In general, the mean CARs we report for nonpublic targets are either statistically insignificant or small and positive. However, public targets exhibit larger, statistically significant, negative CARs. Further, t-tests of the differences in the CARs between the nonpublic and public targets result in statistically significant, positive results at the one-percent level, for the entire sample and all but one of the deal characteristic groups and bidder acquisition behavior. For the full sample, the difference in means is 1.84 percent indicating that

acquisitions of nonpublic targets generate higher abnormal returns than public targets. These results suggest the market views acquisitions of nonpublic targets differently than public targets. The difference in the five-day CAR between acquisitions of public versus nonpublic targets ranges from 1.27 percent to 2.18 percent. Shareholders clearly benefit more from acquisitions of nonpublic targets, which is to say they often lose less.

Additionally, we consider deal characteristics such as the method of payment and geographic similarity. For cash financed acquisitions, we do not see a significant difference in our CARs for the different types of targets. However, when equity is used, the acquisition of a nonpublic target yields a return almost two percent higher than that of a public target due to a substantial decline in the CAR for public targets. Interstate mergers (bidder and target are from different states) result in positive difference in means of nearly 1.50 percent compared to a difference in means of 2.13 percent for intrastate mergers (acquirer and target from the same state).

Further, we classify the acquirers based on whether they are a serial acquirer or nonserial acquirer. This gives us an indication of the acquirer's acquisition behavior, i.e., how frequently they make acquisitions. We find that the difference in means (nonpublic target – public target) for serial acquirers is 1.27 percent and is 2.18 percent for nonserial acquirers.

We use cross-sectional analysis to examine return determinants. Accordingly, we perform the regression analysis as given in Equation (4). We use the five-day CAR as the dependent variable and the variables discussed previously as the independent variables<sup>7</sup>. We report regression results in Table 4. All of the models have similar specifications. However, we do examine the public and nonpublic target regression results separately in the second and third

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<sup>7</sup> We obtain Pearson correlation coefficients for model regressors. The results do not suggest substantial multicollinearity between the variables. The coefficients are available upon request.

models. In the fourth model, we include interaction terms to look for structural breaks in the data with respect to the public status of the target.

We find a statistically significant relation, at the one percent level, between the CAR and the public variable. This suggests the market views the acquisition of a nonpublic bank – either a bank subsidiary or a privately-held bank – more favorably than the acquisition of a public banking firm. In fact, we obtain a significant coefficient for the public variable of -0.0125. This indicates that the five-day CAR is 1.25 percent lower than if the target was a nonpublic firm. This finding is important because much of the prior research in banking excludes nonpublic targets from consideration. Private and subsidiary firms (non publicly traded firms) comprise over half of the sample (744 non public versus 649 public firms). This group of firms is critical in forming the overall implications of shareholder benefits resulting from merger and acquisition announcements.

We do not find a statistically significant relationship between many of our variables with the five-day CAR. However, we do find a negative, significant relationship with total assets and the five-day CAR. This suggests lower returns are associated with acquisitions made by larger bidding firms. This finding is consistent with existing literature indicating an inverse relationship between acquirer size and acquisition profitability. Similar to findings by Lee and Carter (2014), we find the serial acquirer variable to have a positive, significant relationship with the five-day CAR. Given our coefficient result (0.0065), we expect a five-day CAR 0.65 percent higher if the acquirer is a serial acquirer compared to an acquisition by a nonserial acquirer. Interestingly, we do not find the amount of commercial loans relative to total assets or the percentage of nontraditional income to be factors in the CARs as suggested by Cole and White (2012).

In the last column, we also report regression coefficients from interactions of the private dummy variable with our other independent variables. We obtain significant results for some variables indicating structural differences exist for public targets compared to nonpublic targets. We see a positive relationship with the five-day CAR when equity is used in the acquisition of nonpublic targets. Our findings suggest a return 1.21 percent higher when the target is not publicly traded. We find similar, significant results for total assets although the magnitude of the difference is smaller (.14 percent). Interestingly, we find a negative relationship with the five-day CAR and our serial acquirer variable for nonpublic targets. This suggests that the return is almost 1 percent lower for acquisitions of nonpublic targets compared to public targets.

Figure 1 indicates that mergers destroy shareholder wealth, overall. Our figure shows substantial differences in the amount of wealth destruction for acquisitions of public versus nonpublic targets. Overall, acquisitions accounted for aggregate wealth destruction of approximately \$35 billion. Of that total, over \$30 billion is attributable to acquisitions of public targets compared to less than \$4 billion for nonpublic targets. We see the largest contributions to wealth creation (destruction) occurring in the late 1990s and early 2000s.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

Overall, we find evidence consistent with the market valuing acquisitions of nonpublic targets differently than those of public targets. We clearly show that the market looks favorably upon acquisitions of nonpublic targets, supporting the liquidity hypothesis. Both our univariate and cross-sectional analysis reveal superior shareholder returns for acquisitions of nonpublic targets compared to public targets, even when considering acquirer and deal characteristics. Additionally, we document structural differences based on the public status of the target in the

five-day CAR for the method of financing, total assets, and the acquisition behavior of the acquirer.

Our research includes these nonpublic targets which are largely excluded from existing banking based merger and acquisition studies. This is a key difference between our study and previous research especially considering that nonpublic firms comprise more than half of our sample. Second, we focus only on acquisitions involving financial firms of which there are few studies which also include nonpublic targets. It is essential to study financial firms as they comprise a significant portion of the economy and are an essential component to its efficient and continued function. In fact, Cornett and De (1991a) assert that “there may be factors unique to bank mergers that increase bidder returns relative to non-financial mergers” (p. 273). One reason unique factors may exist is that the financial industry is highly regulated and subject to additional restrictions with respect to firm activities than other nonfinancial firms whose primary concern is profit or value maximization. Additionally, we incorporate industry specific variables. Further, focusing on banks alone allows us to exploring our hypothesis while reducing and/or eliminating the potential for cross-industry effects to cloud our results.

As with any study, certain limitations exist. This study focuses on one highly regulated industry. Additionally, we draw our sample from a period of time, which underwent industry deregulation. Last, during the last few years of the first decade of the 21<sup>st</sup> Century, a major shift occurred in the financial industry. Consequently, extrapolation and generalizations to other industries and/or to other time periods should be regarded with the appropriate level of caution.

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**Table 1. Number of Acquisitions by Year.**

This table presents the number of acquisitions announced by year. We provide the number of acquisitions and percent of sample for each year for the full sample as well as the public and nonpublic target subsamples. Nonpublic firms include private and subsidiary firms.

| <b>Year</b>  | <b>All Acquirers</b> |                    | <b>Nonpublic Targets</b> |                    | <b>Public Targets</b> |                    |
|--------------|----------------------|--------------------|--------------------------|--------------------|-----------------------|--------------------|
|              | <b>N#</b>            | <b>% of Sample</b> | <b>N#</b>                | <b>% of Sample</b> | <b>N#</b>             | <b>% of Sample</b> |
| 1990         | 27                   | 1.95%              | 15                       | 2.05%              | 12                    | 1.85%              |
| 1991         | 32                   | 2.32%              | 18                       | 2.46%              | 14                    | 2.16%              |
| 1992         | 57                   | 4.12%              | 32                       | 4.37%              | 25                    | 3.85%              |
| 1993         | 106                  | 7.67%              | 66                       | 9.00%              | 40                    | 6.16%              |
| 1994         | 129                  | 9.33%              | 75                       | 10.23%             | 54                    | 8.32%              |
| 1995         | 93                   | 6.73%              | 53                       | 7.23%              | 40                    | 6.16%              |
| 1996         | 86                   | 6.22%              | 44                       | 6.00%              | 42                    | 6.47%              |
| 1997         | 126                  | 9.12%              | 75                       | 10.23%             | 51                    | 7.86%              |
| 1998         | 119                  | 8.61%              | 61                       | 8.32%              | 58                    | 8.94%              |
| 1999         | 89                   | 6.44%              | 38                       | 5.18%              | 51                    | 7.86%              |
| 2000         | 64                   | 4.63%              | 27                       | 3.68%              | 37                    | 5.70%              |
| 2001         | 67                   | 4.85%              | 34                       | 4.64%              | 33                    | 5.08%              |
| 2002         | 53                   | 3.84%              | 24                       | 3.27%              | 29                    | 4.47%              |
| 2003         | 78                   | 5.64%              | 42                       | 5.73%              | 36                    | 5.55%              |
| 2004         | 79                   | 5.72%              | 39                       | 5.32%              | 40                    | 6.16%              |
| 2005         | 63                   | 4.56%              | 39                       | 5.32%              | 24                    | 3.70%              |
| 2006         | 59                   | 4.27%              | 27                       | 3.68%              | 32                    | 4.93%              |
| 2007         | 55                   | 3.98%              | 24                       | 3.27%              | 31                    | 4.78%              |
| <b>Total</b> | 1382                 | 100.00%            | 733                      | 100.00%            | 649                   | 100.00%            |

**Table 2. Summary Acquirer Characteristics and Sample Information.**

This table reports summary data for the acquirer. This table also reports mean deal values and acquirer size, measured as the market capitalization of the firm one month prior to acquisition announcement and total assets as well as wealth creation (destruction). We also include summary information regarding bidder profitability and information regarding the composition of the sample. The medians are reported in parentheses beneath the means.

| <b>All Acquirers</b>  |                          |                |                |
|---|--------------------------|----------------|----------------|
|   | <b>Mean<br/>(Median)</b> | <b>Minimum</b> | <b>Maximum</b> |
| <i>Deal Value (\$M)</i>   | 266<br>(41)              | 1              | 58700          |
| <i>Market Capitalization (\$M)</i>                                  | 5452<br>(643)            | 10             | 270000         |
| <i>Total Assets (\$M)</i>   | 29<br>(4)                | 0              | 1880           |
| <i>Wealth Creation (\$M)</i>  | -25<br>(-2)              | -7590          | 7590           |
| <i>Return on Equity</i>   | 12.97%<br>(13.16%)       | -17.35%        | 33.67%         |
| <i>Return on Assets</i>   | 1.12%<br>(1.13%)         | -1.35%         | 3.32%          |
| <i>Real Estate Loans Percent of Total Assets</i>                    | 38.39%<br>(37.29%)       | 0.00%          | 87.79%         |
| <i>Commercial Loans Percent of Total Assets</i>                     | 12.44%<br>(11.62%)       | 0.00%          | 49.27%         |
| <i>Noninterest Income Percent of Total Interest and Noninterest</i> | 17.37%<br>(15.69%)       | 1.76%          | 65.03%         |
| <b>All Acquirers – Number of Acquisitions</b>                       |                          |                |                |
| <b><i>Full Sample</i></b>   |                          |                | 1,382          |
| <b><i>Target Status</i></b>   |                          |                |                |
| Public Targets  |                          |                | 649            |
| Nonpublic Targets   |                          |                | 733            |
| <b><i>Method of Payment</i></b>                                     |                          |                |                |
| Cash Only Financing   |                          |                | 317            |
| Equity Used   |                          |                | 1,065          |
| <b><i>Bidder Acquisition Frequency</i></b>                          |                          |                |                |
| Serial  |                          |                | 543            |
| Nonserial   |                          |                | 839            |
| <b><i>Geographic Similarity</i></b>                                 |                          |                |                |
| Interstate  |                          |                | 623            |
| Intrastate  |                          |                | 759            |

**Table 3. Comparison of Five-Day Announcement Period Cumulative Abnormal Returns (CARs) for Sample Bank Mergers.**

This table reports the differences in means for the five-day CARs, where comparisons are made between public and nonpublic targets and based on other deal and acquirer characteristics. The median five-day CAR is reported below the mean in parentheses.

|  | All Acquirers |                      |     | Nonpublic Targets |                     |     | Public Targets |                      |     | Difference in Means<br>(Nonpublic-Public) |     |
|--|---------------|----------------------|-----|-------------------|---------------------|-----|----------------|----------------------|-----|---|-----|
|  | N#            | CAR (-2, +2)         |     | N#                | CAR (-2, +2)        |     | N#             | CAR (-2, +2)         |     |   |     |
| Full Sample                                | 1382          | -0.0055<br>(-0.0064) | *** | 733               | 0.0032<br>(-0.0015) | **  | 649            | -0.0152<br>(-0.0138) | *** | <b>0.0184</b>                             | *** |
| <b><i>Method of Payment</i></b>            |               |                      |     |                   |                     |     |                |                      |     |   |     |
| Cash                                       | 317           | 0.0025<br>(-0.0040)  |     | 249               | 0.0042<br>(-0.0032) | *   | 68             | -0.0039<br>(-0.0129) |     | <b>0.0081</b>                             |     |
| Equity Used                                | 1065          | -0.0078<br>(-0.0071) | *** | 484               | 0.0026<br>(-0.0009) |     | 581            | -0.0165<br>(-0.0138) | *** | <b>0.0191</b>                             | *** |
| <b><i>Bidder Acquisition Frequency</i></b> |               |                      |     |                   |                     |     |                |                      |     |   |     |
| Serial                                     | 543           | -0.0031<br>(-0.0050) | **  | 296               | 0.0026<br>(0.0001)  |     | 247            | -0.0101<br>(-0.0126) | *** | <b>0.0127</b>                             | *** |
| Nonserial                                  | 839           | -0.0070<br>(-0.0075) | *** | 437               | 0.0035<br>(-0.0023) | *   | 402            | -0.0183<br>(-0.0143) | *** | <b>0.0218</b>                             | *** |
| <b><i>Geographic Similarity</i></b>        |               |                      |     |                   |                     |     |                |                      |     |   |     |
| Interstate                                 | 623           | -0.0068<br>(-0.0074) | *** | 329               | 0.0002<br>(-0.0018) |     | 294            | -0.0145<br>(-0.0134) | *** | <b>0.0147</b>                             | *** |
| Intrastate                                 | 759           | -0.0044<br>(-0.0060) | *** | 404               | 0.0056<br>(-0.0015) | *** | 355            | -0.0157<br>(-0.0143) | *** | <b>0.0213</b>                             | *** |

**Table 4. Regression Results.**

This table presents OLS results for the acquiring firm's five-day (-2, +2) CAR regressed against

|  | <b>Full Sample</b> | <b>Nonpublic Targets</b> | <b>Public Targets</b> | <b>Full Sample</b> |
|--|--------------------|--------------------------|-----------------------|--------------------|
| <i>Public</i>  | -0.0157 ***        |                          |                       |                    |
| <i>Equity Used</i>   | -0.0060 **         | -0.0037                  | -0.0124 ***           | -0.0145 ***        |
| <i>Serial Acquirer</i>   | 0.0071 ***         | 0.0028                   | 0.0118 ***            | 0.0116 ***         |
| <i>Intrastate</i>  | 0.0006             | 0.0019                   | -0.0007               | -0.0016            |
| <i>Ln (Total Assets)</i>   | -0.0026 ***        | -0.0026 **               | -0.0027 *             | -0.0035 ***        |
| <i>Return on Equity</i>  | -0.0120            | -0.0547                  | 0.0537                | 0.0376             |
| <i>Commercial Loans Percent of Total Assets</i>                                      | 0.0180             | 0.0183                   | 0.0146                | 0.0146             |
| <i>Noninterest Income Percent of Total Interest and Noninterest Income</i>           | 0.0040             | -0.0020                  | 0.0159                | 0.0259             |
| <i>Equity Used X Private</i>   |                    |                          |                       | 0.0121 **          |
| <i>Serial Acquirer X Private</i>   |                    |                          |                       | -0.0092 *          |
| <i>Intrastate X Private</i>  |                    |                          |                       | 0.0041             |
| <i>Ln (Total Assets) X Private</i>   |                    |                          |                       | 0.0014 *           |
| <i>Return on Equity X Private</i>  |                    |                          |                       | -0.0768            |
| <i>Commercial Loans Percent of Total Assets X Private</i>                            |                    |                          |                       | 0.0047             |
| <i>Noninterest Income Percent of Total Interest and Noninterest Income X Private</i> |                    |                          |                       | -0.0302            |
| <i>Intercept</i>   | 0.0461 ***         | 0.0469 **                | 0.0301                | 0.0421 ***         |
| <i>Year Dummies</i>  | Yes                | Yes                      | Yes                   | Yes                |
| <i>N</i>   | 1382               | 1382                     | 1382                  | 1382               |
| <i>R<sup>2</sup></i>   | 0.0809             | 0.0385                   | 0.0605                | 0.0876             |

**Figure 1: Aggregate Wealth Creation (Destruction).**

This figure illustrates the total wealth creation (destruction), by year, over the sample period from acquisitions of public and nonpublic target firms. Wealth creation is defined as the five-day CAR multiplied by the market capitalization of the acquirer one month prior to acquisition announcement.

