

Interstate Bank Mergers and Their Impact on Shareholder Returns: Evidence From the 1990s

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During the 1990s merger activity in the commercial banking industry has expanded at a rapid pace primarily due to the loosening of interstate restrictions and the much-improved health of the banking industry. Our study examines interstate merger activity in the banking industry during the 1991-1995 time period, measures its impact on stockholder returns, and compares these results to a similar study that uses data from the 1980s. Our findings indicate that during the 1990s returns to targets have been significantly positive while returns to bidders have been significantly negative. These findings differ from the findings of Cornett and De (1991) who report significant positive returns to bidders and targets in interstate mergers during the time period 1982-1986. In addition, our study finds evidence that indicates that there is a significantly negative revaluation of the combined bidder and target values at the merger announcement.

Introduction

Merger activity in the commercial banking industry has expanded at a rapid pace over the past several years, particularly in the area of interstate mergers. Among the factors that have contributed to this recent explosion of merger activity are the loosening of interstate restrictions by states and the much-improved health of the banking industry. With regard to the first factor, consider that in the late 1980s, only 19 states permitted acquisition of banks within their state by holding companies headquartered in another state (Clair and Tucker, 1989). In addition, during the same time period, only 51 multistate bank holding companies were in operation with 6.0 percent of commercial bank assets held by banks owned by out-of-state bank holding companies. Since that time, however, the picture has changed dramatically. As of mid-year 1993 there were 178 multistate bank holding companies in existence, and the share of domestic commercial banking assets controlled by out-of-state

organizations had increased to 21.3 percent. Further, as of November 1993 the number of states allowing nationwide entry by bank holding companies outside their state had risen to 34 (Savage, 1993). Congress added impetus when it passed the Interstate Banking and Branching Efficiency Act in 1994. This act opened the door for full coast-to-coast banking in June 1997.

The improved health of the banking industry is a second factor that has played a major role in sparking interstate merger endeavors. In 1991 the FDIC was on the brink of collapse due to the failure of hundreds of banks during the late 1980s and early 1990s. Over the next four years the banking industry reported strong growth in income before taxes and extraordinary items as a percentage of average consolidated assets and, in 1993 and 1994 banks recorded their highest level of profits since World War II (English and Reid, 1995). This trend has persisted through 1997 with record-setting profits continuing to be reported by the banking industry. This improved profitability has led to much higher levels of capital throughout the banking industry as well as significant increases in the price of bank stocks, thus facilitating the acquisition process.

With the high level of merger activity that has occurred in the 1990s it is obvious that the banking industry believes that acquiring banks across state lines is an attractive and beneficial proposition. Whether this activity benefits the stockholders of the participating banks, however, is unclear. Previous interstate bank merger studies have produced mixed results. Rhoades (1994), in a summary of bank merger and acquisition studies from 1980-1993, reports that event studies in general have found that shareholders of target banks gain, but evidence regarding returns to bidding banks has been inconsistent. Rhoades suggests two reasons why discrepancies regarding returns to bidding banks have arisen. First, the time period around the announcement date for which the abnormal returns are examined varies widely from study to study, and the findings appear to be sensitive to the time period selected. According to Rhoades, significant positive abnormal returns are often found during the day or two immediately around the announcement date. Second, Rhoades points out that in many studies the bidders and targets are not matched or the merger is not consummated following the announcement. Rhoades suggests that these shortcomings could be problematic.

Prior Research

Much previous research involving the impact of interstate bank mergers and acquisitions on shareholder returns has used data collected during the 1980s. (See Cornett and Tehranian, 1992; Hawawini and Swary, 1990; Baradwaj, Dubofsky, and Fraser, 1992; Cornett and De, 1991; Allen and Cebenoyan, 1991, among others.) Rhoades' (1994) review of bank merger research shows that all 21 of the studies that measured returns to acquirers and targets at the announcement of the merger were undertaken using data prior to 1990. A 1994 study by Houston and Ryngaert uses

data collected during 1990 and 1991, but these data are commingled with data from 1985-1989. Likewise, Pilloff (1996) incorporates 1990 and 1991 data, but also includes mergers that occurred during 1982-1989. For the banking industry the 1980s and early 1990s were characterized by a large number of bank failures, increased government intervention, and tighter restrictions on interstate activity than exist today. Consequently, banks were often confined to acquisitions in already saturated markets or to purchases of weak or failed institutions.

Present Study

The operating environment and economic scenario have changed for the banking industry since the 1980s. Banks today have the chance to pursue opportunities that allow greater geographic diversification in potentially more profitable markets. How has the improvement in the health of the banking industry and the continued relaxation of interstate barriers in the 1990s affected the markets' response to bank merger and acquisition announcements? To our knowledge, there has been no previous research that has focused only on merger announcements made entirely in the 1990s. Therefore, the purpose of our study is to examine interstate merger activity during the 1991-1995 time period, measure its impact on stockholders' returns, and then compare our results to a study undertaken by Cornett and De (1991) using 1980s data. Further, we wish to address the problem areas mentioned by Rhoades (1994). Because, according to Rhoades, results appear to be sensitive to the time period selected around the announcement date, we adopt a methodological approach similar to that of Cornett and De who report abnormal returns of bidding banks for a two-day period around the merger announcement. Like Cornett and De, we examine the target returns using Rhodes' recommendation of matching bidding banks with their targets. As an additional assessment of merger returns, we include a measure of overall returns to the combined firm (the weighted average of the returns to the bidder and target firms) as developed by Houston and Ryngaert (1994).

Our findings indicate that significant negative returns accrued to the stockholders of bidding banks during the time period 1991-1995. This result differs from the findings of Cornett and De (1991) who find those returns to be significantly positive. Our finding of significant positive returns for target banks, however, is consistent with their results. In addition, we find that the combined value of bidders and their targets declines significantly immediately after the announcement of the merger.

Data and Methodology

A sample of interstate bank mergers announced from 1991 through 1995 was compiled using the listings of completed bank mergers found in the *Mergers and Acquisition Journal*. We find a total of 97 merger announcements during this time period where both bidders and their targets were traded on either the New York

Stock Exchange, the American Stock Exchange, or the NASDAQ Exchange. All observations are of mergers where the bidder acquired all assets of the target. Our initial sample excludes mergers where either the bidder or target was a savings bank or a savings and loan association, or the merger was FDIC-assisted due to the target's financial condition. Target returns in such situations would likely be biased upward by depressed stock values in the savings and loan industry.

The date of the initial announcement is identified using the *Wall Street Journal Index*. Nineteen observations are eliminated because the initial announcement date was either not available or uncertain. In most of these cases, the target bank was extremely small relative to the bidding bank. We also eliminate six observations because either the bidder or target released significant information other than the merger announcement during an 11-day window beginning five days prior to the announcement and ending five days after the announcement. Examples of this information include earnings releases, dividend increases, and the announcement of other merger activity by the bidder. We also withheld four observations where the announcement date occurred too late in 1995 to provide a sufficient number of trading days to properly estimate announcement returns using the methodology outlined below.

Our final sample contains 68 matched bidders and targets. (See Appendix A.) In 66 of the mergers, the method of payment is stock. In one merger, cash made up only 1.0 percent of the offer price, and in the remaining merger, shareholders of the target bank were given the option of receiving cash or stock. This predominance of stock as a method of payment is consistent with what would be expected in a sample of mergers during a period of historically high stock price levels. Table 1 presents the summary statistics (minimum, maximum, mean and standard deviation) for the market value of the equity of the participating banks, total assets, the ratio of the market value of the bidder's equity to the market value of the target's equity (SRATIO), and the ratio of the bidder's total assets to the target's total assets (ARATIO) for each bidder and target. These statistics are for the fiscal year-end prior to the merger.

Table 1—Summary Statistics for 68 Acquisition Announcements 1991-1995

Variable	Minimum	Maximum	Mean	Standard Deviation
Value of Equity (millions of \$):				
Bidding Banks	57.940	16691.407	4198.205	3976.448
Target Banks	6.846	3938.707	475.353	776.046
Value of Assets (millions of \$):				
Bidding Banks	516.00	186930.00	36112.91	43074.78
Target Banks	135.00	35400.00	4303.47	7345.30
SRATIO ^a	0.9834193	1286.98	42.93412	156.15838
ARATIO ^b	0.7523898	420.7142857	30.02704	58.75580

^aEquals the market value of equity of the bidding bank divided by the market value of equity of target bank

^bEquals the total assets of the bidding bank divided by the total assets of the target bank

Because our objective is to compare our results with those of Cornett and De (1991), we use the same methodology employed in their study. Thus, we use the standard event study method described in Dodd and Warner (1983) to measure the impact of the announcement of an acquisition on stock returns of participants. The following model was estimated:

$$(1) R_{j,t} = \alpha_j + \beta_j R_{m,t} + \varepsilon_{j,t}$$

where:

- $R_{j,t}$ = The rate of return on security j for day t ;
- $R_{m,t}$ = The return on the CRSP equally weighted index¹ on day t ;
- α_j, β_j = Estimated parameters; and
- $\varepsilon_{j,t}$ = An error term for security j on day t .

In the absence of unexpected information, the relationship between the return for the firm and the return for the market should be unchanged. Therefore, the market return is used to predict the firm's normal return.

For security j , the abnormal return (AR) for day t is computed as the difference between the actual return and the predicted return as described by the following equation:

$$(2) AR_{j,t} = R_{j,t} - (\alpha_j + \beta_j R_{m,t})$$

We treat the day the announcement of the merger first appears in the *Wall Street Journal* as the event day (day 0) and measure all other days relative to this date. Days -1 and 1 are trading days immediately prior and immediately after the announcement date, respectively. Like Cornett and De (1991), the market model parameters are estimated for each firm over a 60-day post-announcement interval (day + 16 through + 75).² We then compute and accumulate abnormal returns for each firm for the event date and the day prior (-1, 0).

In order to test for the overall change in stockholder wealth as a result of a merger, we use a measure similar to that of Houston and Ryngaert (1994):

$$(3) \frac{VM_{ti}AR_{ti} + VM_{bi}AR_{bi}}{VM_{ti} + VM_{bi}}$$

where

- VM_{ti} = The market value of the target firm's stock two days before the merger bid for the target;
- VM_{bi} = The market value of the bidding firm's stock two days before the merger bid;
- AR_{ti} = The abnormal returns for the i th target;

¹ We also used a value-weighted index, but our results do not change significantly.

² While we chose to base our study on the methodology used by Cornett and De (1991), we also estimated abnormal returns using different model specifications to test the sensitivity of our results. Among the changes are the use of a 60-day pre-announcement estimation period from day -75 to -16 and the use of different event windows from day -5 to + 5. The conclusions of our study are robust to each specification change.

AR_{it} = The abnormal returns for the i th bidder.

This measure gives the percentage change in the value of the combined pre-merger firms.

Results

The abnormal returns earned by the bidding and target banks' stockholders and the combined abnormal returns for the present study are displayed in Table 2 along with the corresponding results from the Cornett and De (1991) study.

Table 2—Comparative Results

Study	Bidder Returns	Target Returns	Combined Returns
Cornett and De (1991)	0.55%	8.10%	Not tested
n = 152 Bidders	(t = 3.05)	(t = 52.63)	(but implied to be
n = 37 Targets *			positive)
Current Study	-2.24%	10.97%	-0.70%
n = 68 Matched Bidder	(t = 5.15)	(t = 7.17)	(t = 2.51)
and Targets			

* Cornett and De reported in a footnote that they matched the 37 target banks with the corresponding 37 bidding banks and that the results were similar

In the present study the average two-day abnormal return to target bank stockholders is 10.97 percent, and the average two-day abnormal return to bidding bank stockholders is -2.24 percent. Both of these returns are significant at the .01 level. The combined abnormal return is -.70 percent and is also significant at the .01 level. Forty-six of the 68 bidding banks earned negative returns while only 14 of the 68 target banks earned negative returns. Thirty-seven of the 68 mergers resulted in combined negative returns.

Our findings with regard to returns to bidding banks conflict with the results of the Cornett and De (1991) study that finds significantly positive returns to bidders. Our results also indicate that interstate mergers do not increase the value of the new, combined bank as implied by Cornett and De's study. Instead, value is shifted from bidding bank stockholders to the stockholders of the target banks. This result is consistent with Houston and Ryngaert (1994) who find no evidence of increased firm value as a result of bank mergers.

We suggest that this pattern of returns can be explained by two differences in the approach to arranging the combinations: (1) method of payment; and (2) an increase in offer premiums designed to reduce the likelihood of competitive bids. Several prior studies have demonstrated that the use of stock as a method of payment reduces both bidder and target returns (Gordon and Yagil, 1981; Wansley, Lane, and Yang, 1983; and Travlos, 1987). This occurrence may be explained by both tax effects and signaling effects.

From the perspective of target firms, the use of cash as a method of payment creates a taxable event. Thus, target stockholders would require higher offer

premiums as compensation for their tax payments. On the other hand, the use of stock creates a tax-free ownership transfer.

From the perspective of the bidding firms, the use of cash as the method of payment creates tax savings from interest payments if debt is used and potential depreciation tax savings from the write-up of target firm assets. Furthermore, if increased debt is used to fund the purchase, the use of cash could be regarded as a positive signal of the bidding firm's optimism of the future value of the target firm. Conversely, the use of stock can eliminate these tax advantages and send a negative signal.

Because bidders are more likely to know the true value of their banks' common stock, their choice of payment method can convey a signal to market participants regarding that value. If they seek acquisitions using predominantly stock when their stock is currently overvalued, their offers can be artificially rich looking. In this case, investors should recognize the signal of overvaluation and reduce the current market price of the bidding bank. A review of the SRATIO and ARATIO in Table 1 provides some evidence of possible bidder overvaluation. The average bidding bank is approximately 43 times larger than its target based on the market value of equity, but only 30 times larger on a total asset basis.

The predominant use of stock as the method of payment could explain, therefore, the decline in bidding firm stock returns and the decline in the combined value of the participants relative to Cornett and De (1991). Of the 132 observations where they could identify the method of payment, 61 bidders (46 percent) used cash as either partial or complete payment. In our study, only two of the 68 bidders (3 percent) included a cash component in their offer and none used all cash. Additionally, the notion that the use of stock is a signal of overvalued stock prices would be consistent with the historically high stock valuations in the banking industry during the time period that we studied. The evidence from prior studies regarding method of payment is inconsistent with the increase in returns to target firms.

We propose that the reductions in interstate regulations, improved profitability, and higher levels of capital have increased the competition for available targets in the banking industry. In turn, bidders may be increasing offer premiums in an attempt to avoid costs associated with competing with other bidders in an open market auction. Bidding firms' management often justify higher premiums as strategic long-term investments; however, those higher premiums may actually be interpreted by investors as overpayments prompted by hubris. For example, in August 1997 Barnett Banks Inc. announced that it was putting itself up for sale, and six banks submitted offers. NationsBank was able to prevail by submitting a bid that was four times Barnett's underlying book value. This was substantially higher than the average price-to-book value ratio in bank acquisitions in 1997 which was slightly over two times. Although NationsBank's stock price dropped on the

announcement of the acquisition, James Hance, a NationsBank vice chairman, offered no apologies for the price that was paid. According to Mr. Hance, "Think of how we would have felt if we were a dollar (per share) short. Once you get to that level, you have to win." (Milligan, 1998). Nevertheless, investors may not always share management's view regarding the level of long-term cash flows from interstate bank acquisitions and, subsequently, bid down the value of acquiring banks as observed in our study.

Conclusions

Results from the 1990s continue to confirm the existence of significant positive abnormal returns to target banks as has been reported in most studies of interstate bank mergers. Unlike Cornett and De (1991) who find significant positive returns to bidding banks over the period 1982-1986, however, we find evidence of significant negative returns to bidders. We also can infer that because Cornett and De find significant positive returns to both targets and bidders, the overall effect would be a significant increase in the market value of the combined firm. The market value of the combined firm in our study, however, declines significantly. These results are consistent with the notion that while a reduction in regulatory restrictions on interstate bank mergers and increased profitability in the banking industry has led to higher levels of merger and acquisition activity, the market does not initially reward the acquiring banks. The findings indicate that the market typically penalizes banks on the announcement of merger plans.

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Appendix A—Bank Merger Sample (1991-1995)

Bidder	Target
1991	
NBD Bancorp	FNW Bancorp
Wachovia Corp.	South Carolina National Corp.
BankAmerica Corp.	Valley Capital Corp.
BancOne Corp.	First Security Corp. of Kentucky
BancOne Corp.	Affiliated Bancshares of Colorado
National City	Merchants Bank
1992	
CoreStates Financial Corp.	First Peoples Financial Corp.
Boatmen's Bancshares	Sunwest Financial Services
Norwest Corp.	Lincoln Financial Corp.
NBD Bancorp	INB Financial Corp.
KeyCorp	Puget Sound Bancorp
BancOne Corp.	Key Centurian Bankshares
First Bank Systems	Western Capital Corp.
BB&T Financial Corp	Security Financial Holding
TCF Financial	Republic Capital
First Bank Systems	Colorado National
First Fidelity Bancorp	Northeast Bancorp
Republic Bancorp	Horizon Financial Services
1993	
Bank of New York Corp.	National Community Banks
Boatmen's Bancshares	First Amarillo Bancorp
First Bank Systems	Boulevard Bancorp
Comerica	Pacific Western Bancshares
KeyCorp	Commercial Bancorp of Colorado
AmSouth Bancorp	Citizens National Corp.
AmSouth Bancorp	Fortune Bancorp
Old Kent Bancshares	Edgemark Bancorp
BancOne Corp.	Liberty National Bancorp
Society Corp.	KeyCorp

Appendix A (cont.)—Bank Merger Sample (1991-1995)

Bidder	Target
1994	
Boatmen's Bancshares	Worthen Banking Corp.
BB&T Financial Corp.	Commerce Bank—Virginia
Synovus Financial	NBSC Corp.
First of America	F&C Bancshares
First Union Corp.	BancFlorida Financial
Fleet Financial Group	NBB Bancorp
First Fidelity Bancorp	Baltimore Bancorp
First Fidelity Bancorp	First Inter-Bancorp
Firststar Corp.	First Colonial Bankshares
BankAmerica	Continental Bank
Mellon Bank	Glendale Bancorp
Union Planters Corp.	Grenada Sunburst
Union Planters Corp.	BNF Bancorp.
Commerce Bancshares	Union Bancshares
BayBanks Inc.	NFS Financial Corp.
TCF Financial	Great Lakes
First Financial	First Rock
First National	F.F. Bancorp
Firststar Corp.	Investors Bank Corp.
1995	
First Union Corp.	First Fidelity Bancorp
Fleet Financial Group	Shawmut National Corp.
PNC Bank Corp.	Midlantic Corp.
National City Corp.	Integra Financial Corp.
NationsBank	Bank South Corp.
NationsBank	CFS Holdings
NationsBank	Intercontinental Bank
US Bancorp	West One Bancorp
Boatmen's Bancshares	Fourth Financial Corp
Boatmen's Bancshares	Citizens Bancshares
First Bank Systems Inc.	FirstTier Financial Inc.
Regions Financial Corp.	First National Bancorp
Regions Financial Corp.	Metro Financial Corp.
BancOne Corp.	Premier Corp.
Meridian Bancorp	United Counties Bancorp
Mercantile Bancorp	Hawkeye Bancorp
Comerica Inc.	MetroBank
Union Planters Corp.	Capital Bancorp
Fifth Third Bancorp	Kentucky Enterprises Bancorp
Firststar Corp.	Harvest Financial
Norwest Corp.	Liberty National Bank