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Target's Corporate Governance and Bank Merger Payoffs

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Abstract: Commercial bank merger and acquisition (M&A) transactions are especially informative for analyzing the impact of differing corporate governance structures on the balance of corporate control between managers and shareholders. We exploit these special characteristics to investigate the balance of control between top-tier managers and shareholders using data from bank M&A transactions over the period 1990-2004. Unlike research on non-financial firms, the impacts of independent directors, managerial share ownership, and independent blockholders on bank merger purchase premiums in this environment are likely to be measured more consistently because of industry operating standards and regulations. It is also the case that research on banks in this area has not received adequate attention. Our model controls for risk characteristics of the target and the acquiring banks, the deal characteristics, and the economic environment. The results are robust. Our results are consistent with those found for non-financial firms, and are consistent with the hypothesis that independent directors could provide an important internal governance mechanism for protecting shareholders' interests especially in large scale transactions such as mergers and takeovers. We also find results consistent with the conflict of interest argument, where top-tier managers tend to trade potential takeover gains in return for their own personal benefits, such as job security and other employment related perquisites. Our overall findings would support policies that promote independent outside directors on the board of commercial banking firms in order to provide protection for shareholders and investors at large.

Key words: Corporate governance, bank merger, merger purchase premium, performance, bank holding companies

JEL classification: G2, G21, G28, G3

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Target's Corporate Governance and Bank Merger Payoffs

1. Introduction and Summary

The last decade has witnessed an unprecedented pace of bank mergers and acquisitions. Between 1990 and 2004, the number of bank mergers and acquisitions averaged about 435 per year compared to 345 per year over the period 1980-1989. As a result, the number of banks operating in the U.S. has declined by approximately 40 percent since 1990. Our investigation of the factors that determine market prices for bank mergers will likely advance our understanding of the likely directions and consequences of continuing mergers and acquisitions in the banking industry. In this study, we focus on an important question which remained unanswered in the literature -- how the composition of the targets' boards of directors and the corporate governance structure, in general, influence the takeover market and purchase premium in bank mergers.

Previous studies suggest that corporate boards can be an important internal governance mechanism for protecting shareholders' interests -- see Fama (1980) and Fama and Jensen (1983). Specifically, *independent outside directors* are thought to represent the interests of shareholders because they help to mitigate shareholder/management agency problems. Independent outside directors could potentially play an important monitoring role in merger transactions. If independent outside directors are more likely to make decisions consistent with shareholder-wealth maximization, then purchase premium in merger transactions may be expected to be higher for targets with a greater proportion of independent outside directors than for other targets. Cotter, Shivdasani, and Zenner (1997) find that, for *non-financial* firms that are the targets of tender offers, the initial tender offer premium, bid premium revision, and target shareholder gains are higher when the target's board is independent. We examine the impact of independent outside directors on the purchase premium for bank mergers.

Corporate governance literature also identifies factors other than board independence that may be important to the effectiveness of the board of directors in negotiating bank acquisitions. Specifically, the literature suggests that the *share ownership by top-tier managers* could have an important role in aligning the interests of managers and those of the shareholders, thus it could improve the efficiency of the merger market -- see Mikkelson and Partch (1989) and Cotter and Zenner (1994). Target's higher share ownership by top-tier managers in this case could lead to more incentive to push for larger purchase premium (thus, larger gains to insiders from a merger offer). However, as in Moeller (2005), there is a second view of share ownership by top-tier managers. This view suggests that the top-tier managers may be more willing to accept a lower purchase premium for the target firm in exchange for higher compensation and job security for themselves, thus expecting a negative relationship between merger purchase premiums received by target shareholders and the proportion of shares owned by top-tier managers. We empirically test the impact of managerial share ownership on the purchase premiums for bank mergers.

Target's large blockholders have also been found to play an important role in corporate governance and in determining the firm's value. *Independent large blockholders*, in particular, can exert pressure on top management in the mergers decision and could potentially use the threat to vote their shares to unseat management to align the interest of managers with those of shareholders – see Shleifer and Vishny (1986), Barclay and Holderness (1991), and Hadlock, Houston, and Ryngaert (1999). Previous studies have also shown target's share prices are more likely to start running up prior to the merger announcement date with the presence of large blockholders when compared with merger deals when the target has no large blockholders, thus, expecting smaller purchase premiums over the market value of target's share price around the merger announcement date. This may be due to the anticipation that the merger negotiation would likely be successful with the influence and the push from large blockholders. We include the large blockholders variable in our analysis to test for the influence that large blockholders

could have on merger purchase premiums, and find a weak negative relationship between the presence of independent blockholders and the merger purchase premium. Of course, this negative correlation may partially be the result of large independent blockholders penchant for increasing the likelihood that a firm will become a merger or acquisition target.

In addition to target's board composition, we examine other factors that might affect supply and demand conditions in the market for bank mergers, which may have been the driving force for bank merger waves in our sample period 1990-2004. First, bank mergers may be driven by desires to reduce overall risk by diversifying into new geographic or products markets. Benston, Hunter, and Wall (1995) label this motivation as the *"earnings diversification" hypothesis*. An acquirer may seek earnings diversification in an effort to generate higher levels of cash flow for the same levels of total risk. According to the earning diversification hypothesis, an acquiring bank will pay more for a target that offers an opportunity to diversify its earnings. Second, bank mergers may be motivated by a strategic decision to attempt to exploit economies of scale, or to cut overhead and eliminate duplication by closing branches, or to achieve synergies through economies of scope.

We define the merger premium as the market price offered for the target minus the market price of equity (20 days prior to the merger announcement date) of the target times the number of shares outstanding at the time of the announcement. The merger premium is then correlated with the financial characteristics of the target and the acquiring banks, and composition of target's board of director, the target's managerial share ownership, and the independent large blockholder variables.

We control for all the different factors, including characteristics of the target, the acquirer, and the merger deal, which are generally expected to impact merger purchase premiums. Our results indicate a significant positive relationship between independence of the target's board of directors and the size of the purchase premiums received by the target. In addition, we find a significant negative relationship between target's managerial share ownership and the merger

purchase premiums, and a weak negative relationship between the presence of independent blockholders and the purchase premiums. The independent director results are consistent with those found in corporate finance literature for non-bank mergers. That is, target's independent directors could provide an important internal governance mechanism for protecting shareholders' interests especially in large scale transactions like mergers. We also find that managerial share ownership decreases the purchase premium, which is consistent with an argument that target's top-tier managers/ shareholders are more likely to accept a lower purchase premium for the target firm in exchange for their own job security and other benefits that are often offered to them by the acquiring firm – see, for example, Hartzel, Ofek, Yermack (2004) and Wulf (2004). Our results also suggest a marginal negative impact of independent blockholders on the purchase premiums, probably due to the target's share price running up prior to the merger announcement date with the market's perception that the target's independent blockholders would be able to push the deal through successfully.

Our contribution to the literature is clear when our analysis and results are contrasted to the two papers closest to ours. For example, compared to Benston, Hunter, and Wall (1995), we integrate bank merger premiums into a modern corporate governance framework. We also use a much more recent data set and an expanded model. The other article most closely related to our paper is Moeller (2005). We complement Moeller (2005) in two important respects. First, we use a single industry. This eliminates the need for [often imprecise] industry control variables. More importantly, the industry analyzed is exceptionally suited for this type of analysis because of the infrequency of hostile takeovers. It is well known that whether the merger or takeover is a hostile or friendly in nature may cause the coefficient estimates for the impact of managerial share ownership (as a proxy for strong managers relative to shareholders) on the premium received by shareholders to reverse signs. This presents certain estimation and identification problems. Additionally, we use a broader definition of managerial ownership than Moeller (2005). Finally, our results for the estimated impact of managerial ownership on

shareholder premiums are economically at least two orders of magnitude greater that those in Moeller (2005).

The remainder of this paper proceeds as follows. A brief literature review is presented in section 2. Our data and empirical methodology are described in section 3. Our results are outlined in section 4. And, our conclusions are presented in section 5.

2. Literature Review

Previous studies on mergers and acquisitions of non-financial firms have produced mixed results about the determinants of merger premiums. The analysis of bank merger premiums is less likely to suffer this ambiguity as bank mergers require time-consuming regulatory approval, making hostile takeovers extremely difficult to execute. This is important because as Moeller (2005) points out, whether the merger is a hostile or friendly transaction may determine the sign of the correlation between strong management and the relative premiums received by shareholders.

In previous banking studies [Beatty, Santomero, and Smirlock (1987); Cheng, Gup, and Wall (1989); Fraser and Kolari (1988); Rogowski and Simonson (1989); Rose, (1991); and Brewer, Jackson, Jagtiani, and Nguyen (2000)], asset size, profitability, capital-asset ratio, means of payment, and whether the mergers were interstate or intrastate have been found to be significant in determining merger purchase premiums or explaining the stock market reactions to announcements of bank mergers. Shawky, Kilb, and Staas (1996) find that smaller targets tend to be offered a larger bid premium, and Palia (1993) finds that the relative size of targets and acquiring banks are important in explaining the variation in the bid premiums. With regard to performance, Shawky, Kilb, and Staas (1996) and Brewer, Jackson, Jagtiani, and Nguyen (2000) find that greater merger premiums tend to be offered to target banks with higher profitability. Note that the merger premiums used in these earlier papers are defined as offer

price relative to *book* value of target's equity. In this paper, we examine the dollar purchase premiums over *market* value of the target's equity.

Benston, Hunter, and Wall (1995) examine the dollar purchase premium (relative to market value of target's equity) paid to target banking organizations during the period 1980-1989, and find that the coefficient on the variance of the target's return on assets is negative and statistically significant, suggesting that risky targets are offered a lower purchase premium. They also find that the coefficients on the acquirer's book value capital-to-asset ratio and market-value-to-book-value of equity are positive and statistically significantly related to the purchase premium, indicating that more capitalized, more efficient and better managed acquirers tend to offer larger purchase premiums. The coefficient on the ratio of target's asset to acquirer's asset is significantly negative, suggesting that the cost of consummating the merger exceeds the potential savings due to economies of scale when acquiring a large target bank. We include the target's and acquirer's volatility of returns and capital-to-asset ratio and relative size as control factors in our analysis.

Cornett and Tehranian (1992), examining the post-merger performance of large bank mergers between 1982 and 1987, find that merged banks tend to have significant improvement in operating pretax cash flow returns in relation to the industry in the post-merger period. This superior performance resulted from improvement in the merged banks' ability to attract loans and deposits, improved employee productivity, and faster asset growth.[1] Utilizing both accounting data and market data, Cornett and Tehranian (1992) attempt to determine whether stock price gains associated with mergers announcement (short-run) are the result of real economic gains (long-run). They find a significant correlation between announcement-period abnormal stock returns and the various long-term performance measures, and conclude that market participants are able to identify in advance the improved performance associated with

[1] For more discussion on bank merger performance, see Berger, DeYoung, Genay, and Udell (2000).

bank acquisitions.[2] Our study of purchase premiums focuses on short-term phenomena. We do not test whether mergers will result in efficiency gains or improved long-run performance, but whether the target's corporate governance structure influences the dollar premium (over the market value of target's equity) paid by the acquirer to gain control of the target's assets.

Independent Outside Directors -- Several authors have suggested that corporate boards can be an important internal governance mechanism for protecting shareholders' interests -- see Fama (1980) and Fama and Jensen (1983). Specifically, independent outside directors are thought to represent the interests of shareholders because they could help to mitigate shareholder/management agency problems. Independent outside directors could potentially play an important monitoring role in large scale transactions, such as mergers. If independent outside directors are more likely to make decisions consistent with shareholder-wealth maximization, then shareholder (or management) agency problems can be minimized. Analysts suggest that an independent board is likely to have a better alignment with shareholders' interests because it is in a better position to monitor and control managers – for example, see Dunn (1987). Another claim is that independent directors could bring a greater breadth of experience to the board and improve the board's effectiveness -- see Firstenberg and Malkiel (1980) and Vance (1983).

The empirical results in Weisbach (1988) and Byrd and Hickman (1992) support this claim as they find that independent boards tend to respond to poor performance by replacing the chief executive officer (CEO). Studies by Brickley, Coles, and Terry (1994), Byrd and Hickman (1992), and Rosenstein and Wyatt (1997) find relatively better stock market performance for firms whose board of directors are made up with relatively more outside, independent directors. On the other hand, Subrahmanyam, Rangan, and Rosenstein (1997) find that independent boards have no extra value in evaluating acquisition targets.

[2] Healy, Palepu, and Ruback (1991) perform a similar study on non-regulated firms.

Cotter, Shivdasani, and Zenner (1997) find that, for *non-financial* firms that are the targets of tender offers, the initial tender offer premium (over the target's share price), bid premium revision, and target shareholder gains are higher when the target's board is independent, where the board independence is defined as having more than 50 percent independent directors. Brickley and James (1987) find that in states with more active banking takeover markets, the average fraction of the bank's board composed of outside directors is higher than in other states. This finding suggests that the structure of the board is particularly important when a bank may be involved in corporate control activity. In this paper, we examine the impact of independent outside directors on the purchase premium.

Corporate governance literature also identifies factors other than board independence that may be important for the effectiveness of the board of directors in negotiating bank acquisitions -- 1) board size; 2) equity ownership by inside directors/ top-tier managers; and 3) the presence of large blockholders.

Board Size -- Yermack (1996) found an inverse relationship between firm value and board size, suggesting that smaller boards may be more effective decision-makers and thus enhance firm value. However, his sample omitted banks and other financial firms. We examine the impact of board size on the purchase premiums for bank mergers.

Managerial Share Ownership -- The finance literature suggests share ownership by managers could be important in corporate mergers and acquisitions. Morck, Shleifer, and Vishny (1988) find that share ownership by managers may be an important device to align the interest of management with those of shareholders. Mikkelson and Partch (1989) and Cotter and Zenner (1994) find that share ownership by managers is an important determinant of merger market efficiency. In banking studies, Brickley and James (1987), Allen and Cebenoyan (1991), and Carter and Stover (1991) find that share ownership by managers and directors is beneficial to shareholders of banks. In non-banking studies, Mikkelson and Partch (1989) and Cotter and Zenner (1994) show that, with greater share ownership by managers, managerial

gains from merger offer are larger and managerial resistance less likely. McConnell and Servaes (1990) demonstrate that the proportion of share ownership by managers is important in determining firm value, and thus higher share ownership by management should lead to larger purchase premium. On the other hand, Moeller (2005) offers an alternative view. This view suggests a negative relationship between target top-tier manager share ownership and merger purchase premium since they would tend to trade the extra merger purchase premium for their own private benefits (such as job security and higher compensation and perquisites in the post-merger organization) at the expense of other target shareholders. Hartzel, Ofek, Yermack (2004) and Wulf (2004) examine how the pecuniary and non-pecuniary benefits that target CEOs receive in merger transactions influence target shareholders' wealth. Hartzel, Ofek, Yermack (20040 and Wulf (2004) find that managers pursue personal interests, and are willing to trade purchase premium for personal benefits. We include a measure of managerial ownership in our empirical analysis.

Independent Large blockholders -- Previous research has shown that affiliated and unaffiliated (independent) large blockholders can have an impact on corporate control decisions – see Shleifer and Vishny (1986), Barclay and Holderness (1991), and Hadlock, Houston, and Ryngaert (1999). While affiliated large blockholders tend to align their interest with that of management, independent blockholders may facilitate control changes by using the "threat" to vote their shares to unseat management in a proxy contest. Independent large blockholders can exert pressure on top management to accept a reasonably attractive acquisition offer, resulting in larger gains to target shareholders. Brook, Hendershott, and Lee (2000) finds that banks with large independent blockholders are more likely to become a target for a takeover. However, they find the presence of independent blockholders to be associated with smaller merger announcement returns. Mergers that involve a target with independent blockholders tend to be anticipated by the market so that part of the gains from the merger is incorporated into the target's stock price prior to the actual merger announcement, causing the calculated

purchase premiums to be smaller relative to those cases where there is no large blockholder. We test for the effects of the presence of independent large blockholders on merger purchase premium.

Overall, this paper examines the impact of the corporate governance structure of the target banks on the merger purchase premium. Our analysis sheds light on whether the structure of the banking organization's board of directors, managerial share ownership, and the presence of independent large blockholders influence purchase premiums and thus, lead to actions in large transactions that enhance shareholders' value.

III. The Data and Empirical Methodology

Data Description:

The data used to estimate the above equation is collected from a sample of bank merger and acquisition transactions that took place from 1990 to 2004. The details about the merger deals are obtained from Thomson Financial Securities Data (formerly Securities Data Corporation (SDC)). We started with the SDC sample of all bank mergers between 1990 and 2004, a total of 11,252 transactions. Of these reported 11,252 transactions, only less than 65 percent were completed. We restrict our analysis to only completed merger transactions, yielding 7,185 observations. Most of these 7,185 reported merger transactions are then excluded because they actually represent the firm's internal restructuring (where reported target and acquirer have the same Cusip number) that have little if anything to do with changing ownership and control or because they are mergers that involves foreign entities, semi-private firms (where stock price of the target is not available), or missing deal information – yielding 693 observations. Of these 693 targets, we were able to obtain proxy statements for 632 firms.

Of these 632 observations, the majority are mergers between very small banks. Chhaochharia and Grinstein (2007) find that corporate governance rules enhance firm value more in larger firms than in smaller ones as these rules are both less costly and more beneficial

in larger firms. We exclude those very small transactions, using a $250 million in real total assets (1982-84 dollars) as the cutoff level for inclusion in our sample. This restriction reduces our sample size to 424 transactions. We then lose 32 observations due to unavailability of the acquirers' stock price data on the Center for Research in Stock Prices (CRSP) database; so, our final sample consists of 392 mergers, where both the acquirers and the targets are U.S. publicly-traded banking organizations with assets size of at least $250 million.[3]

Financial data is obtained from the quarterly reports filed by thrifts (Call Reports) and bank holding companies (Y-9 Reports), for each of the 13 quarters prior to the merger announcement date. The merger announcement date, target name, acquirer name, value of the deal, and other characteristics of the merger announcement come from the SDC database. Summary statistics of the sample are presented in Table 1. The mean purchase premium using the target's market pricing 20 trading days prior to the announcement is $357 million. Acquirers' market-to-book value ratios are on average higher than those of the targets', although the targets appear to have greater accounting returns than do acquirers. The mean ratio of target's assets to the acquirer's assets is 0.2956. On average, over 70 percent of targets' boards are independent outside directors. Independent large blockholders hold a little over 7 percent of the common shares, on average, compared to a little under 7 percent held by the target's management.

The Basic Model:

The premium paid by the acquirer for a target depends on the difference between the values the acquirer currently places on the target versus the value the market currently places on the target. For example, according to Benston, Hunter, and Wall (1995), "[t]he price bid for any asset should be positively related to and no more than the present value of the change in

[3] We are aware of the sample bias problem stemming from this criterion, so the result may not be applicable to very small banks.

the bidder's expected net cash flows…Because, at a minimum, the price bid should reflect the stand-alone value of the net assets acquired, …" (page 780).]

Our basic framework follows the model specification used in Benston, Hunter, and Wall (1995), and it is given in equation (1) below. The purchase premiums for merger deal j which was announced at time t ($PREMIUM_{j,t}$) are defined as the difference between the announced offer price for a target organization and the market price of the target's common stock 20 business days prior to the merger announcement date, all multiplied by the number of common shares outstanding -- they are measured in $ million.

For robustness test, we also conduct an analysis using another measure of takeover premiums, as used in Moeller (2004), where the purchase premiums are measure as a ratio, and equal to the difference between the offer price and the target's market price of equity prior to the merger divided by the target's market price of equity prior to the merger. The results of these tests are consistent with our main findings, as reported in Appendix III.

$$PREMIUM_{j,t} = \alpha_0 + \alpha_1 ROA_{j,t,T} * TA_{j,t,T} + \alpha_2 VROA_{j,t,T} * TA_{j,t,T} + \alpha_3 ROA_{j,t,A} * TA_{j,t,T} + \alpha_4 VROA_{j,t,A} * TA_{j,t,T} + \alpha_5 COV_{j,t,T,A} * TA_{j,t,T} + \alpha_6 CRATIO_{j,t,T} * TA_{j,t,T} + \alpha_7 CRATIO_{j,t,A} * TA_{j,t,T} + \alpha_8 MARKETBOOK_{j,t,T} * TA_{j,t,T} + \alpha_9 MARKETBOOK_{j,t,A} * TA_{j,t,T} + \alpha_{10} RELATIVE_{j,t} * TA_{j,t,T} + \alpha_{11} INTRASTATE_{j,t} + \sum_t \alpha_{0,t} TIND_t + \varepsilon_{j,t} \quad (1)$$

Five variables representing the level, variance and covariance of the acquirers' and targets' return on assets are included. The targets' and acquirers' return on assets over the 13 quarters prior to the merger announcement date are represented by ROA_T and ROA_A, respectively. The variances of return on assets for the target and acquirer over the 13 quarters prior to the quarter of the merger announcement date are represented by $VROA_T$ and $VROA_A$, respectively. The covariance of the target's and acquirer's return on assets is represented by $COV_{T,A}$.

The merger literature suggests that managers of acquiring firms may be more superior in generating value to shareholders than managers of target firms. We capture this effect by using the ratio of the market to book value of equity. The variable $MARKETBOOK_T$ is the market-value-to-book-value equity ratio of the target, and $MARKETBOOK_A$ is the market-value-to-book-value equity ratio of the acquirer. The acquiring banks that possess superior risk management strategy, as reflected in the larger market to book value of equity ratio, $MARKETBOOK_A$, are expected to offer higher purchase premiums, thus a positive coefficient is expected. On the other hand, $MARKETBOOK_T$ is expected to have a negative coefficient, implying less opportunity for the acquiring bank to improve performance of the well-managed targets.

Banking organizations are required by regulation to hold enough capital to support the risk that they take. This risk-based minimum capital requirement and the leverage ratio are aimed at reducing the risk-taking propensities of bank shareholders. We include the target's capital-asset ratio ($CRATIO_T$) and the acquirer's capital-asset ratio ($CRATIO_A$) in the quarter prior to the merger announcement date quarter as a proxy for the bank's capital adequacy. Well-capitalized targets may be expected to receive a larger purchase premium.

To get a better sense of how the purchase price might depend on the acquirer's ability to reduce the costs of producing the combined organization's existing product mix by achieving economies of scale, we use the relative asset ratio, $RELATIVE_j$. The variable $RELATIVE_j$, which is the target 's total assets divided by the acquirer's total assets, may be either positively or negatively associated with the attractiveness of a given target. If a larger relative asset ratio provides a greater opportunity for merger-related efficiencies to be realized, then the relative asset ratio should be positively correlated with purchase premium. A countervailing factor in large bank mergers, however, is the difficulty of merging two large banking organizations, or two organizations of equal size. According to organization theorists, melding cultures in a merger is more difficult and costly when the target is more equal in size to the acquirer -- see Benston, Hunter, and Wall (1995).

Other control factors are $INTRASTATE_{j,t}$ which is a binary variable that equals one if the target and acquirer are located in the same state (zero otherwise) and TA_T which is the total assets of the target. We also include time-period indicator variables for the year of the merger announcement that ranges between 1990 and 2004 -- $TIND_t$ where t=2,...,T. These variables are introduced to account for the effect of omitted macroeconomic and other variables that may influence the overall level of acquisition activity over time, and, thus, the merger premium paid for a given transaction.

The Importance of Board Composition and Independent Directors:

To capture the corporate governance effects on purchase premium, we modify Benston, Hunter, and Wall (1995) by including measures of shareholder control as proxied by the proportion of independent directors (board composition), presence of independent large blockholders, and target's managerial share ownership.

Board Composition:

We classify directors as independent or non-independent. Non-independent directors are either present or past employees of the bank or directors who are family members of insiders and directors who have some business ties to the bank (e.g. attorneys whose firm represents the bank, consultants to the bank). Independent directors are directors who are not current or past employees of the bank, do not have substantial business or family ties with management (as indicated in the proxy statement), nor have potential business ties with the bank. Cotter, Shivdansani, and Zenner (1997) define a board as independent when independent directors are more than fifty percent of the board membership. However, the average bank board tends to have substantially more than fifty percent independent directors. The median proportion of independent directors for our sample of banking organizations is 77.78 percent. We use this number to create an indicator variable for board independence.

The indicator variable *INDEPENDENT_DIRECTOR*$_T$ is equal to one if the percent of the board of directors that are independent is greater than,77.78 and zero otherwise. As an alternative specification, we also include the ratio of independent outside directors to the size of the overall board, *%INDEPENDENT_DIRECTOR*$_T$, in a separate model. In addition, larger bank boards tend to have a large proportion of independent outside directors. We control for the target's board size, *BOARDSIZE*$_T$, in our empirical specification to isolate the impact of independent outside directors on the purchase premiums.

Target's Managerial Share Ownership:

Another corporate governance mechanism that is designed to align the interest of managerial and board interests with those of shareholders is share ownership by managers. The measure of managerial ownership included in our analysis is the percentage of equity ownership by the top-tier managers reported in the last proxy statement prior to the merger announcement date. We define top-tier managers as the top five executives typically reported in the proxy statements. Although it is common to use only the CEO's equity ownership as a measure of managerial ownership, we instead follow the procedure outlined in Lefanowicz, Robinson, and Smith (2000), and use the top five executives' equity ownership in recognition of the important role of other senior executive in corporate control changing events. The indicator variable *MANAGERIAL_ OWNERSHIP*$_T$ is equal to one if the target's managerial share ownership is greater than the median percentage (4.82%) for our sample targets, and zero otherwise. Again, as an alternative specification, we include the target's ratio of managerial share ownership, *% MANAGERIAL_OWNERSHIP*$_T$, in a separate model.

Independent Large Blockholders:

The presence of large block shareholders should mitigate any agency conflicts between shareholders and manager, especially in large transactions, such as mergers and acquisitions.

Previous research finds that affiliated and independent block shareholders can have an impact on corporate control decisions. Shareholder intervention is also more likely when firms have large blockholders. While inside blockholders are expected to have incentives to support the firm's CEO, independent blockholders are expected to play an important role in determining the degree of shareholder control. We define an independent blockholder (at least 5 percent ownership) as a blockholder that does not have substantial business or family ties with management as indicated in the proxy statement. We include in the analysis a binary variable $INDEPENDENT\_BLOCKHOLDER_T$ that is equal to one if there is a large independent shareholder with share ownership greater than or equal to 5 percent, and zero otherwise. Again, we also extend the model to include $\%INDEPENDENT\_BLOCKHOLDER_T$, which is the proportion of shares held by independent large blockholders, in a separate analysis.

The expanded model that includes corporate governance indicator variables is shown in equation (2) below. The results are presented in Table 2.

$$PREMIUM_{j,t} = \alpha_0 + \alpha_1 ROA_{j,t,T} * TA_{j,t,T} + \alpha_2 VROA_{j,t,T} * TA_{j,t,T} + \alpha_3 ROA_{j,t,A} * TA_{j,t,T} + \alpha_4 VROA_{j,t,A} * TA_{j,t,T} + \alpha_5 COV_{j,t,T,A} * TA_{j,t,T} + \alpha_6 CRATIO_{j,t,T} * TA_{j,t,T} + \alpha_7 CRATIO_{j,t,A} * TA_{j,t,T} + \alpha_8 MARKETBOOK_{j,t,T} * TA_{j,t,T} + \alpha_9 MARKETBOOK_{j,t,A} * TA_{j,t,T} + \alpha_{10} RELATIVE_{j,t} * TA_{j,t,T} + \alpha_{11} INTRASTATE_{j,t} + \alpha_{12} BOARDSIZE_{j,t,T} + \alpha_{13} INDEPENDENT\_DIRECTOR_{j,t,T} + \alpha_{14} INDEPENDENT\_BLOCKHOLDER_{j,t,T} + \alpha_{15} MANAGERIAL\_OWNERSHIP_{j,t,T} + \sum_t \alpha_{16,t} TIND_t + \varepsilon_{j,t} \quad \text{----------} \quad (2)$$

The alternative expanded model that includes corporate governance ratio variables (in percent) is shown in equation (3) below. Like the other financial variables included in the analysis, we interact the proportion of independent director variable, the proportion of shares held by top-tier managers variable, and the proportion of shares held by independent large blockholders variable with the target's total assets in the analysis. These results are presented in Table 3.

$$PREMIUM_{j,t} = \alpha_0 + \alpha_1 ROA_{j,t,T} * TA_{j,t,T} + \alpha_2 VROA_{j,t,T} * TA_{j,t,T} + \alpha_3 ROA_{j,t,A} * TA_{j,t,T} +$$
$$\alpha_4 VROA_{j,t,A} * TA_{j,t,T} + \alpha_5 COV_{j,t,T,A} * TA_{j,t,T} + \alpha_6 CRATIO_{j,t,T} * TA_{j,t,T} +$$
$$\alpha_7 CRATIO_{j,t,A} * TA_{j,t,T} + \alpha_8 MARKETBOOK_{j,t,T} * TA_{j,t,T} + \alpha_9 MARKETBOOK_{j,t,A} * TA_{j,t,T} +$$
$$\alpha_{10} RELATIVE_{j,t} * TA_{j,t,T} + \alpha_{11} INTRASTATE_{j,t} + \alpha_{12} BOARDSIZE_{j,t,T} +$$
$$\alpha_{13} \%INDEPENDENT\_DIRECTOR_{j,t,T} * TA_{j,t,T} +$$
$$\alpha_{14} \%INDEPENDENT\_BLOCKHOLDER_{j,t,T} * TA_{j,t,T} +$$
$$\alpha_{15} \%MANAGERIAL\_OWNERSHIP_{j,t,T} * TA_{j,t,T} + \sum_t \alpha_{16,t} TIND_t + \varepsilon_{j,t} \quad \text{---------- (3)}$$

IV. The Empirical Results

We estimate our expanded models – equations (2) and (3) -- to determine the importance of both target's and acquirer's characteristics on the purchase premium and the impact of the target's corporate governance structure on the purchase premium. Our results of these tests are reported in Tables 2 and 3, based on equations (2) and (3), respectively.

From Table 2, the analysis in column 1 excludes the corporate governance variables (*BOARDSIZE*, *INDEPENDENT_DIRECTOR*, *MANAGERIAL_OWNERSHIP,* and *INDEPENDENT_BLOCKHOLDER*). Column 2 adds to the basic specification *BOARDSIZE* and *INDEPENDENT_DIRECTOR* binary variable. Column 3 adds the *MANAGERIAL_OWNERSHIP* binary variable, and, finally, the binary variable *INDEPENDENT_BLOCKHOLDER* is added in column 4. Table 3 follows a similar structure, except the additional corporate governance variables that are included in columns 2, 3, and 4 of Table 3 are measured as ratios (not binary variables).

Risk Characteristics and Merger Purchase Premiums:

Interestingly, the most important characteristics (besides the target's corporate governance variables) that impact the purchase premiums seem to center around characteristics of the acquirers, rather than the target's risk characteristics. From Tables 2 and 3, column 1, the coefficients on the acquirer's return on assets (ROA_A) are significantly (at the 1 percent level) positive, suggesting that more profitable acquirers are willing to offer a higher

purchase premium. The coefficients on the acquirer's capital-asset ratio ($CRATIO_A$) are also significantly (at the 5 percent level) positive, indicating that well-capitalized acquirers are willing to offer a larger purchase premium to acquire a suitable target. In addition, the coefficients on the acquirer's market-to-book-value equity ratio ($MARKETBOOK_A$) is positive and statistically significant (at the 1 percent level), suggesting that, as it is commonly believed, acquirers with superior risk management (high market-to-book-value equity) will tend to pay more for a suitable target since there would be more opportunity for these efficient and well-managed acquirers to improve the target's operations and performance after the merger.

The significantly negative (at the 1 percent level) coefficient on the ratio of the target's assets to the acquirer's assets (*RELATIVE*) indicates that the acquiring banks are willing to pay smaller premiums to acquire relative large target banking organizations, suggesting that the benefits of economies of scale may be more than offset by the cost of blending the target into the acquirer's culture. This is similar to what Benston, Hunter, and Wall (1995) find for the earlier period (1981-1986), when there were fewer mergers between large targets and acquirers. The mean ratio of target's assets to the acquirer's assets is 0.213 for their sample compared to 0.296 in our sample.

Corporate Governance and Merger Purchase Premiums:

Column 2 of Tables 2 and 3 include two of the corporate governance variables in addition to the characteristics of the target and acquirer – target's board size ($BOARDSIZE_T$) is included as a control variable, and a measure of independence of the target's board is included to capture the impact of independent directors on bank merger premiums. Board independence is measured by the binary variable $INDEPENDENT\_DIRECTOR_T$ in Table 2 and by the ratio variable $\%INDEPENDENT\_DIRECTOR_T$ in Table 3. The coefficients of risk characteristics and control factors remain consistent with those discussed earlier (from column 1). The $BOARDSIZE_T$ variable seems to be unimportant in determining merger purchase premiums as the coefficients are positive but not statistically significant. The significant positive coefficients

of the binary variable *INDEPENDENT_DIRECTOR*$_T$ (in Table 2) and the ratio variable %*INDEPENDENT_DIRECTOR*$_T$ (in Table 3) indicate that independent boards are related to higher merger purchase premiums secured by the target. This is consistent with an argument that target's independent boards create value for the shareholders. This finding is also consistent with corporate finance literature on non-financial firms – see Cotter, Shivdasani, and Zenner (1997). This result is especially interesting considering that the median percentage of independent directors in our sample is 77.78 percent. Recall that our binary variable *INDEPENDENT_DIRECTOR*$_T$ is equal to one when the percentage of independent directors is above the median, and zero otherwise.

Column 3 of Tables 2 and 3 include also a measure of the target's share ownership by top-tier managers (insiders). Note that these insiders may or may not be on the target's board of directors, but they do represent insiders' ownership and voting rights. The coefficients of risk characteristics, control factors, target's board size, and target's board independence remain consistent with those discussed earlier (from columns 1 and 2). From column 3 of Table 2, the coefficient of the binary variable *MANAGERIAL_OWNERSHIP*$_T$ is negative and significant (at the 1 percent level), suggesting that more top-tier management equity ownership is associated with smaller merger purchase premiums. Similarly, the coefficient of the variable *%MANAGERIAL_OWNERSHIP*$_T$ is also significantly negative -- see column 3 in Table 3. These results are consistent with earlier evidence on non-financial firms in Moeller (2005), who finds that a low fraction of CEO share ownership is associated with larger takeover premiums in his sample of non-financial targets. [Although our results are qualitative similar to Moeller (2005), the magnitude of our coefficient estimates are economically much larger than his.] Unlike independent outside directors, share ownership by top-tier managers is associated with lower purchase premiums received by the target banks. This suggests that share ownership by top-tier managers is less likely to maximize shareholders' wealth due to conflicts of interest, and this argument seems to hold for both banking (highly regulated) and non-banking firms.

Finally, in column 4 of Tables 2 and 3, we include a measure of independent large blockholders in the analysis. The results remain unchanged for the board size variable (positive but insignificant), board independence (significantly positive), and managerial ownership (significantly negative). From column 4 of Table 2, the coefficient of the binary variable $INDEPENDENT\_\ BLOCKHOLDERS_T$ is negative and weakly significant (at the 10 percent level), consistent with an argument that with the presence of independent large blockholders, the market anticipate the takeover and incorporate part of the gains into the target's share price prior to the merger announcement date, resulting in smaller observed purchase premiums. When the variable is measured in terms of the ratio of equity ownership held by large independent blockholders to the overall shares outstanding (instead of the binary variable), in column 4 of Table 3, the coefficient of $\%INDEPENDENT\_\ BLOCKHOLDERS_T$ is still negative but not statistically significant.

Robustness Tests:

Several robustness tests of our results have been performed. First, we include the target's asset size as an additional control variable to the basic model – the results are presented in Appendix I. Since the target's total assets is positive correlated with the proportion of directors that are independent (with 12 percent correlation coefficient and significant at the 5 percent level), it is possible that our binary variable $INDEPENDENT\_DIRECTOR_T$ variable may be serving as a proxy for target's asset size. After controlling for the target's asset, we still find the same results, where the coefficient of $INDEPENDENT\_DIRECTOR_T$ is still significantly positive, indicating larger merger purchase premiums to targets with independent boards of directors.

Second, we include the means of payment as an additional control variable – the results are presented in Appendix II. The variable *Means of Payment* is a binary variable that is equal to one if more than 50 percent of the value is paid in stocks, and equal to zero otherwise. The results remain unchanged in terms of signs and significance of the coefficients of risk

characteristics and corporate governance variables. Board size remains insignificant, while the target's independent board adds value and share ownership by managers reduces value to target's shareholders. In addition, independent blockholders continue to have weakly negative impact on the purchase premiums.

Third, we use an alternative measure of the purchase premiums, %*PREMIUM,* which is calculated as the offer price per share minus the target's stock price 20 days before the announcement date, divided by the target's stock price 20 days before the announcement date. The analysis is based on the expanded model in equation (2)' below, and the results are presented in Appendix III. The results are consistent with our earlier findings although the significance of the risk characteristics and control factors change and the goodness of fit is much weaker in this model than those presented in Tables 2 and 3 (with purchase premiums measured in $ million). The positive impact of independent directors and negative impact of managerial ownership and the presence of independent large blockholders are confirmed in the robustness test.

$$\%PREMIUM_{j,t} = \alpha_0 + \alpha_1 ROA_{j,t,T} + \alpha_2 VROA_{j,t,T} + \alpha_3 ROA_{j,t,A} + \alpha_4 VROA_{j,t,A} + \alpha_5 COV_{j,t,T,A} + \alpha_6 CRATIO_{j,t,T} + \alpha_7 CRATIO_{j,t,A} + \alpha_8 MARKETBOOK_{j,t,T} + \alpha_9 MARKETBOOK_{j,t,A} + \alpha_{10} RELATIVE_{j,t} + \alpha_{11} INTRASTATE_{j,t} + \alpha_{12} BOARDSIZE_{j,t,T} + \alpha_{13} INDEPENDENT\_DIRECTOR_{j,t,T} + \alpha_{14} INDEPENDENT\_BLOCKHOLDER_{j,t,T} + \alpha_{15} MANAGERIAL\_OWNERSHIP_{j,t,T} + \sum_t \alpha_{16,t} TIND_t + \varepsilon_{j,t} \quad \text{----------} \quad (2)'$$

Overall, our robustness test results confirm that, unlike inside directors, independent outside directors could provide an important internal governance mechanism for protecting shareholders' interests especially in large scale transactions like mergers.

V. Conclusions

The objective of this paper is to examine the balance of control between top-tier managers and shareholders using data from bank mergers over the period 1990-2004. Several studies have investigated the role of independent outside directors at non-financial firms.

Independent boards (with more than 50 percent outside directors) have been found in corporate finance literature to be associated with larger shareholder gains and being more effective in monitoring the firm's management. Unlike research on non-financial firms in corporate finance literature, the role of independent outside directors in banking firms has not received as much attention in the literature. The role of independent outside directors in banking firms could be very different from those of non-financial firms due to banking regulations and supervision (at the state and federal level), the federal deposit insurance (federal subsidy), the too-big-to-fail implications for very large banks, etc.

We define bank board to be independent if the proportion of independent directors is more than our sample median of 78 percent (higher than the usual 50 percent used for non-financial firms) since banks are more likely to seek more outside directors with various expertise. Our model controls for risk characteristics of the target and the acquiring banks, the deal characteristics, and the economic environment. The results are robust and indicate significant positive relationship between independence of the target's board and the size of merger purchase premiums received by the target. Unlike the independent outside directors, the target's managerial share ownership and the presence of independent blockholders have a negative impact on the merger purchase premiums received by the target bank.

Our results are consistent with those found for non-financial firms in the corporate finance literature, and are consistent with the hypothesis that independent directors could provide an important internal governance mechanism for protecting shareholders' interests especially in large scale transactions such as mergers and takeovers. In addition, our results are consistent with the conflict of interest argument, where top-tier managers tend to trade potential takeover gains in return for their own personal benefits in terms of job security and other benefits. Our results on the independent blockholders are weak but overall consistent with a belief that the presence of independent blockholders makes it more likely for a banking organization to become a target of a takeover and that the successful completion of the merger

transaction may be anticipated by the market, leading to smaller observed merger purchase premiums. Independent blockholders seem to help put the firm in play, while independent directors help make certain that shareholders receive larger purchase premiums.

It should also be pointed out that in addition to being statistically significant, the coefficients of our board independence measure also show strong economic significance, with coefficients ranging from 72 to 100, suggesting that targets with independent board, on average, receive about $72 million to $100 million more in merger purchase premiums. This is a significant amount of excess premium compared with the average total bid premium of $357 million for our sample of 392 bank-merger deals – a 20 to 28 percent increase in the additional premium, on average, when the target's board is independent. Similarly, the coefficient of our managerial ownership variable suggests that, on average, the targets with large managerial share ownership receive about $114 million (about 32 percent of the sample average premium) less. This is the cost borne by other shareholders in exchange for private benefits to the managerial shareholders. Given the objective of protecting shareholders' interests, our overall findings support public policies that promote independent outside directors on the boards of banking firms

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Table 1: Summary statistics for the variables used in the empirical specifications

This table presents the summary statistics for the variables used in the empirical analyses. The number of observations is 392.

Variable	Mnemonic	Median	Mean	Std. Deviation
Purchase premium over stock price 20 days before (millions)	*PREM20*	$59.6238	$357.3665	$1,192.93
Target quarterly ROA (%)	ROA_T	0.0023	0.0021	0.0014
Target variance of ROA	$VROA_T$	0.0000006930	0.000003474	0.00001141
Acquirer quarterly ROA (%)	ROA_A	0.0010	0.0017	0.0013
Acquirer variance of ROA	$VROA_A$	0.000001265	0.000001634	0.000002393
Covariance of the target's and acquirer's return on assets	$COV_{T,A}$	0.0000003911	0.0025	0.0064
Target capital-to-total asset ratio	$CRATIO_T$	0.0800	0.0838	0.0255
Acquirer capital-to-total asset ratio	$CRATIO_A$	0.0805	0.0816	0.0154
Target market-to-book-value of equity	$MARKETBOOK_T$	1.6289	1.6721	0.6363
Acquirer market-to-book-value of equity	$MARKETBOOK_A$	2.0611	2.2223	1.0590
Target assets / Acquirer assets	*RELATIVE*	0.1686	0.2956	0.3420
A binary variable that equals 1 if the target and acquirer are located in the same state, and 0 otherwise	*INTRASTATE*	0	0.3954	----------
Target's number of directors	$BOARDSIZE_T$	11.0000	12.0944	4.9399
Target's ratio of outside directors to the size of the board of director	$\%\ INDEPENDENT\_\ DIRECTOR_T$	77.7778	74.8857	13.5315
Target's percentage of equity ownership by large independent blockholders	$\%\ INDEPENDENT\_\ BLOCKHOLDER_T$	5.2150	7.3434	10.6155
Target's percentage of equity ownership by management	$\%\ MANAGERIAL\_\ OWNERSHIP_T$	4.8142	6.8418	7.8976

Table 2: Regression Results
The Impact of Corporate Governance Variables on Purchase Premiums ($ Mill)

This table presents the results of estimating our extended purchase premium equation (2). The dependent variable is the merger dollar purchase premium ($ million) defined as the offer price per share minus the target stock price 20 days before the announcement date times the number of shares outstanding. The independent variables are: ROA_T = mean return on assets of target over the 13 quarters prior to the quarter of the merger announcement date; ROA_A = mean return on assets of acquirer over the 13 quarters prior to the quarter of the merger announcement date; $VROA_T$ = the variance of the return on assets of the target using 13 quarters of data ending with the quarter prior to the merger announcement; $VROA_A$ = the variance of the return on assets of the acquirer using 13 quarters of data ending with the quarter prior to the merger announcement; $COV_{T,A}$ = the covariance of the target's and acquirer's return on assets using 13 quarters of data ending with the quarter prior to the merger announcement; $CRATIO_T$ is the capital-to-total asset ratio of the target; $CRATIO_A$ is the capital-to-total asset ratio of the acquirer; $MARKETBOOK_T$ is the market-value-to-book-value equity ratio of the target; $MARKETBOOK_A$ is the market-value-to-book-value equity ratio of the acquirer; *RELATIVE* is the target banking organization's total assets divided by the acquirer's total assets; *INTRASTATE* is a binary variable that equals 1 if the target and acquirer are located in the same state, and zero otherwise; $BOARDSIZE_T$ = the size of target board of directors; $INDEPENDENT\_DIRECTOR_T$ is a binary variable for independent directors. It is equal to one if the proportion of independent directors is greater the median percentage for our sample of acquisitions, and zero otherwise; $MANAGERIAL\_OWNERSHIP_T$ is a binary variable for the target managerial share ownership. It is equal to one if the percentage of managerial share ownership is greater than the median percentage for our sample of targets, and zero otherwise. The percentage of equity ownership by management is obtained from the last proxy statement prior to the merger announcement date; and $INDEPENDENT\_BLOCKHOLDER_T$, is a binary variable for large blockholders that do not have substantial business or family ties with management as indicated in the proxy statement. It is equal to one if there is a large independent shareholder with share ownership greater than or equal to 5%, and zero otherwise. We include indicator variables for the year of the merger announcement that ranges between 1990 and 2004. Robust t-statistics (with White's Correction) are reported in parentheses. The t-statistics and F-statistics are starred if they are significantly at the 10 (*), 5(**), and 1 (***) percent level.

Variables	(1)	(2)	(3)	(4)
CONSTANT	-6.0007 (-0.14)	-94.3126 (-1.00)	11.8059 (0.13)	90.7836 (0.88)
$ROA_T * TA_T$	4.9715 (0.77)	4.6568 (0.72)	4.7835 (0.75)	4.8263 (0.77)
$VROA_T * TA_T$	198.0796 (0.34)	131.5056 (0.23)	142.4192 (0.25)	149.5288 (0.27)
$ROA_A * TA_T$	13.8267 (2.84)***	14.4423 (2.99)***	14.4927 (3.03)***	14.5996 (3.07)***
$VROA_A * TA_T$	-2424.536 (-1.28)	-2470.222 (-1.29)	-2517.157 (-1.33)	-2497.148 (-1.33)
$COV_{T,A} * TA_T$	0.3980 (0.40)	0.3715 (0.38)	0.3897 (0.40)	0.4073 (0.42)
$CRATIO_T * TA_T$	-0.2701 (-1.15)	-0.2672 (-1.14)	-0.2731 (-1.17)	-0.2765 (-1.21)
$CRATIO_A * TA_T$	0.5356 (2.00)**	0.5128 (1.90)*	0.5012 (1.86)*	0.5023 (1.88)*
$MARKETBOOK_T * TA_T$	-0.0096 (-1.48)	-0.0092 (-1.41)	-0.0090 (-1.38)	-0.0091 (-1.43)
$MARKETBOOK_A * TA_T$	0.0129 (3.43)***	0.0127 (3.35)***	0.0127 (3.35)***	0.0127 (3.42)***

Table 2: Regression Results -- Continued
The Impact of Corporate Governance Variables on Purchase Premiums ($ Mill)

Variables	(1)	(2)	(3)	(4)
*RELATIVE * TA_T*	-0.0334 (-2.61)***	-0.0319 (-2.48)**	-0.0316 (-2.50)**	-0.0311 (-2.44)**
INTRASTATE	-0.9462 (-0.02)	-5.1664 (-0.13)	-3.1819 (-0.08)	2.4436 (0.06)
$BOARDSIZE_T$	-------	3.9268 (0.94)	1.5999 (0.42)	-0.4888 (-0.13)
$INDEPENDENT\_DIRECTOR_T$	-------	100.4639 (2.44)**	71.5795 (1.83)*	78.3962 (1.92)*
$MANAGERIAL\_OWNERSHIP_T$	-------	-------	-114.8049 (-2.98)***	-114.4187 (-2.99)***
$INDEPENDENT\_ BLOCKHOLDER_T$	-------	-------	-------	-96.2575 (-1.70)*
Number of observations	392	392	392	392
R^2	0.8364	0.8385	0.8402	0.8416
F-statistic	19.65***	17.46***	17.02***	16.37***
F-statistic testing the join significance of the corporate governance variables			5.69***	3.81**

Table 3: Regression Results
The Impact of Corporate Governance Variables (Ratio) on Purchase Premiums ($ Mill)

This table presents the results of estimating our extended purchase premium equation (3). The dependent variable is the merger dollar purchase premium ($ million) defined as the offer price per share minus the target stock price 20 days before the announcement date times the number of shares outstanding. The independent variables are: ROA_T = mean return on assets of target over the 13 quarters prior to the quarter of the merger announcement date; ROA_A = mean return on assets of acquirer over the 13 quarters prior to the quarter of the merger announcement date; $VROA_T$ = the variance of the return on assets of the target using 13 quarters of data ending with the quarter prior to the merger announcement; $VROA_A$ = the variance of the return on assets of the acquirer using 13 quarters of data ending with the quarter prior to the merger announcement; $COV_{T,A}$ = the covariance of the target's and acquirer's return on assets using 13 quarters of data ending with the quarter prior to the merger announcement; $CRATIO_T$ is the capital-to-total asset ratio of the target; $CRATIO_A$ is the capital-to-total asset ratio of the acquirer; $MARKETBOOK_T$ is the market-value-to-book-value equity ratio of the target; $MARKETBOOK_A$ is the market-value-to-book-value equity ratio of the acquirer; *RELATIVE* is the target banking organization's total assets divided by the acquirer's total assets; *INTRASTATE* is a binary variable that equals 1 if the target and acquirer are located in the same state, and zero otherwise; $BOARDSIZE_T$ = the size of target board of directors; $\%INDEPENDENT\ DIRECTOR_T$ is the proportion of independent directors on the target's board of directors; $\%MANAGERIAL\ OWNERSHIP_T$ is the percentage of managerial share ownership in the target firm. The percentage of equity ownership by management is obtained from the last proxy statement prior to the merger announcement date; and $\%INDEPENDENT\ BLOCKHOLDER_T$, is the proportion of shares held by large blockholders that do not have substantial business or family ties with management as indicated in the proxy statement. We include indicator variables for the year of the merger announcement that ranges between 1990 and 2004. Robust t-statistics (with White's Correction) are reported in parentheses. The t-statistics and F-statistics are starred if they are significantly at the 10 (*), 5(**), and 1 (***) percent level.

Variables	(1)	(2)	(3)	(4)
CONSTANT	-6.0007 (-0.14)	-103.0706 (-1.11)	-85.4496 (-0.95)	-103.9752 (-1.09)
$ROA_T * TA_T$	4.9715 (0.77)	4.7118 (0.74)	3.7121 (0.65)	3.3643 (0.59)
$VROA_T * TA_T$	198.0796 (0.34)	66.5309 (0.13)	63.3271 (0.15)	33.6956 (0.08)
$ROA_A * TA_T$	13.8267 (2.84)***	13.0904 (2.68)***	14.5288 (3.87)***	15.5152 (3.84)***
$VROA_A * TA_T$	-2424.536 (-1.28)	-2674.262 (-1.49)	-2627.921 (-1.50)	-2617.6090 (-1.60)
$COV_{T,A} * TA_T$	0.3980 (0.40)	0.0920 (0.10)	0.3266 (0.32)	0.4764 (0.45)
$CRATIO_T * TA_T$	-0.2701 (-1.15)	-0.2808 (-1.23)	-0.4680 (-2.65)*	-0.4780 (-2.87)***
$CRATIO_A * TA_T$	0.5356 (2.00)**	0.4663 (1.76)*	0.7783 (3.37)***	0.8145 (3.58)***
$MARKETBOOK_T * TA_T$	-0.0096 (-1.48)	-0.0129 (-1.82)*	-0.0188 (-3.42)***	-0.01888 (-2.41)***
$MARKETBOOK_A * TA_T$	0.0129 (3.43)***	0.0141 (3.79)***	0.0194 (6.66)***	0.0190 (6.99)***

Table 3: Regression Results -- Continued
The Impact of Corporate Governance Variables (Ratio) on Purchase Premiums ($ Mill)

Variables	(1)	(2)	(3)	(4)
*RELATIVE * TA_T*	-0.0334 (-2.61)***	-0.0340 (-2.59)***	-0.0411 (-3.62)***	-0.0373 (-3.21)***
INTRASTATE	-0.9462 (-0.02)	7.7840 (0.20)	-3.5423 (-0.09)	-3.2822 (-0.09)
$BOARDSIZE_T$	-------	5.9462 (1.40)	4.3816 (1.10)	5.2081 (1.21)
*% $INDEPENDENT\ DIRECTOR_T$ * TA_T*	-------	0.0001 (2.53)**	0.0002 (2.37)**	0.0002 (2.43)**
*% $MANAGERIAL\ OWNERSHIP_T$ * TA_T*	-------	-------	-0.0044 (-2.11)**	-0.0043 (-2.07)**
*% $INDEPENDENT\ BLOCKHOLDER_T$ * TA_T*	-------	-------	-------	-0.0005 (-1.02)
Number of observations	392	392	392	392
R^2	0.8364	0.8411	0.8638	0.8661
F-statistic	19.65***	45.98***	21.05***	26.63***
F-statistic testing the join significance o the corporate governance variables			5.06***	3.79**

Appendix I -- Target's Asset Size

Dependent Variable = $ Million Purchase Premium
Using the Expanded Model in Equation (2) With *Target's Total Assets* Included

This table presents the results of estimating our extended purchase premium equation (2), but with an additional variable – *Target's Total Assets* -- which is defined as dollar total assets of the target one quarter before the quarter of the merger announcement. The dependent variable and all other independent variables have the same definitions as those described in Table 2. Number of observations used is 392. We include indicator variables for the year of the merger announcement that ranges between 1990 and 2004 – results are not reported here. Robust t-statistics (with White's Correction) are reported in parentheses. The t-statistics and F-statistics are starred if they are significantly at the 10 (*), 5(**), and 1 (***) percent level.

Variables		Variables	
CONSTANT	-80.02 (-0.90)	*RELATIVE * TA_T*	-0.0333** (-2.54)
*ROA_T * TA_T*	6.78 (1.01)	*INTRASTATE*	-12.07 (-0.29)
*$VROA_T$ * TA_T*	58.50 (0.11)	*$BOARDSIZE_T$*	4.0825 (0.98)
*ROA_A * TA_T*	14.10*** (2.89)	*$INDEPENDENT\_DIRECTOR_T$*	100.25** (2.40)
*$VROA_A$ * TA_T*	-2790.8 (-1.52)	*$MANAGERIAL\_OWNERSHIP_T$*	--
*$COV_{T,A}$ * TA_T*	0.3459 (0.36)	*$INDEPENDENT\_ BLOCKHOLDER_T$*	--
*$CRATIO_T$ * TA_T*	-0.3405 (-1.42)	*Target's Asset Size*	0.00002 (1.01)
*$CRATIO_A$ * TA_T*	0.2932* (0.82)		
*$MARKETBOOK_T$ * TA_T*	-0.0109 (-1.57)	*R^2*	0.8413
*$MARKETBOOK_A$ * TA_T*	0.0142*** (3.50)	*F-statistic*	35.85***

Appendix II -- Means of Payment

Dependent Variable = $ Million Purchase Premium
Using the Expanded Model in Equation (2) With the *Means of Payment* Included

This table presents the results of estimating our extended purchase premium equation (2), but with an additional variable – *Means of Payment* -- which is a binary variable equal to one if the more than 50 percent of the value is paid in stock, and equal to zero otherwise. The dependent variable and all other independent variables have the same definitions as those described in Table 2. Number of observations used is 392. We include indicator variables for the year of the merger announcement that ranges between 1990 and 2004 – results are not reported here. Robust t-statistics (with White's Correction) are reported in parentheses. The t-statistics and F-statistics are starred if they are significantly at the 10 (*), 5(**), and 1 (***) percent level.

Variables		Variables	
CONSTANT	94.4002 (0.88)	*RELATIVE * TA_T*	-0.0311** (-2.44)
*ROA_T * TA_T*	4.84 (0.77)	*INTRASTATE*	2.287 (0.06)
*$VROA_T$ * TA_T*	148.83 (0.27)	*$BOARDSIZE_T$*	-0.375 (-0.10)
*ROA_A * TA_T*	14.61*** (3.06)	*$INDEPENDENT\_DIRECTOR_T$*	78.255* (1.91)
*$VROA_A$ * TA_T*	-2495.5 (-1.33)	*$MANAGERIAL\_OWNERSHIP_T$*	-114.28*** (-2.97)
*$COV_{T,A}$ * TA_T*	0.4085 (0.42)	*$INDEPENDENT\_ BLOCKHOLDER_T$*	-97.32* (-1.70)
*$CRATIO_T$ * TA_T*	-0.2768 (-1.21)	*Means of Payment*	-10.061 (-0.27)
*$CRATIO_A$ * TA_T*	0.5025* (1.88)	*R^2*	0.8417
*$MARKETBOOK_T$ * TA_T*	-0.0092 (-1.43)	*F-statistic*	15.77***
*$MARKETBOOK_A$ * TA_T*	0.0127*** (3.42)	*F-statistic testing the join significance of the corporate governance variables*	3.75

Appendix III -- Purchase Premiums Measured in %

Dependent Variable = *% PREMIUM*
Using the Expanded Model in Equation (2) With Different Measure of Purchase Premiums

This table presents the results of estimating our extended purchase premium equation (2), but with a different measure of the dependent variable – as shown in equation (2)' below. The dependent variable here is %PURCHASE PREMIUM, which is calculated as the offer price per share minus the target's stock price 20 days before the announcement date, divided by the target's stock price 20 days before the announcement date. All of the independent variables have the same definitions as those described in Table 2. Number of observations used is 392. We include indicator variables for the year of the merger announcement that ranges between 1990 and 2004 – results are not reported here. Robust t-statistics (with White's Correction) are reported in parentheses. The t-statistics and F-statistics are starred if they are significantly at the 10 (*), 5(**), and 1 (***) percent level.

$$\%PREMIUM_{j,t} = \alpha_0 + \alpha_1 ROA_{j,t,T} + \alpha_2 VROA_{j,t,T} + \alpha_3 ROA_{j,t,A} + \alpha_4 VROA_{j,t,A} + \alpha_5 COV_{j,t,T,A} +$$
$$\alpha_6 CRATIO_{j,t,T} + \alpha_7 CRATIO_{j,t,A} + \alpha_8 MARKETBOOK_{j,t,T} + \alpha_9 MARKETBOOK_{j,t,A} +$$
$$\alpha_{10} RELATIVE_{j,t} + \alpha_{11} INTRASTATE_{j,t} + \alpha_{12} BOARDSIZE_{j,t,T} +$$
$$\alpha_{13} INDEPENDENT\_DIRECTOR_{j,t,T} + \alpha_{14} INDEPENDENT\_BLOCKHOLDER_{j,t,T} +$$
$$\alpha_{15} MANAGERIAL\_OWNERSHIP_{j,t,T} + \sum_t \alpha_{16,t} TIND_t + \varepsilon_{j,t} \quad \text{---------- (2)'}$$

Variables		Variables	
CONSTANT	54.0037*** (3.93)	*RELATIVE*	-7.775* (-1.76)
ROA_T	1073.28 (0.73)	*INTRASTATE*	2.955 (0.70)
$VROA_T$	-85463.7 (-0.87)	$BOARDSIZE_T$	-0.3289 (-1.04)
ROA_A	214.94 (0.15)	$INDEPENDENT\_DIRECTOR_T$	4.972* (1.71)
$VROA_A$	-352196.3 (-0.97)	$MANAGERIAL\_OWNERSHIP_T$	-8.766** (-2.26)
$COV_{T,A}$	201.79 (0.61)	$INDEPENDENT\_BLOCKHOLDER_T$	-11.423*** (-2.70)
$CRATIO_T$	-218.80*** (-4.17)		
$CRATIO_A$	243.74*** (2.89)	R^2	0.2218
$MARKETBOOK_T$	-18.952** (-2.54)	*F-statistic*	2.78***
$MARKETBOOK_A$	1.1442 (0.60)	*F-statistic testing the join significance of the corporate governance variables*	3.38