The Value of Board Diversity in Banking: Evidence from the Market for Corporate Control

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Abstract

The ongoing crisis in the financial markets has increased public scrutiny of bank boards as effective monitors of management. In this paper, we examine the value of board diversity in the U.S. banking industry as a potential mechanism to enhance the decision-making capabilities of a board. We employ a sample of mergers (a corporate strategy which exacerbates agency conflict) to assess if measures of diversity as displayed by the bidding bank's board are linked to the market performance of acquisitions. We find positive announcement returns to mergers approved by boards whose members are diverse in terms of occupational background, age and tenure. By contrast, we find no evidence of gender diversity having similar value-creating effects. Also, boards with more banking expertise (where directors have multiple directorships at other financial firms) are not more effective at monitoring bank managers. The results presented in this paper do not support calls for more representation of industry-specific expertise on the boards of banks. By contrast, we show that demographically diverse boards may serve to protect shareholders from value-destroying corporate strategies.

Keywords: Corporate Governance, Board Diversity, Banks, Mergers, Acquisitions, Performance

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INTRODUCTION

It is a widely-accepted view that the composition of the board of directors could play a vital role in determining corporate performance (Hermalin and Weisbach, 2003). In the past decade, boards have made an increasing number of appointments from a wider range of demographic, educational and social backgrounds. In the wake of the ongoing financial crisis, the obligation of bank boards to monitor managerial risk-taking has come under increased public scrutiny. However, calls by policymakers for more prescriptions about the composition of bank boards (e.g. by stipulating the level of financial sector expertise that director must hold) run contrary to recent attempts by banks to increase the diversity of their boards. The purpose of this paper is to assess the value of board diversity in the U.S. banking industry. To gauge the effects of diverse boards on complex decision-making and management monitoring, we analyze the composition of bidding boards and the performance of acquisitions which they approve.

The market for corporate control offers a suitable setting to examine the value effects of board diversity. This is because mergers and acquisitions (M&A) constitute important managerial initiatives that are subject to board scrutiny and whose details and consequences are both observable. Additionally, the importance of management monitoring is particularly high when the interests of shareholders and management diverge (Fama and Jensen, 1983). Previous work has identified an agency conflict underlying M&A (for an overview of the literature, see

Hagendorff et al., 2007). For instance, bidding bank managers benefit from higher prestige and increased remuneration packages in the post-merger period (Bliss and Rosen, 2001) even when—as frequently is the case—bidding bank shareholders realize substantial wealth losses as a result of M&A (Becher, 2000; DeLong and DeYoung, 2007; Houston and Ryngaert, 1994).[1]

In an efficient capital market, where assets are priced rationally, the market reaction to a board announcement forms an unbiased estimate of the net benefits from a proposed initiative. Keys et al. (2002) link board diversity to shareholder value. The authors report above-market returns to companies following the announcement of their inclusion in *Fortune*'s list of top diversity promoters. By contrast, Farrell and Hersch (2005) cannot find abnormal returns surrounding the announcement of a female director being appointed to the board of U.S. industrial companies.

The main finding we present in this paper is that board diversity creates shareholder value in the market for corporate control. Market investors place high levels of trust in the strategic decision-making capabilities of diverse boards. Specifically, we find that job-related forms of diversity as well as age and tenure diversity create value for bidding bank shareholders. By contrast, no such wealth-creating effects exist for gender diversity.

We contribute to the literature on board diversity and performance. However, our work is distinct in several aspects. First, to the best of our knowledge, we provide the first estimation of the economic benefits generated by board diversity in the context of a specific corporate strategy. Previous work on the performance implications of board diversity examines the general effects of diversity on profitability (e.g., Erhardt et al., 2003; Shrader et al., 1997), operating efficiency (Siciliano, 1996), or Tobin's *q* (e.g., Carter et al., 2003; Rose, 2007). However, our approach of

analyzing the returns generated by a specific announcement rather than general performance partly avoids an endogeneity issue that is inherent in most previous work on board diversity. Endogeneity, which arises when board characteristics, strategy and performance are jointly determined, has given rise to persistent doubts over whether empirical links between board demography and corporate performance imply causal relationships (Farrell and Hersch, 2005).[2] The results we present in this paper are consistent with the view that board diversity creates value for shareholders.

Second, the extant literature on board diversity concentrates almost exclusively on visually observable forms of demography. By largely restricting itself to gender and race, the literature falls short of making more general inferences about the influence of board diversity. We seek to expand the existing analyses by controlling for a wider range of diversity measures including non-observable sources of heterogeneity such as professional background diversity. Finally, our paper also contributes to the bank merger performance literature. To date, knowledge accumulation about the antecedents of value creation for bank M&A remains patchy. The results we present in this paper confirm that governance variables may partly explain the returns to acquisitions.

The paper proceeds as follows. The next section surveys the theoretical and empirical evidence on the performance effects of diversity in the boardroom. This is followed by a section that develops our main hypotheses. Subsequently, the sample and methods of analysis are introduced, before we present our results on board diversity and merger returns. The final section offers a discussion and summary of our results.

LITERATURE REVIEW:
DO DIVERSE BOARDS MAKE BETTER DECISIONS?

What is the optimal composition of a board of directors such that it may fulfill its roles effectively? A substantial body of research examines effective board composition in the non-financial sector by analyzing the optimal balance between executive and independent directors (Byrd and Hickman, 1992), the structure of board leadership (Rechner and Dalton, 1991), and director characteristics such as age and tenure (Kosnik, 1990; Masulis et al., 2007). Cornett et al. (2003) and Becher and Campbell (2004) examine similar issues for the banking industry and present findings which are not materially different from those of multi-industry studies.

The theoretical foundations of board diversity are only weakly-developed with few references to the underlying board processes which may cause diversity to have measurable performance effects (Forbes and Milliken, 1999). Also, existing theoretical concepts are not based on a single coherent theory, but, instead, draw on various perspectives including psychology, resource dependence theory, and agency theory.

Essentially, the case for diversity in the boardroom centers around two main types of arguments: ethical and economic (Van der Walt and Ingley, 2003). Ethical arguments regard board diversity as a desirable end in itself and emphasize that it is inequitable to exclude certain groups from corporate elites on the basis of gender, race or other non-performance related characteristics (Singh et al., 2001). In the same vein, promoting board diversity is one means to empower constituencies of society that have historically been excluded from positions of power (Keasey et al., 1997). Therefore, the concept of board diversity is linked to the notion of equality of representation and, ultimately, to the ideal of 'fair' outcomes in society (Brammer et al.,

2007). It follows from this that diverse boards create legitimacy and improve a firm's bargaining power vis-à-vis its various stakeholders (Carter et al., 2007).

As regards the economic case for board diversity, a central argument is that diversity enhances the functional abilities of a board, particularly its ability to engage in complex problem-solving, strategic decision-making, and management monitoring (Forbes and Milliken, 1999). Accordingly, boards may be viewed as a knowledge-based asset which creates value for shareholders by linking an organization to its external environment (Pfeffer and Salancik, 1978). Owing to their idiosyncratic experiences and values, diverse board members bring privileged economic resources to organizations which help them comprehend the firm's dynamic industry context (Hambrick and Mason, 1984). For example, the presence of knowledge and specific skills to cater to boards' specialized needs may further an organization's understanding of its marketplace and, thus, improve corporate performance when boards match their diversity with that of customers or suppliers (Carter et al., 2003). Diverse boards may also provide improved access to capital, a nation's business elite (Van der Walt and Ingley, 2003)—and, in the case of a regulated industry such as banking, industry regulators (Macey and O'Hara, 2003).

Among the specific board functions that may improve with diversity is a board's effectiveness in monitoring management. Agency theory posits that the separation of ownership and control leaves management exposed to conflicts of interest and shareholders vulnerable to disappointing returns on their investment (Jensen and Meckling, 1976). Fama (1980) argues that, while the board is the most important internal control mechanism for promoting and protecting shareholder interests, boards can only fulfill this monitoring role when they provide high-quality and impartial advice. Diverse groups have been shown to be exhibit higher levels of creativity (Maznevski, 1994) as well as improved problem-solving capabilities (Watson et al., 1993).

Consequently, board diversity may stimulate board activism by raising a number of issues that are less likely to be discussed by more homogeneous groups (Ely and Thomas, 2001).

However, there are also costs associated with board diversity. The presence of different viewpoints on diverse boards may cause coordination problems such as increased time to take decisions (Forbes and Milliken, 1999). Further, diversity may corrode group cohesion and lead to a board whose members are less cooperative and experience more emotional conflict (Blau, 1977; Lau and Murnighan, 2005).

A number of studies have empirically examined the performance implications of board diversity for non-financial firms. The results are equivocal while, collectively, backing the notion of diversity having positive performance effects. Shrader et al. (1997), Erhardt et al. (2003), and Farrell and Hersch (2005) find a positive link between gender diversity and performance in a U.S. multi-industry setting. For the U.K., Singh et al. (2001) find in a survey of FTSE 100 companies that larger and more profitable firms tend to exhibit a higher number of female directors on their boards. On the other hand, Rose (2007) finds no evidence of gender diversity having a performance-enhancing effect in a sample of Danish boards. By contrast, Adams and Ferreira (2004) document that increasing gender diversity leads to a less efficient decision-making process as demonstrated by more frequent board meetings.

Next to the effects of gender composition, some studies have also examined the performance effects following the appointment of ethnic minorities to the board of non-financial firms. Carter et al. (2003) find a positive relationship between demographic board diversity and firm value as measured by Tobin's q. Similarly, Erhardt et al. (2003) observe that the number of board

members that are either women or belong to an ethnic minority is positively related to accounting performance in a sample of 127 large multi-industry U.S. companies.

To date, only very few studies exist which examine the performance effects of diversity in the banking industry. Bantel and Jackson (1989) find that more innovative banks are managed by top management teams (i.e. board members shaping decision-making in key functional areas) that are more diverse with respect to occupational diversity. Similarly, Richard (2000) looks at how workforce diversity at banks affects employee productivity and management's self-reported measures of market performance. The author finds that U.S. bank managers perceive workforce diversity to create value.

In summary, the results of previous research imply that gender and ethnic background diversity may have performance-enhancing effects. However, the existing literature rarely deviates from analyzing gender and ethnic diversity and relies on general measures of performance.

HYPOTHESIS DEVELOPMENT

As a result of the often substantial wealth losses that bidding bank shareholders realize in the market for corporate control (Becher, 2000; DeLong and DeYoung, 2007; Houston and Ryngaert, 1994), the value effects of M&A provide a suitable setting in which to assess the performance implications of the composition of the board of directors—the decision-making body charged with protecting the interests of shareholders (Fama and Jensen, 1983).

Diversity may have both positive and negative effects on shareholder value in the market for corporate control. In essence, diverse boards may display improved functional abilities that will

be conducive to it exercising its monitoring obligations, but also suffer from less group cohesion. With regard to M&A performance, we expect that diverse boards exhibit better problem solving capabilities which could help gather and process information relating to a specific deal. On the other hand, increasing levels of diversity may also be associated with social conflict and somewhat diminished decision-making capabilities for complex and ambiguous tasks such as mergers.

In this paper, we examine the value effects of board diversity using measures of heterogeneity based on the occupational background, tenure, gender, and age of board members. We detail the expected performance results for each of the four diversity measures below. [3]

*Occupational background diversity***.** Job-related forms of diversity, when directors come from different types of functional backgrounds, give boards access to a wider pool of resources (Richard, 2000) which should facilitate the evaluation of complex merger proposals. In the same vein, different occupational backgrounds also mean that directors have acquired expertise in different functional areas (Milliken and Martins, 1996). On the other hand, differences in jargon and terminology that result from job-related diversity are likely to hinder effective communication among board members. Next to linguistic issues, board members with diverse occupational backgrounds may not necessarily understand each other's areas of expertise and appreciate the different perspectives offered to them, thus, giving rise to conflict.

Tenure diversity. Boards whose members are different in terms of the time they have served on a bank's board combine the wealth of experiences and expertise accumulated by longer-tenured directors with the 'fresh perspective' that the more recently-appointed members bring to the board. Tenure diversity, thus, prevents boards from entering a certain 'corporate mindset' and

could aid the critical appraisal of merger decisions. On the other hand, one may expect the cohesiveness of a board to decrease with higher levels of tenure diversity. This is because longer-tenured directors will be more likely to have developed a shared understanding of each others roles and expertise (Forbes and Milliken, 1999). Also, the acquisition of bank-specific knowledge by directors, which could be crucial to aid complex problem-solving, will be hindered if director turnover is high.

Gender diversity. Increasing the number of female appointments constitutes one of the most visible forms of diversifying board demography. While female directors are believed to bring with them skill sets that are especially attuned to service-oriented industries (Farrell and Hersch, 2005), the fact that females have traditionally played only a marginal role in terms of boardroom representation means that female directors are an effective means to break through the established ways of thinking—possibly leading to a more activist board. On the other hand, as more females break through the glass ceiling and move from positions of middle management to join to the 'higher echelons' (Hambrick and Mason, 1984), there is the possibility of conflict between the newly-appointed female directors and their male colleagues some of whom may feel the former have been appointed solely on the basis of their gender.

Age diversity. Resulting from the experiences and knowledge that different age groups bring to the board, increasing levels of age diversity may improve the levels of knowledge on the board. However, similarly to the arguments presented above, diversity in terms of age may also lead to cognitive conflict when there is disagreement over viewpoints and procedures and an overall deterioration of board dynamics.

In summary, while the list of demographic attributes presented above is by no means exhaustive, variations across boards in these diversity measures are likely to capture differences in the way that board members perceive, process and respond to new information. Thus, we expect that these diversity measures have both positive and negative effects on different aspects of board effectiveness as envisaged by agency.

DATA AND METHODOLOGY

Merger Sample

We test our hypothesis for a sample of 148 bank merger announcements between 1996 and 2004 made by publicly listed U.S. commercial banks. All M&A deals are valued at more than $100 million in constant 2004 terms, were subsequently completed, and result in the acquirer having a stake of at least 50% in the target institution.

We obtain an initial dataset of 296 bank mergers from Thomson Financial's merger database (SDC) and exclude deals for one of the following reasons: stock return data are not available on Datastream, there are no filings with the Securities and Exchange Commission (SEC), and the target is not a U.S. commercial bank, bank holding company or insurance company. Additionally, deals are excluded if acquirers are involved in further deals within 180 trading days.

[Table 1 near here]

Table 1 presents an overview of the final sample of deals. The late 1990s saw a peak of M&A activity in the banking sector. It also becomes clear that deals have grown increasingly larger over time as indicated by rising average deal values.

Board Diversity Measures

We obtain data on the composition of bidding bank boards from proxy statements (DEF 14A) available on the SEC's *EDGAR* system. We collect a wider range of diversity measures than previous empirical investigations in order to analyze whether the value-creating potential of diversity depends on the type of diversity considered.

For continuous demographic variables (age and tenure diversity), we construct a measure of variation as the mean divided by the standard deviation across the board. Occupational background diversity is measured using a heterogeneity index as suggested by Blau (1977). This Herfindahl-type index (which increases with the level of diversity across a board) is computed as $1- \Sigma p_i^2$, where p is the proportion of group members in i different categories. We follow Hillman et al. (2000) and categorize directors as either insiders, outsider business experts (e.g., CEO or senior manager of for-profit firms), support specialists (such as law and accounting experts), or community leaders (e.g. politicians, clergy and academics).[4] Finally gender diversity is measured as the percentage of female board members.

Market Reaction Data

We use event study methodology to measure the market reaction to bank merger announcements. Specifically, we estimate the following daily market model:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}, \quad (1)$$

where $R_{i,t}$ are the returns on the acquiring bank and $R_{m,t}$ the returns on the Datastream U.S. bank index. We estimate the model parameters using 100 daily return observations starting from 121 to 21 days before the acquisition announcement supplied by Thomson Financial. We construct cumulative abnormal returns (*CAR*) as the sum of the prediction errors of the market model from 2 days before the merger announcement to 2 days after the announcement.

$$CAR_{it} = \sum_{t=-2}^{+2} [R_{it} - \hat{a}_i - \hat{\beta}_i R_{mt}] \tag{2}$$

We also estimate *CAR* over alternative event windows (-1 day to +1 day; -10 days to +1 day). When determining the statistical significance of *CAR*, we follow Dodd and Warner (1983) and standardize abnormal returns (*AR*) by the square root of their estimation period return variance ($\hat{\sigma}_i$):

$$SAR_{it} = AR_{it} \Big/ \hat{\sigma}_i \sqrt{1 + \frac{1}{L_i} + \frac{(R_{mt} - \overline{R}_m)^2}{\sum_{m=1}^{L_i} (R_{mt} - \overline{R}_m)^2}}, \tag{3}$$

where *L* are the number of days (100) used in the market model and R and $\overline{R}$ are the equity returns and the market return prediction for bidding banks, respectively. This procedure prevents abnormal returns with large variances from dominating the test.

Table 2 shows that, on average, the market reaction to a bank merger is negative. For example, over a 5-day event window, bidding bank shareholders experience returns of -0.47% (statistically significant at 5%). The negative abnormal returns are strongest on the announcement day and become less pronounced as the time period under consideration increases. Nonetheless, bidding bank shareholders experience economically and statistically

significant wealth losses in more than 70% of all sample deals and over each event window. These results are consistent with previous findings. Houston and Ryngaert (1994) find 5-day CAR of -2.30% around bank merger announcements, Becher (2000) and DeLong and DeYoung (2007) analyze an 11-day event window and find CAR of -1.08% and -3.15%, respectively.

[Table 2 near here]

The results in Table 2 confirm the existence of an agency conflict inherent in M&A. The M&A strategies in our sample harm the wealth of bidding bank shareholders and, thus, point to a possible role for the board of directors in curbing such value-destroying corporate strategies. In the next section, we present results on board diversity and the value effects of acquisition activities.

RESULTS

Univariate Results

Table 3 presents data on the diversity of acquiring banks' boards ranked by the market reaction to M&A deals. Specifically, we report board diversity measures for the highest and lowest quartile of announcement returns (based on five-day CAR). If diverse boards make better acquisition decisions, we expect to find more diverse boards in the high-return quartile compared with boards in the low-return quartile.

[Table 3 near here]

The results presented in Table 3 are consistent with this expectation. For example, the age diversity measure is 7.63 in the low return quartile and 8.91 in the high return quartile (difference

statistically significant at 5%). Consequently, mergers announced by boards whose members are more diverse in terms of age are associated with higher market returns. Similarly, tenure and occupational diversity are associated with higher announcement returns (differences significant at 5% level) implying that market investors also assign higher credibility to merger strategies announced by boards whose members are heterogeneous in terms of tenure and occupational background. On the other hand, we cannot find any statistically significant differences in gender diversity between the low and the high return quartile.[5]

Overall, the results reported in Table 3 point to investors valuing board diversity. However, occupational, tenure, and age diversity receive a more positive market reaction than gender diversity. We revisit this argument and discuss possible explanations for this finding in the next section.

Regression Analysis

We estimate the following regression model to analyze the effects of diverse boards on merger announcement returns, while simultaneously controlling for variables that are not related to board diversity:

$$\text{5-day CAR} = \alpha + \beta_1 \text{ board diversity} + \beta_2 \text{ control variables} + \varepsilon \quad (4)$$

The dependent variable are 5-day CAR around the announcement of a bank merger. The diversity measures are defined as previously. The vector of control variables contains drivers of merger announcement returns as identified in the extant literature. Deal value is the log transformation of the dollar value of the M&A transaction reported by Thomson Financial. Other control variables are collected from Worldscope for one year before the deal and include relative

size (based on total assets of target over that of the bidding bank) and product focus (which is a binary variable that takes the value of 1 if the first two digits of the four-digit SIC code of the institutions involved in a merger are identical, and 0 otherwise).[6] Smaller deals as well as focusing deals may be easier to integrate into the context of the acquiring bank and, thus, generate a more positive market reaction upon announcement (DeLong and DeYoung, 2007; Houston and Ryngaert, 1994). We also control for pre-merger bidding bank profitability using return on equity (ROE) in the year before the deal. The cash-only dummy is 1 if a merger is financed by 100% cash rather than by a mix of cash and equity (in which case the variable is 0). Generally, because cash-financed deals are not funded by the acquirer's potentially overvalued equity, they signal greater commitment to an acquisition target than other forms of merger finance (Becher, 2000).

Board size is the log of the number of members on the acquiring bank's board (as reported in the last proxy statement before the deal took place). We control for board size as it could be important for the functioning of a board. Larger boards may increase knowledge, while simultaneously giving rise to conflict and coordination problems among members (Bantel and Jackson, 1989; Forbes and Milliken, 1999).

Further, we include the number of board meetings in the fiscal year before a deal was announced in our regressions, because it is possible that more diverse boards are also more active. Consequently, the effect of board diversity on merger returns may, in fact, be driven by increased board activity.[7] Financial background is the proportion of independent directors with at least one independent directorship in the financial services industry. We include this variable to test whether more industry-specific knowledge on the boards of banking firms improves merger performance.

Table 4 shows summary statistics for the variables. Our results for gender diversity (14%) are higher than those reported in Adams and Ferreira (2004) (8%) and Carter et al. (2003) (10%); however, both studies examine non-financial firms.

[Table 4 & Table 5 near here]

Correlations between the market reaction variable (5-day CAR) and the various control variables are presented in Table 5. There is a positive correlation between merger returns and the profitability of the bidding bank and a negative correlation between deal value and merger returns (significant at the 5%-level). As regards the diversity measures, three (occupational, age, and tenure diversity) out of four measures display a positive and significant (at 5%) correlation coefficient with announcement returns. Further, correlations between the control variables are generally low indicating that multicollinearity is a negligible issue for the multivariate analysis.

Table 6 presents different specifications of our regression model. In Column 1, we exclude the diversity variables and estimate the coefficient on the control variables instead. The results indicate a negative and statistically significant association between the deal value and five-day CAR (significant at 1%). Consequently, the expected gains from smaller deals are higher, presumably because acquisitions of a transformatory nature pose more challenges in the post-merger integration process. This is consistent with DeLong and DeYoung (2007) who find that bank mergers valued at more than $1 billion decrease shareholder value. Further, Column 1 reports that the market reacts more positively to merger announcements where the bidding bank has displayed strong profitability before the transaction (significant at the 1%-level). Also, the cash finance dummy has a positive coefficient (significant at 10%).

[Table 6 near here]

In Columns 2 – 5, we add the board diversity measures to the regression specifications. The results are in line with the results we present in the previous section. Thus, we find economically and statistically significant value effects associated with most forms of board diversity. The coefficient on occupational diversity enters the specification in Colum 2 with a positive sign (significant at 5%) confirming that boards with directors from different professional backgrounds are associated with higher announcement returns. Similar results hold for age diversity and tenure diversity (both statistically significant at 5%). The gender diversity variable, by contrast, does not enter the regression with a statistically significant coefficient.

We interpret our finding that only certain types of diversity are value-creating as more consistent with resource dependence theory (Hambrick and Mason, 1984) than with theories which emphasize that diversity provides an organization with improved access to product and labor markets (Pfeffer and Salancik, 1978). Resource dependence theory posits that the value of different director attributes to the functioning (monitoring) of a board depends on its members' ability to relate to economic resources outside a firm. It could be argued that occupational diversity (by providing functional area expertise) as well as tenure and age diversity (which represents a mix of heterogeneous experiences) provide a clearer link between the board and its external environment than gender diversity. If, on the other hand, theories of legitimacy and empowerment (see Brammer et al., 2007) were the dominating explanation for the economic value created by board diversity, it is difficult to see why gender diversity should not create value for shareholders in a similar way than, say, occupational diversity.

Finally, it is interesting to note that the coefficient on the financial background variable does not enter any of the regression specifications with a coefficient that is statistically significant at customary levels. This result further strengthens our finding that diversity creates value for

shareholders. By contrast, more industry specialists on a bank's board (which, by and large, leads to a less diverse boardroom) do not improve the expected gains from bank acquisitions.

DISCUSSION AND CONCLUDING REMARKS

In this paper, we present evidence of the benefits associated with board diversity in the context of a specific corporate strategy. We employ a sample of bank mergers to examine the role of board diversity in improving the expected performance gains from M&A. The results show that, while bank mergers on average destroy value for shareholders of the bidding bank, various measures of board diversity improve the market reaction to bank M&A. This indicates that market investors have more trust in the capabilities of diverse boards to monitor managerial initiatives. Specifically, we find that occupational, tenure and age diversity create value for shareholders. On the other hand, we do not find any evidence that there are economic benefits associated with gender diversity. We argue that our finding that certain sources of board diversity create value is consistent with resource dependence theory which emphasizes that board diversity provides access to economic resources (whose value to shareholders may vary with the type of diversity considered), rather than ethical explanations according to which diversity creates legitimacy in dealing with stakeholders. It could be argued that if purely ethical factors were to drive our results, all sources of diversity (including gender) should give rise to measurable value effects.

Our analysis is not without limitations. First, we link demography to value, but do not consider process variables that could help explain the dynamics that lead to diversity having a beneficial effect on corporate performance. For example, it is assumed that because diversity increases the range of available skills (inputs), that these additional skills will be utilized by the

board to generate measureable outputs. A more fine-grained analysis would perceive resource inputs based on director demography and economic outputs as separate constructs and analyze processes involving delegation and modes of cooperation among directors to understand how the two constructs interlink (Forbes and Milliken, 1999). However, such an analysis requires data of a more qualitative nature such as survey data. Thus, we believe that qualitative data should play a more important role in future corporate governance research. Second, we study the performance implications of bank acquisitions post-approval. It could be argued that the monitoring effectiveness of the bidder's board may be evident in its decision to veto a proposed deal. Hence, it would be fruitful for future research to consider the board characteristics of bidding firms in abandoned versus completed M&A deals to further examine the role of governance in merger outcomes.

This paper comes against the background of regulatory calls for better representation of industry-specific expertise on bank boards. However, the results presented in this paper do not support this view. We show that most sources of diversity protect shareholders from value-destroying acquisition strategies. Further, we find that directors with directorships at other financial firms (and, presumably, more industry knowledge) are not more effective at monitoring bank managers. While it could certainly be argued that increasingly sophisticated regulatory regimes (e.g. Basel 2) require banking specialists with detailed knowledge of, say, risk assessment models on the board of banks, our results caution that a homogeneous group of directors, however well-qualified, will not be associated with better decision-making than a diverse board.

ENDNOTES

[1] Next to agency conflict, there are also other explanations of why M&A frequently destroys shareholder wealth. Roll (1986) suggests executives suffer from hubris and overestimate their abilities to create value from M&A. Other views emphasize that, because executives are unable to diversify their human capital invested in a firm, they, instead, rely on diversifying firm earnings via acquisitions (Morck et al., 1990).

[2] Farrell and Hersch (2005) argue that, rather than diverse boards improving corporate performance, companies with a strong performance record are more successful in recruiting candidates from, what presumably is, a limited and sought after pool of highly-qualified and diverse members of the corporate elite.

[3] We do not measure diversity based on ethnicity or nationality. We find it impossible to accurately and consistently determine directors ethnic origins by examining photos published in annual reports. Further, the number of foreign nationals that acted as directors on U.S. bank boards was relatively small during our sample period which precludes any meaningful analysis.

[4] Classifications of the occupational background of directors were independently performed by two researchers and any conflicting results subsequently resolved.

[5] Next to 5-day CAR, we also use other event window lengths and find results that are qualitatively identical to those reported in Table 3.

[6] During large parts of our sample period, U.S. banks were not permitted to engage in diversification outside banking. The Gramm-Leach Bliley Act (GLBA) of 1999 repealed these so-called Glass-Steagall restrictions on the product scope of banks. In unreported tests (both via a *t*-test and by including a year dummy in our regressions), we examine whether the market reaction to M&A changes in the period before and after GLBA, but we are unable to find any evidence consistent with this.

[7] Adams and Mehran (2005) examine a related question and analyze whether active boards increase the market valuations of banks, but cannot find any evidence consistent with this.

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Table 1 Total Number and Value of Sample Deals per Year

Year	Number	Average Value ($ mil)	% Number
1996	6	524.86	4.05
1997	24	1196.50	16.22
1998	28	7323.74	18.92
1999	18	1225.43	12.16
2000	14	2484.73	9.46
2001	19	561.49	12.84
2002	11	861.57	7.43
2003	14	3885.43	9.46
2004	14	5571.52	9.46
Total	**148**	**3015.65**	**100.00**

Source: Thomson Financial. Deal values are in constant 2004 US$ terms.

Table 2 Market Reaction to Bank Merger Announcements

Event window	N	Ave CAR	% Pos.	% Neg.	*t*-Test
-1 days to +10 days	148	-0.25%	26.49	73.51	(-2.82)**
-2 days to +2 days	148	-0.47%	24.50	75.50	(-10.17)**
-1 day to +1 day	148	-0.70%	22.52	77.48	(-24.09)***
announcement day	148	-1.40%	27.15	72.85	(-98.18)***

The sample consists of 148 bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against a Datastream banks-only index using market model regressions that are averaged over each event window. Tests of statistical significance are based on standardized prediction errors.

** $p < .01$

*** $p < .001$ (one tailed *t*-test)

Table 3 Board Diversity and the Market Reaction to Merger Announcements

	Market Reaction (5-day CAR)		Difference Q1-Q4
	Lowest Quartile Market Reaction Q1	Highest Quartile Market Reaction Q4	
Occupational Diversity	0.35 (n=37)	0.56 (n=37)	0.21* (2.07)
Tenure Diversity	1.03 (n=37)	1.37 (n=37)	0.34* (2.26)
Gender Diversity	0.14 (n=37)	0.13 (n=37)	-0.01 (0.71)
Age Diversity	7.63 (n=37)	8.91 (n=37)	1.28* (2.12)
Finance Background	0.21 (n=37)	0.23 (n=37)	0.02 (0.54)

The sample consists of 148 bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against a Datastream banks-only index using market model regressions that are averaged over each event window. Tests of statistical significance are based on standardized prediction errors. Age and tenure diversity is measured as the mean divided by the standard deviation across the board. Occupational background diversity is defined using Blau's (1977) heterogeneity index with directors categorized as insiders, outsider business experts, support specialists, or community leaders. Finance background and gender diversity are scaled by board size. *t*-Statistics in parentheses.

* $p < .05$ (two tailed *t*-test).

Table 4 Summary Statistics

	N	Mean	Median	Std. Dev.	Min	Max
Transaction data						
Deal value	148	3,015.654	315.100	10,403.800	100.420	72,558.180
Relative size	148	0.260	0.128	0.312	0.002	1.559
Cash finance	148	0.128	0.000	0.336	0.000	1.000
Product focus	148	0.858	1.000	0.350	0.000	1.000
Bank & governance data						
ROE	148	0.121	0.121	0.048	0.001	0.293
Board size	148	14.980	14.500	4.794	6.000	31.000
Board Meeting (p.a.)	148	8.959	8.000	3.186	4.000	18.000
Finance background	148	0.184	0.156	0.132	0.000	0.500
Board diversity measures						
Occupational diversity	148	0.544	0.565	0.126	0.292	0.711
Gender diversity	148	0.137	0.142	0.105	0.000	0.320
Tenure diversity	148	1.337	1.281	0.312	0.917	2.147
Age diversity	148	8.535	8.202	2.206	5.165	12.772

The sample consists of 148 bank acquirers between 1996 and 2004. All banks are publicly traded. Deal value is in million US$, relative size is the target asset value over that of the bidder, and profitability is based on the bidder's ROE (in *t*-1); product focus is measured by a binary variable that takes the value of 1 if the first two digits of the four-digit SIC code of the banks involved in a merger are identical and 0 otherwise. The cash-only dummy is 1 if a transaction is 100% cash-financed and 0 otherwise. Age and tenure diversity are measured as the mean divided by the standard deviation across the board. Occupational background diversity is defined using Blau's (1977) heterogeneity index with directors categorized as insiders, outsider business experts, support specialists, or community leaders. Finance background and gender diversity are scaled by board size.

Table 5 Correlations

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	5-day CAR												
(2)	Deal Value	-.14*											
(3)	Rel. Size	-.22	.33*										
(4)	ROE	.18*	.26*	.15									
(5)	Product Focus	-.14	-.13	.23	-.03								
(6)	Board Size	.29	.11	-.19	.22*	-.14							
(7)	Board Meetings	-.08	-.28	.25	-.30	.13	-.34*						
(8)	Finance Background	.42	.05	.03	-.08	-.03	-.12	.03					
(9)	Cash Finance	.32	-13	-.18*	-.16*	-.25*	-.19	.25	-.27				
(10)	Occupational Diversity	.27*	-.05	.29	-.16	-.02*	-.27	.05	.07	.06			
(11)	Gender Diversity	-.10	.16*	-.15	.20	-.26	.15	.16*	.09	-.06	.14		
(12)	Tenure Diversity	.36*	.30	.12	-.31	-.24	-.22*	.13*	.13	.26	.11	.12	
(13)	Age Heterogeneity	.25*	.07	-.14	.14	.21	.24	-.28	-.14	-.08	-.20*	.34	.24

The table presents pairwise correlations between variables. 5-Day CAR are standardized abnormal returns (calculated against a Datastream banks-only index) over 5-days around merger announcements. Control variables include deal value (log of the dollar value of the transaction), relative size (target asset value over that of the bidder), profitability is based on ROE (in *t*-1); product focus is measured by a binary variable that takes the value of 1 if the first two digits of the four-digit SIC code of the banks involved in a merger are identical and 0 otherwise. The cash-only dummy is 1 if a transaction is 100% cash-financed and 0 otherwise. Age and tenure diversity are measured as the mean divided by the standard deviation across the board. Occupational background diversity is defined using Blau's (1977) heterogeneity index with directors categorized as insiders, outsider business experts, support specialists, or community leaders. Finance background and gender diversity are scaled by board size.

* $p < .05$

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Table 6 Regression Results: Board Diversity and Merger Returns

	(1)	(2)	(3)	(4)	(5)
Deal value	-0.191*	-0.187*	-0.190*	-0.186*	-0.182*
	(0.090)	(0.092)	(0.090)	(0.090)	(0.088)
Relative size	0.177	0.166	0.129	0.158	0.290
	(0.254)	(0.259)	(0.262)	(0.257)	(0.255)
Cash finance	0.102†	0.105	0.081	0.099	0.114
	(0.061)	(0.086)	(0.087)	(0.085)	(0.082)
Product focus	-0.050	-0.042	-0.057	-0.035	-0.032
	(0.177)	(0.181)	(0.178)	(0.179)	(0.175)
ROE	3.726*	3.698*	3.642*	3.739*	3.273*
	(1.568)	(1.578)	(1.575)	(1.572)	(1.556)
Board size	-0.069	-0.070	-0.057	-0.043	-0.048
	(0.198)	(0.199)	(0.199)	(0.203)	(0.195)
Board meetings (p.a.)	-0.151	-0.153	-0.134	-0.150	-0.144
	(0.166)	(0.166)	(0.168)	(0.166)	(0.163)
Finance background	0.286	0.278	0.294	0.282	0.353
	(0.354)	(0.357)	(0.355)	(0.355)	(0.350)
Occupational diversity		0.129*			
		(0.052)			
Gender diversity			-0.450		
			(0.604)		
Tenure diversity				0.120*	
				(0.068)	
Age diversity					0.060*
					(0.027)
Constant	0.616	0.527	0.626	0.350	-0.018
	(0.879)	(0.952)	(0.881)	(0.986)	(0.911)
Observations	148	148	148	148	148
Adj. R-squared	0.096	0.136	0.100	0.128	0.132

The sample consists of 148 bank acquirers between 1996 and 2004. All banks are publicly traded. The dependent variable are standardized abnormal returns (calculated against a Datastream banks-only index) over 5 days around merger announcements. Control variables include deal value (log of the dollar value of the transaction), relative size (target asset value over that of the bidder), profitability is based on ROE (in *t*-1); product focus is measured by a binary variable that takes the value of 1 if the first two digits of the four-digit SIC code of the banks involved in a merger are identical and 0 otherwise. The cash-only dummy is 1 if a transaction is 100% cash-financed and 0 otherwise. Age and tenure diversity are measured as the mean divided by the standard deviation across the board. Occupational background diversity is defined using Blau's (1977) heterogeneity index with directors categorized as insiders, outsider business experts, support specialists, or community leaders. Finance background and gender diversity are scaled by board size. Heteroskedasticity-robust standard errors in parentheses

† $p < .10$

* $p < .05$