Corporate Governance and Bank Diversification

Abstract

This study aims to investigate the corporate governance structures between specialized and diversified U.S. banks (financial conglomerates) and whether, if exists, the differences in their governance structures explain the value discount of diversified banks. If the intensified agency problems are the results of financial conglomerates, we would expect to see a relationship between characteristics of weak governance structure and bank diversification decision. Our major findings are as follows: First, univariate analyses show that governance structure between specialized and diversified banks are different. Diversified banks on average have lower managerial ownership and institutional holdings than the specialized banks. These ownership differences support the agency argument for diversification but more outside directors are employed by diversified banks to enhance the monitoring role played by the boards. Second, bank diversification is associated with governance mechanisms in some perspectives. Board independence, outside director's holdings and CEO equity-based pay become higher as bank become diversified, Finally, we find that CEO equity-based pay and managerial entrenchment level has a significant impact on value discount of diversified bank.

JEL classification: G21

Keywords: Bank diversification; Banking; Corporate governance

I. Introduction

The agency problem resulting from the separate ownership and management not only exists in the industry firms but also in banks and financial institutions. However, the corporate governance of banks and financial institutions received relative less focus due to the opaqueness of financial institutions and regulated industry (Adams and Mehran, 2003; Mehran, 2003; Handley-Schachler, Juleff, and Paton, 2007; Mortlock. 2003). After the thrift and banking problem of the 1980s and early 1990s in the U.S. and the Asian financial crisis in 1998, policy makers realized the importance of maintaining good corporate governance and management in banking for stabilizing the financial system (Mehran, 2003; Vafeas and Waegelein, 2003). In 2006, Basel Committee revised the paper of enhancing corporate governance for banking organizations in 1999 published by OECD. They re-emphasize the importance of effective corporate governance in the banking sector and poor bank governance might contribute to bank failures, the loss of public trust and confidence in banking system, and financial crises.

The critical corporate governance mechanisms in literature are as follows: board characteristics, ownership structure, CEO compensation, the role of audit committee, and external governance. The function of above corporate governance mechanisms has still not come to a general conclusion for its impact on firm performance in the empirical studies for less-regulated firms. Beside, here for the banking firms, these governance mechanisms might not all have significant impact on bank performance since corporate governance in the industrial firms has been primarily concerned with the single agency relationship between managers and shareholders. We know the multiple principal-agency relationships or diverse stakeholders are features of financial services companies and a more complicated organization structure and theoretical discussion are needed than that in less-regulated

firms. Furthermore, bank regulation might also limit the function of above corporate governance mechanisms on alleviating the agency problems. Compared with the industrial firms, the regulation might be viewed as a special corporate governance mechanism in the banking industry. Therefore, most of empirical studies have examined the impact of corporate governance mechanisms on firm performance by excluding regulated firms.

It is reasonable to focus on the effect of regulation on corporate governance in similar industries in order to provide more reliable empirical results by using a more homogeneous and clearer setting. However, the corporate governance of banks, a special attention is needed since financial services are critical for any economy and of course banks are the most important component within financial services. Thus, the question arises to whether the proposals and reforms in less-regulated firms can be effective at enhancing the governance of banks. If not, then the questions would be what in practice the structure of corporate governance is in banking firms and how it work to avoid the agency problem and thus enhance bank performance and stability (Adams and Mehran, 2003).

Deregulations on bank activities have driven the banking firms to become financial conglomerates but a number of concerns have been raised. These concerns are mainly related to risk-taking behavior and the stability of financial system. Allowing inter-state banking and branches (geographic diversification) makes commercial banks enjoy the benefits of economic scale on cost of deposits and making loans. Regarding to the economy of scope, bank engages a variety of activities could benefit from information advantages and thus boost performance and market valuation; however, conglomerates may make it more difficult to design effective incentive contract for managers and to align the incentive of outsiders and insiders (Laeven and Levine, 2007). Insiders may be eager to expand the range of

financial activities if diversification enhances their private benefits, especially the banks under deposit insurance protections. Therefore, financial conglomerates may intensify the agency problem and thus offset the benefits of economic of scope.

It is difficult to obtain enough pure banks, which provide either the traditional borrowing and lending activity or underwriting securities. U.S. sample banks included in this study are with the competitive banking environment and we believe that banks in the U.S. have gradually evolved into financial conglomerates, that is, diversified banks. Besides, we know that agency problems might be intensified in financial conglomerates. Laeven and Levine (2007) have emphasized that the potential benefits of functional diversification might be less than the costs, due to the intensified agency problem resulting from financial conglomerates. If we only examine the function of corporate governance mechanisms in pure banks, we might not provide useful suggestions for the most of banks in the U.S. Furthermore, if we did not divide our sample banks into two groups (specialized versus diversified) our univariate comparison related to these corporate governance mechanisms might be appropriate since we assume the intensified agency problem resulted from financial conglomerates. Therefore, in this study we would investigate the corporate governance structures between specialized and diversified U.S. banks (financial conglomerates) and we would expect that theses differences are consistent with the intensified agency problems from diversification. Besides, by limiting the sample of U.S. banks, we would expect to see a clear comparison between specialized and diversified banks since the corporate governance not only differs with industry characteristics but also with national boundaries (Macey and O'Hara, 2003).

Our contributions to the literature are in the following. First, even though the intensified agency problems resulted from bank diversification (financial conglomerates), diversified banks in the U.S. decrease the usages of corporate

governance characteristics in managerial ownership and institutional ownership but increase the level of outside director ownership based on the univariate analysis in Table 3. Second, Laeven and Levine (2007) provide the evidence that financial conglomerates intensify agency problem and thus destroys value; however, they did not control the impact of corporate governance mechanisms in the model of bank excess value. It means that the discounted value might be caused by the poor corporate governance mechanisms within financial conglomerate. Here we modify the model of Laeven and Levine (2007) by adding our major variables of corporate governance mechanisms in the excess value model. Empirical results from the OLS regressions, we provide several positive relationships between diversity and some corporate governance characteristics: board independence, outside director ownership, and CEO equity pay. Next, we investigate the relationship between these corporate governance characteristics and excess value of bank; however, we could not find any significant results to link these corporate governance characteristics with bank excess value after controlling the decision to diversify. Even though diversified banks have realized the opaqueness and the intensified agency problems after financial conglomerates and increase the usages of some corporate governance mechanisms, the agency problems still there since these mechanisms could not enhance bank valuation. Besides, we also provide additional evidence that CEO equity pay and managerial entrenchment level hurt bank access value by increasing risk taking incentives but the market for corporate control (BCF index) enhanced it. Our empirical results reported here are adjusted for heteroskedasticity with and also control the year effect in the regression model (White, 1980; Laeven and Levine, 2007).

The reminder of the paper is organized as follows. Section II reviews previous literature on the importance of corporate governance of banks, advantages and

disadvantages of financial conglomerates, and the corporate governance in banking. Section III provides a description of the sample and data. Section IV contains our univariate analysis for specialized and diversified banks. Section V reports the multivariate OLS regression analysis for the relationship between excess value and corporate governance characteristics. Finally, the last section presents the conclusion.

II. Literature review:

1. The importance of corporate governance of banks:

Financial stability is critical for the whole economy since a more stable economic and financial environment is essential for the growth of industrial firms (Vafeas and Waegelein, 2003). We know that banks are the essential providers of external financing or staged financing, especially for small and medium-size firms (Claessen, 2003 and Stulz, 2002). At the firm level, better corporate governance leads to efficient investment decisions. But here at the bank level, banks are corporations either and if good corporate governance in banks, banks may allocate the capital resource efficiently and price the loans fairly. Therefore, corporate governance of banks affects the cost of capital for firms and household units (Clasessens, 2003). Besides, the corporate governance of banks, especially for CEO equity pay, might enhance bank's risk taking behavior and hinder the stability of financial system. Some corporate governance mechanisms heavily discussed in the industrial firms might not be perfectly fit for banking firms due to the characteristics of diverse stakeholders (depositors, claimholders, diffuse equity ownership, etc.) and stability concerns. For example, John and Qian (2003) expect that low CEO pay-performance sensitivity might be optimal in banking after considering the benefits of debtholders. Regulations make most of the above

characteristics unique for banking firms and we discuss the "specialness" of banks and the related corporate governance mechanisms in the next section.

To understand the corporate governance of banks is important for the policy makers since better corporate governance in banks might lead to better development in financial sector, economic growth, and risk management.

2. Literature review to corporate governance in banking industry:

Macey and O'Hara (2003) state that there are two corporate governance models: the Anglo-American and Franco-German models. They differ in treatments in the interest of protecting: the Anglo-American model state that the only focus of corporate governance is to maximize shareholder value. However, to the extent that shareholder wealth maximization might conflict with the interests of other groups, called "stakeholders" or "nonshareholder constituencies". Therefore, the Franco-German model takes the interests of nonshareholders into account and considers corporations to be the one with a long-term relationship with these stakeholders, particular banks and employee groups. Besides, the corporate governance not only differs with industry characteristics but also with national boundaries. Thus, due to the characteristics of multiple principal-agency relationships, banks should be governed according to the Franco-German Model (Handly-Schachler, Juleff, and Paton, 2007).

Adam and Mehran (2003) provide statistical and non-econometric analysis by comparing corporate governance variables for a sample of bank holding companies (BHCs) with a sample of manufacturing firms. They found that some key variables are different in BHCs: board size and composition, board activity, CEO compensation, CEO ownership, block share ownership.

Mortlock (2003) states that reliance on debt financing and the complex risks are

two special features of banks and a more intensive focus is needed here than some other industries. He proposes that appropriate banking supervisory and more frequent financial disclosures (bank credit in market value, directors' and managers' conflict of interest, and the board's rules) and external auditing arrangements are important for enhancing good bank governance. Mortlock (2003) stresses the importance of effective market disciplines in promoting financial stability and sound corporate governance practices and it is also aligned with the concept of the third Pillar under Basel II.

Houston and James (1995) state that banks use relatively fewer stock options and stockholding as the evidence that CEO equity pay contract in banks could intensify the risk taking incentive and hinder bank stability. John and Qian (2003) find that the pay-performance sensitivity for bank CEO is lower than for manufacturing firms due to the capital structure difference.

Deposit insurance protection (the safety net) resulted from avoiding the depositor panic of bank run might also create the moral hazard problem, where the safety net provide shareholders and managers incentives to increase excess risk-taking activities and which is subsidized by the taxpayers. Even though there are minimum capital requirements and prompt correction actions, the moral hazard problem is still there. Macey and O'Hara (2003) suggest that depositors with funds at risk might induce them to monitor bank activities actively. Basel Committee also stresses the important role of supervisors on ensuring a stable financial environment and Barth et al. (2004) propose that supervisors at risk might enhance the effective monitoring in banks.

Therefore, the implication from above studies is that banks did require distinctive, different, and complicated corporate governance arrangements from less-regulated manufacturing firms.

3. Advantages and disadvantages of financial conglomerates:

Diamond (1984) assigns the role of delegated monitors for financial intermediaries and demonstrates the diversification benefits from the economy of scale by operating bank offices across state line. Later, researchers find that diversification (making the loans and underwriting the securities of the same firms) can provide cost savings to their clients by charging lower fee (e.g. Kroszner and Rajan, 1994; Puri, 1996; Gande et al., 1997; Schenone, 2004; Ber et al., 2001, and Benzoni and Schenone, 2005). The procedure of relaxing restrictions on banking activities begin with removing restrictions on operating bank offices across state line (Riegle-Neal Interstate Banking and Branching Act, 1994) and then on bank affiliation with other financial firms (Gramm-Leach-Bliley Act, 1999).

The advantages of functionally diversified banks are as follows (Baele et al., 2007). First, the consolidated revenues would be enhanced by improving the income-generating capacity and the operating costs of financial conglomerates would be lower by enjoying operating synergies. Second, information advantages from lending relations might facilitates the efficiency of other financial services. Third, bank governance might be improved by cross-activity mergers (takeover market). In addition, the cross-product merge deals undertaken in financial institutions have a higher degree of similarity than in most other industries. Cybo-Ottone and Murgia (2000) provide evidence that the abnormal return of cross-product deals is higher than horizontal bank merge. On the other hand, the disadvantage of financial conglomerates would be mainly the conflict of interest and the complexity of the conglomerates organization for monitoring, that is, the intensified agency problems resulted from it.

Hebb and Fraser (2002) examine two hypotheses of financial conglomerates

(combining lending and underwriting). First, the conflict of interest hypothesis states that a join bank/underwriter might underwrite security issuance of a firm in which it has a borrowing relationship with the bank. Second, the information advantages hypothesis states that the additional information obtained by a joint underwriter/bank might convey a signaling effect to investors as less risky (Puri, 1996). They show that there is no evidence to support the hypothesis of conflict of interest by using Canadian banks.

Laeven and Levine (2007) state that there is no evidence that diversification intensifies agency problem and destroys value in non-financial corporate diversification literature. However, the opaqueness and complexity of financial intermediaries might intensify the agency problems in financial conglomerates since it might not be easier for stakeholders to monitor banks. For example, Morgan (2002) finds that bond analysts have greater variations in bank's bond ratings.

Even though diversification (making the loans and underwriting the securities of the same firms) can provide cost savings to their clients by charging lower fee (e.g. Kroszner and Rajan, 1994; Puri, 1996; Gande et al., 1997; Schenone, 2004; Ber et al., 2001, and Benzoni and Schenone, 2005), conglomerates may make it more difficult to design effective incentive contract for managers and to align the incentives of outsiders and insiders (Aron, 1988; Stulz, 1990; Rotemberg and Saloner, 1994) and thus offset the benefits of economic scope. Laeven and Levine (2007) find a diversification discount and state that it would be better to break the financial conglomerates into separated financial intermediaries that specialized in individual activities. However, by the discounted value might be caused by the poor corporate governance mechanisms within financial conglomerate and they did not directly control the impact of corporate governance mechanisms there.

Based on the above literature, theory and empirical studies provide conflicting predictions on the impact of financial conglomerates on bank value. We also know that financial conglomerates are not easier to monitor and design effective corporate governance contracts than the industrial conglomerates due to regulations and opaqueness of financial intermediaries and thus result in the intensified agency problem. However, competition in banking environment has driven banks to become financial conglomerates and of course the resulted intensified agency problems within them. The corporate governance of banks becomes critical important for policy makers since better bank corporate governance leads to efficient resource allocation and thus economic growth.

Therefore, here we first examine the difference in corporate governance structure between specialized and diversified (financial conglomerates) U.S. banks. Second, if the intensified agency problems resulted from financial conglomerates exists, we expect that banks increase the usage of corporate governance mechanisms after diversified decisions. Third, we would like to examine whether bank excess value increases by adopting some key corporate governance mechanisms after controlling the impact of diversification (financial conglomerates). By modifying the model of Laeven and Levine (2007) and adding our major variables of corporate governance mechanisms there, we would expect to see positive relationships between these key corporate governance variables and bank excess value, that is, bank corporate governance will enhance bank excess value even though the diversified decision is made.

III. Sample and Data description

A. sample:

This study adopts Laeven and Levine's (2007) selection criteria of sample banks

in the U.S.. Sample banks included in this study are excluded small banks (less than US$100 million in total asset) and banks engaged in neither investment banking nor deposit-taking and loan-making. This study also eliminate Islamic banks because of accounting information does not match with the rest of sample and banks with missing data on basic accounting variables, including assets, loan, deposits, equity, interest income , and non-interest income.

We use the OSIRIS database to obtain the financial statements of banks from 2003-2008. OSIRIS is maintained by Bureau Van Dijk, which provides the Bankscope dataset. Bankscope contains considerably more data on financial firms than alternative data source (Laeven and Levine, 2007). The only difference between Bankscope and OSIRIS is that only listed banks are provided in OSIRIS. We believe that since this study has the selection criterion of excluding small banks (less than US$100 million in total asset) from sample of banks, most of banks included in this study should be large banks and listed banks with high possibility. Financial data refers to the end of year.

B. Data on governance variables:

This study investigates bank governance in five categories: board characteristics, ownership structures, CEO compensation, the roles of the audit committee, and market for corporate control. We collect the corporate governance data from the Compact D/SEC database, SEC proxy statement, Risk Metrics (formerly Investors Responsibility Research Center, IRRC), Governance and Directors datasets, Thomson Reuters, Executive Compensation, and Corporate Library database to match the sample of banks with the governance data.

We employ four variables to proxy for board characteristics, such as board size, board independence, leadership structure, and busyness of board. We clarify the

board characteristics from the Risk Metrics Directors and Corporate Library database. We investigate bank ownership structure in four different perspectives, such as managerial ownership, blockholder ownership, institutional ownership, and outside director ownership. We collect the data on ownership structure from the Compact D/SEC database, Thomson Reuters, Corporate Library, and proxy statements depending on the data availability. CEO equity-based pay and CEO ownership data is collected from the COMPUSTAT Executive Compensation. The study utilizes two measures as the proxy for audit quality: outside directors on audit committee and number of audit committee meetings. We collect these data from the proxy statements.

The measures of Gompers, Ishii, and Metrick (2003) corporate governance index and Bebchuk, Cohen, and Ferrell (2009) governance entrenchment index are used to proxy for external governance. The Gompers, Ishii, and Metrick (2003) index measures the numbers of antitakeover provisions in a firm's charter and in the legal code of the state in which the firm is incorporated. The data of the index is assembled and reported every two or three years (1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006) by the IRRC and it varies between zero and twenty-four. Bebchuk, Cohen, and Ferrell (2009) develop the entrenchment index which extends the Gompers, Ishii, and Metrick (2003) index by only focusing on the 6 provisions. This index varies from zero to six. Following the concepts of Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2009), higher scores on the "governance index" are referred to as having the "higher management power" or the "weaker shareholder rights". Therefore, a firm is usually thought to be a better externally-governed firm when it has lower score on the "governance index". The available data from the previous year are used for years for which there is no governance index (Cremers and Nair, 2005). Because governance data draws from several sources, we do not

require complete data availability for all variables in order to maximize the sample size.

C. Variables:

C.1 Governance measures

(1) Board characteristics

This study incorporates four board characteristics measures developed by (Jensen, 1993; Fama, 1980; Fama and Jensen, 1983; Ferris, Jagannathan, and Pritchard, 2003). For the first measure, board size (*BOARD SIZE*) is measured by the number of directors on the board. Our second board characteristic measures the board independence (*BOARD INDEPENDENCE*). The *BOARD INDEPENDENCE* is calculated as the percentage of outside directors of the board. We define outside directors as directors who not have an executive position in the firm, not had such a position in the past, or not are related to an executive. Third, *LEADERSHIP STRUCTURE* is a dummy variable equal to one for the chairman of the board of sample bank serving as chief executive officer and zero otherwise. Finally, we calculate the percentage of the busy board (*BUSY BOARD*) in which a director is defined as "busy" when he or she holds three or more directorships.

(2) Ownership structure

We employ four proxies for ownership structure, including managerial ownership, blockholder ownership, institutional ownership, and outside director ownership. We define the percentage of common stock shares of the bank held by the officer and directors as the ratio of *MANAGERIAL OWNERSHIP* of the sample bank. The *BLOCKHOLDER OWNERSHIP* is defined as the ratio of total more than 5% shareholdings to total common shares outstanding of the sample bank. The

percentage of equity ownership held by 18 largest public pension funds is used as the proxy for the *INSTITUTIONAL OWNERSHIP*. We define the *OUTSIDE DIRECTOR OWNERSHIP* as the percentage of common equity held by the outside directors.

(3) CEO compensation

CEO equity-based pay and CEO ownership are used to proxy for CEO compensation. *CEO EQUITY-BASED PAY* is the percentage of equity-based compensation in CEO's total compensation, with equity-based pay defined as the value of stock option and restricted stock grants. *CEO OWNERSHIP* is measured by the percentage of equity ownership held by chief executive officer.

(4) The role of audit committee

We measure the outside directors on audit commit and the number of audit committee meetings to proxy for the quality of audit committee. *OUTSIDE DIRECTORS ON AUDIT COMMITTEE* is a dummy variable equal to one if the audit committee composes entirely of outside directors and zero otherwise. *NUMBER OF AUDIT COMMITTEE MEETINGS* is defined as the times of audit committee meetings in that fiscal year.

(5) External governance level

As described earlier, the measures of Gompers, Ishii, and Metrick (2003) corporate governance index (*GIM INDEX*) and Bebchuk, Cohen, and Ferrell (2009) governance entrenchment index (*BCF INDEX*) are used to proxy for external governance.

C.2 Bank-level measures of activities and diversity

Laeven and Levine (2007) define pure commercial banks as converting deposits into loans and specialized investing banks as underwriting securities but not making loans. Laeven and Levine (2007) measure the degree to which banks specialized in lending and non-lending services (bank activities) or whether banks perform a range of activities (bank diversity). Bank activities and diversities are two kinds of measures of diversification but bank diversities focus on diversification per se. Laeven and Levine (2007) only focus on the impact diversification per se on bank valuations. Then they construct asset- and income-based measures for both the measures of bank activities and diversity and report both in their study. But they also raise the issue that the income-based measure suffers from more measurement problems that the asset-based measure since the income-based measure could overestimate the level of lending institutions engaging in non-lending activities.

Following the definition for specialized and diversified banks (Laven and Levine, 2007), a bank is classified as diversified one if the ratio of interest income to total operating income (NIM/TOINCOME) or if loans to total earning assets (LOAN/TEASSET) is between 0.1 and 0.9. In this study, due to the measurement problems, here we only adopt the asset-based measure, LOAN/TEASSET, as a way to break the sample banks into two segments: specialized versus diversified banks.

(1) Bank activities

For the measures of bank activities, very high values in the percentage of loans relative to total earning assets (the income-based measure: *NIM/TOINCOME*) or in the ratios of net interest income to total operating income (the asset-based measure: *LOAN/TEASSET*) signal that the bank specialized in loan making. Total earning assets include loans, securities, and investments. Total operating income includes net interest income, net fee income, net trading income, and net commission income.

(2) Measures of diversification (diversification per se)

For the measures of diversification, lower values of diversity indexes (asset diversity and income diversity) infer to more specialization, while higher values imply that the banks engages in both lending and non-lending services. Asset diversity and income diversity take values between zero and one and are calculated as follows.

$$\textbf{\textit{ASSET DIVERSITY}} = 1 - \left| \frac{(NetLoans - OtherEarningAsset)}{TotalEarningAsset} \right|$$

$$\textbf{\textit{INCOME DIVERSITY}} = 1 - \left| \frac{(NetInterestIncome - OtherOperatingIncome)}{TotalOperatingIncome} \right|$$

where other earning assets include securities and investments and other operating income includes fee income, net commission income, and net trading income.

Note that all four measures *(NIM/TOINCOME, LOAN/TEASSET, ASSET DIVERSITY, and INCOME DIVERSITY*) take values between zero and one and there might be a link between the measures of bank activities (*NIM/TOINCOME and LOAN/TEASSET*) and diversity (*ASSET DIVERSITY and INCOME DIVERSITY*). If a bank only makes loans, it will be classified as having one in *LOAN/TEASSET* and having zero income diversity. However, the two measures still capture different traits. Laeven and Levine (2007) state that the diversity indexes measure diversification per se, while the bank activities measure where each bank falls along the range from a pure lending bank to a pure fee-generating bank.

C.2 Measures of Bank Excess Value

Based on Laeven and Levine (2007), excess value is the difference between a bank's actual TOBIN-Q and the activity-adjusted TOBIN-Q. Laeven and Levine (2007) use TOBIN-Q as one measure of bank valuation and Andres

and Vallelado (2008) use TOBIN-Q as the measure of bank performance. Here the *TOBIN-Q* is calculated as the book value of total asset minus the book value of common equity plus the market value of common equity divided by the book value of total assets (Andres and Vallelado, 2008). So we calculate the excess value for bank j is as follows and there are two measures of excess value, one is by the asset composition of the bank and the other (*LOAN/TEASSET*) is by the income composition of the bank (*NIM/TOINCOME*). Laeven and Levine (2007) emphasize that this method can control for the possibility of unequal market value for different financial activities. Here we follow the same assumption of Laeven and Levine (2007) that only two banking activities (lending versus non-lending) are considered in this study.

$$EXCESSVALUE_j = q - \left(\partial_{j1} q^1 + \partial_{j2} q^2\right) = q - \left(\partial_{j1} q^1 + \left(1 - \partial_{j1}\right) q^2\right)$$

where q^1 and q^2 are constructed from banks that specialize in one activity. q^1 is the valuation of a bank focused on commercial banking and q^2 is the valuation of a bank focused on investment banking. For the asset-based measures, banks where *LOAN/TEASSET* is larger than 0.90 are classified as specialized, where 90% of the assets are associated with one activity. Then q^1 is the average q of bank with *LOAN/TEASSET* is larger than 0.90 and q^2 is the average q of bank with *LOAN/TEASSET* is less than 0.10. Here ∂_{ij} is the share of the *i*th activity in the total activity of bank *j*. Similarly, the income-based measure is banks where NIM/TOINCOME is larger than 0.90 are classified as specialized. q^1 is the average q of bank with NIM/TOINCOME is larger than 0.90 and q^2 is the average q of bank with NIM/TOINCOME is less than 0.10.

C.4 Control variables

We investigate the robustness of the diversification and governance mechanisms in financial conglomerates by controlling for bank level characteristics. Bank size is usually used to influence diversification decision and bank valuation through economies of scale as in Lang and Stulz (1994). The ratio of profit before taxes to total asset (PBT/ASSET) is also included to capture the impact of accounting return on bank valuation and decision to diversity.

D. Summary Statistics

Table 1 presents descriptive statistics for our sample of banks. The mean and median size of the board are 12.139 and 12 directors, respectively, which is close to the average size for non-financial firms (Yermack, 1996; Klein, 1998; Anderson, Bates, Bizjak, and Lemmon, 2000), but lower than the ones reported in Adams and Mehran (2003) for US bank holding companies from 1986 to 1999 and Andres and Vallelado (2008) for large commercial banks from 6 OECD countries. On average, outside directors account for 78% of board of directors, similar to Andres and Vallelado's (2008) data, but lower than the ratio reported by Adams and Mehran (2003). The median value of leadership structure is 1, indicating that relatively higher ratio of banks in the United States whose chairman also serves as CEO of the bank. Interestingly, the mean (median) ratio of busy board is 4.18% (0%) which is relatively lower that the ones reported for non-financial firms (Ferris, Jagannathan, and Pritchard, 2003).

[Table 1 is inserted about here]

Outside blockholders hold 11.62% (8.5%) of ownership on average. Institutional ownership takes 1.06% (0.7%) shares in mean (median) of sample banks,

largely lower than the average level of manufacturing firms (Adams and Mehran, 2003). Mean (median) managerial ownership is 8.21% (5.37%). Specifically, mean (median) CEO ownership is 2.2% (0.52%), quite consistent with the findings in John and Qian (2003) and Adams and Mehran (2003) in which they document that the level of CEO ownership in banking industry is significantly lower than that of manufacturing firms. We also find that equity-based pay constitutes 37.76% (41.45%) of CEO total compensation of the sample banks, which is significantly lower that the ratio in manufacturing industries (Anderson et al., 2000). As John and Qian (2003) indicate, CEO incentives equipped by pay-performance sensitivity in banking industry is designed to be less than one in manufacturing industries due to managerial higher incentives toward riskier project investment for this high leveraged and asymmetric institutions.

We observe that high percentage of outside directors on audit committee. This may be due to the SOX regulation after 2002 Mean (median) number of audit committee meetings is 8.66 (8) times within a year, which is significantly larger than the number reported by Vafeas and Waegelein (2007) for Fortune 500 firms in 2001. The mean (median) GIM index and BCF index is 9.49 (10) and 3.06 (3), respectively.

The average Tobin-Q is higher than one. Mean (median) ratio of *LOAN/TEASSET* is 0.746 (0.778), close to the mean (median) level of *NIM/TOINCOME*. Consistent with Laeven and Levine (2007), we find that income-based activity measures have more measurement problems than asset-based measures. Although it is not reported, we find that distribution of *NIM/TOINCOME* is quite diverse but the distribution of *LOAN/TEASSET* is between 0 and 1. In order to include the results from income-based activities measure for robustness, we require that there is a positive correlation between the extent to which banks engage

in a particular activity and the net income generated from that activity. Therefore, our four measures regarding bank excess value and diversity activities take value between zero and one (Laeven and Levine, 2007) in the empirical analysis. We do the empirical tests on both two measures of banking activities and get the similar results. For our analysis below we report our results using the asset based measure.

IV. The Characteristics of Specialized and Diversified Banks

According to Laeven and Levine (2007), a bank is defined as diversified if its ratio of diversity activities either measured by assets or incomes is between 0.1 and 0.9. Under this definition, we divide our sample into two subgroups: specialized and diversified bank and compare the difference between these two types of banks. Table 2 and 3 present univariate comparisons of financial and governance characteristics between specialized and diversified Banks. Table 2 shows a comparison of financial characteristics between specialized and diversified Banks. Diversified banks are relatively larger and tend to have lower growth opportunities (Tobin Q), consistent with findings of Laeven and Levine (2007). The finding that banks have lower growth opportunities (*Tobin-Q*) once they diversified is also consistent with the evidence documented in non-banking industries (Lang and Stulz, 1994; Servaes, 1996; Hyland and Diltz, 2002; Ahn and Denis, 2004). Although we find the magnitude of diversified banks' average net income ratio is larger than that of specialized banks, we do not observe consistent pattern in terms of profits (*PBT/ASSET*) for these two types of banks.

[Table 2 is inserted about here]

Table 3 reports univariate comparisons of governance characteristics between

specialized and diversified banks. We do not find there is significant difference in board size between specialized and diversified banks. However, we find that diversified banks have significantly higher board independence as compared to specialized banks. The average managerial ownership of diversified banks is significantly less than the average holdings in specialized firms. This finding is consistent with the evidence for non-banking industries that managerial ownership is significantly lower in diversified firms (Servaes, 1996; Denis, Denis, and Sarin, 1997; Anderson, Bates, Bizjak, and Lemmon, 2000). The table also shows that the average holdings of 18 biggest pension funds (*INSTITUTIONAL OWNERSHIP*) is at least 1% lower in diversified banks. However, the average level of outside directors' ownership of diversified banks is significantly higher than one of specialized banks. We observe the percentage of CEO compensation made up by equity or stock options of diversified banks is larger than one of specialized banks, but the difference is not significant. The mean (median) number of *BCF INDEX* of diversified banks is significantly higher compared with specialized banks. This indicates that managers in diversified banks tend to more entrenched then those in specialized banks in some sense.

[Table 3 is inserted about here]

The univariate analysis indicates that some differences from the governance perspective exist between specialized banks and diversified banks. Lower managerial ownership and institutional ownership of diversified banks highlight the ownership structure between these two groups of banks are different. Especially, the difference on ownership structure may indicate that there is more agency problem in diversified banks. However, differences in the level of board independence and outside

director's ownership convey that diversified banks may strengthen their board functions for low ownership. As Adams and Mehran (2003) argue that different governance mechanisms may plays as substitutes for one another, but the industry attributes characterize the systematic differences between the governance of banking and manufacturing firms. Compared to traditional saving and loan activities, banks involving in non-lending financial activities expose themselves more business risk and investment risk (Laevine and Levine, 2007). This industrial or business characteristics shape the needs for their governances. Banks intensely involve in multiple banking activities tend to expose themselves to higher operation and investment risks since their managers have such low stakes in the bank and hence call for bank directors to expand their fiduciary duties to implement their monitoring functions to protest stakeholders (Macey and O'Hara, 2003).

V. Multivariate Analysis on Governance Characteristics in Specialized and Diversified Banks

We further investigate the relationship between bank diversification and governance mechanisms in a multivariate framework. To capture the effects of diversification on bank governance, we include *ASSET DIVERSITY* variable in each model specification. We also include bank size (*LOG(TA)*), loan to total asset(*LOAN/TEASSET*), profit before taxes to total asset (*PBT/ASSET*) as control variables. Because our data is cross-sectional and time-series data, simple OLS pooled regressions are likely to overstate the statistical significance of empirical test results due to serial and cross correlation in the error terms (Anderson, et al. 2000). To address the issue, we compute *t*-values with White's heteroskedasticity-consistent standard errors and control the year effect in the regression model (White, 1980;

Laeven and Levine, 2007).[1]

[Table 4 is inserted about here]

Model 1 to 4 reports the relation between diversification and board structure of sample banks. We find no significant difference on board size as the diversity activities increase, similar to previous univariate results. Model 2 reports the relation between diversification and board independence of sample banks. As banks become diversified, their board independence is statistically and significantly higher than specialized banks. This result corresponds to the univariate result that diversified banks have higher board independence even we control those factors which may also influence bank diversification decision. We do not find significant differences on leadership structure between these two types of banks in the multivariate framework. The multivariate analysis on busy board (Model 4) does not provide supporting evidence that board members in diversified banks tend to busier than those in specialized banks.

Table 4 also reports the relation between diversification and the ownership structure of sample banks. The negative coefficients of bank diversity in models 5 and 7 imply officers and directors as well as institutional investors tend to reduce their holdings as banks diversify, but this effect is not significant. Therefore, our empirical results indicate that the effect of bank diversification to managerial shareholdings or institutional holdings is at the margin. On the contrary, outside directors of diversified banks on average hold 3.0% more shares compared with their counterparts. The results from model 2 and 8 suggest that diversified banks, in some

[1] We also compute t-value with Newey-West's (1987) heteroskedasticity-consistent standard errors, and the results are quantitatively similar.

sense, put more emphasis on their board functions of which are equipped with higher board independence and higher outsider directors' ownership. Inconsistent with the univariate analysis in the previous section, we find that the percentage of CEO compensation based on stock performance significantly increases at 10% level as banks become diversified. By adding more weights on CEO compensation from stock performance, diversified banks tend to use this as a mechanism to align managerial interest with shareholders' so as to avoid the possible managerial entrenchment problems such as inefficient investment. The results from models 13 and 14 provide supporting evidence that managerial entrenchment level in diversified banks is significantly lower compared to specialized banks. Finally, we do not find there are significant differences in CEO ownership and outsider directors on audit committee between diversified banks and specialized banks.

VI. Excess Value, Bank Diversification, and Governance Characteristics

Our analyses highlight that different governance mechanisms exist between diversified banks and specialized banks in some perspectives, especially in board independence, outside director's ownership and shareholder's protections. The results in previous sections also provide the evidence that diversified banks may put emphasis on alternative governance mechanisms, namely outside directors and market for corporate control, when they become diversified. We further investigate whether these differences in governance mechanisms associate with excess value of diversified banks. To provide further evidence on the role that alternative governance characteristics might play their roles in diversified banks, we investigate the relationship among excess value of diversified banks, bank diversification, and their governance structures. Table 5 presents our empirical results. In each model specification, we use excess value of the sample bank to regress on its diversity level

and governance variables. In each regression, we add one of different governance variables to investigate its impact on bank excess values. As the results indicate, board independence level and outside director ownership have no significant effect on bank excess values. The increase in percentage of CEO equity based on their performance shows a significantly negative impact on bank excess value at 10% significance level (model 3). Although we find CEO equity-based pay of diversified banks are significantly higher than specialized banks, banks with higher ratio of CEO equity based pay have significantly lower values than those with lower ratio of CEO equity-based pay (model 3). Our result is consistent with the argument of Houston and James (1995) and John and Qian (2003) that high equity-based compensation induces managerial risk-taking incentives so as to invest in highly-risk projects. However, our empirical results further indicate that these investment behaviors motivated by higher stock-performance linkage are harmful to banks' future growth opportunities as indicated in model 3. Our finding also implies that equipped CEO with higher pay-performance sensitivity in banking industry does not increase the value of diversified banks. This may due to the reason that higher risk taking incentives in banking industry indirectly encourage CEO in inefficient investment and result in higher bank instability. In banking industry that debtholders provide most of capital but undertake serious information asymmetry problem between managers and them, the importance of income stability from its operation outweighs the potential benefit from growth opportunities with high-risk undertakings (Houston and James, 1995).

Our conjecture is supported by the result of model 5 in Table 5 that managerial entrenchment behavior plays a crucial role in determining the bank value. As managers become more entrenched, their interests are not aligned with stakeholders' or shareholders' benefits; therefore the bank value won't be maximized. When we

add these governance variables together in the multiple regression analyses, the governance effect becomes marginal, as model 6 to model 8, but the profitability level still has significantly impact on excess values of banks. Although it is not significant, bank diversification is found to have negative impact on excess value of banks, which is consistent with the findings of Laeven and Levine (2007). However, our results further indicate that governance mechanisms of diversified banks help to reduce the negative impact of bank diversity as documented by literature as compared our adjusted R-squared with ones reported by Laeven and Levine (2007).

[Table 5 is inserted about here]

VII. Endogeneity issues

We also concern that our findings is due to some unobservable sample characteristics which could be responsible for both the level of governance structures and the excess value of diversified banks (Hermalin and Weisbach, 2003; Himmelberg, Hubbard, and Palia, 1999; Andres and Vallelado, 2008). We use instrumental variable approach to address this issue (Andres and Vallelado, 2008; Florackis and Ozkan, 2009). In each regression model, we use the lagged value of governance variable, industry average of governance variable, and endogenous regressors as instrumented. For example, in the model that examines the relation between the excess value and board independence of sample banks, the lag value and industry average of board independence as well as other control variables are used as instrumental variables. Therefore, two-stage least square regression with adjusted

standard errors for potential heteroskedasticity is used.[2] Our results are similar to those reported in Table 5. As we observe that the sign of bank diversity effect is positive from model 6 to 8, although not significant, governance structures of diversified bank seem to have stronger impact on the excess value of bank diversified after we address the endogeneity concern. Therefore we can conclude that the governance mechanisms have significant impact on bank value discount, especially on CEO equity-based pay and managerial entrenched level.

[Table 6 is inserted about here]

VIII. Summary and Conclusion

This study compares the structure of corporate governance across specialized and diversified banks in the US, examine the link between agency problems and bank diversification, and relate those differences in governance to the excess value of diversified banks. We find that some differences exist between specialized banks and diversified banks from corporate governance perspective. Univariate analyses show that diversified banks tend to have lower managerial ownership and institutional holdings. These ownership differences provide evidence that there is more agency problem in diversified banks and support the agency argument for diversification. However, diversified banks employ more outside directors, show higher board independence, and endow outside directors with more share holdings.

Multivariate analyses about the governance structure and bank diversification indicate that bank diversification is associated with governance mechanisms in some perspectives. Bank diversification usually leads to higher board independence, higher

[2] We also adopt a GMM method of estimation, which provides consistent estimates by utilizing instruments that are obtained from the orthogonality condition between the regressors and the error term in our regression model, and our results are quantitatively similar.

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outside director's holdings and higher percentage of CEO equity-based pay. Through these governance mechanisms, diversified banks not only strengthen their monitoring functions to avoid the possible managerial entrenchment problems but also better align managerial interest with shareholders'.

Our empirical investigation among excess value of diversified banks, bank diversification, and their governance structures shows that governance mechanisms have significant negative impact on bank excess value, especially on CEO equity-based pay and managerial entrenched level. Here we support the statement of Houston and James (1995) that banks use relatively fewer stock options and stockholding for avoiding the risk taking incentive and thus hindering bank stability. Besides, the deposit insurance protection (the safety net) in banking industry further provides managers incentives to increase excess risk-taking activities. Our study, although show significant differences in governance perspective between diversified banks and specialized banks, suggests that governance differences cannot completely explain the significant valuation discounts for diversified banks.

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Table 1. Summary Statistics for the Variables of Governance and Financial Characteristics

This table presents the summary statistics for various measures of corporate governance and financial characteristics for the studied samples. *BOARD SIZE* is the number of the directors serving on the board. *BOARD INDEPENDENCE* is the fraction of outside directors in the board, where outside directors are directors who do not have an executive position in the firm, have not had such a position in the past, or are not related to an executive. *LEADERSHIP STRUCTURE* is a dummy variable that equals one when the chairman of the board serves as CEO, and zero otherwise. *BUSY BOARD* is the fraction of directors who serve on the boards of three or more firms. *MANAGERIAL OWNERSHIP* is the fraction of outstanding shares held by officers and directors. *BLOCKHOLDER OWNERSHIP* is the fraction of outstanding shares owned by blockholders, where blockholders is defined as shareholders who hold more than 5% of outstanding shares. *INSTITUTIONAL OWNERSHIP* is the fraction of outstanding shares held by the 18 largest public pension funds (as in Cremers and Nair (2005)). *OUTSIDE DIRECTORS OWNERSHIP* is the fraction of outstanding shares held by outside directors. *CEO EQUITY-BASED PAY* is the percentage of equity-based compensation (stock option and restricted stock grants) in CEO's total compensation. *CEO OWNERSHIP* is the fraction of outstanding shares held by CEO. *OUTSIDE DIRECTORS ON AUDIT COMMITTEE* is a dummy variable that equals one if the audit committee is composed entirely of outside directors, and zero otherwise. *NUMBER OF AUDIT COMMITTEE MEETINGS* is the number of times the audit committee meets during the fiscal year. Two measures of external governance indices are used: *GIM INDEX* (Gompers et al., 2003) and *BCF INDEX* (Bebchuk et al., 2009). *TOBIN Q* is calculated as the book value of total asset minus the book value of common equity plus the market value of common equity divided by the book value of total assets. *LOAN/TEASSET* is the ration of loan to total earning asset. *NIM/TOINCOME* is the ratio of net interest income to total operating income. *NIM/ASSET* is the ratio of net interest income divided by total asset. *OPI/ASSET* is the ratio of operating income dived by total asset. *PBT/ASSET* is the ratio of profits before taxes divided by total asset. *EXCESS_ASSET* is the difference between a bank's actual *TOBIN Q* and the activity-adjusted *TOBIN Q* based on asset-based measures. *EXCESS_INCOME* is the difference between a bank's actual *TOBIN Q* and the activity-adjusted *TOBIN Q* based on income-based measures. *ASSET DIVERSITY* is calculated as 1-|(net loans-other earning assets)/total earning asset| and takes value between 0 and 1. *INCOME DIVERSITY* is calculated as 1-|(net interest income-total operating income)/total operating income| and takes value between 0 and 1.

Panel A. Governance Characteristics

Variable	*N*	Mean	Median	Maximum	Minimum
BOARD_SIZE	915	12.140	12	31	5
BOARD INDEPENDENCE	914	0.782	0.800	0.957	0.273
LEADERSHIP STRUCTURE	915	0.577	1	1	0
BUSY BOARD	831	0.042	0.000	0.714	0
MANAGERIAL OWNERSHIP	170	0.082	0.054	0.586	0
BLOCKHOLDER OWNERSHIP	821	0.116	0.085	0.906	0
INSTITUTIONAL OWNERSHIP	1969	0.011	0.007	0.062	0
OUTSIDE DIRECTORS OWNERSHIP	906	0.051	0.024	0.757	0
CEO EQUITY-BASED PAY	214	0.378	0.414	1.000	0
CEO OWNERSHIP	696	0.022	0.006	0.509	0
OUTSIDE DIRECTORS ON AUDIT COMMITTEE	908	0.819	1	1	0
NUMBER OF AUDIT COMMITTEE MEETINGS	179	8.659	8	21	0
GIM INDEX	534	9.498	10	15	3
BCF INDEX	536	3.065	3	6	0

Panel B. Financial Characteristics

Variable	*N*	Mean	Median	Maximum	Minimum
TOBIN_Q	3126	1.096	1.082	5.889	0.811
LOAN/TEASSET	3499	0.747	0.778	1.000	0.000
NIM/TOINCOME	3499	0.780	0.798	1.000	0.006
NIM/ASSET	3503	0.033	0.032	0.210	0.000
OPI/ASSET	3503	0.012	0.008	0.683	-0.023
PBT/ASSET	3503	0.010	0.012	0.268	-0.157
EXCESS_ASSET	3127	-0.090	-0.114	5.065	-1.498
EXCESS_INCOME	3126	-0.321	-0.306	4.299	-2.334
ASSET DIVERSITY	3499	0.470	0.440	0.999	0.000
INCOME DIVERSITY	3499	0.413	0.401	0.999	0.000

Table 2. Univariate Comparisons of Firm Characteristics for Specialized and Diversified Banks

Sample bank for segment data is defined by Laeven and Levine (2007). Banks with the ratio of *LOAN/TEASSET* between 0.1 and 0.9 are defined as diversified banks; otherwise they are specialized banks. The number in parentheses below the mean is the t-statistics from an ANOVA test, and the number in parentheses below the median is the z-statistics from a Wilcoxon sign-rank test. The sample period is during the year 2003-2008.

	Mean		Median	
	Specialized	**Diversified**	**Specialized**	**Diversified**
TOBIN Q	**1.383**	**1.093*** (-9.593)**	**1.103**	**1.082* (1.897)**
LOAN/TEASSET	**0.514**	**0.747*** (-9.370)**	**0.900**	**0.778 (0.190)**
NIM/TOINCOME	**0.644**	**0.782*** (6.200)**	**0.815**	**0.798 (0.364)**
NIM/ASSET	**0.026**	**0.033*** (4.457)**	**0.022**	**0.032*** (2.927)**
OPI/ASSET	**0.070**	**0.011*** (-14.956)**	**0.008**	**0.008 (0.159)**
PBT/ASSET	**0.030**	**0.010*** (-7.915)**	**0.017**	**0.012*** (3.565)**

Table 3. Univariate Comparisons of Governance Characteristics for Specialized and Diversified Banks

Sample bank for segment data is defined by Laeven and Levine (2007). Banks with the ratio of *LOAN/TEASSET* between 0.1 and 0.9 are defined as diversified banks; otherwise they are specialized banks. The number in parentheses below the mean is the t-statistics from an ANOVA test, and the number in parentheses below the median is the z-statistics from a Wilcoxon sign-rank test. The sample period is during the year 2003-2008.

	Mean		Median	
	Specialized	**Diversified**	**Specialized**	**Diversified**
BOARD SIZE	12.063	12.011	13.000	12.000
		(-0.061)		(0.47)
BOARD INDEPENDENCE	0.696	0.784***	0.75	0.813*
		(2.921)		(1.854)
LEADERSHIP STRUCTURE	0.688	0.571	1.000	1.000
		(-0.93)		(0.796)
BUSY BOARD	0.066	0.041	0.063	0.000*
		(-1.009)		(1.744)
MANAGERIAL OWNERSHIP	0.287	0.075***	0.351	0.051*
		(-5.26)		(1.648)
BLOCKHOLDER OWNERSHIP	0.092	0.116	0.065	0.085
		(0.703)		(0.645)
INSTITUTIONAL OWNERSHIP	0.022	0.010***	0.025	0.007***
		(-4.782)		(4.05)
OUTSIDE DIRECTORS OWNERSHIP	0.008	0.051**	0.003	0.025***
		(2.057)		(4.363)
CEO EQUITY-BASED PAY	0.496	0.357	0.495	0.349
		(-1.36)		(1.512)
CEO OWNERSHIP_	0.135	0.023	0.003	0.006
		(-0.269)		(1.301)
OUTSIDE DIRECTORS ON AUDIT COMMITTEE	0.875	0.814	1.000	1.000
		(-0.625)		(0.42)
NUMBER OF AUDIT COMMITTEE MEETINGS	8.750	8.913	9.500	8.000
		(0.112)		(0.072)
GIM INDEX	8.417	9.519	9.000	10.000
		(1.299)		(1.085)
BCF INDEX	1.6667	3.067***	2.000	3.000***
		(3.447)		(3.039)

Table 4. OLS Regressions Comparing Corporate Governance Characteristics in Specialized Banks and Banks become Diversified

This table presents OLS regression results that the dependent variables are the list of corporate governance characteristics. The corporate governance characteristics are as follows: *BOARD SIZE* is the number of the directors serving on the board. *BOARD INDEPENDENCE* is the fraction of outside directors in the board, where outside directors are directors who do not have an executive position in the firm, have not had such a position in the past, or are not related to an executive. *LEADERSHIP STRUCTURE* is a dummy variable that equals one when the chairman of the board serves as CEO, and zero otherwise. *BUSY BOARD* is the fraction of directors who serve on the boards of three or more firms. *Managerial ownership* is the fraction of outstanding shares held by officers and directors. *BLOCKHOLDER OWNERSHIP* is the fraction of outstanding shares owned by blockholders, where blockholders is defined as shareholders who hold more than 5% of outstanding shares. *INSTITUTIONAL OWNERSHIP* is the fraction of outstanding shares held by the 18 largest public pension funds (as in Cremers and Nair (2005)). *OUTSIDE DIRECTORS OWNERSHIP* is the fraction of outstanding shares held by outside directors. *CEO EQUITY-BASED PAY* is the percentage of equity-based compensation (stock option and restricted stock grants) in CEO's total compensation. *CEO OWNERSHIP* is the fraction of outstanding shares held by CEO. *OUTSIDE DIRECTORS ON AUDIT COMMITTEE* is a dummy variable that equals one if the audit committee is composed entirely of outside directors, and zero otherwise. *NUMBER OF AUDIT COMMITTEE MEETINGS* is the number of times the audit committee meets during the fiscal year. Two measures of external governance indices are used: *GIM INDEX* (Gompers et al., 2003) and *BCF INDEX* (Bebchuk et al., 2009). *ASSET DIVERSITY* is included as the independent variable to investigate the relationship between bank diversification and governance mechanisms. *LOG(TA), LOAN/TEASSET,* and *PBT/ASSET* are included to control for the bank-level characteristics and also year effect. *LOG(TA)* is the logarithm of total asset. *LOAN/TEASSET* is the ration of loan to total earning asset. *PBT/ASSET* is the ratio of profits before taxes divided by total asset. The t-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980). *, **, and * stand for statistical significance based on two-tails tests at the 10%, 5%, and 1% level, respectively.**

	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	Model9	model 10	model 11	model 12	model 13	model 14
	BOARD SIZE	*BOARD INDEPENDENCE*	*LEADERSHIP STRUCTURE*	*BUSY BOARD*	*MANAGERIAL OWNERSHIP*	*BLOCK OWNERSHIP*	*INSTITUTION OWNERSHIP*	*OUTSIDE DIR OWNERSHIP*	*EQUITY-BASED PAY*	*CEO OWNERSHIP*	*OUTSIDE DIRS ON AUDIT COM*	*NO AUDIT COM MEETINGS*	*GIM INDEX*	*BCF INDEX*
Intercept	80.438	-21.271***	23.148	16.119***	0.059	-9.557	1.150***	-8.667***	21.746	-1.012	-1.727	-3151.68***	236.436	-80.654
	(0.501)	(-3.387)	(1.026)	(3.222)	(0.003)	(-1.124)	(6.254)	(-2.665)	(0.485)	(-0.394)	(-0.095)	(-4.797)	(1.458)	(-1.059)
ASSET DIVERSITY	0.021	0.039*	-0.096	0.025	-0.058	0.012	-0.001	0.030**	0.171*	-0.015	-0.016	-0.098	-1.438**	-0.643**
	(0.041)	(1.619)	(-1.242)	(1.342)	(-1.353)	(0.435)	(-0.250)	(2.021)	(1.778)	(-1.216)	(-0.237)	(-0.084)	(-2.054)	(-2.055)
LOG(TA)	0.801***	-0.012***	0.091***	0.022***	-0.025***	-0.007**	0.004***	-0.012***	0.067***	-0.006***	-0.025***	0.798***	-0.148**	-0.138***
	(12.281)	(-4.567)	(9.919)	(9.493)	(-7.665)	(-2.228)	(43.624)	(-9.176)	(6.632)	(-5.706)	(-2.689)	(4.411)	(-2.030)	(-3.487)
LOAN/TEASSET	2.337***	-0.019	-0.010	-0.006	-0.037	-0.059	0.004***	0.005	0.132	-0.014	-0.331***	1.063	1.758*	0.960**
	(3.623)	(-0.558)	(-1.118)	(-0.210)	(-0.862)	(-1.528)	(2.626)	(0.476)	(1.095)	(-0.876)	(-3.514)	(0.750)	(1.825)	(2.204)
PBT/ASSET	8.992**	-0.558***	-0.742	0.307***	1.375***	-0.693***	0.030***	-0.021	2.371***	0.027	-0.979*	11.794	-8.734**	-12.390***
	(2.261)	(-3.179)	(-0.911)	(2.682)	(3.322)	(-3.534)	(2.799)	(-0.168)	(2.887)	(0.294)	(-1.901)	(0.919)	(-1.964)	(-4.989)
Control year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted	**0.131**	**0.065**	**0.092**	**0.214**	**0.232**	**0.019**	**0.518**	**0.071**	**0.17**	**0.02**	**0.013**	**0.171**	**0.040**	**0.128**

F-statistic	**27.26*** **	**13.07*** **	**18.59*** **	**44.96*** **	**9.86*** **	**4.09*** **	**407.93*** **	**14.23*** **	**8.69*** **	**3.68*** **	**3.30** **	**7.46*** **	**5.20*** **	**15.74*** **
N	**870**	**870**	**870**	**806**	**148**	**796**	**1893**	**863**	**187**	**661**	**864**	**157**	**499**	**501**

Table 5. OLS Regressions of Excess Value on Measures of Corporate Governance in Specialized Banks and Banks become Diversified

This table presents OLS regression results that the dependent variable is EXCESS_ASSET_. We further examine the role played by these statistically significant corporate governance characteristics in Table 4 with the decision to diversify. EXCESS_ASSET_ is the difference between a bank's actual TOBIN_Q and the activity-adjusted TOBIN_Q based on asset-based measures. The corporate governance characteristics are as follows: *BOARD INDEPENDENCE* is the fraction of outside directors in the board, where outside directors are directors who do not have an executive position in the firm, have not had such a position in the past, or are not related to an executive. *OUTSIDE DIRECTORS OWNERSHIP* is the fraction of outstanding shares held by outside directors. *CEO EQUITY-BASED PAY* is the percentage of equity-based compensation (stock option and restricted stock grants) in CEO's total compensation. Two measures of external governance indices are used: *GIM INDEX* (Gompers et al., 2003) and *BCF INDEX* (Bebchuk et al., 2009). ASSET DIVERSITY is included as the independent variable to control for the decision to diversify. *LOG(TA)*, *LOAN/TEASSET*, and *PBT/ASSET* are included to control for the bank-level characteristics and also year effect. LOG(TA) is the logarithm of total asset. *LOAN/TEASSET* is the ration of loan to total earning asset. *PBT/ASSET* is the ratio of profits before taxes divided by total asset. The t-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980). *, **, and * stand for statistical significance based on two-tails tests at the 10%, 5%, and 1% level, respectively.**

	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8
Intercept	43.797	44.582	210***	18.892	31.936	217.342***	215.554***	215.922***
	(1.568)	(1.590)	(9.787)	(0.540)	(0.952)	(9.645)	(8.459)	(8.300)
ASSET DIVERSITY	-0.223*	-0.219*	-0.059	-0.134	-0.180	-0.043	-0.044	-0.040
	(-1.689)	(-1.672)	(-0.991)	(-0.970)	(-1.337)	(-0.730)	(-0.699)	(-0.625)
LOG(TA)	-0.022***	-0.023***	-0.011**	-0.012	-0.014	-0.015**	-0.014**	-0.017**
	(-2.692)	(-2.714)	(-2.141)	(-1.143)	(-1.438)	(-2.553)	(-1.997)	(-2.021)
LOAN/TEASSET	-0.003	-0.005	0.062	0.157	0.218	0.043	0.043	0.043
	(-0.015)	(-0.021)	(0.763)	(0.707)	(0.993)	(0.522)	(0.510)	(0.514)
PBT/ASSET	6.310***	6.281***	13.604***	8.749***	8.297***	13.545***	13.585***	13.477***
	(2.842)	(2.834)	(20.078)	(3.125)	(2.939)	(20.256)	(20.008)	(19.963)
BOARD INDEPENDENCE	0.051						-0.009	-0.018
	(0.591)						(-0.140)	(-0.272)
OUTSIDE DIRECTORS OWNERSHIP		0.044				0.584	0.717	0.596
		(0.343)				(1.457)	(1.622)	(1.249)
CEO QUUITY-BASED PAY			-0.073*			-0.058	-0.063	-0.059
			(-1.681)			(-1.318)	(-1.329)	(-1.264)
GIM INDEX				-0.002			0.002	
				(-0.562)			(0.674)	
BCF INDEX					-0.026**			-0.002

					(-2.445)			**(-0.222)**
Adjusted R-squared	**0.198**	**0.198**	**0.892**	**0.286**	**0.291**	**0.903**	**0.905**	**0.904**
F-statistic	**36.59*** **	**36.36*** **	**246.65*** **	**33.801*** **	**34.776*** **	**211.70*** **	**152.54*** **	**148.29*** **
N	**865**	**859**	**180**	**492**	**494**	**159**	**145**	**142**

Table 6. Two-stage LS (TSLS) Regressions of Excess Value on Measures of Corporate Governance in Specialized Banks and Banks become Diversified

This table presents TSLS regression results that the dependent variable is EXCESS_ASSET_. We further examine the role played by these statistically significant corporate governance characteristics in Table 4 with the decision to diversify. EXCESS_ASSET_ is the difference between a bank's actual TOBIN_Q and the activity-adjusted TOBIN_Q based on asset-based measures. The corporate governance characteristics are as follows: *BOARD INDEPENDENCE* is the fraction of outside directors in the board, where outside directors are directors who do not have an executive position in the firm, have not had such a position in the past, or are not related to an executive. *OUTSIDE DIRECTORS OWNERSHIP* is the fraction of outstanding shares held by outside directors. *CEO EQUITY-BASED PAY* is the percentage of equity-based compensation (stock option and restricted stock grants) in CEO's total compensation. Two measures of external governance indices are used: *GIM INDEX* (Gompers et al., 2003) and *BCF INDEX* (Bebchuk et al., 2009). ASSET DIVERSITY is included as the independent variable to control for the decision to diversify. *LOG(TA)*, *LOAN/TEASSET*, and *PBT/ASSET* are included to control for the bank-level characteristics and also year effect. LOG(TA) is the logarithm of total asset. *LOAN/TEASSET* is the ration of loan to total earning asset. *PBT/ASSET* is the ratio of profits before taxes divided by total asset. The t-statistics in parentheses are based on standard errors adjusted for heteroskedasticity (White, 1980). *, **, and * stand for statistical significance based on two-tails tests at the 10%, 5%, and 1% level, respectively.**

	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8
Intercept	-48.817	-4.608	248.713***	-50.142	252.324***	261.225***	202.935***	205.118***
	(-1.527)	(-0.130)	(6.171)	(-1.158)	(4.632)	(6.434)	(5.843)	(5.781)
ASSET DIVERSITY	-0.059	-0.220	-0.019	-0.199	-0.414***	0.044	0.049	0.046
	(-0.320)	(-1.428)	(-0.176)	(-0.661)	(-2.669)	(0.315)	(0.403)	(0.332)
LOG(TA)	-0.022	-0.018	0.036	-0.013	-0.033***	0.033	-0.010	0.006
	(-0.136)	(-1.048)	(1.159)	(-0.828)	(-2.686)	(0.739)	(-0.210)	(0.114)
LOAN/TEASSET	0.193	-0.030	0.127	0.411	0.224	0.100	0.007	0.014
	(0.600)	(-0.118)	(0.869)	(1.242)	(0.861)	(0.681)	(0.058)	(0.116)
PBT/ASSET	7.457***	6.787***	14.753***	7.325***	5.181	14.754***	12.923***	13.471***
	(6.887)	(3.109)	(12.748)	(4.682)	(1.500)	(11.425)	(8.102)	(8.091)
BOARD INDEPENDENCE	0.509						-0.453	-0.417
	(0.633)						(-1.362)	(-1.241)
OUTSIDE DIRECTORS OWNERSHIP		-0.041				-0.404	-1.471	-1.019
		(-0.030)				(-0.076)	(-0.295)	(-0.199)
CEO QUUITY-BASED PAY			-0.641*			-0.679*	-0.219	-0.343
			(-1.711)			(-1.698)	(-0.536)	(-0.769)
GIM INDEX				-0.059			-0.001	
				(-1.160)			(-0.054)	

BCF INDEX					**-0.094***			**0.010**
					(-1.862)			**(0.319)**
Adjusted R-squared	**0.016**	**0.193**	**0.732**	**-0.276**	**0.068**	**0.729**	**0.868**	**0.851**
F-statistic	**7.842*** **	**33.080*** **	**88.107*** **	**4.590**	**34.903**	**67.555*** **	**98.527*** **	**85.916*** **
N	**477**	**797**	**161**	**292**	**466**	**142**	**129**	**127**