Is Corporate Governance Different for Bank Holding Companies?[1]

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Abstract:

We analyze a range of corporate governance variables as they pertain to a sample of bank holding companies (BHCs) and manufacturing firms. We find that BHCs have larger boards and that the percentage of outside directors on these boards is significantly higher; also, BHC boards have more committees and meet slightly more frequently. Conversely, the proportion of CEO stock option pay to salary plus bonuses as well as the percentage and market value of direct equity holdings are smaller for bank holding companies. Furthermore, fewer institutions hold shares of BHCs relative to shares of manufacturing firms, and the institutions hold a smaller percentage of a BHC's equity. These observed differences in variables suggest that governance structures are industry-specific. The differences, we argue, might be due to differences in the investment opportunities of the firms in the two industries as well as to the presence of regulation in the banking industry.

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1. Introduction

In the wake of the recent corporate scandals, corporate governance practices have received heightened attention. Shareholders, creditors, regulators, and academics are examining the decision-making process in corporations and other organizations and are proposing changes in governance structures to enhance accountability and efficiency. To the extent that these proposals are based on academic research, they generally draw upon a large body of studies on the governance of firms in unregulated, nonfinancial industries.

Financial institutions, however, are very different from firms in unregulated industries, such as manufacturing firms. Thus, the question arises as to whether these proposals and reforms can also be effective at enhancing the governance of financial institutions, and, in particular, banking firms. The question is a difficult one to answer, though, given the little research on the governance of banking firms. Therefore, in order to evaluate reforms to the governance structures of banking firms, it is important to understand current governance practices as well as how governance differs between banking and unregulated firms. Otherwise, governance proposals cannot be fine-tuned. Significantly, uniformly designed proposals that do not take into account industry differences at the very least may be ineffective in improving the governance of financial institutions, and at worst may have unintended negative consequences.

Accordingly, this article examines corporate governance in banking firms. In particular, we study corporate governance variables identified as relevant by academics and practitioners and describe their differences and similarities vis-á-vis banking firms

and manufacturing firms. Because public information on governance characteristics is generally available only for publicly traded bank holding companies (BHCs), we examine the governance of BHCs and not banks. We also discuss the effect of regulation—such as supervisory and regulatory requirements at the state and Office of the Comptroller of the Currency (OCC) levels—prior to 2000 on banking firm behavior. Many typical external governance mechanisms, such as the threat of hostile takeovers in the industry, are absent in the case of banking firms; therefore, we focus primarily on internal governance structures and shareholder block ownership. Our goal is to provide useful information and a road map for thinking about the governance of financial institutions, in terms of reform as well as research.

We discuss the potential benefits and costs associated with some of the corporate governance variables for an average firm. However, we stress that all of these variables are ultimately part of a simultaneous system that determines the corporation's value and the allocation of such value among claimants. Also, different governance mechanisms may be substitutes for one another. For example, certain executive pay packages can vary across firms, even in the same business environment, for good reason. Firms with more effective boards may have more equity-based CEO compensation in their structure, while firms with greater CEO ownership may have more cash compensation (Mehran 1995). Thus, the quality of governance of any organization must be evaluated along a number of dimensions.

Our sample consists of thirty-five bank holding companies over the 1986-96 period. For these BHCs, we construct governance variables or proxies that have received attention by researchers in law, economics, organization, and management who argue that

the variables are correlated with governance practices. We also compare variables in our sample with those for manufacturing firms compiled in other studies.

Our comparison of BHCs and manufacturing firms yields several key findings. First, BHC board size (18.2 members versus 12.1 members) and the percentage of outside directors (68.7 percent versus 60.6 percent) are significantly larger on average. Second, BHC boards on average have more committees (4.9 compared with 4.4) and meet slightly more frequently (7.9 times versus 7.6 times). Third, measured in percentage terms, the ratio of chief executives' stock option pay to salary plus bonuses is smaller at BHCs (1.0 as opposed to 1.6). Fourth, the percentage of CEO direct equity holdings is smaller for BHC chief executives (2.3 percent compared with 2.9 percent) as is the value of their direct equity holdings ($27.9 million versus $133.8 million). Finally, fewer institutions on average hold a share of BHCs in our sample (204 as opposed to 535) and institutions hold a smaller percentage of a BHC's equity (42.2 percent compared with 54.6 percent). The findings on board size, percentage of outside directors, ownership (percentage and market value), and the ratio of stock options to salary plus bonuses complement those of other studies, which use samples that differ from ours (see Houston and James [1995] and Booth, Cornett, and Tehranian [2002]).

Our findings of systematic differences between the governance of banking and manufacturing firms bolster the argument that governance structures may indeed be industry-specific. We argue that these differences are influenced by differences in the investment characteristics of the two types of firms as well as by the presence of regulation. Moreover, the differences reported here are similar to those found between manufacturing firms and insurance industry firms (see, for example, Talmor and Wallace

[2001]) and between manufacturing firms and public utilities firms (see, for example, Booth, Cornett, and Tehranian [2002]).[4] These results suggest that governance reforms, in order to be effective, could take industry differences into account.

2. Why Governance May Differ for Bank Holding Companies

Shleifer and Vishny define corporate governance as dealing "with the ways that suppliers of finance to corporations assure themselves of getting a return on their investment" (1997, p. 737). According to agency theory, if managers operate independently, they may make financing, investment, and payout decisions that are detrimental to shareholders.[5] To mitigate the conflict between managers and shareholders, the literature offers several solutions, such as monitoring by the board of directors and blockholders, compensation contracts, and managerial equity investment.[6] The governance of banking firms may be different from that of unregulated, nonfinancial firms for several reasons. For one, the number of parties with a stake in an institution's activity complicates the governance of financial institutions. In addition to investors, depositors and regulators have a direct interest in bank performance. On a more aggregate level, regulators are concerned with the effect governance has on the

[4] In all likelihood, similar results will also hold for firms in the thrift industry, except during the conversion period, when insiders gain a significant equity stake in the conversion process (see Cole and Mehran [1998]).

[5] The literature also identifies a conflict between stockholders, including managers, and bondholders (see, for example, Jensen and Meckling [1976] and Galai and Masulis [1976]). The conflict has been the source of much analysis on the effect of managers' risk-taking on depositors and the Federal Deposit Insurance Corporation (FDIC) insurance fund.

[6] The literature on the governance of a general firm is reviewed elsewhere in this volume.

performance of financial institutions because the health of the overall economy depends upon their performance.

As a result, the board of directors of a banking firm is placed in a crucial role in its governance structure. Although the boards of BHCs are assigned the same legal responsibilities as other boards,[7] regulators have placed additional expectations on bank, as opposed to BHC, boards that delineate their responsibilities even further.[8] These usually take the form of laws, regulations, or guidance, and they generally reflect interest in safe and sound financial institutions.[9] To the extent that BHC boards are influenced by

[7] Boards, according to law, have two fiduciary duties to the company: the duty of care and the duty of loyalty (see Macey and O'Hara [2003] for a discussion and interpretation of these duties).

[8] It is important to realize that the objectives of regulators and those of banking firms may not coincide, which could impact the governance, and in turn the conduct, of the firm. In theory, there is a conflict between the objectives of regulators—safety and soundness—and those of shareholders—value maximization. When a conflict exists between value maximization and the need to support prudent operations, regulators expect boards to balance these concerns effectively, by ensuring that bank performance as well as safety and soundness are taken into account. Little is known as to how these conflicts affect the ability of top management and boards of directors to serve these potentially divergent interests. Similarly, higher standards of accountability on the boards of regulated firms versus those of unregulated firms could hinder the ability of regulated firms to attract talented directors, which could adversely affect BHC performance—but it is unclear if this is the case. For example, a higher standard of accountability for bank directors and, arguably, well-defined regulatory expectations have led the government to sue directors to recover some of the losses in bank failures, particularly during periods of poor economic performance and large numbers of failures. Fearing litigation, many directors have stepped down, and numerous banks have had difficulty attracting directors (see Quint [1992]).

[9] Examples of the regulatory expectations for bank boards are: 1) to establish bank strategies (Basel Committee); 2) to approve short-term business plans (OCC Director's Book); 3) to review and approve proposed departures from long- and short-term business plans before they take place (OCC's Director's Book); 4) to review and approve budgets prepared by management (Federal Reserve Bank of Atlanta's New Director's Primer); 5) to establish policies that govern day-to-day operations (Federal Reserve Board Commercial Bank Examination Manual); 6) to adopt real estate appraisal

the structure and operation of their subsidiary bank boards, these expectations may also affect how BHC boards operate (see, for example, Adams and Mehran [2002]).

These and other differences in the operation of financial and nonfinancial institutions have led many to view regulatory oversight of the industry as a substitute for corporate governance, or at least to view governance as less critical to the conduct and operation of banking firms.[10] Others argue that effective supervision could lead to board oversight becoming a more critical element of banking firm governance—that is, these could be complementary forces. Either way, the presence of regulation should affect the design of internal governance mechanisms.[11]

One major area likely to be affected by regulation is the structure of executive compensation. Stock-based compensation motivates top management to undertake more value-enhancing decisions (see Core, Guay, and Larcker [2003]), but regulators would also want to consider how stock options affect risk-taking. Thus, although in

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and evaluation policies (Federal Reserve Board Commercial Bank Examination Manual); 7) to maintain an adequate allowance for loan loss reserve and review it on a quarterly basis (Interagency Policy Statement on Loan and Lease Losses); 8) to approve bank risk management policies annually (Federal Reserve Board Trading Activities Manual); 9) to establish limits on payment system net debit caps (Federal Reserve Board Payment System Risk Policy); 10) to approve the bank's Bank Secrecy Act compliance program (Federal Reserve Regulation H); and 11) to review monthly exposure reports (121 Report and New York State banking law).

[10] For example, bank supervision that ensures that the bank complies with regulatory requirements could play a general monitoring role. John, Mehran, and Qian (2003) support this argument by showing that weak BHC examination ratings are correlated with high pay-performance sensitivity of CEO compensation.

[11] An additional consequence of supervision playing a role in the governance of banking firms will likely be that capital markets will demand less disclosure from banking firms and markets will invest less in information production useful for investors in the banking industry.

nonfinancial firms stock options may be appropriate instruments to provide incentives for managers to create value, as well as to protect the creditors of distressed companies, the options may conflict with policy objectives that seek to protect the nonshareholding stakeholders, such as depositors and taxpayers in financial firms. As regulatory reform has expanded the range of activities available to financial firms, it has become increasingly important for policymakers to understand the relationship between governance structure and the incentive for risk-taking.[12]

Resolution of a financially distressed condition or outright insolvency in the banking industry can also have an important effect on top managers' incentive structures. In an unregulated environment, financial distress generally leads to reorganization and, in most cases, the incumbent top manager is given the opportunity to turn the corporation around.[13] Moreover, CEOs of distressed firms typically get paid according to their compensation contracts, even when their firms enter bankruptcy.

However, in the banking industry, distress usually leads to liquidation, and the incumbent is removed from management (see Skeel [1998] for a discussion of how and when regulators act in insolvency cases). In addition, depositors' claims have seniority

[12] John, Saunders, and Senbet (2000) argue that regulatory oversight has to take such incentive distortions into account when establishing procedures; regulation that accounts for the incentives of top management will be more effective than capital regulation in ameliorating risk-shifting incentives. The authors suggest that pay-performance sensitivity of top-management compensation in banks may be a useful input in pricing FDIC insurance premiums and designing bank regulation. Similarly, Cole and Mehran (1998) suggest that because insider ownership improves firm performance, and thus reduces the risk of default, regulators can encourage ownership as a "complement to, or substitute for, capital requirements, which generates their own inefficiencies" (p. 294).

[13] For example, Hothchkiss (1995) reports that only 41 percent of CEOs of distressed firms were replaced in the month of filing and 55 percent were replaced by the time reorganization was approved.

over management compensation contracts. Since stock options are long-term compensation contracts, all else equal, rational chief executives of BHCs can be expected to demand more cash compensation relative to equity-based compensation, as the latter becomes worthless in the event of liquidation (Mehran and Winton 2001).[14]

Large grants to top executives (and employees) have the potential to impact banking firms' capital by way of future share repurchases. When executives (and employees) exercise their options, the firm typically has to repurchase shares from the market. Thus, capital leaves the firm. By granting options, the firm loses its flexibility with regard to when and how much to pay out. Therefore, large grants of options in any given year have the potential to affect the capital base adversely in later years when options become vested and are exercised. This can attract the scrutiny of regulators.

Three other factors can affect the executive compensation structure in the banking industry, independent of regulation. First, Smith and Watts (1992) argue that a firm's compensation structure is influenced by the firm's investment opportunity set. They contend that because it is easier for the *board* to observe, monitor, and evaluate the actions of CEOs of low-growth firms or industries, the board relies more on fixed compensation than on stock-based compensation. Characteristics of the investment opportunity set of firms in the banking industry are most likely different than those for firms in unregulated environments (see Houston and James [1995]). Therefore, the compensation policy of banking firms is most likely different. We discuss this issue more fully later on.

[14] See Skeel (1999) for a similar discussion. Mehran and Winton (2001) further argue that liquidation of distressed firms in the banking industry and seniority of depositors' claims to management compensation contracts would cause CEOs of banking firms, all else equal, to demand higher compensation when they are nominated to these positions.

Second, competition in the managerial labor market and the product market may also affect governance, as Fama (1980), Jensen (1993), and Hart (1983) suggest. The banking industry is, arguably, competitive in both markets. Also, interstate banking deregulation most likely has resulted in more competition.[15] Thus, the similarity in the production technology of banking firms as well as industry competition can impact the governance of banking firms. Specifically, according to contracting theory, contracts are easier to construct and are more likely to exist in industries where more precise (relative) performance measures are available and where it is not relatively costly to replace a CEO (Parrino 1997). In general, performance measures are better able to filter the effects of industry and marketwide shocks in homogenous industries. Thus, relative performance is easier to measure and poorly performing CEOs are easier to identify in such industries. In addition, the costs of replacing CEOs are lower in such industries because firm-specific human capital is lower. Accordingly, stock-based compensation contracts will tend to be less important in homogenous industries such as banking, where relative performance measures are more precise. Moreover, monitors are likely to expend less effort and fewer resources in homogeneous industries (Parrino 1997, p. 195).[16]

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[15] Few papers have focused on the effect of deregulation on the pay-performance sensitivity of CEO compensation (some examples are Hubbard and Palia [1995] and Crawford, Ezzel, and Miles [1995]). Jayaratne and Strahan (1998) provide evidence that relaxation of branching restrictions has lowered banks' loan losses and operating costs.

[16] One of the consequences of industry homogeneity is that monitors rely more on objective measures of performance, such as stock or accounting returns, than on subjective measures, such as marketing strategy and the rate of product diffusion. See Aggarwal and Samwick (1999) and Kedia (forthcoming) for further discussion and evidence on the effect of product market competition on management compensation.

Third, capital structure may influence executive compensation in BHCs. According to agency theory, stockholders want the board to compensate a CEO with stock options because they increase the CEO's pay-performance sensitivity. A higher level of stock options, in theory, motivates the CEO to pursue riskier investment strategies. If the firm has debt in its capital structure, riskier strategies benefit stockholders at the expense of debtholders (see, for example, Jensen and Meckling [1976]). In efficient capital markets, however, the incentive for risk-taking is anticipated by debtholders, and thus increased reliance on stock options gives rise to a debt premium, or cost of debt (John and John 1993). The size of the premium is related to the leverage ratio. To reduce the cost of debt, leveraged firms may choose to scale back their use of stock options. Because BHCs are highly leveraged institutions, they may therefore want to limit their use of stock options as it could, for example, affect their cost of issuing debt. John and Qian (2003) support this argument, and find that the lower the pay-performance sensitivity for CEOs of BHCs is, the higher the ratio of the BHCs' debt to total assets is.[17] As a result of differences in the operating characteristics of BHCs and unregulated firms as well as the presence of regulation, we expect BHCs to have less stock-based compensation in their executive compensation packages.

The presence of regulation and the high leverage of banking firms may also affect the ability of external governance mechanisms to resolve the governance problems of these firms. For example, the absence of an active market for corporate control in the

[17] However, John, Mehran, and Qian (2003) show that the CEOs of BHCs with higher subordinated debt as a fraction of their assets have higher pay-performance sensitivity. They argue that subordinated debtholders, unlike other creditors, have incentives to monitor the bank, particularly with respect to its risk choices.

banking industry prevents better performing firms from taking over the poorly performing ones and removing their boards.

Note that despite active consolidation in the banking industry, there have been very few hostile takeover bids. There are at least four reasons for this phenomenon. First, state laws and banking regulations impose substantial delays on any hostile bid. Delay is a significant impediment to any hostile offer—it allows the target firm to arrange defenses or seek alternative bidders—but it is particularly important in a regulated environment. Delay also has an impact on a bid's progress in the equity markets, as arbitrageurs rarely involve themselves in mergers and acquisitions in the banking industry because the time required for a transaction to take place reduces the value of any spread between market and transaction prices. Also, since the gestation period for acquisitions in banking is much longer than it is for firms in an unregulated environment, bidding banks are less likely to receive tenders of large blocks from sophisticated investors until the regulatory approval process is completed. This creates uncertainty about the offer's potential for completion.

Second, many stakeholder groups—that is, competitors and consumer advocates—can use the delay to organize opposition to a regulated acquisition and influence the decision of the regulatory body (see McGlaughlin and Mehran [1995] for a similar discussion of hostile offers in the utilities industry). Third, the medium of exchange in hostile offers is typically all cash or mostly cash (see, for example, Franks, Harris, and Mayer [1988]; Fishman [1989] argues that cash preempts other bidders). The acquirer typically borrows the funds needed for the acquisition investment and relies on its investment bankers to raise the funds (Safieddene and Titman 1999), particularly

when the target is large. BHCs, however, are unwilling to borrow funds for acquisition purposes as they are already highly leveraged.[18] Fourth, many banks in the holding companies or subsidiaries of holding companies hold a significant share of their ultimate parent company as pension trustee or as fund manager. This large block ownership reduces the probability of success in a hostile offer.

Constraints on hostile acquisitions in the banking industry can potentially increase the size of boards. In a successful hostile takeover, the board of an acquirer becomes the board of the two combining entities around the time of merger completion. Thus, while the asset size of the firm increases, board size may actually stay the same. In the banking industry, however, hostile offers are rare, and so, with a typical acquisition in the industry, most members of a target company's board do not leave the board of the consolidated entity until their term expires. As a result, acquisitions not only increase the asset size of the acquirer, they may increase board size, at least in the years around the merger completion. Therefore, we expect BHCs to have boards that are larger than boards in unregulated firms.

Finally, regulation may also reduce blockholders' incentives to monitor the boards of financial institutions. In general, in an environment where regulators are active, blockholders are passive. In an unregulated environment, blockholders typically invest in the shares of undervalued companies. They then gain a seat (or seats) on the board through proxy contests and exert pressure on management to restructure corporate assets and/or change corporate payout policy. In addition, blockholders often sue the board, and

[18] Becher and Campbell (2002) document 4 cash acquisitions in a sample of 146 mergers in the 1990-99 period. Given the banking industry's financial health and profitability in the 1990s and the size of the targets to bidders in the sample (about 5.5 percent), cash offerings are not a puzzle.

tarnish outside directors' reputations in order to achieve their objectives. Blockholders are also more willing to invest capital in a share of the company, as well as other resources, if they can get a fair assessment of the value of the company and face little or no opposition on (quick) asset restructuring. Conversely, a regulatory environment, at times, may interfere with the information production and acquisition process, as disclosure of some information may be perceived by regulators as potentially causing bank runs.[19] Blockholders are also more unlikely to gain seats through proxy fights and acquire additional information about a regulated firm. Moreover, even if blockholders can influence management to restructure its assets, the restructuring may take some time in the banking industry. Thus, it is likely that blockholders' incentives are affected by regulation, implying that block ownership of firms in the banking industry should be less concentrated than it is in unregulated environments.

3. Sample Construction and Characteristics

Our banking sample consists of thirty-five publicly traded bank holding companies that were among the 200 largest top-tier BHCs in terms of book value of assets for each year between 1986 and 1996. We collected additional data on these firms for 1997-99; however, the number of firms dropped to thirty-two during those years due to merger and acquisition activity. For 1997, 1998, and 1999, our sample consists of

[19] For example, the proposal to adopt risk-based deposit insurance for commercial banks in 1993 initially received significant opposition from the banking community. The view was that analysts might be able to back out the value of a bank's CAMEL rating by determining capital ratios and FDIC insurance premiums from its income statement. Thus, investors potentially would become more aware of a bank's risk. Opponents argued that riskier banks in need of equity capital may have difficulty issuing equity (see Cornett, Mehran, and Tehranian [1998a] for more information).

thirty-four, thirty-three, and thirty-two institutions, respectively. The requirement that the firm be publicly traded makes it possible to collect data on internal governance characteristics from proxy statements filed with the Securities and Exchange Commission. The governance data are measured on the date of the proxy at the beginning of the corresponding fiscal year. We adjust our data to account for the fact that proxies disclose some governance characteristics for the previous fiscal year and others for the following fiscal year. We collected balance-sheet data from fourth-quarter Consolidated Financial Statements for Bank Holding Companies (Form FR Y-9C) from the Federal Reserve Board and stock price and return data from the Center for Research in Security Prices.

The requirement that the firms be among the 200 largest each year during 1986-96 means that our findings could be different for smaller bank holding companies. However, the requirement was imposed to study the role of governance in firms where the potential impact of poor governance could be serious. The assets of our sample of BHCs constitute a large fraction of total industry assets (32.3 percent of all top-tier BHC assets in 1990). Reflecting the increasing consolidation in the industry, this number rose to 50.75 percent in 1998. Thus, poor governance of the sample firms could have potentially serious effects on the banking industry.

Our requirement of a minimum of ten years of data on each firm may raise concerns about sample selection (or survivor-ship) bias; surviving firms in the sample have systematically different, perhaps superior, governance than do delisted BHCs.[20]

[20] However, Boyd and Runkle (1993) argue that regulators rarely liquidate large distressed banks or BHCs. In the event of reorganization via acquisition by another bank, the failing bank often, but not always, loses its identity. In some cases, the management of the distressed firm is removed (changes in governance) but its identity

However, since the qualitative nature of our comparisons between BHCs and manufacturing firms holds for the entire sample as well as for individual years, we do not believe that survivorship bias affects our results. In addition, as we discuss, other studies that have examined subsets of the variables that we analyze find similar results using other sample selection procedures (see, for example, Houston and James [1995] and Booth, Cornett, and Tehranian [2002]).[21]

Table 1 presents the distribution of means of selected financial variables for our sample BHCs. Perhaps the most important trend evident is the increasing firm size, measured by the book value of assets, which reflects the heightened consolidation in the industry (see also Stiroh [2000]). An average firm in our sample had $18.7 billion (median: $9.1 billion) of assets at the end 1986, rising to $91.5 billion (median: $43.4 billion) in 1999. Bank primary capital has also increased, from 7 percent in 1986 to 8.5 percent in 1999.[22] The increase is consistent with revisions to capital adequacy

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continues. The authors argue that this minimizes potential survivorship bias in most samples of banking firms.

[21] To address additional concerns about survivorship bias, we also examined the stock price performance of our sample firms relative to several benchmarks of publicly traded BHCs from 1986 to 1999. In each case, we excluded the sample firms from the benchmark. Over the 1986-99 period, the monthly raw stock returns of our BHC sample very closely matched the returns of benchmark portfolios, both on an equal- and value-weighted return basis, and the *t*-tests for the difference between portfolio returns on the sample and on the benchmark were not statistically significant. Because our sample firms do not outperform or underperform several benchmark bank portfolios in terms of stock returns, we argue that the observed characteristics of our sample BHCs' governance structures are not systematically different from those of other bank holding companies.

[22] Bank primary capital is measured as the sum of the book value of common stock, preferred stock, surplus, undivided profits, capital reserves, mandatory convertible debt, loan and lease loss reserves, and minority interests in consolidated subsidiaries minus intangible assets.

standards and the general upward trend in capital accumulation by banks in the 1990s (see Estrella [2002] and Flannery and Rangan [2002]). Tobin's Q and return on assets, as proxies for performance, have also exhibited an upward trend since 1990, consistent with the industry trend (see Stiroh [2000]).[23]

4. Findings from the Corporate Governance Variables

Table 2 provides summary statistics for selected variables that describe the governance structures of our sample BHCs; Table 3 compares the variables' means and medians with those in comparison samples of manufacturing firms. We emphasize that our analysis and comparison are not regression-based; rather, our purpose is to compile a series of descriptive statistics in one place. We choose manufacturing firms for comparison because their governance structures have been analyzed more extensively by researchers than those of firms in other industries; data availability was also a determining factor.

4.1. Board Size and Composition

As Table 2 shows, an average of eighteen directors make up each BHC board, although there is a wide distribution of board size in the sample (a minimum of eight directors and a maximum of thirty-six). Over the sample period, it is apparent that banking firm boards are becoming smaller. An average board in 1999 had 17 directors (median: 18), down from 20.3 in 1986 (median: 20). The trend is consistent with the

[23] Tobin's Q is measured as (book value of assets plus market value of equity minus book value of equity)/book value of assets. Return on assets is measured as net income/book value of assets.

finding of Adams and Mehran (2002), who examine BHC board size over the 1959-99 period. As Table 3 indicates, an average S&P manufacturing firm had six fewer directors than an average BHC did over the sample period. Booth, Cornett, and Tehranian (2002) also provide evidence that banks have larger boards, using a sample of the 100 largest BHCs and the 100 largest manufacturing firms in 1999.

There are at least three plausible reasons why BHCs have larger boards. First, studies have shown that board size is positively correlated with firm size (see, for example, Hermalin and Weisbach [2003], Yermack [1996], and Baker and Gompers [2000]), and BHCs are larger than manufacturing firms in terms of asset size.[24] Second, BHC boards may be larger because of their complex organizational structure. BHCs may own or control many subsidiary banks, each of which has its own board. Coordination among these different boards may affect the structure of the BHC board, for instance, because of the need to include directors from the subsidiary boards on the BHC board (see Adams and Mehran [2002] for a discussion of this argument). Third, as we have observed, the nature of acquisitions (hostile versus friendly) could play a role in maintaining the large size of an average BHC board. An active level of consolidation among our sample firms—and in the banking industry during our sample period—could account for the larger boards of our BHCs. Consolidation in the banking industry alone, however, cannot explain why bank boards are larger. Adams and Mehran (2002) show that BHC board size appears to be large relative to manufacturing board size even before

[24] For example, mean assets from a 1992-99 sample of 336 unregulated firms in the 1998 *Fortune* 500 were $11.08 billion (Adams, Almeida, and Ferreira 2002), compared with $40.9 billion in our 1986-99 sample.

the post-1986 wave of consolidation. In addition, it is difficult to reconcile the increase in consolidation with the downward trend in BHC board size over time.

According to Table 2, the mean percentage of outside directors in the sample is 68.7 percent (median: 71.4 percent).[25] Table 3 shows that the percentage of outside directors in BHCs is significantly larger than in S&P manufacturing firms, where the mean percentage is 60.6 percent (median: 66.7 percent).[26] The mean percentage of outside and "gray" directors in 1999, 81.6 percent (median: 83.3 percent), is almost the same as what is reported in Booth, Cornett, and Tehranian (2002) for the 100 largest BHCs. The authors also find that the mean and median percentages of outside directors are higher for commercial banks relative to the top 100 manufacturing firms in 1999.

It should be noted that certain regulations at the bank level, as opposed to the holding company level, could constrain board structure with regard to size and

[25] We define an outside director as a board member who is not a top executive, a retired executive, a former executive, a relative of the CEO or the chairperson of the board, or an outside corporate lawyer employed by the firm at any point during our sample period. Although this definition of an outside director has been used extensively in the financial economics literature (see, for example, Weisbach [1988]), it is narrower than the banking regulatory definition in many states. For instance, the New York State Banking Department considers an outsider of a state bank's board to include a current officer or employee of the bank holding company and any affiliate of the bank. Directors who are neither insiders—that is, executives of the BHC—nor outsiders according to our definition are considered to be "gray."

[26] On the one hand, the high proportion of outsiders in our sample is surprising because our classification of who is an independent outsider is stricter than it is in other studies: a director is not an outsider if he was an officer or had any business relationship with the BHC in any of the fourteen years of the sample. In contrast, most cross-sectional studies can only classify directors based on current employee status or business relationships. On the other hand, because these are banking firms, the proportion of outsiders may overstate the board's true independence, as lending relationships between the directors and/or the directors' employers and the BHC or its subsidiaries exist but are not disclosed in proxies. Unfortunately, it is difficult to obtain data on these lending relationships, so we cannot adjust our classification of directors accordingly.

composition. For example, the board of a national bank (regulated and supervised by the OCC) must consist of at least five, but no more than twenty-five, members (the comptroller can exempt the national bank from the twenty-five-member limit). Each state member bank, supervised by the Federal Reserve, is required to be managed by a board. Board size is also regulated separately. For example, New York State banks are required to have a board of no less than seven directors and no more than thirty (with capital stock, surplus, and divided profits in excess of $50 million). Different states may also have requirements on board composition at the bank level; for example, New York State's regulation requires two-thirds of the directors of each state bank to be outsiders.

Since such regulatory restrictions generally apply only to board structure at the bank level and not the holding company level, which is the focus of this study, the regulatory environment alone does not explain BHC board size and composition. However, regulation may have an indirect effect on the structure of BHC boards to the extent that it is influenced by the structure of the boards of the BHC's lead bank and other subsidiary banks (see, for example, Adams and Mehran [2002]).

4.2. Board Activity

Table 2 provides information on board activity and committee structure. An average BHC in the sample meets 8.5 times per year (median: 8). However, there has been a downward trend in this number. As shown in Table 3, BHC boards meet slightly more frequently than boards of manufacturing firms (although only the median differences are significant at the 10 percent level).

The number of annual board meetings for a bank, rather than a holding company, is regulated at the state level. For example, during our sample period, New York State member banks were required to have a minimum of ten meetings per year (two conference call meetings were allowed). State regulations on the number of meetings may influence the bank's choice of directors, since potential directors might have a better chance of being nominated if they live within proximity to the bank.[27]

BHCs have on average 4.4 board committees (median: 4). This figure has increased by one over the sample period. In addition, the average number of directors per committee has decreased over time, from 5.8 in 1986 to 3.9 in 1999, likely due to the decline in BHC board size, which is not shown in the tables. Moreover, the average BHC had more committees than did the average manufacturing firm (Table 3), and the difference was statistically significant.

4.3. CEO Compensation

The mean and median ratios of the value of new option grants to salary plus bonuses from 1992 to 1999 are presented in Table 2. Note that the sum of salary, bonuses, and stock options is more than 90 percent of an average CEO's total compensation (Murphy [1999]). Note also that although the mean and median for salary and bonuses are rising (not reported here), growth in the value of options granted to CEOs is significantly higher than that of salary and bonuses. By 1999, the mean ratio of the value of stock options to salary plus bonuses is 1.65 (median: 1.22).

[27] The majority of directors of national banks must be selected from a certain proximity to the bank's head office (unless the residency requirement is waived by the comptroller).

The increased use of stock options in executive compensation packages in banking follows the pattern of other industries, even though the growth and level of stock option use are significantly lower than in manufacturing firms. Table 3 compares the ratio of the value of granted stock options to salary plus bonuses for the fifty largest S&P 500 manufacturing firms in terms of assets with our sample of BHCs over 1992-99. The value of options granted to CEOs of manufacturing firms on average is 60 percent larger than the sum of base salary and bonuses; however, this does not hold for the chief executives of BHCs.

One potential explanation for the lower reliance on stock options in the banking industry is found in Smith and Watts (1992), who show that low-growth industries rely less on stock-based compensation (also see Mehran [1992]). Smith and Watts suggest that boards can observe, monitor, and evaluate the actions of CEOs of firms and industries with low-growth opportunities much easier than they can in firms or industries with high-growth opportunities. Thus, boards in such industries should rely more on fixed rather than on stock-based compensation.

Based on several proxies for growth opportunities advanced in the literature— such as Tobin's Q, market-to-book ratio, research-and-development-to-sales ratio, and volatility— BHCs can be considered to have the characteristics of low-growth firms. The average Tobin's Q in our BHC sample is almost 1 (Table 2), which is far less than the Q-ratios reported in unregulated business environments.[28] It is also well documented that banking industry volatility, measured by the standard deviation of daily or monthly

[28] It is not unusual for low-growth industries to experience waves of consolidation. Other industries that have experienced this phenomenon, besides banking, are the oil industry in the 1970s and the defense industry in the late 1980s.

returns, is significantly smaller than volatility in samples of manufacturing firms (see Campbell et al. [2001], and Table 3). In addition to being a characteristic of low-growth firms, low volatility may make it easier for banking firm boards to monitor CEO actions.[29]

[29] We emphasize that the board *may have* less difficulty monitoring the actions of BHC chief executives than those of manufacturing firm CEOs. Our argument is not about monitoring by the capital markets. We contend that bank boards, like other boards, have private information that is unavailable to the markets. In addition, bank boards have access to regulators' examination reports. Whether the capital markets can do a better job of monitoring BHCs compared with firms in other industries has attracted researchers' attention in the past few years. For example, Morgan (2002), using ratings by bond analysts, finds much greater dispersion in issues of BHCs relative to those of other firms. He interprets this finding in support of "opaqueness" of bank assets. Flannery, Kwan, and Nimalendran (2002), using micro-structure data and dispersion of stock analysts, conclude that these analysts have no more or less ability to monitor BHCs versus nonfinancial firms in the S&P 500. We argue that, although both sets of results are highly useful, a definitive conclusion on the "opaqueness" of BHC assets versus assets of other firms is premature. First, both studies are silent on the lessons of capital market studies on corporate decisions or events. For example, it has been shown that market reaction to equity issues by manufacturing firms is around -3.0 percent. Cornett, Mehran, and Tehranian (1998b) document a much smaller reaction, nearly -1.7 percent, for BHCs issuing equity. They also document a reaction not statistically different from zero for BHCs issuing equity that have low capital relative to minimum regulatory capital. The simplest interpretation of this result is that the announcement of an equity issue is less newsworthy to the market or that the market anticipated the event. This is particularly true in cases of forced equity issue. Moreover, it has been shown that stock market reaction to share repurchase announcements by BHCs is not significant (see, for example, Billingsley et al. [1989]), in contrast to a 3.5 percent positive reaction by unregulated firms (see, for example, Rau and Vermaelen [2002]). Second, we document that BHC stock-return volatility is lower than that of manufacturing firms. One can decompose volatility into two components: asset volatility and leverage volatility. It is evident that banks are highly leveraged and a significant part of their volatility is due to leverage. That being said, the volatility of their assets should be even much lower relative, for example, to the asset volatility of manufacturing firms. Lower asset volatility makes it easier for the market, as well as the board, to evaluate the BHC. Given the significantly smaller announcement returns on corporate events in the banking industry as well as the lower volatility—and given the limited research on "opaqueness"—we are unable to make definitive statements about whether BHCs are more "opaque" or less "opaque" than firms in other industries. This remains an important area for future research.

Finally, given the low stock-return volatility in the banking industry, all else equals, the value of stock options in banks will be lower. To compensate the CEO for a given dollar value of granted options, the bank has to give a larger number of options relative to those given by an average manufacturing firm. This can have an adverse effect on the bank's share price because it produces a larger dilution effect.[30] Thus, it may be more difficult for a bank than for a manufacturing firm to award a given amount of option compensation to its top executives.

4.4. CEO Ownership

As reported in Table 2, an average CEO in our sample owns 2.3 percent of the firm (median: 0.4 percent). The share is less than the CEO ownership in manufacturing firms (Table 3). This result is consistent with the findings of Houston and James (1995), as well as those of Booth, Cornett, and Tehranian (2002), who document that the mean percentage of stock holdings by officers and inside directors of manufacturing firms is 8.97 percent, compared with 5.77 percent in BHCs.

CEO ownership across BHCs and manufacturing firms may differ for several reasons. One can argue that the smaller flow of options to bank holding company CEOs leads to smaller ownership (we do not report the number of options granted to CEOs).[31] Also, Demsetz and Lehn (1985) contend that in noisier environments (for example, proxied by the standard deviation of stock returns), monitoring costs are very high. In

[30] See Core, Guay, and Kothari (1999) for more discussion.

[31] However, the effect of options on ownership may not be large; Ofek and Yermack (2000) show that when top executives exercise their options to acquire stock, they sell the shares they already own.

this case, the authors expect managerial ownership to be more concentrated in order to reduce agency problems. Because our sample BHCs experience relatively low volatility, monitoring costs may be lower for them than for manufacturing firms, which may make large ownership concentration unnecessary. Furthermore, Demsetz and Lehn argue that regulators may substitute for some of the monitoring functions of ownership.

There may also be a mechanical issue influencing the percentage of ownership. Since BHCs are significantly more leveraged and have more assets than manufacturing firms, ownership levels across the two types of firms may not be comparable.[32] An important insight of Modigliani and Miller (1963) in a world with corporate taxes is that the cash-flow claims of an ownership stake in an all-equity firm differ from those associated with the same percentage of equity ownership of an identical firm with a positive debt level. In addition, there is a documented inverse relationship between size, typically measured by the book value of assets, and the percentage of equity held by the CEO (see, for example, Demsetz and Lehn [1985]).

To avoid this mechanical issue, it is also useful to examine differences in the market value of CEO holdings across BHCs and manufacturing firms. Accordingly, we measure the market value of the direct equity stake of an average CEO in the top fifty S&P 500 manufacturing firms and compare it with the CEO equity stake market value of our sample BHCs (Table 3). On average, each BHC chief executive has nearly $28 million invested in his firm, as opposed to $133.8 million for each CEO of a manufacturing firm, although these results are skewed (the median BHC chief executive

[32] For example, the largest BHC in our sample in 1999 had a book value of assets that was 2.2 times greater than that of the largest manufacturing firm. However, the same BHC's market value fell short of the manufacturing firm's market value in 1999.

has $11.9 million of investment, compared with $9.6 million for the manufacturing firm CEO). Similarly, Houston and James (1995) report that nonbank CEOs in their sample have on average nearly eight times more invested in their firms than banking firm CEOs. It should be noted that their sample covers nonbanking firms, unlike ours, which includes only manufacturing firms. Therefore, CEOs of manufacturing firms on average have more invested in the equity of their firms than do chief executives of BHCs. Moreover, we note that CEO pay in BHCs is not tied to performance as much as it is in manufacturing firms. These observations suggest that CEOs in these two industries have different incentive structures.

4.5. Block Ownership

To compile our statistics on block ownership, we rely on the CDA/Spectrum Institutional (13f) Holdings Database of Thomson Financial. Institutional shareholding is our proxy for monitoring by blockholders. However, the corporate governance literature also emphasizes the importance of the identity of blockholders and individuals, as opposed to just the size of institutional holdings (see Holderness [2003]).[33] Accordingly, we first examined the identity of the top three institutions holding a share of each BHC for each year in our sample.[34] We found that bank-affiliated institutions held a substantial amount of the shares of BHCs. For example, Barclays Bank PLC held

[33] We do not report holdings by individual blockholders, as BHC proxy statements indicate that these individuals were generally affiliated with the management of the BHCs in the sample.

[34] We found an upward trend in the number of BHCs held by institutions over time: in 1986, only nineteen (or 54.3 percent) BHCs had institutional holdings; in 1999, the figure had increased to twenty-nine (or 87.5 percent).

3.4 percent and Amsouth Bancorpation held 2.2 percent of the shares of Amsouth Bancorporation in 1999. Further examination of the data and discussions with bank-affiliated institutions revealed that such holdings are often the result of asset management activities, trust activities, or custodial activities.[35] Bank-affiliated institutions are unlikely to monitor the BHC over the course of these activities; therefore, to construct our summary statistics on institutional holders, we deleted all bank-affiliated institutions from the list of institutional holders of our BHCs in all years. We also examined the identity of institutions holding shares of manufacturing firms; however, we found very few cases of blockholders that were affiliated with manufacturing firms (for example, because the firm set up a foundation).[36]

Table 4 provides descriptive statistics on nonaffiliated institutional share holdings of our sample BHCs as well as of the S&P 500 manufacturing firms from 1986 to 1999. Total institutional holdings were on average between 37 percent and 47 percent of the shares of a BHC each year, with a sample mean of 42.4 percent (median: 42.7 percent)—far less than the holdings in manufacturing firms. As the table shows, there has been little change in mean holdings in BHCs over time. For example, institutions held on average 40.7 percent of each BHC in 1986 and 40.1 percent in 1996.[37] However, the

[35] For example, Barclays Bank PLC's holdings of Amsouth Bancorporation in 1999 were retained in a custodial capacity and Amsouth's holdings of its own shares were retained by a subsidiary bank as a pension manager.

[36] We examined the list of institutional holders of our sample of manufacturing firms from 1997 to 1999, but found only nineteen affiliated institutions to delete; therefore, we did not extend this procedure to the previous years. Note that since our deletion procedure is based on institutional names, we are likely to eliminate fewer institutions than necessary both from the manufacturing firms and from the BHCs.

[37] These numbers increased slightly in the following years. However, the rise may be due to some BHCs dropping out of our sample in 1997-99.

number of institutions holding shares of each BHC has increased from nearly 108 in 1986 to 230 in 1996 and to 363 in 1999 (or 236 percent), suggesting that the size of an individual institutional holding has decreased over time. Panel A of Table 4 also indicates that the number of institutions that invest in manufacturing firms was larger in every year of the sample.

Panel B of Table 4 presents the statistics for the entire sample. On average, 535 institutions held shares of each manufacturing firm in the S&P 500, versus 204 for BHCs. Institutions held 54.6 percent of each manufacturing firm, compared with 42.4 percent of each BHC; the difference was statistically significant. Because the literature emphasizes that top holders may have greater incentives to monitor the firm, we also calculated the top holding for each group. On average, we found that top holders held 5.2 percent and 5.4 percent of each BHC and manufacturing firm, respectively; the difference, however, was not statistically significant.

5. Conclusions and Directions for Future Research

Jensen and Meckling (1976) argue that board structure, ownership structure, and compensation structure are determined by one another as well as by a range of variables, such as risk, real and financial assets, cash flow, firm size, and regulation. They suggest that these variables also influence a firm's conduct and performance. Although other studies have examined these potentially complex governance relationships in unregulated industries, few have examined them in the context of a regulated environment. This article extends the current literature by comparing aspects of the corporate governance of

regulated institutions—bank holding companies—with aspects of the governance of unregulated manufacturing firms.

We find that BHC boards are larger than those of manufacturing firms, although they have been declining in size over time.[38] BHC boards also have slightly more outside directors. These differences are very likely the outcome of BHC size and organizational structure, the regulatory framework, and constraints on the ability of BHCs to engage in hostile acquisitions. Thus, normative statements about either board size or board composition that do not take into account banking industry differences are potentially misleading. For example, Adams and Mehran (2002) show that in contrast to findings for nonfinancial firms, larger BHC boards on average are not value-decreasing, and that board composition is unrelated to BHC performance. The fact that board composition is not positively correlated with performance seems surprising, since bank supervisors share examination results with the boards of directors (and may visit the boards of banks that perform poorly and are low in capital). However, this lack of correlation is consistent with the theory that as a result of regulatory requirements, directors do not emphasize value maximization over the safety and soundness of the institution. Therefore, to understand how BHC governance relates to performance, it is important to also understand what BHCs expect from their outside directors, what the regulatory mandates are, and how outside directors balance these different expectations.

We also find that BHC boards have more committees and meet slightly more frequently than manufacturing firm boards. It is difficult to speculate on the costs and

[38] Wu (2000) documents that the size of manufacturing firm boards is declining over time; thus, this does not mean that the gap between BHC board size and manufacturing board size is narrowing.

benefits to BHCs of having more committees.[39] However, one can argue that regulations on the number of meetings may influence the bank's choice of directors; thus, regulations can potentially affect the quality of directors willing to serve on these boards.[40]

In addition, BHC boards are found to rely less on long-term incentive-based compensation, such as stock options, in their CEO compensation packages; CEO ownership, in terms of percentage and market value, is also found to be smaller in BHCs. Since observed compensation packages and ownership are the outcome of a contracting process that takes into account industry structure as well as regulation, we should not expect CEO compensation structures to become similar to those of manufacturing firms in the near future.

Finally, fewer institutions hold shares of our sample BHCs relative to manufacturing firms, and institutions hold a smaller percentage of a BHC's equity. The question is whether institutions that do hold BHC stock are active in the governance of BHCs. We are unable to answer this question now since there have been very few documented cases of institutions taking a reactive or proactive role in the governance of banking firms. It is possible that institutional investors prefer to resolve banking firms' governance issues privately (Carleton, Nelson, and Weisbach 1998), so as to avoid public announcements, which may also be destabilizing. Or, institutions may expect regulators

[39] In general, committees are shaped in part by factors external to the board, such as regulatory bodies, interest groups, labor unions, and shareholders (see Hayes, Mehran, and Schaefer [2000] for a discussion of committee structures).

[40] Future research could also consider the effect of directorship by insiders and outsiders on a director's ability to perform his responsibilities. Moreover, the potential negative effects of interlocks in the banking industry—that is, situations in which the CEO or chairman of a BHC is on the board of another company, while that other company's CEO or chairman is on the board of the BHC— warrant attention. Adams and Mehran (2003) discuss these and other governance issues not addressed in this article.

to resolve the governance problems of BHCs. This remains an important area for future research.

The systematic differences found between the governance of banking and manufacturing firms highlight the point that governance structures are in fact industry-specific. We suggest that these differences are due to the differences in the investment opportunities of BHCs and manufacturing firms as well as to the presence of regulation. Our findings imply that governance reforms, in order to be effective, could take industry differences into account.

More generally, our results raise the bigger question of whether the governance structure of banking firms is optimal, in the sense that it maximizes shareholder value subject to the constraints imposed on these firms. To answer this question, future research will have to examine the effect of governance structures in banking on measures of firm performance. One step in this direction has already been taken by Adams and Mehran (2002), whose findings suggest at a minimum that differences between the board structures of banking firms and manufacturing firms may not be a cause for concern.

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Table 1

Mean (and Median) of Selected Financial Variables by Year and Descriptive Statistics for the Sample.

Table 1 shows summary statistics for select financial variables, both on a yearly basis as well as for the entire sample, for our sample of BHCs from 1986-1999. All financial variables were collected from the fourth quarter *Consolidated Financial Statements for Bank Holding Companies* (Form FR Y-9C) from the Federal Reserve Board, except monthly stock returns, which were collected from CRSP. Sample data is not available for all firms for all years because of acquisitions of sample banks in 1997-1999. During 1986-1996 our sample consists of 35 BHCs. In 1997, 1998 and 1999 our sample consists of 34, 33 and 32 institutions, respectively. We calculate a measure of bank capital, its primary capital ratio, which we define as the sum of the book value of common stock, perpetual preferred stock, surplus, undivided profits, capital reserves, mandatory convertible debt, loan and lease loss reserves, and minority interests in consolidated subsidiaries minus intangible assets. Return on assets (ROA) is calculated as the ratio of net income to book value of assets. Our measure of Q is the ratio of the firm's market value to book value of its assets. The firm's market value is calculated as book value of assets minus book value of equity plus market value of equity. Volatility of stock return is measured as the standard deviation of the monthly returns on the stock price for the given year.

	Yearly Mean and Median (in Parentheses) of Selected Financial Variables														Descriptive Statistics 1986-1999			
Variables	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Mean	Median	Min	Max
Book value of assets (in billions of $)	18.7 (9.1)	19.9 (9.3)	22.3 (10.9)	25.0 (12.2)	26.5 (13.8)	29.0 (15.0)	31.3 (20.8)	37.9 (21.5)	41.6 (21.8)	47.0 (31.9)	51.6 (32.5)	59.3 (35.2)	82.9 (39.1)	91.5 (43.4)	40.9	22.1	3.0	632.6
% Primary capital ratio	7.0 (6.9)	7.7 (7.6)	7.7 (7.6)	7.6 (7.6)	7.7 (7.8)	8.2 (8.2)	8.7 (8.7)	8.9 (8.8)	8.6 (8.3)	8.5 (8.3)	8.6 (8.7)	8.6 (8.4)	8.3 (8.2)	8.5 (8.6)	8.2	8.0	3.0	14.9
% Return on assets	0.9 (0.9)	0.5 (0.7)	0.9 (1.0)	0.7 (0.9)	0.6 (0.7)	0.6 (0.8)	0.8 (1.0)	1.0 (1.1)	1.1 (1.1)	1.2 (1.1)	1.2 (1.2)	1.2 (1.2)	1.2 (1.2)	1.2 (1.3)	0.9	1.0	-2.8	2.3
% Return on equity	14.3 (14.8)	6.4 (11.9)	14.5 (15.5)	9.4 (13.6)	8.7 (12.9)	6.6 (12.0)	11.0 (14.1)	13.1 (14.2)	15.0 (15.2)	14.7 (15.2)	15.2 (15.8)	15.5 (15.7)	14.8 (15.5)	16.1 (17.7)	12.5	14.7	-82.3	33.8
Q ratio	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)	1.1 (1.1)	1.1 (1.1)	1.2 (1.2)	1.2 (1.1)	1.1 (1.1)	1.1	1.0	0.9	1.5
% Stock return	17.0 (17.9)	-10.8 (-8.6)	23.3 (19.9)	19.2 (19.0)	-21.3 (-12.9)	75.3 (84.8)	43.1 (32.5)	4.6 (1.8)	-3.5 (-2.9)	55.6 (54.4)	33.2 (32.7)	62.2 (64.8)	7.6 (5.1)	-17.5 (-19.8)	21.0	16.7	-67.7	139.8
% Monthly volatility of stock return	8.5 (8.4)	9.9 (9.8)	6.3 (6.5)	6.2 (5.5)	10.6 (10.3)	9.6 (8.0)	7.2 (5.7)	6.6 (5.6)	5.9 (5.7)	5.9 (5.8)	5.4 (5.3)	7.1 (7.0)	10.5 (10.1)	8.8 (8.3)	7.7	7.1	1.2	22.3

Table 2

Mean (and Median) of Corporate Governance Variables by Year and Descriptive Statistics for the Sample.

Table 2 shows summary statistics for select governance variables, both on a yearly basis as well as for the entire sample, for our sample of BHCs from 1986-1999. Sample data is not available for all firms for all years because of missing data (primarily due to missing proxy statements) and because of acquisitions of sample banks in 1997-1999. During 1986-1996 our sample consists of 35 BHCs. In 1997, 1998 and 1999 our sample consists of 34, 33 and 32 institutions, respectively. Data on the governance characteristics is collected from proxy statements filed with the SEC. We consider a director to be an insider if he works for the firm and an outsider if he is neither a top executive, a retired executive, a former executive, a relative of the CEO or chairperson or an outside lawyer employed by the firm at any point in our sample. All other directors are gray. Compensation data is collected from Execucomp 2000 and is therefore only available from 1992-1999. The ownership data is collected from proxy statements filed with the SEC.

	Yearly Means and Medians (in Parentheses) of Governance Variables														Descriptive Statistics 1986-1999			
Variables	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Mean	Median	Min	Max
Board size	20.3 (20)	19.9 (19)	19.7 (19)	19.1 (19)	18.2 (18)	17.4 (16)	17.5 (18)	17.2 (17)	16.9 (15)	16.7 (17)	16.9 (17)	17.0 (16)	17.3 (17.5)	17.0 (18)	18.0	18.0	8.0	36.0
% Outside directors	69.9 (71.4)	71.6 (72.2)	71.2 (71.4)	68.9 (71.4)	70.2 (72.7)	68.5 (72.1)	67.5 (71.4)	66.8 (69.2)	66.7 (66.7)	66.2 (69.9)	67.4 (69.9)	65.7 (69.9)	67.2 (73.3)	75.1 (75.0)	68.7	71.4	10.0	95.2
% Outside and gray directors	80.1 (81.3)	80.2 (81.8)	80.1 (81.8)	78.7 (80.0)	80.1 (81.5)	79.9 (80)	80.4 (82.1)	80.0 (80.0)	80.2 (80.9)	80.0 (78.6)	80.0 (78.8)	79.2 (77.7)	79.6 (79.6)	81.6 (83.3)	80.0	81.0	44.4	95.2
Number of board meetings	8.5 (8)	8.6 (8)	8.5 (7)	8.5 (9)	8.6 (8)	9.3 (8.5)	9.0 (9)	9.3 (10)	8.7 (8)	8.4 (8)	8.1 (8)	8.0 (8)	7.2 (7)	7.5 (7)	8.5	8.0	2.0	24.0
Number of board committees	4.0 (4)	3.9 (4)	4.0 (4)	4.0 (4)	4.0 (4)	4.2 (4)	4.5 (4)	4.5 (5)	4.6 (5)	4.7 (5)	4.9 (5)	4.8 (5)	5.0 (5)	5.0 (5)	4.4	4.0	1.0	9.0
Value of granted options to sum of salary plus bonus	-- --	-- --	-- --	-- --	-- --	-- --	0.29 (0.20)	0.41 (0.36)	0.78 (0.58)	1.01 (0.43)	1.09 (0.52)	0.87 (0.51)	1.76 (0.97)	1.65 (1.22)	0.99	0.50	0.00	19.85
% Shares owned by CEO	2.2 (0.4)	2.0 (0.4)	2.2 (0.4)	2.1 (0.4)	2.1 (0.5)	2.3 (0.5)	2.3 (0.5)	2.2 (0.5)	2.2 (0.5)	2.2 (0.6)	2.4 (0.5)	2.4 (0.5)	2.5 (0.5)	3.1 (0.4)	2.3	0.4	0.0	49.4

Table 3

Statistical Comparisons of Descriptive Statistics on Select Governance and Financial Variables between BHCs and Manufacturing Firms Using a Variety of Data Sources on Manufacturing Firms

Table 3 shows statistical comparisons of select governance and financial variables for our sample of BHCs and for non-regulated, non-financial manufacturing firms during 1986-1999. Since no data set on manufacturing firms contains all governance variables of interest over the period 1986-1999, the data source used to construct summary statistics for manufacturing firms varies by the variable under consideration and may also vary by year. The corresponding data sources and data years are described in the footnotes of the table. For each variable, the BHC statistic is computed for the same sample period as the statistic for the manufacturing firms. One asterisk indicates the difference is significant at the 10%-level, two asterisks indicates the significance is at the 5%-level and three asterisks indicates the significance is at the 1%-level.

Variables	Bank Holding Companies	Manufacturing Firms (SIC 2000-3999)
Board Size[1]		
Mean	18.2	12.1***
Median	18.0	12.0***
% Outside Directors[1]		
Mean	68.7	60.6***
Median	71.4	66.7***
Meetings Per Year[2]		
Mean	7.9	7.6
Median	8.0	7.0*
Number of Committees[3]		
Mean	4.9	4.4***
Median	5.0	4.0***
Ratio of Value of Option Grant to Sum of Salary plus Bonus[4]		
Mean	1.0	1.6*
Median	0.5	0.8***
% CEO Ownership[5]		
Mean	2.3	2.9*
Median	0.4	0.3***
CEO Stake (in millions of $)[6]		
Mean	27.9	133.8**
Median	11.9	9.6**
Tobin's Q[7]		
Mean	1.1	1.9***
Median	1.0	1.5***
% Daily Stock Return Volatility[8]		
Mean	1.8	2.0***
Median	1.7	1.8***

[1]Manufacturing firm data is from Yermack (1995) for 1986-1991, Spencer Stuart S&P 100 for 1995-1996 and S&P 500 for 1997-1999. There are 2,394 firm years.
[2]Manufacturing firm data from 1995 and 1996 are from Spencer Stuart S&P 100 and 1997-1999 are from Spencer Stuart S&P 500. There are 724 firm years.
[3]Manufacturing firm data from 1995 and 1996 are from Spencer Stuart S&P 100 and 1997-1998 are from Spencer Stuart S&P 500. There are 510 firm years.
[4]Manufacturing firm data is from Execucomp 1992-1999 and is for the top 50 S&P 500 firms based on Total Assets. There are 400 manufacturing firm years.
[5]Manufacturing firm data from 1986-1991 is from Yermack (1995) and 1992-1999 is from Execucomp. There are 6, 613 manufacturing firm years.
[6]Manafacturing firm data is the top 50 S&P 500 manufacturing firms in terms of market value in Yermack (1995) for 1986-1991 and Execucomp for 1992-1999.
[7]Manufacturing firm data from 1986-1991 is from Yermack (1995) and 1992-1999 is from Compustat data for a sample of manufacturing firms in S&P 500. There are 4,017 firm years.
[8]Calculated as standard deviation of daily returns for a year, then averaged over 1986-1999. Manufacturing firm data includes manufacturers from Yermack (1995) over the period 1986-1991. The data from 1992-1999 is from Compustat for the S&P 500. There are 1,474 manufacturing firm years.

Table 4

Comparisons of Descriptive Statistics on Unaffiliated Institutional Holdings Data for BHCs and S&P 500 Firms 1986-1999.

Table 4 shows summary statistics and statistical comparisons of select unaffiliated institutional holding data for our sample of BHCs and for all non-regulated, non-financial S&P 500 firms from 1986-1999. All institutional holder data is from the CDA/Spectrum Institutional (13f) Holdings database of Thomson Financial. To construct data on unaffiliated institutional holders of BHCs, we examined the list of institutional holder names for each year and deleted bank-affiliated holders. We also deleted affiliated institutions (e.g. company foundations) in the S&P 500 sample during 1997-1999. Since we only found 19 cases of affiliated institutions during this period, we did not extend this procedure to the S&P 500 data for all years. BHC sample data is not available for all firms for all years because of acquisitions of sample banks in 1997-1999. During 1986-1996 our BHC sample consists of 35 BHCs. In 1997, 1998 and 1999 our BHC sample consists of 34, 33 and 32 institutions, respectively. Panel A shows yearly descriptive statistics, Panel B shows descriptive statistics for the entire 1986-1999 period. One asterisk indicates the difference is significant at the 10%-level, two asterisks indicates the significance is at the 5%-level and three asterisks indicates the significance is at the 1%-level.

Panel A: Yearly Comparisons of Select Institutional Holdings Data between our Sample of Bank Holding Companies and S&P 500 Manufacturing Firms

Variables	1986		1987		1988		1989		1990		1991		1992	
	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG
Mean Num of Institutions	107.9	375.6***	107.6	410.0***	129.1	417.4***	142.1	439.5***	127.8	451.3***	157.6	477.7***	184.6	498.5***
% Mean Holding	40.7	53.0***	37.2	53.4***	38.3	52.5***	40.8	52.0***	38.5	53.6***	43.2	53.4***	47.5	54.5**
% Median Holding	39.8	53.4***	31.6	53.2***	35.2	53.6***	37.8	53.0***	38.7	54.6***	48.3	54.8**	52.4	56.0*
% Mean Holding of Top Holder	5.5	5.0	4.9	5.6	4.8	5.0	5.1	5.0	5.6	5.3	5.8	5.0	6.0	5.1

Variables	1993		1994		1995		1996		1997		1998		1999	
	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG	BHC	MFG
Mean Num of Institutions	188.5	502.3***	186.1	511.0***	216.3	559.1***	230.2	586.7***	274.9	646.5***	318.4	736.1***	363.2	787.9***
% Mean Holding	44.9	55.3***	42.1	54.2***	42.6	55.0***	40.1	55.4***	43.9	56.4***	45.0	57.4***	45.5	56.7***
% Median Holding	48.3	56.4***	40.5	55.2***	37.9	55.9***	38.4	57.6***	42.9	57.7***	44.3	56.5***	45.0	58.5***
% Mean Holding of Top Holder	5.5	5.2	5.3	5.5	5.1	5.6	5.1	5.7	4.7	5.8	4.9	5.8	4.4	5.8**

Panel B: Comparisons of Descriptive Statistics on Institutional Holdings Data between the Sample of BHCs and S&P 500 Manufacturing Firms for 1986-1999

Variables	BHC	MFG
Mean Num of Institutions	204.2	535.4***
% Mean Holding	42.4	54.6***
% Median Holding	42.7	55.7***
% Mean Holding of Top Holder	5.2	5.4