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Regulatory Pressure and Bank Directors' Incentives to Attend Board Meetings

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ABSTRACT

The primary way in which directors obtain necessary information is by attending board meetings. Bank directors, in particular, are strongly urged to attend meetings by regulators. We investigate whether such pressure is sufficient for bank directors to have good attendance records. Using data on whether directors were named in proxy statements as attending fewer meetings than they were supposed to, we find that (1) bank directors appear to have worse attendance records than their counterparts in nonfinancial firms, (2) their attendance behavior is related to explicit and implicit incentives for attendance, and (3) past attendance records are not related to the likelihood a director departs the board. Our results suggest that explicit and implicit incentives may provide important complements to regulatory pressure in influencing director behavior.

I. INTRODUCTION

The sub-prime crisis and the subsequent collapse of the financial system have put bank directors under the spotlight. As an example of the current pressure on boards of banks, in February 2009, the UK Treasury commissioned Sir David Walker to conduct an independent review of corporate governance of the UK banking system. This review looks into board practices and structures, and the competences needed on bank boards. Such a response is an admission that the collapse of the banking system is a joint failure of both bank corporate governance and regulatory systems.

In this paper, we ask how corporate governance and regulation affect the way in which directors of publicly traded bank holding companies (BHCs) carry out their duties. We examine one aspect of their behavior, which is emphasized in numerous codes of conduct for bank directors, namely their attendance at board meetings. In order to fulfill their duties of care and loyalty, bank director guidelines emphasize the need for directors to obtain information. A key way in which directors are supposed to obtain information, participate in decision making and avoid personal liability is through their attendance at board

meetings. In the chapter on a director's individual responsibilities in the OCC's *Director's Book* (Office of the Comptroller of the Currency 1997), attendance at board and committee meetings is the first out of five things listed which a director can do to be diligent.[1] In fact, the book states (p. 70) that

> Directors who do not attend or participate in board and assigned committee meetings regularly are not fully meeting their responsibilities. Being present at those meetings is important to keeping informed about the bank's activities. The OCC considers this so fundamental that bank examiners may specifically criticize an individual director's unsatisfactory attendance.

Similarly, course material for the bank director's course 'Insights for Bank Directors' offered by the Federal Reserve's Center for Online Learning at the Federal Reserve Bank of St. Louis (2006) states that 'Active Participation Requires 100% Board and Committee Meeting Attendance.'

Given the emphasis on attendance at board meetings by regulators, we expect that bank directors should have excellent attendance behavior and that nonregulatory factors that may provide bank directors with explicit or implicit incentives to show up at board meetings will have little effect. To test this hypothesis, we examine bank director attendance patterns and the relationship between their attendance behavior and several factors proxying for their incentives to show up at meetings in a sample of 5707 directorships from 35 large US bank holding companies over the years 1986–1999.

The most direct explicit incentives for directors to attend board meetings are provided by compensation, in particular by board meeting fees. Each time a director attends a board meeting, he or she may receive a fee, which in our sample is on average $1128 (in 2000 dollars). This may not seem like much money to compensate directors of large banks. However, there is evidence that even such relatively small meeting fees are effective at influencing directors' attendance behavior. In a sample of S&P 1500 firms, Adams and Ferreira (2008) find that board meeting fees are roughly the same as in our sample, namely $1014 (in 2003 dollars), and they show that directors have fewer attendance problems when board meeting fees are higher. Their results are robust to controlling for selection problems and omitted variables, which suggests that meeting fees have a pure incentive effect in a sample of primarily nonfinancial firms.

We also investigate the impact of implicit incentives and director characteristics on meeting attendance. The less time a typical director has, the more likely he or she will have attendance problems. Thus, we expect the number of external directorships and a director's retirement status to affect his/her attendance. Moreover, group dynamics and composition may affect a typical director's behavior. In particular, free-riding behavior may be more likely to occur in larger boards and women may have different expectations concerning their

1 The other four things are requesting and reviewing meeting materials, asking questions and seeking explanations of problems, understanding audits and supervisory communications, and exercising independent judgment.

behavior than men (Adams and Ferreira 2009). Given the regulatory pressure for bank directors to show up at meetings, our goal is to examine whether such explicit and implicit incentives have any effect whatsoever on their attendance behavior.

Since data on directors' actual attendance at meetings are generally not available, we examine whether or not bank directors were named in proxy statements according to the Securities and Exchange Commission's (SEC) requirement that firms disclose the names of directors who attended fewer than 75% of the meetings they were supposed to attend during the previous fiscal year. Thus, we examine directors with relatively severe attendance problems.

We find that the frequency of BHC directorships with severe attendance problems is much higher in our sample than in nonbanking firms. Thus, regulatory pressure *per se* does not appear to be sufficient to induce directors to have good attendance records. In addition, explicit and implicit incentives for attendance appear to have economically significant effects on directors' attendance behavior. For example, our results suggest that an increase in board meeting fees by $1000 could reduce the likelihood of attendance problems by roughly 50%. Factors such as total compensation, board size and age also appear to be important influences on director behavior. On the other hand, a director's past attendance behavior has no influence on the likelihood that he leaves the board. Thus, it does not appear as if directors are disciplined for having attendance problems, at least not through retention decisions.

Our results may appear puzzling, given the official emphasis by regulators on board meetings and the additional liability risk that bank directors face. Directors of publicly traded BHCs are subject to more scrutiny than directors of publicly traded nonbank corporations. In addition to being accountable to shareholders and the securities and exchange regulators (such as the SEC in the United States), they are accountable to banking regulators. More than directors of nonfinancial institutions, they may be considered to be accountable to other stakeholders, such as depositors, because individual bank failures can have spillover effects on other banks. They may also face greater liability risk than directors of nonfinancial institutions. Especially following periods of bank failures, courts have held bank directors to a higher standard of duty of care than nonbank directors (Macey and O'Hara 2003). Bank regulators can impose higher civil money penalties on bank directors than the SEC can, and directors and officers (D&O) insurance for bank directors regularly includes exemptions denying coverage for violations of banking law.

Our findings highlight that there is a gap between what regulators ask for in terms of board oversight and the practice. To bridge the gap, it may be important for regulators to emphasize more clearly that board oversight is desirable and to recommend changes in directors' nonregulatory incentive structures.[2]

2 Our paper also contributes to an increasing literature on corporate board structure and behavior, which includes Gillan et al. (2006), Boone et al. (2007), Coles et al. (2008), Lehn et al. (2008), and Linck et al. (2008), among others.

Our paper is structured as follows. In section II, we discuss the factors we expect to affect the attendance behavior of bank directors. Section III describes the data. In section IV, we describe bank directors' attendance patterns and analyze factors associated with them in section V. In section VI, we conduct further analysis. We analyze the relation between directors' attendance records and the likelihood they leave the board in section VII. We conclude in section VIII.

II. FACTORS THAT AFFECT BANK DIRECTOR ATTENDANCE

A. Regulatory expectations

Although some might view regulatory oversight as a substitute for board monitoring, regulators themselves appear to view board oversight as an important complement to supervision. This fact is emphasized in an OCC (1988) study of 171 failed national banks, which noted that 60% had boards 'which either lacked necessary banking knowledge or were uninformed or passive in their supervision of the bank's affairs' (p. 5). Similarly, a GAO (US General Accounting Office 1989) review of all 185 banks that failed in 1987 identified inadequate board supervision as a contributing cause in 49% of failures and stated that 'Federal Regulators have often cited management-related problems as the leading cause of thrift and bank failures' (p. 11).

In order to adequately supervise management, the OCC maintains that regular attendance at board and committee meetings is essential (OCC's *Director's Book*, Office of the Comptroller of the Currency 1997). The FDIC's *Pocket Guide for Directors* (Federal Deposit Insurance Corporation 2003), whose guidelines have been endorsed by the Board of Governors of the Federal Reserve System, the OCC and the Office of Thrift Supervision, asserts that directors 'should attend board and assigned committee meetings regularly, . . .' The course material for the course 'Insights for Bank Directors' (Federal Reserve's Center for Online Learning at the Federal Reserve Bank of St. Louis 2006) states that 'it is critical that you and your fellow directors attend regular and special board and committee meetings if you are to be aware of where the bank stands' and the Federal Reserve Bank of Kansas City's *Basics for Bank Directors* (Myers 2001) stresses that bank examiners note attendance at board meetings to determine whether boards are meeting their oversight responsibility. Such regulatory (and legal) expectations are mirrored in directors' own interpretation of their duties. For example, the website of the largest banking trade organization in the United States, the American Banker's Association (2006), emphasizes that 'Board meetings represent the chief forum where bank directors exercise their most appropriate role – oversight.'

If bank directors are perceived as neglecting their duties, regulators have substantial power to punish them. The FDIC can hold directors personally liable for negligence and sue them for civil damages. According to the American Association of Bank Directors (2006), regulators have the power to freeze

directors' assets without a hearing, impose $1,000,000 a day civil fines on directors, require restitution from them even though they did not personally benefit from a transaction, and remove them from office without a hearing or evidence of wrongdoing. While we are unaware of any studies quantitatively comparing the liability risk faced by bank directors to that of other directors, it appears that they are more likely to be held liable than other directors.[3] Consistent with this idea, in an article in *Bank Director Magazine*, Krauss (2001) cites evidence that banks are the industry group with the highest chance of having a D&O claim filed against them. To fulfill regulatory expectations and to avoid being held liable, it appears that bank directors should have strong incentives to attend board meetings.

B. Nonregulatory incentives

Aside from the additional regulatory and legal pressure, bank directors face the same explicit and implicit incentives to attend board meetings as any other director does. We believe that bank directors will be intrinsically motivated to attend meetings. However, this intrinsic motivation may be complemented by other incentives. Thus, we expect bank directors to respond to the monetary incentives provided by board meeting fees. Similarly, total compensation could have an effect on attendance if, as in efficiency wage theories, directors who are paid more attend more meetings because they care more about retaining their directorships.

Other board characteristics, such as the number of board meetings and board size, will also plausibly affect a director's attendance. The larger the board, the more free-riding behavior may occur since it may be less important that a particular director is not present at a meeting. Individual characteristics may also influence directors' attendance. For example, as directors accumulate more directorships in other firms, their opportunity costs of attending meetings increases. Thus, we expect directors with more external directorships to have more attendance problems. On the other hand, since retired and older directors may have more time to devote to their board duties, we expect them to have fewer attendance problems. Adams and Ferreira (2009) argue that female directors may have different expectations concerning their behavior than men. Consistent with this argument, they show that female directors have fewer attendance problems than male directors. Thus, we also expect female bank directors to have fewer attendance problems than their male counterparts. Finally, because of reputational concerns, directors may care more about attending meetings in bigger, more well-known firms. Their incentives for attendance might also increase in more unpredictable and complex environments because board decisions may be more important there.

3 Black et al. (2003) examine the liability risk that outside directors of nonfinancial firms face.

III. DATA

Our sample of data on BHC directorships consists of financial data and board and director characteristics for a random sample of 35 publicly traded BHCs that were among the 200 largest (in terms of book value of assets) top-tier bank holding companies for each of the years 1986–1996. Data are available on these firms until fiscal year 1999; however, the number of firms drops from 35 to 32 after 1996 because of merger and acquisition activity. While the number of BHCs in the sample seems relatively small, our sample is representative of the industry. In 1990, for example, the assets of our sample BHCs constituted a large fraction of total industry assets, namely 32.3% of total top-tiered BHC assets. Reflecting increasing consolidation in the industry, this number rose to 50.75% in 1998.

We collected data on director attendance, director characteristics, and director compensation from all available proxy statements filed during 1987–2000. We exclude directors, such as executive or inside directors, from our sample who were not explicitly paid director compensation for their board service. Because directors are often appointed in the middle of the proxy year, we further restrict our sample to directors whose tenure is less than a year in a given fiscal year. This ensures that we consider only directors who are not artificially constrained from attending board meetings in our regressions. Our final sample consists of data on 5707 directorships (director-firm-year observations) in 35 BHCs over the years 1986–1999.

The Securities Exchange Act of 1934 requires corporations to list in their proxy statements the name of each incumbent director who during the previous fiscal year attended fewer than 75% of the aggregate of the total number of meetings of the board and the total number of meetings held by all board committees on which he served while a director. Although the SEC has a 75% threshold, the way in which attendance problems are reported across firms varies. Some firms may have a different threshold or they may report only attendance problems for board meetings. Regardless of the threshold (even if it is greater than 75%), we assume that if a firm reports the name of a director in the proxy, from the point of view of the firm, that director has an attendance problem. Thus, for each director in our sample, we collected information on whether he was named in the proxy in connection with his attendance behavior. From the proxies, we also obtained data on the number of other directorships of each director, the director's tenure as director, gender, age, and retirement status.

For each firm, we collected the following data on director compensation: board meeting fees, the value or number of shares and options granted directors on an annual basis, and the size of the annual retainer. To make the results comparable over time, we convert all director compensation variables into 2000 dollars using the consumer price index (CPI-U). Finally, we collected the number of regular board meetings during each fiscal year. All balance sheet data are from the fourth quarter Consolidated Financial Statements for Bank Holding Companies (Form FR Y-9C) from the Federal Reserve Board and stock price and return data are from CRSP.

In order to control for the portion of director compensation that, which is not related to meeting fees in our regressions, we need to estimate the value of the options granted to directors whenever this is not provided in the proxy.[4] We choose to value director options using a procedure that is as close as possible to ExecuComp's procedure for valuing options for the top 5 executives in each firm. To price the options, we use the Black–Scholes formula, assuming continuously paid dividends. We use data from CRSP to calculate the dividend yield and the standard deviation of the prior 60-month stock returns, our estimate of volatility. Expiration of director options usually occurs in 10 years; we use 7 years to be consistent with ExecuComp. We use the market price of shares at the end of the month of each firm's annual meeting at the beginning of the fiscal year as the exercise price of the options as well as the price of the stock.

Table 1 shows descriptive statistics for selected firm, board and director characteristics. The sample BHCs pay their directors to attend board meetings in 89.7% of years. The average meeting fee for regular board meetings is $1128 in 2000 dollars, with a maximum board meeting fee of $4548. The average board meeting fee in 2003 dollars in Adams and Ferreira's (2008) sample of S&P companies is similar, $1014, although the maximum is higher, $8000. However, the average fixed compensation each director receives, the sum of the cash annual retainer, and the value of annual share and option grants, is much lower than in Adams and Ferreira (2008), $30,497, as opposed to $86,028.

One reason for this difference may be that the board of the BHC often overlaps with the board of the BHC's lead bank, as well as with other subsidiaries. If directors are compensated for their work by both the lead bank and the BHC, the amount of compensation disclosed in the BHCs' proxy will tend to understate the total compensation they receive from the BHC. The case of City National provides an extreme example of how such understatement can occur. During fiscal 1992–1996, *all* cash fees paid to the board of the BHC, which was identical to the board of the lead bank, City National Bank, and whose meetings were generally held jointly with those of the bank, were paid by the bank, not the BHC. In 1999, the directors of Pacific Century, who were all also directors of Pacific Century's lead bank, the Bank of Hawaii, received the same annual retainer, $8638.66, from the bank as they did from the BHC. Since our sample BHCs disclose that they pay some compensation to BHC directors for sitting on lead or subsidiary bank boards in 58% of firm-years, director compensation numbers from BHC proxies may generally be understated. Also consistent with this idea, Scally and Crowe (2005) reported in *Bank Director Magazine*'s 2005 survey of bank director compensation that total cash compensation for directors of holding companies in 2004 averaged $13,724, while total cash compensation for lead bank directors averaged $13,347. However, this potential understatement does not appear to fully account for the differences in mean compensation between BHC directors and directors of other types of firms.

4 We do not include committee compensation in our estimates of directors' compensation since this portion may vary across directors depending on their committee memberships. The amount of data necessary to calculate this additional amount is thus substantial.

Table 1 Summary statistics

Variable	Obs	Mean	SD	Min	Max
Firm characteristics					
Ln(assets) (assets in millions)	480	16.945	1.056	14.916	20.265
Volatility	484	0.077	0.030	0.012	0.223
Board characteristics					
Board meeting fee in 2000 dollars (in thousands)	474	1.128	0.584	0.000	4.548
Director compensation (excluding meeting fees) in 2000 dollars (in thousands)	463	30.497	22.518	0.000	162.906
Total director compensation in 2000 dollars (in thousands)	463	39.869	24.701	0.000	176.851
# Board meetings	475	8.331	3.263	4	24
Board size	482	17.5	5.440	8	38
Director characteristics					
Attendance problem dummy	6920	0.094	0.292	0	1
# Other directorships	6270	1.526	1.653	0	14
Tenure as director in years	6882	8.417	6.529	1	51
Female dummy	6895	0.063	0.243	0	1
Director age in years	6878	59.757	7.213	26	91
Retired dummy	6883	0.133	0.339	0	1

This table shows summary statistics for select financial variables, director compensation, and board and director characteristics for our sample of BHCs for fiscal years 1986–1999. Financial variables are from the fourth quarter Consolidated Financial Statements for Bank Holding Companies (Form FR Y-9C) from the Federal Reserve Board and CRSP. Sample data are 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. Volatility of stock price is measured as the standard deviation of the monthly returns on the stock price for the given year. We excluded directors from our sample who were not paid director compensation for their board service as well as all directors appointed to the board in the current fiscal year, i.e. all directors whose tenure on the board in a given fiscal year is less than 1 year. Director Compensation (excluding Meeting Fees) is the sum of the cash annual retainer plus the value of annual share and option grants. Total Director Compensation is the sum of Director Compensation (excluding Meeting Fees) and # Board Meetings times Board Meeting Fee. Options were priced following the method in ExecuComp. We used the stock price at the end of the month of the firm's annual meeting at the beginning of each fiscal year to value stock and option grants during that fiscal year. All compensation numbers have been converted to 2000 dollars using the CPI-U. Attendance Problem Dummy is a dummy variable that is equal to one if the director was named in the proxy as having attendance problems. Retired Dummy is equal to 1 if the proxy indicated that the director retired from his primary occupation. The number of observations varies because of missing data.

The number of board meetings is 8.33, which is only slightly higher than the average in Vafeas' (1999) sample of large nonfinancial firms (7.45 meetings). Finally, fewer BHC directorships are held by women (6.3%) and retired directors (13.3%) than in Adams and Ferreira (2008) (10.76% and 22.73%, respectively).

IV. ABSENTEEISM IN BANK BOARDROOMS: THE BASIC FACTS

What is noticeable in our sample is that directors have many more attendance problems than in Adams and Ferreira's (2008) sample. Directors were named as having attendance problems in 267 (56.6%) firm-years and 652 (9.4%) director-firm-years. The corresponding numbers in Adams and Ferreira (2008) are 17.83% and 3.12%, respectively. The average number of BHC board members with attendance problems is 1.55, with a minimum of 0 and a maximum of 15. In Adams and Ferreira (2008), the average number of directors with attendance problems is 0.24, with a maximum of 6. Part of this poor attendance record may be attributable to the fact that BHC boards are much larger than in nonfinancial firms, so that it is less important for any given director to attend a meeting. However, even when we correct for board size, we find that the average fraction of directors on the board with attendance problems (7.66%) is much higher in our sample than in Adams and Ferreira (2008) (2.28%). Somewhat surprisingly, the increased regulatory pressure and liability risk BHC directors are subject to does not seem to induce them to have better attendance records than their counterparts in other types of firms. Given the regulatory emphasis on good attendance at board meetings, it is important to determine what *does* affect BHC directors' attendance behavior. We investigate this issue in the next section.

V. FACTORS ASSOCIATED WITH ATTENDANCE PROBLEMS

In this section, we use data at the director level to study the relationship between nonregulatory factors we expect might affect BHC directors' attendance and their attendance problems. Although our prior is that bank directors face so much regulatory pressure to attend meetings that such factors should have little effect on their behavior, the fact that attendance problems of bank directors are so high suggests that other factors might influence their behavior.

Our dependent variable is a dummy variable, which is equal to 1 if the proxy reports that the director had attendance problems and is 0 otherwise. In order to correctly interpret the results, one should keep in mind that the attendance problem dummy indicates those directors who experienced considerable attendance problems, i.e., they generally missed more than 25% of the meetings they were supposed to attend. Only when directors reach this threshold are firms required to disclose their names in the following year's proxy. Clearly, reputational concerns will cause directors to avoid crossing the threshold. As a consequence, it is surprising that the proportion of directorships reported as having attendance problems is relatively large: 9.4%. In addition, directors not named in proxies as having attendance problems may also skip meetings. Two of our sample firms report actual attendance data at the director level. Consistent with the idea that attendance problems are likely to be much more severe than our numbers suggest, the average proportion of directors of Bank of

America who missed board meetings during the period 1986 to 1999 is 35.7%, while the same statistic for directors of First Security is 25.5%. If we had actual attendance data for the entire sample, we might expect to find even stronger effects of these factors on attendance at individual meetings.

To examine factors associated with director attendance behavior, we estimate a probit model of the probability that a director experiences attendance problems as a function of the meeting fee paid by the firm and other factors. We use three sets of explanatory variables. The first set consists of board characteristics, such as total director compensation (excluding meeting fees), the number of board meetings, and board size.[5] Our second set consists of director characteristics that proxy for a director's opportunity cost of attending meetings, such as the number of other directorships, director tenure, the director's age, and the director's retirement status, as well as the director's gender. Our final set of variables consists of firm characteristics, such as the log of the book value of total assets to proxy for firm size and stock return volatility to proxy for uncertainty and complexity. In all specifications, we adjust our standard errors for group correlation within firms. We do not use firm fixed effects because our main explanatory variable (meeting fees) varies little over time for a given firm.[6]

Column I of Table 2 reports our estimates when we use the number of other directorships, total director compensation, the number of board meetings, and board size as our explanatory variables. In column II, we include the remaining director characteristics and firm level variables. We find that higher meeting fees are negatively related to the likelihood that a director will experience attendance problems. Consistent with the idea that the number of directorships raises a director's opportunity cost of time, the coefficient on the number of other directorships is positive, although not statistically significant. As expected, we find that compensation is negatively related to attendance problems, and is statistically significant at the 5% level in column II. More board meetings do not seem to be related to the likelihood that a director experiences attendance problems. On the other hand, board size is positively and highly significantly related to attendance. This is consistent with the idea that BHC boards are so large that free-riding problems are pervasive. Consistent with Adams and Ferreira (2009), female bank directors appear to have fewer attendance problems than male directors. Finally, a director's retirement status is quite significantly related to his attendance behavior.

5 While these variables plausibly affect director attendance, it is also possible that they are jointly determined with attendance. To the extent that this is true, the results should be viewed with care. However, excluding controls for board characteristics only marginally affects the results that follow.

6 Zhou (2001) points out that if the explanatory variable changes slowly over time (as do ownership and, in our case, meeting fees), firm fixed-effect regressions may fail to detect relationships in the data even when they exist. See also Hamermesh (2000) for a similar argument.

Table 2 Probit regressions of attendance problem dummy on board meeting fees

	Dependent variable: attendance problem dummy	
	I	II
Board meeting fee	–0.314***	–0.365***
	(–3.24)	(–2.61)
	[–0.049]	[–0.055]
# Other directorships	0.016	0.008
	(0.82)	(0.45)
Director compensation (excluding meeting fees)	–0.004	–0.007**
	(–1.37)	(–2.24)
# Board meetings	–0.020	–0.025
	(–1.36)	(–1.56)
Board size	0.053***	0.050***
	(3.05)	(3.91)
Tenure as director		0.002
		(0.25)
Female dummy		–0.266*
		(–1.76)
Director age		–0.007
		(–1.02)
Retired dummy		–0.373***
		(–3.69)
Ln(assets)		0.099
		(0.84)
Volatility		2.042
		(1.14)
Number of obs	5707	5679

The sample consists of data on directors who were on the boards of our sample BHCs for fiscal years 1986–1999. We excluded directors from our sample who were not paid director compensation for their board service as well as all directors appointed to the board in the current fiscal year. The dependent variable is a dummy variable that is equal to one if the director was named in the proxy as having attendance problems. Board Meeting Fee and Director Compensation (excluding Meeting Fees) are measured in 2000 dollars. Remaining sample characteristics are in Table 3. All specifications include year dummies. Standard errors are adjusted for potential heteroskedasticity and for group correlation within firms. Robust *z*-statistics are in parentheses. Marginal effects for Board Meeting Fee are reported in square brackets. The effect of the constant term is omitted. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

The relationships between attendance behavior and the various explanatory variables also appear to be economically significant. For example, in square brackets beneath the *z*-statistics on board meeting fees, we report the marginal effect of a change in meeting fees on the probability that a director experiences attendance problems, evaluated at the means of the data. These effects help us assess the economic significance of the role of meeting fees. They indicate that an increase in meeting fees by $1000 will decrease the probability that an average director has attendance problems by approximately 0.049 in column I and 0.055 in column II. Given that the fraction of directorships with attendance problems in the entire sample is 0.094, this amounts to a decrease in attendance

problems by roughly 48–55%. Thus, it seems that even moderate meeting fees can be highly effective at decreasing attendance problems. This sensitivity to meeting fees is much higher than that estimated in Adams and Ferreira (2008). While this suggests that bank directors may be more sensitive to monetary rewards than nonbank directors, there is a simpler explanation for this difference. The proportion of attendance problems is much higher in our sample, thus there is more room for improving attendance by means of meeting fees. Since regulators value bank director attendance, our evidence suggests they should consider the impact of nonregulatory factors on their behavior.

VI. FURTHER ANALYSIS

So far, we have shown that there is a statistically and economically significant relationship between various board and director characteristics and bank director attendance problems. If firms value director attendance, then our results suggest that they can improve their attendance by changing these characteristics. If meeting fees have a causal effect on director attendance, it is plausible that the easiest way of increasing attendance may be to increase meeting fees. Thus, we further analyze the relationship between meeting fees and bank director attendance to try to identify the mechanism driving this relationship and also to ensure that it is robust at the firm level. In section VI.A, we examine whether our results are driven primarily by some mechanism inducing causation from attendance problems to meeting fees. In section VI.B, we examine whether our results are driven by sorting of directors among firms. Finally, in section VI.C, we check whether our results hold at the firm level.

A. Do meeting fees have a causal impact on director attendance?

There is a plausible alternative hypothesis that could explain the negative correlation between meeting fees and attendance problems, which we call the *disguised extra pay* hypothesis. Suppose that directors anticipate whether they will have attendance problems or not. Since directors, to some extent, set their own compensation, the boards that expect few or no attendance problems may choose to pay higher meeting fees. Meeting fees may be justified to outsiders as a means of providing subsidies for attendance, but since no attendance problem is expected, meeting fees may really just represent a disguised increase in director pay.

If causation runs from attendance to meetings fees, and not the other way around, directors do not respond to explicit incentives; rather, they get paid because of their expectations about their behavior. We attempt to control for this possibility with instrumental variables methods. As we document below, we find that stories, that predict a causal relationship running from meeting fees to attendance still look reasonable after we control for the possibility of reverse causation.

A related but different explanation for this correlation concerns the selection of directors. Suppose again that directors know whether they are likely to experience attendance problems in the future or not. The ones who anticipate not having attendance problems will prefer to work for BHCs that pay high meeting fees, everything else constant. The ones who anticipate having attendance problems will choose to work for BHCs that pay no or low meeting fees and more fixed pay. Therefore, heterogeneity in meeting fees across banks will provide incentives for directors to select the banks they will work for. This sorting argument is similar to the direct incentives argument, except that it operates on a different margin: direct incentives affect behavior on the intensive margin while sorting affects behavior on the extensive margin. We attempt to directly test the sorting explanation in section VI.B.

To address the possibility that the negative correlation between meeting fees and attendance problems are driven by the *disguised extra pay* hypothesis, we proceed as follows. First, we restrict the sample to directors whose tenure on the board in a given fiscal year t is exactly 1 year. These directors are the least likely to have had any influence on determining meeting fees in that year. To estimate a causal effect of meeting fees on attendance, we instrument meeting fees in year t using meeting fees from year $t-2$ in this restricted sample. The reasoning is as follows. Meeting fees are likely to be autocorrelated over time because changes in compensation structure occur infrequently. However, directors with tenure of 1 year could not have played any role in determining the meeting fee in year $t-2$. Therefore, the meeting fee from $t-2$ should be a valid instrument for meeting fees in this restricted sample, i.e., it should be correlated with the meeting fees in year t but uncorrelated with the attendance problems of directors appointed in year $t-1$ during year t.[7]

When we restrict the sample in this manner, the number of usable observations drops dramatically (almost 10 times). This makes it more difficult to document a result; however, we believe that the results are nevertheless suggestive.

In Table 3, we report the first stage of our two-stage procedure using the fee from $t-2$ as an instrument for the meeting fee from year t. As expected, the $t-2$ fee is highly correlated with the fee in year t.

In Table 4, we compare ordinary least squares (OLS) with IV estimates in the restricted sample. From the OLS results in columns I and III, it is clear that restricting our sample to directors appointed in year $t-1$ reduces the significance of our findings because of the resulting dramatic reduction in the degrees

7 Of course, our instrument is not valid if there is an omitted variable correlated both with meeting fees in $t-2$ and with the strategy for the selection of new directors in year $t-1$, which is also related to the expected attendance patterns of these directors. Therefore, our identifying assumption requires that no such omitted variable exists. This is true if the selection of directors depends only on their observable characteristics included on the right-hand side of our regressions. We are thus assuming away the possibility of selection on unobservables, where unobservable (to the econometrician) characteristics of prospective directors correlated with attendance problems are observed by the board and used in the hiring decision.

Table 3 First stage instrumental variables regressions

	Dependent variable: board meeting fee in year t	
	I	II
Board meeting fee in year $t-2$	0.723***	0.687***
	(5.47)	(4.57)
# Other directorships	0.008	0.007
	(0.82)	(0.62)
Director compensation	–0.005**	–0.006*
(excluding meeting fees)	(–2.07)	(–1.94)
# Board meetings	–0.003	0.001
	(–0.20)	(0.06)
Board size	0.011*	0.010
	(1.81)	(1.52)
Female dummy		–0.051
		(–1.42)
Director age		–0.002
		(–1.10)
Retired dummy		0.111
		(0.96)
Ln(assets)		0.051
		(1.18)
Volatility		–1.663**
		(–2.04)
Number of obs	469	468
F-statistic	16.51	15.81
Adj R-squared	0.492	0.505

The table shows the first stage of the instrumental variables regressions in which our sample of BHC directors (described in Table 2) is restricted to those directors in fiscal year t who were appointed to the board in the previous fiscal year, fiscal year $t-1$. The instrument for Board Meeting Fee in fiscal year t measured in 2000 dollars is the board meeting fee in fiscal year $t-2$ (measured in 2000 dollars). The tenure variable is omitted because it becomes a vector of constants by our sample construction. Remaining sample characteristics are as in Table 2. Standard errors are adjusted for potential heteroskedasticity and for group correlation within firms. Robust t-statistics are in parentheses. The effect of the constant term is omitted. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

of freedom. Columns II and IV report our IV estimates. The effect of meeting fees on attendance problems is negative and significant at greater than the 1% level in column II and the 10% level in column IV. In addition, the point estimates of the marginal effects of meeting fees on attendance problems are higher in this restricted sample than in the full sample. The IV estimates, for example, predict an effect that is roughly between one and one and a half times larger than the marginal effect (between –0.049 and –0.055) computed using the full sample.

These results suggest that a major part of the correlation between meeting fees and attendance problems can be explained by a causal relation running from meeting fees to attendance behavior. In addition, the fact that the absolute values of the IV estimates are larger than those of the OLS estimates suggests

Table 4 OLS and second stage instrumental variables regressions

	Dependent variable: attendance problem dummy			
	I	II	III	IV
Board meeting fee	–0.022	–0.061***	–0.023	–0.070*
	(–1.17)	(–2.87)	(–0.99)	(–1.75)
# Other directorships	0.001	0.002	0.003	0.003
	(0.11)	(0.20)	(0.23)	(0.28)
Director compensation (excluding meeting fees)	–0.001**	–0.001**	–0.001	–0.001
	(–2.40)	(–2.57)	(–0.89)	(–1.14)
# Board meetings	–0.006	–0.006	–0.005	–0.005
	(–1.37)	(–1.25)	(–1.29)	(–1.13)
Board size	0.010***	0.011***	0.010***	0.011***
	(5.53)	(6.26)	(5.50)	(6.05)
Female dummy			–0.056	–0.059*
			(–1.51)	(–1.69)
Director age			–0.004*	–0.004**
			(–1.96)	(–2.09)
Retired dummy			–0.056**	–0.047**
			(–2.47)	(–2.02)
Ln(assets)			–0.001	0.011
			(–0.02)	(0.33)
Volatility			–0.273	–0.339
			(–0.51)	(–0.60)
Estimation method	OLS	IV	OLS	IV
Number of obs	469	469	468	468
F-statistic	10.04	11.25	10.53	10.04
R-squared	0.042	0.037	0.056	0.050

The table shows OLS and second stage instrumental variables regressions in which our sample of BHC directors (described in Table 3) is restricted to those directors who were appointed to the board in fiscal year $t-1$. The instrument for board meeting fees in fiscal year t is the board meeting fee in fiscal year $t-2$. The tenure variable is omitted because it becomes a vector of constants by our sample construction. Remaining sample characteristics are in Table 3. Columns I and III report OLS estimates, columns II and IV report the corresponding instrumental variable estimates. Standard errors are adjusted for potential heteroskedasticity and for group correlation within firms. Robust *t*-statistics are in parentheses. The effect of the constant term is omitted. *R*-squared for IV regressions is the centered *R*-squared. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

that any endogeneity problems might actually be operating in the opposite direction than the *disguised extra pay* hypothesis suggests, making it harder to detect a negative effect of meeting fees on attendance problems.

B. Sorting

We discussed director self-selection or sorting as a possible explanation for our results above. An additional implication of the sorting hypothesis is that director turnover should be positively correlated with changes in meeting fees. If some directors prefer to work for banks that pay high meeting fees while others prefer to work for banks that pay low meeting fees, when a bank changes its director compensation structure, one should expect to see some directors leaving while new ones join the board. In this section, we provide a direct test of this implication by examining whether past changes in meetings fees predict director turnover.

We use two measures of director turnover at the firm level. The first one is the number of directors who were paid for board service who joined the board in the current fiscal year, while the second one is the number of directors who were paid for board service that left the board in the following fiscal year. These two variables are highly correlated, since in many cases the net change in board size is zero.

We construct our main explanatory variable as follows. For each firm-year, we calculate the change in nominal meeting fees from its level in the previous year. Because both positive and negative changes in meeting fees should increase director turnover if the sorting hypothesis is true, we focus on the absolute value of these changes. Our main independent variable is the first lag of the absolute value of changes in meeting fees.

Table 5 displays the results of Poisson regressions of our measures of director turnover on our measure of meeting fee changes. We include some board and firm characteristics as controls, such as total director compensation, number of board meetings, board size, log of book value of assets and stock return volatility. We also include two measures of past performance, lagged Tobin's Q and lagged return on assets (ROA) because it is plausible that past firm performance may affect director turnover.

The results suggest that the main determinant of director turnover is board size, which appears reasonable. Changes in meeting fees are not good predictors of turnover. Thus, even if there is some sorting based on meeting fees, it is unlikely that it is the main mechanism driving the correlation between meeting fees and director attendance that we document in this paper. Although we cannot unambiguously discard sorting or reverse causation as possible explanations for the relationship between meeting fees and directors' attendance behavior, we believe the additional evidence we have provided in this section favors a more direct, causal effect of meeting fees on directors' attendance behavior.

C. Firm level results

In this section, we perform some additional tests to check the robustness of our findings. We first replicate our probit regressions at the firm level and then we use the number of attendance problems at the firm level as an alternative dependent variable.

In Table 6, columns I and II, we replicate the regressions in Table 2 using a firm level dummy for attendance problems as our dependent variable, i.e., this variable takes the value of 1 in a given year if there is at least one director in the bank who had attendance problems in that year. This enables us to take advantage of additional data on directors who had attendance problems but whose names were not reported in proxies. All director characteristics are included as firm-year level averages. All specifications include year dummies and the standard errors are corrected for group correlation within firms.

Consistent with our results in Table 2, the negative correlation between meeting fees and attendance problems is economically and statistically

Table 5 Turnover

	Dependent variable: number of director arrivals	Dependent variable: number of director departures
	I	II
Abs (lagged change in board meeting fee)	–0.432 (–0.84)	0.149 (0.49)
Total director compensation	–0.002 (–0.42)	–0.007 (–1.38)
# Board meetings	–0.030 (–0.88)	0.032 (1.24)
Board size	0.091*** (5.42)	0.088*** (7.32)
Ln(assets)	0.005 (0.04)	0.061 (0.58)
Volatility	–3.128 (–0.50)	2.536 (0.64)
Lagged ROA	–12.301 (–0.48)	21.160 (1.32)
Lagged Tobin's Q	–3.292 (–1.57)	–1.888 (–1.57)
Number of obs	393	393

The sample consists of an unbalanced panel of data on 35 BHCs from fiscal 1986–1999. Columns I and II show the results of Poisson regressions of director turnover measures on the absolute value of the lagged change in Board Meeting Fees. The dependent variable in column I, Number of Director Arrivals, is the number of directors who were paid for board service that joined the board in the current fiscal year. The dependent variable in column II, Number of Director Departures, is the number of directors who were paid for board service that left the board in the following fiscal year. Tobin's Q is defined as the ratio of the Book Value of Assets–Book Value of Equity + Market Value of Equity to the Book Value of Assets. Return on Assets is defined as Net Income divided by the Book Value of Assets. Remaining sample characteristics are as in Table 1. All director characteristics in these specifications are averaged over all directors who were paid for board service and who were not appointed in the current fiscal year. All specifications include year dummies. Standard errors are adjusted for potential heteroskedasticity and for group correlation within firms. Robust *z*-statistics are in parentheses. The effect of the constant term is omitted. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

significant. An increase in meeting fees by $1000 reduces the likelihood that a BHC experiences director attendance problems by 0.132 or 0.135, depending on the specification. The fraction of BHCs experiencing attendance problems is 0.57. Thus, an increase in meeting fees by 1000 dollars reduces attendance problems at the firm level by roughly 23%. The only other factor that is significantly related to firm level attendance problems is board size.

To check whether our results are sensitive to how we measure attendance, we use the number of attendance problems a firm reported in its proxy as an alternative dependent variable. On average BHCs have 1.55 attendance problems with a standard deviation of 2.34 and a maximum of 15. Columns III and IV in Table 6 show the results of Poisson regressions using Number of Attendance Problems as our dependent variable. All specifications include year

Table 6 Firm level regressions

	Dependent variable: firm level attendance problem dummy		Dependent variable: number of attendance problems	
	I	II	III	IV
Board meeting fee	–0.340*	–0.348*	–0.519***	–0.619***
	(–1.90)	(–1.90)	(–3.74)	(–3.99)
	[–0.132]	[–0.135]	[–0.519]	[–0.619]
# Other directorships	0.081	0.162	0.138	0.072
	(0.61)	(1.08)	(1.03)	(0.53)
Director compensation	–0.007	–0.007	–0.009*	–0.012**
(excluding meeting fees)	(–1.31)	(–1.19)	(–1.74)	(–2.03)
# Board meetings	–0.007	–0.003	–0.035	–0.048**
	(–0.19)	(–0.07)	(–1.61)	(–2.28)
Board size	0.112***	0.129***	0.140***	0.136***
	(4.76)	(5.16)	(6.51)	(9.65)
Tenure as director		0.026		0.091**
		(0.61)		(2.15)
Female dummy		–2.455		–2.927**
		(–1.37)		(–2.12)
Director age		–0.072		–0.052
		(–1.52)		(–1.19)
Retired dummy		0.343		–0.453
		(0.29)		(–0.51)
Ln(assets)		–0.089		0.213
		(–0.61)		(1.52)
Volatility		–0.225		1.333
		(–0.07)		(0.48)
Estimation method	Probit	Probit	Poisson	Poisson
Number of obs	434	434	434	434

The sample consists of an unbalanced panel of data on 35 BHCs from fiscal 1986–1999. Columns I and II show the results of probit regressions of Firm Level Attendance Problem Dummy on Board Meeting Fee. The dependent variable is a dummy variable that is equal to one if the firm reported that any director who received compensation for board service and who was not appointed in the current fiscal year had attendance problems during that fiscal year. Columns III and IV show the results of Poisson regressions of Number of Attendance Problems on Board Meeting Fee. The dependent variable is the number of directors who were paid for service but not appointed in the current fiscal year that a firm reported as having attendance problems during that fiscal year. Remaining sample characteristics are as in Table 1. All director characteristics in these specifications are averaged over all directors who were paid for board service and who were not appointed in the current fiscal year. All specifications include year dummies. Standard errors are adjusted for potential heteroskedasticity and for group correlation within firms. Robust *z*-statistics are in parentheses. Marginal effects for Board Meeting Fee are reported in square brackets. The effect of the constant term is omitted. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

dummies and the standard errors are corrected for potential heteroskedasticity and group correlation within firms. As one can see from columns III and IV, the results are similar to those we report in Table 2. In addition to meeting fees and board size, compensation and the fraction of women on the board are significantly related to the number of attendance problems. Although a director's

retirement status was significantly related to his attendance problems in Table 2 and Table 4, the fraction of retired directors does not seem to affect attendance problems at the firm level.

Overall, our analysis in this section is consistent with the idea that directors' attendance is influenced by various pecuniary and nonpecuniary incentives to attend meetings.

VII. ATTENDANCE AND DIRECTOR DEPARTURES

Although the previous sections suggest that directors' attendance behavior is affected by various nonregulatory incentives, it is still possible that regulatory pressure provides the main motivation for directors to attend sufficient meetings. Since there is no variation in regulators across the BHCs in our sample, we cannot directly examine how the intensity of regulatory pressure affects director attendance. Instead, we attempt to shed some light on this issue using data on director departures. According to the OCC's *Director's Book* (Office of the Comptroller of the Currency 1997), bank examiners may criticize directors for their attendance behavior. We believe that directors with poor attendance records who are faced with the possibility of such criticism and potential sanctions will be more likely to depart the board. They may do this voluntarily or because they have been asked to leave the board. Either way, our hypothesis is that regulatory pressure should cause directors with poor attendance records to be more likely to leave the board in a given year.

We construct a measure of a director's attendance record, 'Number of Past Attendance Problems', which indicates the number of times a director was named as having attendance problems up to and including the current fiscal year in a given bank. The average tenure of a director is 8.4 years. During this time, directors had on average 0.54 attendance problems with a minimum of 0 and a maximum of 11. Most directors (71.68%) had no attendance problems during their tenure. But 12.47% of directors were named as having attendance problems more than twice during their tenure.

To examine whether persistent attendance problems affects the likelihood a director leaves the board, we estimate probit regressions of the probability that a director departs from the board in the following fiscal year as a function of his past attendance record and other director, board, and firm characteristics. Because we want to focus on retention decisions at the director level, we also use a variable that measures the relative importance of each director on the board. Some directors play a more active role in the boardroom, thus they are less likely to have attendance problems and to be replaced. We use a dummy variable indicating whether a given director is the chairman of a board committee as a proxy for his/her relative importance on the board.

In Table 7, we report the results of our probit regression. The regression includes year dummies and the standard errors are corrected for heteroskedasticity and group correlation within firms. It is clear from the table that the main predictors of director departures are directors' importance (proxied by the

Table 7 Probit of the effect of past attendance problems on director departure

	Dependent variable: director departure
Number of past attendance problems	0.014
	(0.52)
	[0.002]
Committee chair	–0.597***
	(–5.58)
# Other directorships	–4.560E-04
	(–0.03)
Board meeting fee	–0.098
	(–1.04)
Director compensation (excluding meeting fees)	0.002
	(0.73)
# Board meetings	0.008
	(0.43)
Board size	0.023**
	(2.57)
Tenure as director	–1.744E-04
	(–0.03)
Female dummy	0.094
	(0.87)
Director age	0.043***
	(4.64)
Retired dummy	0.273***
	(3.81)
Ln(assets)	0.010
	(0.14)
Volatility	–1.116
	(–0.67)
Number of obs	4970

The sample consists of data on directors who were on the boards of our sample BHCs for fiscal years 1986–1999. We excluded directors from our sample who were not paid director compensation for their board service as well as all directors appointed to the board in the current fiscal year. The table shows a probit regression of Director Departure on Number of Past Attendance Problems, which is the number of times a director was named as having attendance problems up to and including the current fiscal year. The dependent variable, Director Departure, is a dummy variable that is equal to one if the director left the board in the following fiscal year. Committee Chair is a dummy variable indicating whether a director was the chair of a committee in the current fiscal year. Remaining sample characteristics are in Table 2. The specification includes year dummies. Standard errors are adjusted for potential heteroskedasticity and for group correlation within firms. Robust *z*-statistics are in parentheses. The marginal effect for Number of Past Attendance Problems is reported in square brackets. The effect of the constant term is omitted. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

committee chairman variable), age, retirement status, and board size, all of which enter with the expected signs. The positive coefficient on board size is consistent with the results in Table 5, which suggested that the most important factor related to turnover in bank boards is board size. Most importantly, 'Number of Past Attendance Problems' is not significantly related to the likelihood of director departures.

Conger et al. (1998) argue that evaluations of individual directors are extremely rare. Our results are consistent with this idea. While regulators may criticize directors for poor attendance records, it is possible that they only do this in situations in which the bank is performing poorly. Thus, retention decisions do not appear to be a common means of disciplining directors with poor attendance records. This is particularly striking because Adams and Ferreira (2008) document that past attendance problems are significantly related to director departures in their sample.

Our results suggest that regulators do not provide sufficient pressure for bank directors to avoid having attendance problems. Other devices to provide incentives appear to be important complements to regulation. Because the promise to punish directors when they have many attendance problems may be hard to enforce *ex post*, committing to pay meeting fees *ex ante* may be a more effective and impersonal way of credibly punishing directors for poor attendance records. It is noticeable that total director compensation is much lower in banks than in nonfinancial firms. We are unaware of studies that have documented the reasons for this, but it is possible that regulatory pressure keeps director compensation too low to provide sufficient incentives for bank directors.

VIII. FINAL REMARKS

Regulators emphasize the importance of attending board meetings to bank directors. As such, our findings that bank directors often have poor attendance records are puzzling. One explanation is that bank regulators provide sufficiently effective oversight of management, so that it is less important for bank directors to monitor. But, since regulators themselves emphasize the importance of bank boards' monitoring role, this seems unlikely. A more plausible explanation might be that regulatory pressure complements other incentive mechanisms for attendance at board meetings, but that these incentives are too low for bank directors to have excellent attendance records. If regulators care that bank directors have good attendance records, our results suggest that they may need to find better ways of exerting pressure on them.

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