Bank Involvement in Firm Management, Panacea or a Pain?

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Abstract

We investigate the impact of direct participation of banks on the board of borrowing companies in India. On the one hand, bank's proximity to decision-makers in the firm could mitigate the problem of expropriation by corporate insiders typical in emerging markets, thereby enhancing firm value. On the other hand, the possibility of greater intervention by banks even before bankruptcy could exacerbate the debt-equity conflict, hurting the firm's equityholders. India offers a unique setting for analyzing this tradeoff, with panel data on board composition combined with its weak institutional environment that is common to emerging markets. We find that firms with bank nominees on board tend to be larger and older, with lower investments and profits but higher sales growth. These firms have greater leverage, are more likely be in financial distress and more likely to be affiliated with business groups. They are less likely to belong to industries with a greater reliance on external capital. Firms with bankers on board also exhibit slower sales growth, make lower investments, pay out smaller dividends and are more likely to experience bankruptcy compared to firms without banks on board. Overall, bankers on board appear to be associated with diminished firm value, providing evidence consistent with bankers worsening agency problems between debt and equity.

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1 Introduction

The separation between the users and providers of external finance is a potential source of agency problem, which is well recognized. A variety of corporate governance mechanisms may address the agency issue. La Porta et al (2000) emphasize the importance of legal institutions that protect the rights of outsiders, shareholders and creditors for effective corporate governance. Emerging markets are characterised, first and foremost, by poor legal and regulatory institutions, offering weak protection to the outside investors. In these markets, large blockholdings are in the hands of corporate insiders in the form of families and business groups (Claessens et al, 2000) who excercise disproportionate control through pyramidal structures, destroying value for the equityholders (Lin, 2003). Recent research provides evidence of diversion of funds in such economies, through self-dealing (Djankov et al, 2008) and tunneling (Bertrand et al, 2008).

While the focus of corporate governance or lack thereof has largely been on equityholders both in developed and emerging markets, the role of debt in reducing the agency problem between managers and shareholders is also well-known (Jensen (1986), Hart and Moore (1995)). *Ex post* transfer of control in the event of a bankruptcy discourages insiders from overinvesting the firm's free cash flows. More recently, Nini et al (2010) provide evidence of creditor role in corporate governance when firms violate financial covenants *prior* to bankruptcy. However, both pre- and post-bankruptcy implementation of creditor rights, and hence effectiveness of debt as a external governance tool, depend on the legal and regulatory institutions (see Ellul et al, 2007). Evidence from 18 emerging markets offers no support for domestic debt as an effective tool for limiting expropriation by controlling insiders (Harvey et al, 2004).

In this paper, we consider the implications of a more *direct* role of debt in an emerging market, in *internal* rather than *external* corporate governance through board of directors.[1] More direct involvement of debt could be expected to enhance its disciplicing role and improve firm value. On the other hand, greater creditor involvement could exacerbate the conflict between debt and equity, adversely affecting firm value. Using data from India, we provide the first empirical evidence of the implication of having bankers on the board of directors in an emerging market.

India offers a number of advantages for our study. In India, banks appoint their nominees on the board of borrower firms. Unlike in other countries, these appointments do not have to wait until the firm defaults thereby allowing the banks to directly influence the workings of borrower firms. Therfore, India offers a natural setting for understanding the role of debt as an internal governance mechanism. Second, India is good example of an emerging market economy. It was ranked 51st in the list of 139 countries in the Global Competitiveness Report for 2010-11, as against China

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[1] There exists a large literature looking at the role of "outsiders" or "independent" directors in corporate governance (see Hermalin and Weisbach (2003) for a survey). However, banks are different since they are claimants of the firm, unlike other outside directors.

at 27, Brazil at 58 and the Russian Federation at 63, reflecting similar quality of institutiions at an aggregate level. Bertrand et al (2002) provide evidence of concentrated insider ownership and tunneling in business groups in India, a feature common to many other emerging markets. Moreover, India's large government-dominated banking system is also representative of financial institutions in other emerging markets. Third, while paucity of data has hindered research in studying the role of creditors on boards, we have a large panel data for India for the period from 1994-2008 of both listed and unlisted firms with information on firm financials and ownership structure with significant cross-sectional variation in the presence of bank nominees. In our sample, bank nominees comprise, on average, of 4 percent of all directors in a given year. The nominees are not always appointed for short periods.

We use these data to explore 3 alternative, though not mutually exclusive, hypotheses. Each of these relies on the greater proximity afforded to the bank by virtue of being on the board of the borrowing firm. (1) *Information* hypothesis: A position on the board provides the bank with better information about the firm. This could ameliorate the potential credit rationing that a firm may otherwise have experienced due to adverse selection, following Stiglitz and Weiss (1981). We would expect that younger and smaller firms with greater growth opportunities would be more likely to have bankers on board. Moreover, bankers on board would be associated with greater investment and sales growth, higher leverage and lower default. (2) *Monitoring* hypothesis: A second hypothesis rests on the ease of monitoring that bankers on board experience once they have made the loan. The presence of an outsider on the board would make expropriation harder for insiders, mitigating the conflict between insiders and outsiders. Under this hypothesis of improved monitoring, one would expect to find bankers on board of firms with greater opacity or with greater propensity for tunneling (such as those belonging to business groups or firms with lower insider holdings) which would also be consistent with lower bankruptcy risk and improved firm valuation. (3) *Debt-equity agency* hypothesis: The final hypothesis argues that direct involvement allows the bank to influence decisions that shield the bank's interest at the expense of the equityholders, thereby increasing the agency cost arising from the debt-equity conflict. Besides, superior information would also allow the bank to extract informational rents from the firm, à la Rajan (1992). We would expect to find excessive conservatism in investments, slower growth, lower payouts, and greater liquidation to be associated with bank presence on the board. Firm value would also be lower in light of this agency cost. We discuss these hypotheses in greater detail in Section 3.

We empirically investigate these hypotheses using two sets of alternative tests to analyze the implications of having bank nominees. The first set of tests compares the characteristics of firms with and without bank nominees. In our second set of tests, we use alternative performance proxies to compare firms with bank nominees with those without. As part of our empirical strategy, we also take care to address the endogeneity issue commonly raised in the context of board composition and firm performance. We use lagged values as right hand side variables as well as conduct a separate

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switching regression model to explicitly control for unobserved variables.

Our results do not find support for the *Information* hypothesis. We find that larger and older firms, which have lower information asymmetry, are more likely to have bankers on their board. These firms are also less credit constrained since they belong to industries which have a lower need for external capital. Further evidence against the *Information* hypothesis comes from the poor performance associated with firms who have bankers on board. These firms are found to have slower sales growth and are more likely to experience bankruptcy. Lower investment in firms with bank nominees indicates a smaller need for capital, again violating the implications of the *Information* hypothesis.

The available evidence does not support the *Monitoring* hypothesis either. Though we find that business group firms and firms with lower insider holdings (and hence possibly greater likelihood for tunneling) are more likely to be associated with a banker on board, firms with bankers on board perform more poorly than those without such bankers. This is contrary to the outcome expected from better monitoring of the borrowing firm.

Our evidence seems to be consistent with the *Debt-equity agency* hypothesis. We find that firms with bankers on board exhibit slower sales growth, make lower investments and pay out smaller dividends. These measures of conservatism are in line with the creditors aiming to protect their interests at the expense of equityholders. Overall, bankers on board appear to be associated with diminished firm value, providing evidence consistent with bankers worsening agency problems between debt and equity.

Our research is related to the large body of work focusing on the corporate governance of firms. However, our contribution lies in extending the enquiry to direct lender involvement in firm management as a corporate governance mechanism. Besides a few papers, this question has received little attention. Krozner and Strahan (2001) study the implicatons of bankers on board in the U.S. However, using India as the stage for this question offers important advantages over the U.S. In the U.S., which has a shareholder friendly regulatory regime, there are strict laws aimed at limiting lender involvement in firm management. Examples include the doctrines of lender liability and equitable sub-ordination that are applied by bankruptcy judges. Under these doctrines, if a firm's senior lender is shown to have exercised influence over firm management to benefit the lender at the expense of shareholders, then the lender may loose its seniority status and the firm's shareholders and junior creditors can even obtain punitive damages against the lender. Kroszner and Strahan (2001) show that these doctrines limit the role of bank officers on firm boards, that only the large, financially stable firms have bankers on their boards and that the affiliated bank is typically not the main lender to the firm. Bhagat and Black (2000) find no empirical support for a beneficial effect of board composition on firm performance. Booth and Deli (1999) also find no support for a positive role for commercial bankers on board of their borrowing firms. Both these results could be

the outcome of the deterrence effect of lender liability for bankers related to the firm in question, as noted by Kroszner and Strahan (2001). Non-availability of a counterfactual makes it difficult to evaluate the costs and benefits of lender involvement in management outside bankruptcy in the U.S. Since the doctrines of equitable subordination and lender liability do not apply in India, it is conducive for understanding the costs and benefits of lender involvement in firm management.

In the context of Japan's main bank system, Kaplan and Minton (1994) and Morck and Nakamura (1999) find that poorly performing firms are more likely to have a bank representative appointed to the board, which suggests that banks do not try to restrict managerial private benefits of firms whose performance is satisfactory. Dittman et al (2010) consider the role of bankers on the board in German firms. They find that bankers on board promote their own business as lenders and tend to lower firm valuation. Unlike these papers, our focus is on an emerging market, where the weak institutions and greater likelihood of cronyism make the role of banks in corporate governance potentially far more critical.

In a related paper, Ellul et al (2007) find evidence supporting the existence of conflict between family blockholder and external bondholders in an environment of weak investor protection. However, their paper does not consider a direct role for debt in corporate governance, which is the focus of our work.

The rest of the paper is organized as follows. In the next section, we provide institutional details affecting bank's position on boards in India. Section 3 develops the alternative hypotheses that we test. In Section 4, we describe the data and provide descriptive statistics. Section 5 presents our main empirical results. Section 6 concludes.

2   Institutional Background

Prior to the financial sector reforms in the 1990s, capital to industry came broadly from two categories of government-owned institutions - investment institutions and lending institutions. Investment institutions primarily included the life insurance companies (e.g., Life Insurance Corporation of India (LIC)) and a mutual fund company (Unit Trust of India (UTI)). They mobilized funds and invested them in the capital markets. The main sources of credit, on the other hand, were public sector commercial banks (e.g., State Bank of India (SBI)) and development financial institutions (DFIs). While the commercial banks focused largely on short-term loans to agriculture, trade and services, DFIs were established to provide medium- and long-term capital to industry. In India, both banks and DFIs could also invest in the equity of companies, including their borrowers. The main DFIs were Industrial Finance Corporation of India (IFCI, established in 1948 for medium and large industrial concerns in corporate and co-operative sectors), Industrial Development Bank of India (IDBI, set up in 1964 for industrial development), and Industrial Credit and Investment

Corporation of India (ICICI, set up in 1955 for private sector development).[2] Most of the DFIs were set up under separate Acts of the Parliament.[3]

The financial market landscape altered with liberalization in the 1990s. The entry of private sector mutual funds and foreign institutional investors (FIIs) altered the world for the investment institutions that existed so far. Commercial banking too saw the entry and mushrooming of private banks, including foreign banks. However, the DFIs experienced the biggest changes, with gradual reduction in government support and increased exposure to competition, particularly for access to funds. Several of the DFIs have since transformed themselves into banks, e.g., ICICI Bank, IFCI Ltd. and IDBI Ltd. More importantly, these institutions now compete with commercial banks for loans across all maturities, and are no longer focused on term loans.[4] Both banks and DFIs continue to also make large equity investments in companies. However, it is more common for them to invest through their mutual fund affiliates (e.g., ICICI Bank through Prudential ICICI Mutual Fund, SBI through SBI Mutual Fund).

As far as board composition is concerned, in India at least two-thirds of the board consists of rotational directors. Permanent directors include promoters, executive directors and nominee directors of financial institutions. Nominee directors can only be withdrawn by the nominating institution. The notion of nominee directors is a feature that is unique to India. The founding Act of Parliament of each DFI stipulated that the DFI should insert two specific clauses in their loan agreements: (i) a clause for converting its loan into equity in case of default, and (ii) a "nominee director clause" which gave the DFI the right to appoint one or more directors to the board of the borrowing company. In March 1984, the Department of Economic Affairs in the Ministry of Finance issued its guidelines relating to the convertibility and nominee director appointment clauses. In particular, it specified that the IDBI, IFCI, ICICI and IRCI should create a separate department/cell with officials whose exclusive function will be to represent the DFI on the board of companies. It allowed the use of outside directors as the DFI's nominees on board where the DFI has multiple nominees. It also mentioned that nominee directors should be appointed on all MRTP companies assisted by the DFIs (as well as those non-MRTP companies that had institutional shareholdings exceeding 26 percent of company's equity or where the company is likely to become sick or the DFI's stake through equity/loan exceeds Rs. 50 million). Thus, one is likely to find

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[2] Other major DFIs include the Small Industries Development Bank of India (SIDBI), set up in 1990 as the principal financial institution to cater to the SME sector, the Infrastructure Development Finance Company Ltd. (IDFC) set up in 1997, and the Industrial Investment Bank of India (IIBI), which was the erstwhile Industrial Reconstruction Bank of India (IRBI). However, these DFIs have little or no exposure to equity investments in listed companies.

[3] DFIs were created in many countries in the initial stages of their development, and were instrumental in the industrialization of continental Europe, Japan and Korea. The first government-sponsored DFI was set up in the Netherlands in 1822. Between 1848-1852, France set up several DFIs including Credit Foncier and Credit Mobiliser. The Japan Development Bank fostered rapid industrialization in Japan. Immediately after independence in 1947, India took inspiration from the success of such DFIs.

[4] Between 1995 and 2005, commercial banks' share of short-term credit to industry fell from 82.5% to 52.4%, while their share of long-term credit rose from 11.6% to 37% over the same period. The share of financial institutions (not banks) in total credit fell from 24.9% in 1991 to 5.8% in 2006. [RBI reports, various issues]

nominee directors of large DFIs on boards of assisted companies or of poorly-performing companies. It is important to note that even after the financial sector reforms and change in the nature of DFIs (discussed above), DFIs' right to nominee directors effectively continued.[5] Therefore, unlike in other countries, the appointment of DFIs is driven more by statutory obligation. It suffers less from endogeneity concerns that plague research on director appointments and resignations for other countries.

In terms of bank nominees' role, the 1984 guidelines offered an illustrative list of responsibilities, including a focus towards repayment of DFI and government dues, firrm's financial performance, all share transactions, as well as inter-corporate loans and investments and related-party transactions. However, Section 30.A of the Banking Law and Practice in India (1964) stipulated that, unlike the other directors, nominee directors would not be jointly and severally responsible to shareholders for the board's actions.

In 2000, the Securities Exchange Board of India (SEBI) added Clause 49 to the Listing Agreement between a company and the stock exchange regarding corporate governance. Most companies have not been able to meet the deadline for compliance, and the SEBI has willingly extended the deadlines multiple times. However, Clause 49 makes no significant change in the rules governing nominee directors of financial institutions.

For the purposes of our analysis, we treat nominees of all financial institutions, whether DFI, bank or investment institution, as "bank" nominees.

3 Hypotheses

We identify three hypotheses that have predictions relevant for analyzing the direct role of banks on board of companies. We call these the *Information, Monitoring* and *Debt-equity agency* hypotheses. We now outline the hypotheses and highlight their main predictions. These hypotheses are not mutually exclusive and in our tests we estimate the extent to which they are able to predict the observed patterns.

The *Information* hypothesis emphasizes the role of bank nominees in collecting information about the firm and transmitting it to the lender. This in turn will reduce the extent of information asymmetry between the lender and the firm and make external finance easier. This should be most beneficial for firms with greater information asymmetry and when the firm is close to financial distress. Thus according to the *Information* hypothesis firms with greater information problems, those in greater need for external finance and those closer to financial distress are more likely to

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[5]In our sample between 1995 and 2007, conditional on being present, the number of nominees of each financial institution as a percentage of board size, averaged across firms, has not changed very much over time. However, there has been decline in the total number of nominees from most DFIs, but not from LIC or the commercial banks.

have bank nominees on their boards. In our tests, we employ firm size and firm age as proxies for the extent of firm level information asymmetry, use the characteristics of the firm's industry to estimate the need for external finance and employ the Altman's *Z-score* as a proxy for firm financial distress. Furthermore the *Information* hypothesis also predicts that firms with a bank nominee should be less financially constrained and hence invest more and have a higher value.

The *Monitoring* hypothesis highlights the role of bank nominees in monitoring management on behalf of external financial markets. According to the *Monitoring* hypothesis, we should observe bank nominees in firms with more agency problems. We use the extent of insider holding and group affiliation as proxies for ex ante firm level agency problems. While agency problems can have a "U" shaped relationship with insider holding (Morck, Shleifer, and Vishny (1988)), prior research shows that group-affiliated firms will have greater agency problems than unaffiliated firms. Furthermore, according to the *Monitoring* hypothesis, the presence of bank nominees should lower agency costs and improve firm value. We measure the extent of tunneling by firm insiders (see Bertrand et al (2002)) and employ it as a proxy for the extent of agency problems.

The *Debt-equity agency* hypothesis highlights the agency problems between lenders and shareholders and the role of bank nominees in worsening such problems. Lenders and shareholders can have conflicts due to their different risk preferences that arise from their differing payoff structures. While lenders will prefer lower risk, equity holders will prefer greater risk. If bank nominees influence investment policy on behalf of lenders then we expect firms with bank nominees to take less risk. This is likely to manifest in lower investments and lower dividend payouts. Since lower risk is likely to transfer value from equity holders to lenders, the *Debt-equity agency* hypothesis predicts firms with a bank nominee to have a lower equity market capitalization.

Since many of nominee directors represent financial institutions that are allowed to own equity in firms, it is possible that their actions on the board would be influenced by their equity ownership. Moreover, most institutions have not put in place a Chinese wall between their credit and equity arms, with potential flow of information from the nominee director representing the credit arm to the equity arm, and vice versa. We will keep this in mind in our analysis.

4   Data and descriptive statistics

4.1   Data

We use two main databases for our study. Our first data source, Prowess, provides annual financial data and other descriptive variables such as industry affiliation, year of incorporation, and group affiliation. Compiled by the Center for Monitoring Indian Economy (CMIE), Prowess is a panel of both listed and unlisted public limited companies with assets plus sales greater than 40 million

Rupees (approx. $900,000). We complement Prowess with data on the composition on the firm's board of directors from Capitaline. Apart from the name of the directors and their designation, Capitaline also identifies if the director is a lender nominee. Capitaline collects the data from firms' annual reports filed with the Registrar of Companies, a requirement for all public limited companies under the Companies Law in India. To ensure accuracy, we hand-match Capitaline and Prowess using firm names leaving 1,700 to 5,500 domestic firms in our sample each year. To ensure fly-by-night firms do not disproportionately affect our conclusions, we restrict our sample to only firms that have data for more than three years. We also drop firms that are identified as government- or foreign-owned.

4.2 Empirical specification and key variables

In our empirical analysis we do two sets of tests. In the first set of tests, we characterize the firms that have bank nominee directors on their boards. To do this we estimate the following panel OLS model:

$$\text{Bank nominee}_{i,t} = \alpha + \beta_1 \times X_{i,t} + \beta_2 \times X_{j,t} + \mu_t + \mu_{indus} + \epsilon_{it}, \tag{1}$$

where $Bank\ nominee_{i,t}$ is a dummy variable that takes a value one if firm 'i' has a bank nominee in year t and zero otherwise. $X_{i,t}$ is a set of firm characteristics that includes proxies for firm size and age, ($Log(Total\ assets)$ and $Log(Age)$), firm profitability, (ROA), leverage ($Leverage$), firm investment opportunities ($Market\ to\ book$), proxies for firm growth ($Sales\ growth$ and $Investment$). $X_{j,t}$ includes variables that characterize the firm's ownership structure including group affiliation, $Group$ and $Insider\ holding$ and $Institutional\ holding$. All variables that we use in our analysis are defined in Appendix A. We also include time and industry fixed effects in the specification and the standard errors we estimate are robust to heteroskedasticity and clustered at the industry level. We identify a firm's industry at the three-digit NIC code level.

In alternate robustness tests, we also estimate a logit model as well as a multinomial logit model where we differentiate between firms with one and more than one bank nominee on their board.

In our second set of tests we estimate the effect of the bank nominee director on firm performance. To do this, we estimate variants of the following model:

$$y_{it} = \alpha + \beta_0 \times \text{Bank nominee}_{i,t-1} + \beta_1 \times X_{i,t-1} + \mu_t + \mu_i + \epsilon_{it}, \tag{2}$$

where y_{it} is a measure of firm performance. The specific performance measures we model include, $Sales\ growth$, $Investment$, $Leverage$, $Dividends/TA$, $Bankrupt$, $Profit$ and $Industry\ adjusted\ market$ $to\ book$. The specific control variables that we include varies with the dependent variable being modeled and include one or more of $Industry\ sales\ growth$, $Industry\ investment$, $Industry\ leverage$, $Industry\ profit$, $Log(Total\ assets)$, $Log(Age)$, $Insider\ holding$, $Institutional\ holding$, $Market\ to\ book$

and lagged values of *Profit* and *Leverage*. Firms in our sample sometimes change the month when they end their fiscal year. Financial results for the corresponding years pertain to a time period other than twelve months. To control for this we also include a variable *Length of year* which measures the length of the fiscal period in months. Our sample for these regressions includes one observation per firm-year. Apart from time fixed effects, μ_t, we also include firm fixed effects, μ_i. Although we control for all observable firm characteristics that are likely to affect firm performance and also the presence of a bank nominee director on the board, our estimates from (2) may be biased due to omitted variables and reverse causality problems. To control for possible bias, we estimate a switching regression model that explicitly controls for unobserved variables. We explain this in greater detail in Section 5.3.

4.3   Summary statistics

In Table 1, we provide descriptive statistics for our sample. We have a total of 42,500 firm-year observations with information on the presence of a bank nominee and non-missing values for book value of total assets and sales. The average value of *Log(Total assets)* in our sample translates into a book value of total assets of Rs. 348.1 million.[6] We measure firm age as the number of years since incorporation and the average age of firms in our sample is about 18.9 years. About 95% of the firms in our sample are public. The average profitability, which we measure as the ratio of operating profits over total assets, of the firms in our sample is about 13.4%, while the average sales growth is 23.6%. Sales growth appears to have a few outliers, as the median sales growth in our sample is only 11%. To avoid the effect of outliers all variables of empirical interest are winsorized at the 3% level. The average market-to-book ratio of firms in our sample is 1.147, while the median is only 0.818. Firms on average finance about 47.7% of the book value of total assets using debt. About 39.8% of the firms in our sample are group firms. Due to missing values for capital expenditure, we measure investment as the rate of growth of total assets and find that for an average firm in our sample, total assets grow at a rate of 14.1%. Firms on average pay about 1% of the book value of total assets as dividends. About 12.9% of the firms in our sample have a bank or institutional nominee on their boards, and among the firms with bank nominees, the average number of nominee directors is 1.4. The average insider holding for the firms in our sample is 42.8% as indicated by the mean value of *Insider holding*, while the average shareholding of banks and institutions in our sample is 5.5%.

In Panel B, we divide our sample into firms with and without nominee directors and present their summary statistics. Note that all the variables listed in Panel B are significantly different across the two subsamples at less than 1% level. Firms with a bank nominee are larger, as indicated by higher values of *Log(Total assets)*, are slightly older and less likely to be public. Firms with nominee

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[6]All variables are measured in units of Rs. Crores, where one Crore equals 10 million. The average *Log(Total assets)* of 3.55 implies total assets of Rs. 34.81 crores.

directors are less profitable, have lower sales growth rates and market-to-book ratios. Thus, based on the summary evidence, firms with nominee directors appear to have poorer performance. Not surprisingly, firms with bank nominee directors have higher leverage. Such firms are also more likely to belong to a business group. Firms with nominee directors invest less and pay lower dividends. While firms with nominees have lower insider holding they have significantly higher institutional shareholding. Summarizing, our univariate evidence indicates that firms with nominee directors are larger, have poor performance, high leverage, are more likely to belong to a business group and have low insider holding and high institutional shareholding.

5   Empirical results

5.1   Which firms have bank nominee directors?

In Table 2, we present the results of panel regression (1) estimated on our full sample. The results in Column (1) confirm our univariate evidence and show that in the full sample, firms with bank nominees are larger, as indicated by the positive and significant coefficient on *Log(Total assets)*. This is inconsistent with the information hypothesis, which predicts that smaller, opaque firms are more likely to have a bank nominee. We also find that firms with a bank nominee have lower investment and profitability but higher sales growth and leverage. The positive and significant coefficient on *Group* indicates that bank nominees are more likely to be present among group firms. If group firms, due to their opaque ownership structure, are likely to have more agency problems, then this evidence is consistent with the *Agency* hypothesis. In Column (2) we include the shareholding of insiders and institutions as additional covariates and find that firms with a nominee director have lower insider holding and higher institutional shareholding (negative (positive) coefficient on *Insider holding* (*Institutional holding*). If firms with lower insider holding suffer greater tunneling, as shown by Bertrand and Mullainathan (2002), then this evidence is also consistent with the *Agency* hypothesis. Since we do not have data on ownership structure for all firms in our sample, inclusion of these variables significantly reduces the sample size. Hence in subsequent specifications we do not include them. In unreported tests we ensure that their inclusion does not change the results reported here.

In Column (3) & (4) we test if as predicted by the *Information* hypothesis, firms with a bank nominee have greater need for external finance. We use two proxies for a firm's need for external finance. Our first proxy is the *RZ-Index*. This index, first constructed in Rajan and Zingales (1998) measures the external finance decadence of the firm's industry with a higher value indicating greater dependence on external finance. Our results in Column (3) show that contrary to the *Information* hypothesis, firms with a bank nominee have lower *RZ-Index* and thus are from industries that depend less on external finance. In Column (4) we use industry market-to-book as a measure of

the firm's investment opportunities and consequently its dependence on external finance. Firms from industries with a higher market to book ratio are likely to have a greater demand for external finance. Here again, we find that firms with a nominee director are from industries with a lower market to book ratio. Thus our results in Column (3) & (4) do not offer much support for the *Information* hypothesis.

In Column (5) we include the *Altman Z-score* to test if firms with a bank nominee are financially distressed. Note that a lower value of *Altman Z-score* indicates a greater likelihood of financial distress. Our results indicate that firms with a bank nominee have lower *Altman Z-score* consistent with such firms being financially distressed. In Column (6) we repeat our tests after including industry fixed effects at the level of three digit NIC code. We find that coefficients on both *Industry market to book* and *Altman Z-score* become insignificant.[7] This indicates that bank nominees typically sit in firms in industries that have on average low market to book ratios and are dominated by firms with low *Altman Z-score*.

In Column (7) we employ a logit model instead of the OLS model and obtain results similar to the earlier results. Of the 1279 firms with bank nominees in our sample, 433 have more than one bank nominee at some point in time. In Columns (8)-(9) we differentiate between firms with one and more than one bank nominee and estimate the determinants of both. To do this, we estimate a multinomial logit model with a dependent variable that takes a value one for firms with no bank nominee, two for firms with one nominee and three for firms with more than one nominee. The base case in these regressions is not having a bank nominee. Thus the coefficients in Column (8) are estimated from a comparison of firms with one bank nominee and firms with no nominee, while the coefficients in Column (9) are estimated from comparing firms with more than one bank nominee and those with no nominee. The results in Column (8) are broadly similar to the ones in Column (1) and show that firms with lower values of *Altman Z-score*, larger firms that are affiliated with a business group are more likely to have a bank nominee. Such firms also have lower investment levels but they have higher profitability and leverage. Focussing on Column (9) we find that the determinants of having more than one bank nominee are similar to those for having one bank nominee. The only difference is that *Altman Z-score*, and *Profit* are not significant predictors of having more than one bank nominee.

In unreported tests we split our sample into group and non-group firms and reestimate our regression in the two subsamples. We find that the results are largely similar across the two subsamples indicating that the determinants of having a bank nominee are similar across group- and non-group firms.

Summarizing, our results in Table 2 confirm the univariate evidence and show that firms with a bank nominee on their board are larger, have lower investment and profitability but have higher

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[7]We do not include *RZ-Index* in this specification because it is not time variant and will be absorbed by the industry fixed effects.

sales growth. Inconsistent with the *Information* hypothesis, we find that such firms are not from industries with a higher *RZ-Index* or market to book ratio. Consistent with such firms being in financial distress, we find that such firms have lower *Altman Z-score*, are have higher leverage ratios. In terms of ownership patter, such firms are more likely to belong to a business group, have lower insider holding and higher institutional shareholding. These are broadly consistent with such firms have higher agency problems. In subsequent tests, we estimate the effect of bank nominee directors on firm performance.

5.2   How does the presence of bank nominee directors affect firm performance?

We now examine the effect of a bank nominee on subsequent firm performance by estimating (2) and report the results in Table 3. The dependent variable in Column (1) of Panel A is *Sales growth* and apart from lagged values of *Bank nominee* we also include *Industry sales growth* and a number of firm characteristics that may affect firm sales growth as control variables. As mentioned, we include time and firm fixed effects in these regressions. The negative and significant coefficient on *Bank nominee* indicates that firms with a bank nominee on their board have lower sales growth the following year. The size of the coefficient is also economically significant as it indicates that firms with bank nominees have 4.5% lower sales growth. In comparison, the average sales growth rate of firms in our sample is 23.6%. Note that since we include firm fixed effects in these regressions we are in effect comparing within firm changes in sales growth across firms with and without bank nominees. While the results in Table 2 indicate that firms with higher past sales growth rates are likely to have a bank nominee on their board, the results in Column (1) indicate that subsequent to having a bank nominee, firms experience a decrease in sales growth rate. This is consistent with bank nominees constraining firm growth. The coefficients on the control variables indicate that firms in faster growing industries, larger firms, younger firms, those with higher market to book ratios, and lower lagged profitability have higher sales growth rates. We also find that sales growth rate is higher if the fiscal period is longer. In Column (2) we repeat our tests with *Investment* as the dependent variable. Our set of control variables are similar to those we employ in Column (1) except that we include *Industry investment* instead of *Industry sales growth*. We again find that firms with bank nominees have 3.3% lower investment levels. This is consistent with bank nominees constraining firm growth. From the control variables we find that firms in industries with higher investment, larger and younger firms, firms with higher market to book ratio and those with higher lagged profitability and leverage have higher investments. In Column (3) we repeat our tests with *Leverage* as the dependent variable and find that firms with bank nominees have 6% higher leverage ratios. This is consistent with bank nominees helping firms get better access to debt finance. Finally in Column (4) our dependent variable is *Dividends/TA* and our results indicate that firms with bank nominees pay less dividends. This result is also economically significant. The coefficient of -.001 translates into 11% lower dividend payout by firms with bank nominees.

Summarizing, our results in Panel A show that firms with bank nominees have lower sales growth rate, lower investment, higher leverage and pay less dividends. Thus overall the evidence is consistent with bank nominees constraining firm growth and cash distribution to equity holders. In subsequent tests, we try to differentiate across firms to see if there is any difference in the effect of bank nominees on firm performance.

In Panel B, we test to see if the effect of bank nominees on firm performance varies across group- and non-group firms. To do this, we repeat our estimation after replacing *Bank nominee* with two interaction terms, *Bank nominee × Group* and *Bank nominee ×* [1-*Group*]. Note that we do not include *Group* in the regression because group affiliation is time invariant and hence will be accounted for by the firm fixed effects we include. Our specification and control variables are similar to the ones in Panel A. We suppress the coefficients on the control variables to conserve space. Our results in Column (1) indicate that bank nominees depress sales growth rate of both group and non-group firms, although the effect is larger for non-group firms. But a comparison of the coefficients reveals that they are not statistically distinguishable. From Column (2) we find that both group and non-group firms with a bank nominee have lower investments. Here again the magnitude of the effect appears larger for non-group firms, but due to the noise in our estimation, we find that the coefficients on the two interaction terms are not statistically distinguishable. From Column (3) we find that both group- and non-group firms with bank nominees have higher leverage. Finally from Column (4) we find that both group- and non-group firms with bank nominees have lower dividends, but the effect appears higher for non-group firms. Overall the results from Panel B indicate that bank nominees have broadly similar effect on the performance of both group and non-group firms.

In Panel C, we differentiate firms based on prior ability to see if bank nominees have a differential effect on high- versus low-ability firms. To do this, we create a dummy variable high ability, that takes a value one for firms with positive industry adjusted profitability the previous year. We then repeat our estimation after replacing *Bank nominee* with two interaction terms, *Bank nominee × High ability* and *Bank nominee ×* [1-*High ability*]. Our results in Column (1) show that while bank nominees depress the sales growth rate of both high- and low-ability firms, the effect is greater for high-ability firms. Although as reported, the coefficients on the two interaction terms are not significantly different from each other. From Column (2) we find that both high- and low-ability firms with a bank nominee have lower investments. From Column (3) we find that low ability firms with bank nominee directors increase their leverage more than high ability firms. We also find that the coefficients on the interaction terms are significantly different from each other. Finally from Column (4) we find that bank nominees depress dividends only in high ability firms. Summarizing we find that both high- and low-ability firms with bank nominees have lower sales growth and investments. While low ability firms with bank nominees have higher leverage, high ability firms with bank nominees have lower dividends. These results indicate that bank nominees are not very

good at distinguishing between low and high ability firms. While they lend more to firms with low ability, they appear to constrain the dividends of high ability firms.

Finally in Panel D we differentiate firms based on prior leverage to see if bank nominees have a differential effect. We classify firms as having high leverage if they have positive industry adjusted leverage the previous year. From Column (1) we find that both high- and low-leverage firms with a bank nominee have lower sales growth, although the effect of bank nominees appears slightly larger for high leverage firms. The results from Column (2) show that bank nominees depress investments in both high- and low-leverage firms but here again the effect is larger for high leverage firms. Finally from Column (3) we find that bank nominees depress dividends in both high- and low-leverage firms.

Summarizing our results so far indicate that firms with bank nominees have lower sales growth, investments and dividends and higher leverage. This is true of both group and non-group firms. While low ability firms with a bank nominee have higher leverage, high ability firms with a bank nominee pay less dividends. Finally we find that firms with both high- and low-leverage and a bank nominee have lower sales growth, investment and dividends.

In the next set of tests we estimate the effect of bank nominees on firm risk. We use two measures of risk, stock return volatility and bankruptcy likelihood.

In Table 4, we estimate the effect of bank nominees on bankruptcy likelihood. To do that, we obtain data on all firms that file for bankruptcy protection with the Board for Industrial and Financial Reconstruction (BIFR) and merge it with our sample to identify the firms that file for bankruptcy. We identify 472 firms that file for bankruptcy in our sample. We then code a dummy variable *Bankrupt* that takes a value one in the year before the year in which a firm files for bankruptcy. We then estimate (2) with *Bankrupt* as the dependent variable. We also include *Log(Total assets)*, *Log(Age)*, *Market to book*, *Profit*, *Leverage*, and *Length of year* as additional controls. We do not include firm ownership characteristics because in unreported tests we find that they do not have a significant effect on bankruptcy probability but their inclusion significantly reduces the size of the sample. The results in Column (1) of Table 4 show that firms with bank nominees have a higher likelihood of declaring bankruptcy. Our results are economically significant. The average bankruptcy probability of a firm in our sample is 1.1%. From this it is clear that firms with bank nominees have a 90% greater likelihood for bankruptcy. Note that we control for firm leverage and performance in these regressions. Thus the higher bankruptcy probability of firms with bank nominees is not because of their poor performance or higher leverage. In Column (2) we differentiate between group and non-group firms and find that only group firms with bank nominees have a significantly higher bankruptcy likelihood. In Column (3) we differentiate firms based on ability and find that not surprisingly low ability firms with a bank nominee have a higher bankruptcy likelihood. Finally in Column (4) we differentiate firms based on prior leverage and

find that high leverage firms with bank nominees have a higher likelihood of declaring bankruptcy.

Overall our results indicate that firms with bank nominees have a higher bankruptcy likelihood. This indicates that the lower investments and dividend payouts of such firms does not make them safer in reducing their bankruptcy likelihood.

In Table 5 we test the effect of bank nominees on the extent of tunneling. To do this, we follow Bertrand et al (2002) and measure tunneling by estimating how firm performance responds to industry performance. Specifically we estimate a model similar to (2) with profit as the dependent variable and include *Industry profit* and *Log(Total assets)* as the independent variables apart from time and firm fixed effects. The results in Column (1) show that on average the profits of firms in our sample increase by 79 cents for every $1 increase in industry profits. In Column (2) we differentiate between firms with and without a bank nominee by including *Bank nominee* and an interaction term *Industry profit × Bank nominee*. Our results indicate that while firms with a bank nominee have lower profitability (negative coefficient on *Bank nominee*), firms with a bank nominee respond more to shocks to industry profitability. The results indicate that the profits of such firms increases ten cents more for every $1 increase in industry profits. In Columns (3) & (4) we differentiate between group and non-group firms and find that only the profits of non-group firms with a bank nominee respond more to industry shocks. This highlights that bank nominees improve the profitability of only non-group firms.

Finally in Table 6 we estimate the effect of bank nominees on firm valuation. Our dependent variable in these regressions is industry adjusted market to book ratio, *Adjusted market to book*. The results in Column (1) show that in the full sample, firms with bank nominees do not have a significantly different industry adjusted market to book ratio. In Column (2) we differentiate between group and non-group firms and find that group firms with bank nominees have a lower market to book ratio. On the other hand bank nominees do not appear to have a significant effect on the market to book ratio for non-group firms. From Column (3) we find that bank nominees do not have a differential effect on the market to book ratio of high and low ability firms. Finally from Column (4) we find that firms with low leverage that have a bank nominee director have lower market to book ratios. Overall our evidence in this table indicates that group affiliated firms and those with low leverage that have a bank nominee have lower industry adjusted market to book ratios. This along with the evidence in Table 5 highlights that while bank nominees appear to have some positive effect on non-group firms they seem to have a negative effect on group firms.

5.3   Switching Regression Model

We now perform tests that explicitly control for the endogeneity of a having a bank nominee director. In Table 7, we relate firm performance to the presence of bank nominee director after controlling for endogenity. To do this, we estimate a switching regression model (see Fang (2005),

and Li and Prabhala (2007)). The model consists of estimating three regressions: a probit selection model with *Bank nominee*$_{t-1}$ as the dependent variable, and two separate OLS models with firm performance measures as the dependent variable that are estimated for firms with and without a bank nominee on the board.[8] We augment the two OLS models with the Inverse Mills ratio and the Mills ratio, respectively, estimated from the first-stage regression.[9]

In Column (1) of Panel A, we present the results of the first-stage probit model. Since we lack exogenous instruments for the presence of a bank nominee, we include all observable firm characteristics. The coefficients in Column (1) are consistent with those in Table 2 and indicate that firms with a bank nominee on the board are larger, have lower insider holding and higher institutional holding, have low market to book ratio, lagged profitability and higher leverage and are from industries with high leverage.

In Columns (2) and (3), we present the results of the OLS regressions with *Sales growth* as the dependent variable for firms that do not have a bank nominee on the board (Column (2)) and for the firms that do have a bank nominee on the board (Column (3)). The empirical specification in these columns is similar to that in Column (1) of Panel A of Table 3, except that we include the *Inverse Mills ratio* and *Mills ratio* as additional regressors in Columns (2) and (3), respectively, to control for unobserved characteristics (i.e., private information) that may affect both sales growth and the presence of a bank nominee director. A test of whether *Sales growth* is lower for firms with a bank nominee is to compare the actual *Sales growth* for such firms with the counterfactual *Sales growth* if the same firms did not have a bank nominee on the board. We estimate the counterfactual by combining the coefficient estimates in Column (2) with the firm characteristics for firms with a bank nominee. In Panel B, we report the result of a *t*-test for the statistical significance of the difference between the actual sales growth and the counterfactual. Our results indicate that the sales growth for firms with a bank nominee on the board is significantly lower than the counterfactual.

In Columns (4)-(5) we implement the switching regression model with *Investment* as the dependent variable. The first stage regression is the same as in Column (1). In Panel C, we present the results of the t-test comparing the actual *Investment* to the counterfactual investment of firms with a bank nominee. Our results again show that firms with a bank nominee have lower investments.

In Columns (6)-(7) and Panel D we implement the switching regression model with *Leverage* as the dependent variable and confirm that firms with bank nominees have a higher leverage. Finally in Columns (8)-(9) and Panel E we implement the switching regression model with *Dividends/TA*

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[8]The switching regression model, while similar to a Heckman selection model, is more general because it estimates two second-stage equations and thus allows for different coefficients on the covariates for the "selected" and the "not selected" samples. Similar to the Heckman model, the identification comes from the non-linearity of the model, which arises from the assumption of joint normality for the error terms.

[9]The Mills ratio and the Inverse Mills ratio are given by the formulas $\frac{\phi(\hat{\gamma}Z')}{\Phi(\hat{\gamma}Z')}$ and $\frac{-1\times\phi(\hat{\gamma}Z')}{1-\Phi(\hat{\gamma}Z')}$, where ϕ and Φ denote respectively the probability density function and the cumulative distribution function of the standard normal distribution, Z is the vector of regressors used in the selection model, and $\hat{\gamma}$ denotes the vector of coefficient estimates from the selection model.

as the dependent variable and find that firms with bank nominees have lower dividend payout rates.

Overall, the switching regression model allows us to explicitly control for the endogenous presence of bank nominees on firm boards and to estimate their effect on firm performance. We continue to find that firms with bank nominees have lower sales growth, investment, dividend payout but higher leverage.

6   Conclusion

Our paper investigates the interaction between corporate governance and corporate performance. It focuses on a particular channel for corporate governance, namely the board and the role of bankers on the board. This is particularly timely and relevant, given the worldwide push towards improving corporate governance by reforming board of directors and increasing the extent of independent directors on firm boards.

Using a large panel data from India, we find that compared with firms without bankers on board, firms with bankers on board tend to be those with lower information asymmery, have lower investments and lower profits. These firms are more likely to be from industries with lower dependence on external capital and are more likely to be in financial distress. The presence of bankers does not help reduce group firms' proclivity towards expropriation. On the contrary, we find that bankers on boards are associated with more conservative management, in the form of lower investments, lower sales growth and lower dividend payouts. Thus, we interpret the evidence as being consistent with bankers on board worsening the conflict between debt and equity rather than enhancing firm value. This result is particularly striking in the Indian context where the bank nominees have more freedom, without being encumbered with the board's responsibility towards the shareholders.

We contribute to the literature on corporate governance in emerging markets. Expropriation by controlling insiders and high agency costs from conflict with outside investors are typical of such economies with poor institutions. Given the dominance of banks in such economies, we offer critical insight on their role in governance in such environments. This paper is one of a handful of papers looking at debt as a tool for internal governance. India offers a natural setting for these issues - as an emerging economy, with tunneling common among business groups, and large government-controlled financial institutions that are allowed to appoint nominees on the board of borrowing firms.

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Appendix A: Variable definitions

- Sales: total sales in units of Rs. 10 million.

- Sales growth: growth rates of sales.

- Investment: growth rate of total assets.

- Profits: ratio of operating profits to total assets.

- Age: firm age since incorporation measured in number of years.

- Public: dummy variable that takes a value 1 for firms that are publicly traded.

- Market-to-Book: ratio of market value of total assets to book value of total assets.

- Leverage: ratio of book value of total borrowings to book value of total assets.

- Group: dummy variable that takes a value 1 for firms that belong to a business group.

- Dividends/TA: ratio of total dividends paid out to book value of total assets.

- Promoter holding: percentage of outstanding shares held by promoters.

- Insitutional holding: percentage of outstanding shares held by banks and other financial institutions.

- Bank nominee: dummy variable that takes a value 1 for firms that have nominee(s) of financial institutios on board

- Number of bank nominees: total number of nominees of all financial insitutions on board

- Industry Market-to-Book: median ratio of market value of total assets to book value of total assets of all firms in an industry.

- Industry adjusted Market-to-Book: difference between a firm's market-to-book and the corresponding industry market-to-book.

- Industry sales growth: median growth rate of sales of all firms in an industry.

- Industry leverage: median ratio of total borrowings to book value of total assets of all firms in an industry.

- Industry profit: median ratio of operating profits to total assets of all firms in an industry.

- RZ-Index: measure of external-finance dependence of a firm, based on the methodology of Rajan and Zingales (1998).

- Altman Z-Score: measure of a firm's probability of default, based on the methodology of Altman (1968).

- Length of year: length of the fiscal period, in months.

- High ability: dummy variable that takes a value 1 for firms whose sales growth in the previous year exceeded the industry sales growth in the previous year.

- High leverage: dummy variable that takes a value 1 for firms whose leverage in the previous year exceeded the industry leverage in the previous year.

- Bankrupt: dummy variable that takes a value 1 for firms that filed for bankruptcy under BIFR.

Table 1: Descriptive statistics

Panel A: Descriptive statistics for the full sample

	N	Mean	Median	Standard deviation
Log(Total assets)	42500	3.55	3.395	1.999
Log(Age)	41595	2.939	2.89	0.737
Public	41726	0.947	1	0.223
Profits	42500	0.134	0.126	0.156
Sales growth	37542	0.236	0.11	0.699
Market to book	27394	1.147	0.818	1.035
Leverage	42500	0.477	0.407	0.492
Group	42500	0.398	0	0.489
Investment	38014	0.141	0.05	0.363
Dividends/TA	42500	0.009	0	0.017
Bank nominee	42500	0.129	0	0.335
Number of bank nominees	5471	1.428	1	0.79
Promoter holding	27899	0.428	0.442	0.24
Institutional holding	27899	0.055	0.009	0.094

Panel B: Mean values for firms with and without a bank nominee on the board

	Bank nominee		No nominee		
	N	Mean	N	Mean	Difference
Log(Total assets)	5471	5.004	37029	3.336	1.668
Log(Age)	5456	3.113	36139	2.913	0.2
Public	5462	0.938	36264	0.949	-0.011
Profits	5471	0.122	37029	0.135	-0.013
Sales growth	4868	0.131	32674	0.252	-0.121
Market to book	4565	1.043	22829	1.167	-0.124
Leverage	5471	0.752	37029	0.436	0.316
Group	5471	0.654	37029	0.36	0.294
Investment	4890	0.081	33124	0.15	-0.069
Dividends/TA	5471	0.007	37029	0.01	-0.003
Promoter holding	3745	0.352	24154	0.44	-0.088
Institutional holding	3745	0.127	24154	0.044	0.083

This table reports the descriptive statistics of our sample. Panel A summarizes the whole sample while Panel B provides the mean values of the subsample of firms with and without a bank nominee director. In Panel B, the last column reports the difference in means for each variable. All variables are defined in Appendix A. The data cover the period 1994-2008. The nominee director data is from Capitaline while financial and ownership data for all non-Government and non-foreign firms is from Prowess.

Table 2: Which firms have bank nominee directors?

| | Bank nominee | | | | | | Logit | One nominee | Multiple nominees |
| | OLS | | | | | | | Multinomial logit | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Promoter holding		-.040 (.024)*							
Institutional holding		.618 (.057)***							
RZ-Index			-.065 (.010)***						
Industry market to book				-.003 (.002)*		.001 (.001)	.003 (.015)	.016 (.014)	-.055 (.039)
Altman Z-Score					-.0006 (.0003)**	.00005 (.0003)	-.062 (.020)***	-.054 (.017)***	-.130 (.140)
Log(Total assets)	.042 (.010)***	.032 (.009)***	.061 (.007)***	.041 (.010)***	.047 (.012)***	.051 (.010)***	.580 (.042)***	.470 (.040)***	.899 (.091)***
Log(Age)	.012 (.010)	-.003 (.012)	.007 (.007)	.011 (.010)	.009 (.012)	.005 (.008)	-.081 (.072)	-.089 (.075)	-.067 (.137)
Group	.052 (.017)***	.048 (.018)***	.046 (.017)***	.054 (.017)***	.052 (.022)**	.036 (.016)**	.404 (.134)***	.295 (.133)**	.869 (.158)***
Investment	-.054 (.013)***	-.048 (.013)***	-.069 (.012)***	-.052 (.012)***	-.068 (.014)***	-.056 (.013)***	-.654 (.100)***	-.499 (.097)***	-1.158 (.208)***
Sales growth	.007 (.003)**	.008 (.003)**	.011 (.003)***	.007 (.003)**	.007 (.004)**	.013 (.002)***	.019 (.036)	.016 (.042)	-.023 (.098)
Profit	-.055 (.030)*	-.073 (.034)**	-.094 (.026)***	-.054 (.029)*	-.043 (.037)	-.096 (.029)***	.515 (.350)	.651 (.356)*	.558 (1.150)
Leverage	.116 (.016)***	.113 (.017)***	.138 (.009)***	.114 (.015)***	.127 (.019)***	.112 (.018)***	1.106 (.083)***	1.018 (.077)***	1.353 (.222)***
Const.	.010 (.031)	.037 (.036)	.003 (.030)	.062 (.031)**	-.193 (.070)***	.043 (.045)	-4.870 (1.135)***		-179.8 (1.185)***
Obs.	36766	25956	26985	36658	26348	26298	25642	26298	
R^2 or Pseudo R^2	.162	.183	.203	.163	.161	.228	.303	.289	

This table reports the results of a panel data regression of a dummy variable that identifies firms with bank nominee directors and firm characteristics. Specifically, we estimate the following panel regression model: Bank nominee$_{i,t} = \alpha + \beta \times X_{i,t} + \mu_i + \mu_t$. All variables are defined in Appendix A. The data covers the period 1994-2008. The nominee director data are from Capitaline while financial and ownership data are from Prowess. The standard errors are robust to heteroskedasticity and clustered at the industry level. ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Table 3: Bank nominee and firm performance

	Panel A: Bank nominee and firm performance			
	Sales growth	Investment	Leverage	Dividends/TA
	(1)	(2)	(3)	(4)
Bank nominee$_{t-1}$	-.045 (.011)***	-.033 (.009)***	.060 (.012)***	-.001 (.0005)***
Industry sales growth	1.061 (.056)***			
Industry investment		.753 (.044)***		
Industry leverage			.371 (.039)***	
Log(Total assets)	.055 (.013)***	.184 (.007)***	-.049 (.013)***	-.001 (.0003)***
Log(Age)	-.266 (.050)***	-.133 (.043)***	.085 (.031)***	-.005 (.001)***
Market to book	.007 (.001)***	.002 (.0009)**	-.0006 (.0006)	.0004 (.00002)***
Profit$_{t-1}$	-.531 (.075)***	.539 (.053)***	-.564 (.062)***	.027 (.002)***
Leverage$_{t-1}$	.0001 (.0006)	.007 (.001)***		-.00005 (.00003)**
Length of year	.471 (.075)***	.083 (.029)***	.018 (.035)	-.0009 (.001)
Const.	.314 (.231)	-.474 (.144)***	.314 (.077)***	.026 (.005)***
Obs.	21230	21320	21320	21320
R^2	.366	.524	.798	.742

	Panel B: Bank nominee and firm performance: Group and non-group firms			
	Sales growth	Investment	Leverage	Dividends/TA
	(1)	(2)	(3)	(4)
Bank nominee$_{t-1}$ X Group	-.039 (.016)**	-.025 (.011)**	.060 (.015)***	-.001 (.0006)*
Bank nominee$_{t-1}$ X [1- Group]	-.059 (.017)***	-.049 (.017)***	.059 (.015)***	-.002 (.0007)***
Const.	.316 (.231)	-.474 (.144)***	.314 (.077)***	.026 (.005)***
Obs.	21230	21320	21320	21320
R^2	.366	.525	.798	.742
Δ Coef	.020 (.026)	.024 (.022)	-.0007 (.018)	.001 (.001)

Panel C: Bank nominee and firm performance: High and low ability firms				
	Sales growth	Investment	Leverage	Dividends/TA
	(1)	(2)	(3)	(4)
High ability	.092	-.051	-.007	-.00008
	(.015)***	(.010)***	(.007)	(.0003)
Bank nominee$_{t-1}$ X High ability	-.058	-.028	.036	-.002
	(.012)***	(.011)***	(.012)***	(.0006)***
Bank nominee$_{t-1}$ X [1-High ability]	-.029	-.040	.081	-.0009
	(.017)*	(.011)***	(.015)***	(.0007)
Const.	.305	-.148	.275	.031
	(.237)	(.185)	(.067)***	(.006)***
Obs.	21195	21195	21195	21195
R^2	.372	.53	.802	.744
Δ Coef	-.029	.012	-.045	-.001
	(.021)	(.013)	(.013)***	(.0007)

Panel D: Bank nominee and firm performance: High and low leverage firms			
	Sales growth	Investment	Dividends/TA
	(1)	(2)	(3)
High leverage	-.018	-.035	-.003
	(.013)	(.009)***	(.0004)***
Bank nominee$_{t-1}$ X High leverage	-.048	-.037	-.001
	(.014)***	(.011)***	(.0005)***
Bank nominee$_{t-1}$ X [1-High leverage]	-.035	-.022	-.001
	(.012)***	(.010)**	(.0006)*
Const.	.331	-.151	.032
	(.238)	(.185)	(.006)***
Obs.	21195	21195	21195
R^2	.371	.529	.746
Δ Coef	-.013	-.015	.0004
	(.015)	(.012)	(.0005)

This table reports the results of a panel data regression of firm performance on the presence of a bank nominee director and other firm characteristics. Specifically, we estimate the following panel regression model:

$$y_{i,t} = \alpha + \beta \times Banknominee_{i,t-1} + \gamma \times X_i + \mu_i + \mu_t,$$

where y is *Sales growth*, *Investment*, *Leverage* or *Dividends/TA*. The control variables whose coefficients are shown in Panel A but suppressed in Panels B-D include *Log(Total assets)*, *Log(Age)*, *Market to book*, *Length of year* and lagged values of *Profit* in all the columns. We also include *Industry sales growth* and lagged values of *Leverage* to model *Sales growth*, *Industry investment* and lagged values of *Leverage* to model *Investment*, and *Industry leverage* to model *Leverage*. Identical controls are used all Panels for each of the different performance measure. In Panel B we differentiate between group and non-group firms by replacing *Bank nominee$_{t-1}$* with *Bank nominee$_{t-1}$ × Group* and *Bank nominee$_{t-1}$ × [1-Group]*, in Panel C we differentiate between high- and low-ability firms by replacing *Bank nominee* with *Bank nominee$_{t-1}$ × High ability* and *Bank nominee$_{t-1}$ × [1-High ability]* and in Panel D we differentiate between firms with high- and low-leverage by replacing *Bank nominee$_{t-1}$* with *Bank nominee$_{t-1}$ × High leverage* and *Bank nominee$_{t-1}$ × [1-High leverage]*. All specifications have time fixed effects. All variables are defined in Appendix A. The data covers the period 1994-2008. The nominee director data are from Capitaline while financial and ownership data are from Prowess. The standard errors are robust to heteroskedasticity and clustered at the industry level. ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Table 4: Bank nominee and bankruptcy likelihood

	Bank nominee and bankruptcy likelihood			
	(1)	(2)	(3)	(4)
Bank nominee$_{t-1}$	.009 (.003)***			
Bank nominee$_{t-1}$ × Group		.009 (.004)**		
Bank nominee$_{t-1}$ × [1- Group]		.008 (.008)		
Bank nominee$_{t-1}$ × High ability			.002 (.003)	
Bank nominee$_{t-1}$ × [1-High ability]			.017 (.005)***	
Bank nominee$_{t-1}$ × High leverage				.014 (.005)***
Bank nominee$_{t-1}$ × [1-High leverage]				-.0003 (.003)
Leverage	.010 (.005)*	.010 (.005)*	.008 (.006)	.006 (.006)
Log(Total assets)	-.0003 (.001)	-.0003 (.001)	-.00009 (.001)	-.0005 (.001)
Log(Age)	-.002 (.004)	-.002 (.004)	-.002 (.004)	-.002 (.004)
Market to book	.0004 (.0001)***	.0004 (.0001)***	.0004 (.0001)***	.0004 (.0001)***
Profit	-.101 (.022)***	-.101 (.022)***	-.103 (.023)***	-.104 (.023)***
Length of year	.017 (.013)	.017 (.013)	.017 (.014)	.017 (.014)
Const.	.010 (.013)	.010 (.013)	.008 (.013)	.009 (.013)
Obs.	21324	21324	21199	21199
R^2	.318	.318	.32	.32
Δ Coef		.0007 (.010)	-.014 (.005)***	.014 (.005)***

This table reports the results of a panel data regression of bankruptcy likelihood on the presence of a bank nominee director and other firm characteristics. Specifically, we estimate the following panel regression model with time fixed effects:

$$\text{Bankrupt}_{i,t} = \alpha + \beta \times \text{Bank nominee}_{i,t-1} + \gamma \times X_i + \mu_i + \mu_t,$$

All variables are defined in Appendix A. The data covers the period 1994-2008. The nominee director data are from Capitaline, financial and ownership data are from Prowess and bankruptcy data are from BIFR. The standard errors are robust to heteroskedasticity and clustered at the industry level. ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Table 5: Bank nominee and tunneling

	Profit			
	All Firms		Group	Non Group
	(1)	(2)	(3)	(4)
Industry profit	.789	.775	.818	.739
	(.047)***	(.049)***	(.053)***	(.059)***
Bank nominee		-.012	-.014	-.010
		(.004)***	(.005)***	(.006)
Industry profit × Bank nominee		.108	.040	.226
		(.056)*	(.076)	(.106)**
Const.	.062	.063	.101	.049
	(.025)**	(.025)**	(.024)***	(.036)
Obs.	41726	41726	16684	25042
R^2	.536	.537	.556	.508

This table reports the results of a panel data regression of firm profitability on industry profitability, and the presence of a bank nominee director, and *Log(Total assets)* whose coefficient is suppressed. Specifically, we estimate the following panel regression model with time fixed effects:

$$\text{Profit}_{i,t} = \alpha + \beta \times \text{Bank nominee}_{i,t} + \gamma \times X_i + \mu_i + \mu_t,$$

All variables are defined in Appendix A. The data covers the period 1994-2008. The nominee director data are from Capitaline while financial and ownership data are from Prowess. The standard errors are robust to heteroskedasticity and clustered at the industry level. ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Table 6: Bank nominee and firm valuation

	Bank nominee and industry adjusted market-to-book ratio			
	(1)	(2)	(3)	(4)
Bank nominee$_{t-1}$	-.382			
	(.226)*			
Bank nominee$_{t-1}$ X Group		-.575		
		(.285)**		
Bank nominee$_{t-1}$ X [1- Group]		-.017		
		(.271)		
Bank nominee$_{t-1}$ X High ability			-.412	
			(.258)	
Bank nominee$_{t-1}$ X [1-High ability]			-.312	
			(.257)	
Bank nominee$_{t-1}$ X High leverage				-.081
				(.222)
Bank nominee$_{t-1}$ X [1-High leverage]				-.712
				(.286)**
Log(Total assets)	-1.166	-1.165	-1.071	-1.037
	(.351)***	(.351)***	(.357)***	(.359)***
Log(Age)	-3.790	-3.783	-3.606	-3.590
	(.692)***	(.692)***	(.707)***	(.701)***
Profit$_{t-1}$	9.814	9.810	9.802	9.942
	(.922)***	(.923)***	(.928)***	(.858)***
Leverage$_{t-1}$	.084	.084	.092	.094
	(.018)***	(.018)***	(.022)***	(.023)***
Const.	16.528	16.515	12.950	13.221
	(1.938)***	(1.937)***	(3.347)***	(3.357)***
Obs.	21320	21320	21195	21195
R^2	.63	.63	.632	.632
Δ Coef		-.558	.100	.631
		(.359)	(.277)	(.272)**

This table reports the results of a panel data regression of firm valuation (in excess of industry market-to-book) and the presence of a bank nominee director. Specifically, we estimate the following panel regression model with time fixed effects:

$$\text{Industry adjusted market to book}_{i,t} = \alpha + \beta \times \text{Bank nominee}_{i,t-1} + \gamma \times X_i + \mu_i + \mu_t,$$

All variables are defined in Appendix A. The data covers the period 1994-2008. The nominee director data is from Capitaline while financial and ownership data is from Prowess. The standard errors are robust to heteroskedasticity and clustered at the industry level. ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

Table 7: Bank nominee and firm performance: Switching regression model

	Bank nominee	Sales growth		Investment		Leverage		Dividends/TA	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mills		-.005 (.055)		.136 (.045)***		-.784 (.169)***		.015 (.002)***	
Inverse Mills			-.063 (.056)		.020 (.040)		-.992 (.167)***		.006 (.002)***
Industry sales growth	.343 (.218)	.981 (.057)***	1.014 (.110)***						
Industry investment	-1.469 (.903)			.714 (.043)***	.753 (.112)***				
Industry leverage	1.246 (.543)**					.269 (.087)***	-.534 (.207)***		
Log(Total assets)	.164 (.048)***	.009 (.007)	.029 (.009)***	.048 (.004)***	.048 (.007)***	-.024 (.014)*	-.164 (.022)***	.001 (.0002)***	.002 (.0003)***
Log(Age)	-.017 (.045)	-.093 (.008)***	-.069 (.015)***	-.095 (.008)***	-.059 (.011)***	.002 (.008)	-.029 (.016)*	.003 (.0006)***	.001 (.0006)**
Insider holding	-.296 (.170)*	-.012 (.039)	.039 (.038)	-.022 (.018)	.073 (.029)**	.051 (.030)*	.135 (.058)**	.004 (.001)***	-.002 (.002)
Institutional holding	2.119 (.315)***	-.183 (.076)**	-.213 (.103)**	-.119 (.085)	-.098 (.085)	-.727 (.139)***	-1.369 (.257)***	.023 (.004)***	.009 (.003)***
Market to book	-.016 (.005)***	.005 (.001)***	.007 (.002)***	-.0006 (.0009)	.0005 (.001)	.0005 (.001)	.012 (.003)***	.0004 (.00004)***	.0004 (.00007)***
$Profit_{t-1}$	-.443 (.254)*	-.346 (.087)***	-.033 (.122)	.547 (.051)***	.485 (.056)***	-.422 (.062)***	-1.001 (.146)***	.051 (.003)***	.038 (.004)***
$Leverage_{t-1}$	.136 (.034)***	-.031 (.013)**	1.00e-05 (.0004)	.010 (.005)**	.004 (.0002)***			-.0007 (.0004)**	1.00e-05 (.00002)
Length of year	.467 (.118)***	.443 (.104)***	.423 (.139)***	.144 (.038)***	.050 (.070)	.184 (.075)**	-.220 (.094)**	-.004 (.001)***	-.003 (.002)*
Obs.	18311	15213	3026	15280	3031	15280	3031	15280	3031
R^2	.197	.093	.128	.233	.266	.217	.417	.401	.327

Panel B: Difference between actual and counterfactual *Sales growth*

	Actual	Counterfactual	Difference
Sales growth of firms with bank nominees	.126	.156	-.030 (.007)***

Panel C: Difference between actual and counterfactual Investment

	Actual	Counterfactual	Difference
Investment of firms with bank nominees	.085	.128	-.043 (.004)***

Panel D: Difference between actual and counterfactual Leverage

	Actual	Counterfactual	Difference
Leverage of firms with bank nominees	.692	.565	.127 (.008)***

Panel E: Difference between actual and counterfactual Dividends/TA

	Actual	Counterfactual	Difference
Dividends/TA of firms with bank nominees	.008	.012	-.004 (.0002)***

This table reports the results of a switching regression model aimed at understanding the effect of *Bank nominee* on firm performance after controlling for the endogeneity of *Bank nominee*. The model consists of a selection equation (Probit) to estimate the probability of a firm having a bank nominee (Column (1) of Panel A), and two outcome equations that examine the various performance measures for firms with and without a bank nominee. The results of these are presented in Panel A, Columns (2)-(3) for *Sales growth*, Columns (4)-(5) for *Investment*, Columns (6)-(7) for *Leverage* and Columns (8)-(9) for *Dividends/TA*. The *Inverse Mills Ratio* (*Mills Ratio*) estimated from the coefficient estimates in Column (1) are used as additional controls in Columns (2), (4), (6), & (8) (Columns (3), (5), (7), & (9)).

Panel B to E present the results of t-test for the difference between the actual performance measure for firms with a bank nominee and the counterfactual performance estimated using coefficient estimates on firms without a bank nominee and the characteristics of the firms with a bank nominee.