Bank directors on corporate boards: conflict of interests or certification role ? *

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Abstract

We study the impact of banks' presence on corporate boards on the lender-borrower relationship. We have two results. First, we find strong evidence of certification effects as rates on loans by all banks to firms having bankers on boards are lower than on loans to firms without bankers. As rates on loans from the board director's bank and from other banks are not significantly different we have not evidence of conflict of interest effects. Second, firms having bankers are less likely to default than their peers. The evidence confirms that the performance of loans to firms having bank representation is consistent with loan pricing and that the involvement of banks in the firms' governance may be efficient.

1 Introduction

The presence of bank directors in the boards of industrial firms is a tangible fact in several countries. According to Kroszner and Strahan (2001a), 75 per cent of large firms have bankers on their boards in Germany, 53 per cent in Japan, and 31 per cent in the US[1]. Several mutually non exclusive hypotheses regarding bank representation have been advanced in the literature. Bankers may safeguard their interests as firms' creditors, may provide complementary (financial) knowledge to the management or may simply represent their interests as firms' shareholders (Booth Deli, 1999; Byrd and Mizruchi, 2005, Kroszner and Strahan, 2001; Gner et al, 2006).

As far as the effects on financial intermediation are concerned, two competing hypotheses dominate. A banker on a corporate board decreases monitoring-related contract costs as being on the borrower's board permits both to efficiently assess the quality of a firm's projects and to prevent opportunistic behaviors of managers (Fama, 1985).

[1]Bank representation on corporate boards is also a historical fact. See Haubrich and Santos (2003) for the US.

A banker on a firm's board generates conflicts according to other scholars[2]. As a boards' member of both the bank and the company, this director is required to serve interests which may diverge, especially when the firm experiments distress (Kroszner and Strahan, 2001a). The costs of these conflicts may be noteworthy. Pressures on banks for special treatments of borrowers - not justified on economic grounds - may distort the risk assessment's process and weaken the link between actual risk and loan rates - as well as the regular transmission of the monetary impulses to the retail markets. Further, the market exit of insolvent firms may be unduly procrastinated.

The novelty of this paper is to solve the controversy between the 'information' and the 'conflict' views by resorting to a joint analysis of pricing and performance of loans to firms having bankers on their boards.

The emphasis on pricing is motivated by its usefulness in capturing 'conflicts' effects which emerge by taking differences on pricing behaviors between the 'inside' (subject to conflicts) and the 'outside' (non-conflict prone) lenders of a firm. The study of the repayment problems allows to verify the suggestions arising from the analysis of pricing behaviors. The solidity of the 'information view' would be confirmed if rates eventually set at below-market level on loans to firms having bankers were associated to a lower default probability. A divergent pattern on this account would be supposed to reflect some 'conflict' effects, on the other hand.

Our strategy is based on two steps. First, we analyze pricing behavior of banks on around 300,00 loans extended to 32,000 firms during the year 2005 in Italy. Secondly, we observe the (ex-post) performance of these loans along the time-span December 2006-December 2010.

The Italian market of loans constitutes a natural context for this research. Two elements are worthy of mention. Firms rely strongly on bank debt as a source of external finance in Italy. This dependence mirrors in close ties existing between banks and industrial firms[3] also taking shape of interlocking directorships in some cases[4]. The second element refers to the structure of the firms' debt in Italy which is shared-out within a huge number of creditors[5]. This morphology permits comparisons of rates applied to a borrower at the on-the-board and at out-of-the-board banks which represent tangible measures of the 'conflict' effects.

The time-span December 2006-December 2010 is an interesting (ex-post)

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[2]Conflicts of interests affect financial markets whenever a financial service provider, or an agent within such a service provider, has multiple interests which create incentives to act in such a way as to misuse or conceal information needed for the effective functioning of financial markets (Crockett et al., 2003)

[3]Close ties between banks and industries were keep out by the Italian legislation in the past: bank holding in equity stakes of industrial firms were prohibited by the 1933 Banking Law - as the 1933 Glass Stegall Act did in the US. Since the approval of Uniform Banking Code in 1994 onwards, this prohibition has been progressively slackened. It has been definitively removed in 2008.

[4]Company boards's members of banks are allowed to take up positions in firms' boards in Italy as in other industrialized countries. A branched network of interlocking directorships between banks and non-financial companies has been identified in Italy by Ferri and Trento (1997), Bianco and Pagnoni (1997), Santella et al (2008). This network could have represented a substitute for bank holdings in equity stakes of firms in phases when they were not allowed by the legislation (Bianco and Pagnoni,1997).

[5]Some authors pointed out that the fragmented nature of the lender-borrower relationship in Italy may resemble the transaction-based lending schemes rather than the 'housebank' system of Germany (Cesarini, 1994).

testing ground on the quality of loans to industrial firms. This period includes the severe downturn that has affected the real economy after the collapse of the financial institution Lehman Brothers. As far as the lending market is concerned, the crisis has exacerbated the asymmetric information problems and has deteriorated the performance of loans in Italy as well as in the majority of the developed countries.

Our analysis is grounded on a newly hand-collected database obtained by merging four sources. They are the Credit Register (Bank of Italy), the Organi Sociali delle Banche (OR.SO, Bank of Italy), the InfoCamere (Italian Chambers of Commerce) and the Balance Sheet Register (BSR).

The main connection of this research is with the studies on the link between governance structures and financial intermediation. These studies are generally marked by a dialectic between the benefits and the costs of the banks' involvement in the firms' governance. De Long (1994) documents how the presence of investment bankers on the corporate boards was based on a deep conflict of interests during the years before the World War in the US. However, the same conflicts permitted to signal credibly to outside (uninformed) investors the soundness of the companies in a world where information about firms' underlying values and the quality of their managers was scarce[6]. Kroszner and Strahan (2001) find that lender liability are important factors explaining the distribution of bankers to boards. While the demand of monitoring services dominates at low levels of credit risk, concerns about lender liabilities prevail at high levels of risk and drive the presence of bank directors on large and stable firms. Similar outcomes are documented by Byrd and Mizruchi (2004)[7]. Finally, roles as financial experts or as advisors for mergers and acquisitions are evidenced for bank directors on corporate boards by Ciamarra (2006) and Dittman et al (2011).

As far as the costs are concerned, conflict of interests are observed in Mexico by La Porta et al (2003). The authors find that 'related' loans are cheaper and more likely to default than 'unrelated' loans[8]. Further, these conflicts had an important role in the aftermath of financial crisis during the years 1997-1998 as the collapse of the Asian Tigers was due to connected lenders continuing to extend credit to distressed borrowers according to Rajan and Zingales (1998). Other costs of bank representation are found out by Leaven (2002) who demonstrate that 'connected lenders' exposed banks at undue risks in Russia.

Our research improves upon this literature through the availability of data that permit to discriminate the views by looking at both loan *ex-ante* pricing and *ex-post* performance, being the latter observed along the years of the recent financial crisis.

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[6]De Long posit that it was valuable for a firm to have its managers watched over by investment bankers from their posts on the board of directors. These bankers played a crucial 'monitoring' and 'signaling' intermediary role between firms and investors

[7]The dialectic between the director's fiduciary responsibility and the interests of her bank is solved as follows. When the potential for conflicts is high - i.e. when the firm proxies distress - creditors avoid to take board positions and the borrowers only benefit from the expertise and the reputation effects of the non-lending (and not prone to conflict) bankers. By contrasts, creditors usually take positions on the boards of financially sound borrowers to reduce their monitoring costs.

[8]La Porta et al (2003) do not scrutinize bank presence on corporate boards 'per se' as the subject of their study is the lending to related parties, a general phenomenon which includes bank presence on corporate boards.

Our findings are briefly documented as follows. First, after controlling for borrower and relationship characteristics, we find that a firm having a banker on its board is charged lower rates than its peers. Second, below market rates are charged to a firm having a banker by both its out-of-the-board (not-prone to conflicts) and on-the-board (subject to conflict) banks. Third, special rates charged (ex-ante) to firms having bankers on boards are consistent with the relatively higher performance observed (ex-post) on loans granted to these companies.

These results provide support to the information view. Below-market rates by the on-the-board banks are suggestive of a role for bank directors as efficient monitors of the projects carried-out by the firms hosting the bankers. Below-market rates by out-of-the board banks (to firms having bank representation) suggest that the presence of bankers certify the firms' soundness to other out-of-the-board (relatively uninformed) banks. Finally, given the equivalence of (below-market) rates between on-the-board and out-of-the-board banks, on the one hand and the positive association between (lower) loan rates and (lower) propensity to default, on the other hand we have not evidence supporting the conflict of interests view.

The remainder of the paper is organized in three sections: Section 2 delves into the theoretical background of this analysis. Section 3 illustrates our empirical exercises. Sections 4 concludes.

2   Theories

In this section the hypotheses regarding the link between bank representation on corporate boards and the lender-borrower relationship are developed in more detail. The 'information view' is framed around two complementary theories. This view points-out how the costs of monitoring a firm having a bank director are lower for both the bank represented in the board and the other lenders which are outside the boardroom. The 'conflict of interests' view focuses on the structure of incentive of the bank director and its spin-offs on the credit risk's assessment process of the bank.

Monitoring hypothesis. Bank presence on corporate boards has been rationalized as a tool to enhance 'relationship lending' practices [9]. Being on a borrower's board formalizes the long-term investment a bank has with the company and it represents an efficient way to reduce information asymmetries between the lender and the borrower. Being on boards makes possible the flexibility to adapt to changing circumstances and to obtain information relevant for the current situation without the cost of producing data relevant to each contingency described in the contract (Kroszner and Strahan, 2001b). In the same perspective, Williamson (1988) considers the outcomes arising from bankers on boards as superior to those originated by loan covenants while Pfeffer (1972) estimates bank representation as the main channel to acknowledge the internal environment of a company. The empirical literature has identified a role for bank directors as efficient monitor in Japan (Kaplan and Minton, 1994) and in

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[9]Relationship lending has been defined as 'the provision of financial services by a financial intermediary that invests in obtaining customer-specific information, which is proprietary in nature; and that evaluates profitability of these investments through multiple interactions with the costumer (Boot and Thakor, 2000).

the US (Byrd and Mizruchi, 2005).

Certification hypothesis. As per theories on reputational signaling, the actions of agents perceived as relatively informed generate externalities as they indirectly disclose privately held and valuable information (Lummer and McConnel, 1989). As far as the loan market is concerned, a bank on the board of a borrower is intrinsically endowed with deep information on its soundness. The lending behavior of that bank represents a credible signal on the quality that company for the bank community as a whole and, by observing that behavior, outside lenders may avoid the duplication of monitoring costs. In a similar perspective, Boot(1992) points-out how a bank's monitoring costs decrease as a result of information produced through cross-monitoring activities by another claimant. This cross-monitoring activity may involve simply noting the presence of another claimant, information associated with monitoring other claims. Roles played by lenders on boards as certifiers of a firm's soundness are discussed by Byrd and Mizruchi (2005) and they are evidenced by De Long (1991).

Conflict of interest hypothesis. Lending bankers on boards may generate conflicts of interests[10]. As board members of banks, they have the fiduciary duty to serve the interests of creditors, but as directors with firms, they have the duty to serve the interests of firms' shareholders (Kroszner and Strahan, 2001b). Conflicts arise as the pay-offs of these two classes of agents are not aligned (Jensen and Meckling, 1976)[11]. As far the market of loans is concerned, should the incentive from the borrowing firm prevail over that from the lending bank, some pressures to reduce borrowing costs may interferer in the screening and monitoring activities. As a consequence, risk premia applied to a borrower may be set at below-market level and be not justified on the economic grounds(Laeven, 2001; La Porta et al, 2003)[12].

3 Empirical analysis

3.1 Testable hypotheses

We envisage to use empirical methods for discriminating between the hypotheses which are offered for bank presence on corporate boards. Our strategy is divided into two steps. First, we investigate the risk premia charged on loans granted to firms during the year 2005. Next, we follow the performance of these loans over the years 2006-2010. The exercises aim to evaluate the differences existing, on loan conditions and performance, between firms having bank directors and

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[10]The empirical literature on conflicts of interests in financial markets is large. For a survey see Mehran and Stulz (2007). The literature using large samples reaches conclusions that are often more benign than those drown by journalist and politicians. The reputation of banks as certifiers of quality for securities they underwrite or as efficient predictors of credit risk, determines strong incentives limiting the adverse effects of conflicts of interests.

[11]Companies maximize the return to shareholders by promoting projects with both high expected pay-offs and variances. Creditors aim at the repayment of the loans and discourage risky investments whose benefits are not fully gained (high expected profits for borrowers correspond to limited expected pay-offs for creditors while in case of firm's bankrupt, a borrower is relatively protected by large losses).

[12]A role as financial expert for a bank directors on a corporate board has been indicated by some authors. Fama and Jensen (1983) claim that outside directors may even add complementary knowledge to the management, depending on their performance as financial experts in other organizations (Booth and Deli, 1999).

their peers. The two dimensions of the analysis are therefore examined jointly to validate the following hypotheses.

H1. Information view - A bank director on the board of a borrowing firm lower monitoring costs for both the on-the-board bank ('monitoring') and the out-of-the-board banks ('certification'). We consider this view supported by data if these conditions are met: 1) a firm having bank representation pays below-market rates to both the on-the board bank (prone to conflicts) and to the out-of the board (not prone to conflicts) lenders; 2) loan rates charged ex-ante are consistent with the ex-post performance of loans to firms having bankers on boards.

H2. Conflict of interests view: A bank director on the board of a borrowing firm acts to minimize the firm's borrowing costs, irrespective of the credit risk incurred by the bank. This view implicates: 1) a firm having a lender on boards is charged below-market rate only by its on-the-board bank (prone to conflict)while it borrows at market terms from its out-of-the-board lenders (not prone to conflict); 2) Below-market rates charged by the on-the-board bank are uncorrelated with the (ex-post) performance of loans to the firm having bank directors.

3.2 Variables

We need information on the composition of boards for banks and companies, data on the characteristics and the performance of loans and on the balance sheets of borrowers. We resorted to four sources: Organi Sociali delle Banche (OR.SO., Bank of Italy), Infocamere (Chambers of Commerce), the Central Credit Register (CCR, Bank of Italy), and the Balance Sheet Register (CEBIL). The Balance Sheet Register provided us with the sample of firms used in this study. It consists of around 32,000 industrial firms[13] which were registered in CEBIL[14] in the fiscal year 2005, and which survived after cleaning outliers from the row data[15]. The auxiliary companies *(enti strumentali)* were excluded from the exercise.

In Table 1 the variables included in our empirical tests are listed. They are broken down into four classes: *Loan contract characteristics, Governance-signaling terms (key variables), Firms' characteristics, and (traditional) relationship characteristics.*

Governance-signaling terms. Bank representation on corporate boards are the key variables of this study. The OR.SO. and the Infocamere archives are our sources of information to map the banks' involvement in the firms' governance[16].

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[13]The size of our sample is similar to that of some previous studies on the relationship banking in Italy: Conigliani et al (1997) and Ferri et al (2000) exploit a sample of 33,000 firms; D'Auria et al (1999) use an unbalanced panel of 2,331 firms, which spans from 1987 to 1994. Petersen and Rajan (1994) verify the predictions of the literature on relationship banking looking at 3,404 firms. Therefore, we are confident that the size of our sample is sufficiently robust for the goal of this analysis.

[14]Firms eligible for joining CEBIL are those indebted with (at least) a lender participating in the consortium of creditors that banks put up for sharing data on the soundness of counterparts. All large banks operating in Italy are included in this archive.

[15]Row data reported by banks and companies to the Central Credit Register and to the Balance Sheet Register, respectively, were cleared of 'severe' outliers. These outliers make up about 0.0002 percent (two per million) of a Gaussian population and have substantial effects on means, standard deviations and other statistics.

[16]Information include data on identities, hierarchical positions - president, vicepresident,

Table 1: Variable description

Variable name	Description
Dep. var: Interest rate on loan (loan-level)	
Loan contract characteristics:	
CREDIT LINES (loan-level)	=1 for loans extended through credit lines
ACCOUNTS/REC (loan-level)	=1 for loans secured by accounts receivable
FIXED-TERM (loan-level)	=1 for fixed-term loans
TRANCHE (loan-level)	(log of) amount of loan in Euros
COLLATERAL (loan-level)	=1 if loan is secured by real collateral
Governance-signaling characteristics:	
BANKPRES (firm -level)	=1 if firm has a bank director on board
NOLEND-BANKPRES* (firm-level)	=1 if firm has a non-lending bank director on board
LEND-BANKPRES * (firm-level)	=1 if firm has a lending bank director on board
BY-IN* (loan-level)	=1 if loan is granted by the bank having the director on board (to a firm with lenders on board)
BY-OUT * (loan-level)	=1 if loan is granted by lenders without board positions (to a firm with lenders on board)
Firms' characteristics:	
EQUITY/DEBT (firm-level)	Equity to debt
COVERAGE (firm-level)	Interest expenses to gross operating margins
LIQUIDITY (firm-level)	Short term assets to short term liabilities
ASSETS LIQUIDITY (firm-level)	Liquid assets to total assets
TANGIBILITY (firm-level)	Tangible assets to total assets
PROFITABILITY (firm-level)	Return on equities
ST-DEBT (firm-level)	Short term debt to total debt
SIZE (firm-level)	(log of) Sales
	Assets
	Number of employees
SCORE (1-9) (firm-level)	Altman Z-Score (probability of default assessed-ex ante)
DEFAULT (0/1) (bank/firm/year-level)	=1 if the firm has been declared insolvent at one lender in the period.
Traditional relationship characteristics :	
MULTIPLE* (firm-level)	Number of creditors of the firm
TOP-LENDER* (bank/firm-level)	=1 if creditor is the main lender for the firm
LENGTH* (bank/firm-level)	Duration of the bank-firm relationship (number of years)
Industry characteristics: (firm-level)	23 economic branch-level dummies
Local mark.characteristics: (firm-level)	20 regional area-level dummies
Creditor characteristics: (bank-level)	213 individual bank (or 138 bank group) level dummies

* This variable is defined at bank group-level. All individual banks who join a bank group are treated as they were the same entity.

First, we identify firms having a bank director on their boards (BANKPRES). A firm is defined as having a bank representation when a member of its board serves as a director of a bank. These companies are labeled through firm-level (binary) dummies. Second, firms having a *lending*-type bank director (LEND-BANKPRES) are separated from those having a *non-lending*-type bank director (NOLEND-BANKPRES). On this account, a firm is defined as having a *lending*-type bank director (LEND-BANKPRES) when a member of its board serves as a director of a bank which is a creditor of the firm[17].

As far as firms having a *lending*-type bank director are concerned, we set apart loans granted by lenders on boards (BY-IN) from loans granted by the other (out-of-the board) banks (BY-OUT)[18] by mean of loan-level (binary) dummies.

Contract characteristics. Financial data are provided by the Central Credit Register by the Bank of Italy. Loans are reported when tranches exceed Euro 75,000 by a sample of 213 credit institutions accounting for 90 percent of credit granted to the retail sector. Information includes three instruments: credit lines (CREDIT LINES), accounts receivable (ACCOUNTS/REC), fixed-term loans (FIXED-TERM). Further information includes size of loans (TRANCHE) and the pledging of real collateral (COLLATERAL).

Interest rates depend on the characteristics of loan contracts[19]. In line with most of the literature, we adopted CREDIT LINES as the category for the baseline regressions while all instruments were analyzed in the section on robustness[20].

TRANCHE proxies for scale economies achieved by banks in lending activity and is expected to affect pricing (Booth, 1992). Larger loans are associated to lower rates as they are normally extended to firms having a stronger bargaining power with the banks. COLLATERAL decreases the riskiness of a loan, as it gives the lender a specific claim on an asset without diminishing its general claim against the borrower. Collateralized loans may even be associated to higher rates if collateral is asked to counterparts who are ex-ante riskier. These statements are coherent with results of Calcagnini et al (2007). These authors find a positive linkage between the pledging of collateral and rates when bank-level data are used. However, once the risk profile of borrowers is properly

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executive director, director - date of appointment and resignation, for directors and members of Supervisory boards

[17]Alternatively, a firm is defined as having a *non-lending*-type bank director (NOLEND-BANKPRES) when a member of its board serves as a director of a bank which is not a creditor of the firm.

[18]The terms BY-IN and BY-OUT are defined only for firms having a lender on board, i.e. for borrowers having LEND-BANKPRES equal to 1.

[19]The shapes of the loan rate distributions vary significantly across the instrument categories. Means and standard deviations of rates on CREDIT LINES are twice and three times greater than the respective indicators for the other instruments.

[20]According to Berger and Udell (1995), credit lines are the most attractive vehicle for studying the impact of the lender-borrower relationship. This instrument represents a forward commitment to provide financing under specified terms and it formalizes the relationship between the two parties. On the borrower side, it provides the firm with the option to use less than the amount granted by the creditor and to pay interests only on the disbursed facilities. On the lender side, it is a flexible instrument whose terms of contracts may be changed at any point in time. Previous research on the lender-borrower relationship in Italy was conducted by D'Auria et al (1999), Angelini et al (1998) and Guiso (2007). All these studies focus on credit lines extended by banks to companies. Furthermore, Sapienza (2002) uses this instrument to investigate how bank mergers affect the cost of credit.

controlled for - by resorting to rates at lender-borrower level - the same linkage turns out to be negative.

Firms' characteristics. This group of variables includes key information on borrowers. As proxies of SIZE, we look at sales, number of employees and total assets of companies. Larger companies usually pay lower rates as they are considered as less opaque counterparts than small firms. PROFITABILITY of companies - the Return on equity ratio (ROE) - is normally associated to the quality of financed projects while TANGIBILITY of assets is evaluated in terms of transparency, making these assets a collateral which is eligible for refunding creditors (Kroszner and Strahan, 2001b). Higher values for both PROFITABILITY and TANGIBILITY are therefore expected to be associated to lower rates. COVERAGE (interest expenses/gross operating margins) reveals the extent of difficulties incurred by a firm in paying interests out of its cash-flows and without resorting to additional debt (Hoshi et al 1990; Hall and Weinstein, 2000) and it is associated to a higher probability of distress. LIQUIDITY (short-term assets/short-term liabilities) alerts banks on potential troubles of a borrower in dealing with short-term liquidity needs.

A synthetic measure for the risk profile of a borrower - that is widely used by lenders - is the Z-SCORE indicator (Altman, 1968 and 1993). The Z-SCORE captures the likelihood of default for each borrowers which are split up into 9 qualitative risk classes. The indicator is obtained as a discriminant function of a large array of balance sheet items.

Traditional relationship characteristics. In this category we included those variables which are traditionally analyzed by the literature on relationship lending (Boot, 2000). This line of research emphasizes the importance of stable and intensive relationships between banks and companies in limiting informational asymmetries affecting the loan market. In our tests, LENGTH captures the duration of the relationship while TOP-LENDER is defined at firm-level and identifies the bank holding the higher share of the firm's overall debt.

MULTIPLE shows the number of creditors from which each firm borrows. It may correlate negatively with rates if it proxies for the degree of competition in the lending market. Alternatively, a positive link may be a symptom of scarce quality of a company which is unable to borrow additional money from the original bank and it is compelled to approach other creditors (Petersen and Rajan, 1994).

Our empirical strategy controls for banks' affiliation to banking groups. This approach aims to avoid potential information loss owing to loan strategies set out at banking group level. The *governance-signaling* terms and the *relationships* variables were defined by treating each of the banks included in a banking group as if they were the same entity.

3.3   Some facts on lending to firms having bank directors

Tables 2-4 present three types of statistics. We show the importance of loans to firms having bank directors on their boards, the rates charged on these loans, and the characteristics of firms having bank representation in 2005.

In more detail, Table 2 shows that loans granted to firms having bank representation (BANKPRES) account for 13 per cent of total loans. Among loans granted to firms with bank presence on boards, 8 per cent is granted to firms having a *lending*-type bank director (LEND-BANKPRES). Another 5 percent of

credit is extended to firms having a *non-lending*-type bank director(NOLEND-BANKPRES). As for a firm having a *lending*-type bank director on board, loan-level data show that credit by the on-the-board banks (BY-IN) accounts for 2 per cent of total loans and that loans granted by the out-of-the-board banks (BY-OUT) account for 6 per cent[21].

Table 3 reports basic data on lending conditions applied to firms having bank presence on boards. A firm with bank representation is charged 4.46 percentage points (BANKPRES). This data must be compared with 5.19 per cent for firms without bank directors. The same table shows that the impact on rates of bank representation is stronger when the bank affiliated to the on-the-board bank director is a firm's lender. A firm with a *non-lending* banker on its board (NOLEND-BANKPRES) is charged 4.59 percentage points. Further, a firm with a *lending* banker on the board is charged 4.16 and 4.32 percentage points by the on-the-board (BY-IN) and the out-of-the-board (BY-OUT) lenders, respectively. These effects are even more pronounced when the CREDIT LINES category is considered only.

Now we turn to firm-level data in order to analyze the characteristics of companies having bank representation (Table 4). In 2005, the CEBIL archive included 1,441 companies with a bank director on their boards (BANK-PRES). Within this group of companies, 918 had a *non-lending* bank director (NOLEND-BANKPRES) while 523 had a *lending* one (LEND-BANKPRES).

Firms with bank directors are larger in SIZE. Companies without bank representation employ 37 individuals compared with 46 for firms with *non-lending* and 54 for firms with *lending* bank directors. Similar patterns are exhibited by the other proxies adopted for size - SALES and ASSETS.

Bankers are represented on the boards of those companies whose assets are more tangible. TANGIBILITY of assets - the net value of plant, property, and equipment as a share of total assets - increases when we move from firms without bank presence (0.09) to companies with *non-lending* (0.14) or *lending* (0.25) bank directors. Firms with bank representation have a greater debt-servicing ability and a smaller flow of interest expenses as a share of the operating margins (a lower COVERAGE) than their peers. Furthermore, firms with bank directors have a higher EQUITY/DEBT ratio compared to firms without bank representation.

To summarize, loans to firms having bank directors on boards account for 13 per cent of the credit extended to non-financial companies; rates applied on these loans are relatively lower; firms with bank directors on boards are larger in size, have a higher fraction of tangible assets and a greater debt-servicing ability than their peers.

3.4 Results

3.4.1 First step: (ex-ante) loan pricing

We turn to multivariate analysis to assess the link between bank representation on corporate boards and loan rates. Table 5 shows the summary statistics on

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[21]In terms of number of contracts, 12,433 loans (4.2 per cent) are granted to firms with some bank directors on boards, 6,973 (2.3 per cent) are granted to firms having a non lending-type bank directors on boards. As for firms having a lending-type bank director on boards, they are granted 996 loans by the lenders on boards (less than 1 per cent) and 4,464 loans by the out-of-the-board banks (1.5 per cent).

the variables employed in the model.

We run regressions of alternatives based on the following specification:

Interest rates(loan-level) $= \beta$ *(Contract characteristics(loan-level))* $+\gamma BANKPRES$ *(firm-level),* $+\delta NOLEND\text{-}BANKPRES$ *(firm-level),* $+\theta LEND\text{-}BANKPRES$ *(firm-level),* $+\epsilon BY\text{-}IN$ *(loan-level)* $+\lambda$ *(Firms' characteristics (firm-level))* $+\zeta$ *(Traditional Relationship terms(Bank/firm-level))* .

Each regression also includes 20 'fixed effect' (FE) dummies for regional localization of firms, 23 'fixed effect' dummies for economic activity of borrowers - based on the classification for economic branches adopted by the Bank of Italy - and the dummy PUBLIC to insulate those companies which are owned by the Government. Characteristics of lenders are controlled for by mean of 'fixed effects' dummies at bank or banking group-level.

In the tests run over the firms having *lenders* on boards, the simultaneous inclusion of dummies at bank's and firm's levels[22] rules out any potential bias due to the omission of relevant characteristics for lenders and borrowers. [23].

3.4.2 Baseline

In Table 6 the outcomes of the baseline regressions are presented for CREDIT LINES. The goodness of fit as expressed by the R^2 statistics ranges from 0.26 to 0.34. Petersen and Rajan (1994) have R^2 equal to 0.15 in their study on the pricing of credit lines; Angelini et al. (1998) have R^2 equal to 0.17 when they regress loan rates over relationship lending variables as for Italy. Hence our goodness of fit is evaluated as satisfactory for this kind of exercise.

Governance-signaling characteristics. In column (1) we test whether the presence of bank directors (BANKPRES) decreases the cost of loans. The co-efficient is equal to -0.47 and it is significant at a 1 per cent probability-level[24].

In columns (2-3) loans to firms having a *lending* banker (LEND-BANKPRES) are separated from loans to firms having a *non-lending* bank representation (NOLEND-BANKPRES). The coefficients for NOLEND-BANKPRES and LEND-BANKPRES are now equal to -0.35 and -0.67, respectively. It means that the effect on financial intermediation is stronger when the bank director on board is affiliated to a bank which is a creditor of the firm[25]. This results is consistent with our expectations. The incentive to exploit the on-the-board position to reduce informational asymmetries, is expected to be stronger when the on-the board bank is also an on-the-board lender.

Further tests are requested to validate the 'information view'. A below-market rate to a firm having a lender on its board could reflect a conflict of interests in principle, i.e. the pressures to minimize borrowing costs exerted by the company hosting the banker (prevailing over the director's fiduciary duty to serve the interests of the bank).

If it is the case, below-market (conflicts-driven) rates should be applied to the firm hosting the banker by the on-the-board (subject to conflicts) bank only. By contrasts, the loan rates charged by the out-of-the-board banks, to

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[22]The simultaneous inclusion of these dummies is technically allowed by the 'multiple lending' structure of the firms' debt market.

[23]Regressions run over the entire sample of companies may not include firm-level dummies as they are perfectly collinear with variables capturing the (firm-level) characteristics of borrowers. A 'random effect' (RE) model has been adopted in this case.

[24]It means that bank representation decreases the rate by 47 basis points.

[25]I.e., she is a *lending*-type bank director on board.

the same company, should prove to be relatively higher (as displaying a stricter connection with the actual borrower's risk).

In order to discriminate between the 'information' and the 'conflict' views we focus on firms having lenders on their boards only. As for a firm having bank representation, we measure the deviation on loan rates between its on-the-board and out-of-the-board banks. We expect deviations to be significant under the 'conflict of interests' view.

In columns (4) the coefficient for BY-IN indicates the extent of these deviations. They are not significantly different from zero. The estimates indicate that both out-of-the-board and on-the-board banks set below-market rates. The similarity of the pricing behavior between the two classes of lenders do not support the 'conflicts of interest' view.

In column (5), similar estimates are obtained after controlling for the pledging of collateral. In addition, we repeat the exercise by taking into account the possible banking-group membership of the lender. The results, not presented here but available upon request, are qualitatively the same.

Traditional relationship characteristics. In Table 6 the coefficients for the variables capturing the impact of relationship lending are displayed. On average, the TOP-LENDER banks charge 3 basis points less than other lenders. The parameter for LENGTH is positive and equal to 0.343. It means that a firm with an 11-year banking relationship is expected to pay an interest rate which is 1.27 percentage points (i.e., -0.53x(ln 11 - ln 1) higher than a firm with a 1-year relationship. A positive link between LENGTH and loan rate is found out by Petersen and Rajan (1994), D'Auria et al (1997), and Degryse and Van Cayseele (2000). Our coefficient for MULTIPLE is positive and equal to 0.13. It means that a firm increasing the number of creditors by 1 unit is expected to be charged 13 basis points more. The existing evidence is mixed on this issue. A positive link between number of creditors and borrowing cost is detected by Ferri et al (2000) and Petersen et al (1994); by contrasts, Angelini et al (1998) and D'Auria et al (1997) find out a negative association between the two variables.

Firm's financial characteristics. In Table 6 we present the estimates for the variables on borrowers' risk. TANGIBILITY negatively affects loan rates. The coefficient is equal to -0.38. Guiso (2007) finds coefficients ranging from -0.62 to -0.74 for the same variable. Further, the estimate for EQUITY/DEBT is negative (-0.26). Creditors ask to more leveraged customers for a higher risk premium. The parameter of (log of) SALES is negative as size is associated to a lower cost of borrowing (-0.29). Guiso (2007) uses the log of the number of employees as a proxy for size and estimates a coefficient which is equal to -0.50. COVERAGE positively affects interest rates. It means that firms having difficulties in meeting interest expenses from their own cash flows are asked to pay higher rates by creditors. D'Auria et al (1999) find similar results. The negative coefficients for PROFITABILITY indicate that more profitable companies are awarded a lower interest rate. Finally, firms with higher liquid assets ratios (LIQUIDITY) are requested to pay a lower rate as they are perceived as having a higher capacity of dealing with events of stress.

In a nutshell, we have two results. First, a firm having bank presence on its board pays a lower rate (to all banks) than a firm without bankers. Second, the loan rate discount is stronger when the bank represented on its boards is also a firm's creditor.

Further, ex-post performance of loans is analyzed in order to evaluate the

soundness of ex-ante analysis based on pricing. In this perspective, firms having bank representation on boards - and paying relatively low rates - should exhibit low probabilities of default when the information view is at work. Otherwise, special treatment on loans associated to a higher likelihood of distress should signal conflict adverse conflict of interests effects.

3.4.3 Robustness

In this section, we consider the robustness of our results under alternative types of loan contracts, definitions of board connections, and econometric specifications.

Tables 7-8 enlarge the analysis to all the categories of loans extended to firms. We consider rates charged by banks on Credit lines, Fixed-term loans and Accounts receivable. Type of contract are controlled for by mean of 'fixed effect' dummies at loan level. Further, we run separated regressions for each of the instrument categories originally collected[26].

In the 'all loans' regressions (Table 8) the goodness of the estimates expressed by R^2, now reaches 0.55 percent for regressions 1-3 (full sample) and 0,42 percent for regressions 4-5. Consistently with our expectations, loan rates on ACCOUNTS RECEIVABLE are lower either than rates on FIXED-TERM loans and on CREDIT LINES as the former category is partially collateralized (by trade-credit assets). Further, CREDIT LINES seem to be more expansive than FIXED-TERM loans. CREDIT LINES are instruments that give the borrower the option of using less than the granted amounts and their price incorporates that facility in turn.

In columns 1-3 the estimates for BANKPRES are significant and equal to -0.27: these outcomes confirm the reductions in the cost of loans benefited by firms having bank representation. The decrease is stronger for firms whose on-the-boards directors are also firms' creditors[27].

Consistently with the strategy we follow in the baseline analysis, we need to check whether the discounts we observe on loan rates reflect the adverse effects of conflicts or the reduction of monitoring costs the information view predicts. In columns 4-5 deviations between loan prices fixed by the 'inside' and 'outside' lenders of a firm are measured. The coefficients for BY-IN are not significant. These results are confirmed when the model controls for the (real) collateralization of loan contracts.

In Tables 9, 10, 12 we verify whether the results survive when we narrow the definition of 'bank presence on firms' boards' to those connections established by bank EXECUTIVES only. Accordingly, a firm having bank representation (BANKPRES) is a company having a bank EXECUTIVE (not a simple director) on its board while a firm having a *lender* on its board (LEND-BANKPRES) is a firm whose boardroom hosts EXECUTIVES of the firm's lenders. The terms NOLEND-BANKPRES and BY-IN are modified. Table 9 describes the variables we use in the tests while their outcomes are in Tables 10 and 12.

In columns 1-3 of Table 10 the coefficients for LEND-BANKPRES and

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[26]As far as our key variables are concerned, the outcomes of regressions for 'accounts receivable' and 'fixed-term loans' are shown in Tables 14 while the full set of outcomes, not presented here, is available upon request.

[27]The coefficients terms for NOLEND-BANKPRES and LEND-BANKPRES are equal to -0.21 and -0.37 basis points, respectively.

NOLEND-BANKPRES are negative and significant. It means that a firm having a bank executive on its board benefits from a loan rate discounts. Columns 4-5 show that a firm having on board an executive of its creditors pay a lower rate at both its on-the-board and the out-of-the-board lenders.

In Tables 11-12, we modify the controls for borrowers' risk. We include the AZ-SCORE terms in spite of the variables on the firms' balance sheets. The estimates indicate that risk premium applied to borrowers increases monotonically in the SCORE values of firms[28]. As far as our key variables are concerned, columns 1-3 of Table 11 depict a scenario which is consistent to our previous results. Bank representation decreases the cost of loans (BANKPRES), especially when the banker has itself loaned to the firm (LEND-BANKPRES).

In Table 12, the SCORE variable is used in our regressions on bank EXEC-UTIVES. The results of our key variables and the monotonic positive relation between SCORE and rate are confirmed.

In Table 13 we summarize the 'certification effects' we obtain in our tests on firms having bank directors and EXECUTIVES. The Table shows that the certification effects are stronger when the company has on its board a bank director (or a bank EXECUTIVE) affiliated to bank which is also a creditor of the firm[29].

Table 14 summarizes the conflicts of interest effects already presented in Tables 6, 8, 10. In this table, we also include the BY-IN estimates we get in separated regressions for 'Accounts receivable' and 'Fixed-term' loans (they not reported here but are available upon request). Our estimates for the 'conflict of interests' effects are never different from zero.

3.4.4 Second step: (ex-post) loan performance

We compare default rates on loans to firms with and without bankers on their boards. According to the 'information view', below-market rates are charged to firms having bank representation as the efficient monitoring of bankers reduce unobservable risk and repayment problems. Under the 'conflict view', preferential conditions are granted to firms having bank directors although these borrowers are more likely to default (La Porta et al, 2004).

We study the performance of loans to firms using annual data from December 2006 to December 2010. Our sample encompasses the same companies - around 32,000 - we have already scrutinized to study the determinants of loan rates set in 2005.

Table 15 provides summary statistics on the variables exploited for the tests. The dataset covers 168,180 firm-year observations for DEFAULT, our key binary variable which equals 1 when the firm is insolvent at (at least) one bank[30].

Tables 16 presents bivariate statistics on the likelihood that a firm is insolvent according to such a definition. In the time period December 2006- December 2010, the incidence of non-performing loans is equal to 2 percent for firms having

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[28]According to our estimates, a firm belonging to the 9th Score class is charged 213 basis points more than a firm belonging to the 1st class.

[29]We evaluate the statistical significance for the differences in the estimated coefficients. We set up 95 per cent confidence intervals and run Wald tests on the significance of the pairwise differentials. In all regressions the parameters for LEND-BANKPRES are statistically higher than the estimate for NOLEND-BANKPRES, at the 95 per cent probability level.

[30]Information on loan defaults have been originally collected - and they are available - at the bank-firm-year level.

bank directors on boards and to 4.2 percent for their peers. The difference in means is significant at the 1 percent probability level.

We turn to multivariate analysis to assess the link between non-performing loans and the presence of banks on corporate boards. The regressions include controls for borrowers'risk and the characteristics of the relationships. Fixed-effect dummies are also included at level of time, firm's economic sector and (geographical) localization.

The covariates are specified in order to reproduce the same informative set banks had at disposal in 2005, i.e when they assessed firms' risk premia (and set loan rates, accordingly). Therefore, the reference dates for the covariates have been frozen as they were in 2005.

This model may be summarized as
$Prob(DEFAULT)(firm/year\ -level) = \beta\,TRANCHE(firm\text{-}level) +\gamma\,BANKPRES$ $(firm\text{-}level) +\delta\,NOLEND\text{-}BANKPRES\ (firm\text{-}level) +\theta\,LEND\text{-}BANKPRES\ (firm\text{-}level) +\lambda\,FIRMS'CHARACT.(firm\text{-}level) +\zeta\,(TOP\text{-}LENDER'S\ SHARE(firm\text{-}level)) +\psi\,MULTIPLE(firm\text{-}level).$

Probit estimates for this equation are presented in Table 17. The coefficients are expressed in terms of average marginal effects[31].

Column 1 reports a benchmark specification with a term capturing (any type of) bank presence on corporate boards. Columns 2-3 introduce the separate evidence for *lending* and *non-lending* bankers on boards. The Altman Z-SCOREs and a set of balance sheet items are used to control for borrowers' risk in Columns 2-3, alternatively.

All regressions present a negative association between the likelihood of a firm's default and the bank's involvement in its governance. Columns 2-3 show that this association works when either *non-lending* and *lending* types of bank presence are considered.

These results show that the (ex-post) loan performance is consistent with the (ex-ante) pricing of loans to firms having bank directors as the below-market rates charged in 2005 to these borrowers translate in lower default probability in the subsequent time-span 2006-2010. The 'information view' receives support by this test as it confirms that banks may use board linkages to enhance monitoring activity and to safeguard the solvency of their borrowers.

Finally, in Column 4, we verify whether repayment problems differ on loans at on-the-board and out-of-the-board banks - for a company whose governance is subject to bank's involvement. The insignificance of the deviations on defaults rate at inside and at outside banks goes one step further in the direction of the 'information view'. When we analyze loan pricing, we found that the below market rates to a firm having bankers were even charged by out of the boards banks. This results was strongly suggestive of a certification effect played by bank directors and benefited by outside lenders. This effect has a reflection on the actual risk incurred by the outside lenders, as observed ex-post through this tests.

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[31]Probit derivatives are computed as the average of the difference in the cumulative normal distributions evaluated with and without the dummy variables.

4 Conclusions

In this study, we compare pricing and performance of loans to firms having bankers on their boards and to their peers. Further, we match up loan rates and performances at the on-the boards (subject to conflicts) and at the out-of-the boards (not-prone to conflicts) lenders of the same firms.

We find that a firm having a banker on its board pays lower rates than a firm without bankers to both its out-of-the-board and its on-the-board banks. We also find that the lower rates set on loans to firms having bankers on boards are consistent with the superior performance we observe (ex-post) for these borrowers. Our results hold after controlling for loan categories, bank- and firm-specific factors as well as for the intensity of the relationship between lenders and borrowers.

Our findings provide support to the 'information view'. Below-market rates at on-the-board banks suggest that informational asymmetries between lenders and borrowers are reduced when bank directors are seated on the boards of their borrowers. Lower rates at out-of-the board banks (to firms having bank representation) indicate that the presence of bankers certifies the soundness of the firms where they have the seats to outside (uninformed) banks. The analysis of the (ex-post) repayment problems shows that pricing behavior is in line with the actual risk of loans to firms having bankers and it confirms the lack of significance for the 'conflict of interests' effects.

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Table 2: The size of lending to firms having bank directors on boards.
All loans (number of contracts and business coverage)

The sample consists of a cross-section based on 2005 data on loan contracts reported by 32,407 firms to the Italian Central Credit Register. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence on boards) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a *lender* on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of that firm. NOLEND-BANKPRES (firm with a *non lending* banker on boards) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. BY-IN is a loan-level binary variable that equals 1 if the loans is extended by the on-the-board lender. BY-OUT is a loan-level binary variable that equals 1 if the loan is extended by the out-of-the board lenders.

	Loans to firms with bank presence on company boards				
	No	Yes (BANKPRES)			
			To firms having non-lending bankers (NOLEND-BANKPRES)	To firms having lending bankers (LEND-BANKPRES)	
				Loans from lenders out of the boards (BY-OUT)	Loans from lenders on the boards (BY-IN)
N. of contracts	293,062	12,433	6,973	4,464	996
Business coverage		13%	5%	6%	2%

Table 3: The cost of loans to firms having bank directors on boards.
Average interest rates on loans in percentage points (loan-level data)

The sample consists of a cross-section based on 2005 data on loan contracts reported by 32,407 firms to the Italian Central Credit Register. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a lending bank presence on boards) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of the firm. NOLEND-BANKPRES (firm with non lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. BY-IN is a binary variable, defined at loan-level, that equals 1 if the loan is extended by the on-the-board lender. BY-OUT is a binary variable that equals 1 if the loan is extended by the out-of-the board lender.

| | Loans to firms with bank presence on company boards | | | | |
| | No | Yes (BANKPRES) | To firms having non-lending bankers (NOLEND-BANKPRES) | To firms having lending bankers (LEND-BANKPRES) | |
				Loans from lenders out of the boards (BY-OUT)	Loans from lenders on boards (BY-IN)
ALL LOANS	5.19	4.46	4.59	4.32	4.16
CREDIT LINES	8.09	6.89	7.21	6.65	5.93
ACCOUNTS/REC.	3.99	3.45	3.56	3.29	3.33
FIXED-TERM	4.00	3,69	3.78	3.60	3.57

Table 4: Characteristics of firms having bank directors on boards (medians of firm-level data).

The sample consists of a cross-section based on 2005 data on loan contracts reported by 32,407 firms to the Italian Central Credit Register. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence on boards) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a lending bank presence on boards) is a binary variable that equals 1 if the firm has a member of its boards that serves as a director of a bank which is a creditor of the firm. NOLEND-BANKPRES (firm with a non lending bank presence on boards) is a binary variable that equals 1 if the firm has a member of its boards that serves as a director of a bank which is not a creditor of the firm.

				Firms having bank directors on boards	
		No	Yes (BANKPRES)	Firms having non-lending bankers (NOLEND-BANPRES)	Firms having lending bankers (LEND-BANKPRES)
SIZE	employees	37	47	46	54
	assets	7,165	10,175	9,617	11,816
	sales	8,902	11,650	11,789	12,740
COVERAGE		0.78	0.73	0.74	0.72
TANGIBILITY		0.09	0.18	0.14	0.25
LIQUIDITY		1.14	1.15	1.16	1.13
ASSETS LIQUIDITY		0.79	0.70	0.71	0.69
EQUITY/DEBT		0.45	0.57	0.56	0.62
ST-DEBT		0.83	0.74	0.76	0.72
ROE		4.60	4.13	4.19	3.98
MULTIPLE		4	4	4	5
TOP-LENDER'S SHARE		0.54	0.54	0.59	0.47
N		32,407	1,441	918	523

Table 5: Summary statistics for the variables used in the 'Credit lines' regressions.

Table presents summary statistics for the variables used in the regressions for CREDIT LINES. The sample consists of a cross-section based on 2005 data of loans reported in the Central Credit Register by 32,407 firms. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of the firm. NOLEND-BANKPRES (firm with a non lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. BY-IN is a binary variable defined at loan-level that equals 1 if the loans is extended by the on-the-board lender. BY-OUT is a binary variable that equal 1 if the loan is extended by the out-of-the-board lenders.

Variable	Mean	Std. Dev.	Min.	Max.	N
INTEREST RATE	8.074	3.057	0	16.629	87,426
CREDIT LINE (0,1)	1	0	1	1	87,426
ACCOUNTS RECEIV. (0,1)	0	0	0	0	87,426
FIXED-TERM (0,1)	0	0	0	0	87,426
TRANCHE	275,157	6,268,270	1	1,319,996,288	87,426
COLLATERAL (0,1)	0.027	0.161	0	1	87,426
BANKPRES (0,1)	0.038	0.191	0	1	87,426
LEND-BANKPRES (0,1)	0.017	0.129	0	1	87,426
NOLEND-BANKPRES (0,1)	0.021	0.144	0	1	87426
BY-IN (0,1)	0.003	0.057	0	1	87,426
BY-OUT (0,1)	0.014	0.116	0	1	87,426
TANGIBILITY	0.239	0.306	0	1	85,650
PROFITABILITY	4.445	14.038	-41.2	55.22	76,784
COVERAGE	0.739	0.24	0	1	82,660
LIQUIDITY	1.108	0.361	0	2.749	86,069
SALES	13,951	11,521	0	57,318	79,214
EQUITY/DEBT	0.509	0.54	0	3.47	78,425
Z-SCORE	5.589	1.516	1	9	87,309
PUBLIC (0,1)	0.002	0.044	0	1	87,426
MULTIPLE	6.88	3.515	1	33	87,426
TOPLENDER (0,1)	0.209	0.407	0	1	87,426
LENGTH	6.94	3.543	1	11	86,269

Table 6: Bank directors on corporate boards and loan interest rates. -'Credit lines'.

Table reports results from regressions where the dependent variable is the rate charged on credit lines by bank i to firm j. The sample consists of a cross-section based on 2005 data on loans reported by 32,407 firms to the Italian Central Credit Register. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence on boards) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of the firm. NOLEND-BANKPRES (firm with a non lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. BY-IN is a binary variable defined at loan level only for firms having *lending* bankers on boards which equals 1 if the loan is extended by the lender on board. FE means 'fixed effects' dummy variables, RE means ' random effects' model. LENGTH is the natural log of one plus the duration of the relationship.t statistics are reported in brackets. Robust Huber-White standard errors are computed. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DEP VAR: INTEREST RATE	(1) full sample	(2) full sample	(3) full sample	(4) only firms having lenders on boards	(5) only firms having lenders on boards
Contract characteristics					
TRANCHE	-0.169***	-0.169***	-0.165***	-0.316***	-0.315***
	(-32.04)	(-32.03)	(-31.27)	(-8.21)	(-8.09)
COLLATERAL			-0.500***		-0.284
			(-7.90)		(-0.45)
Governance-signaling charact					
BANKPRES	-0.467***				
	(-5.30)				
NOLEND-BANKPRES		-0.349**	-0.349**		
		(-3.16)	(-3.17)		
LEND-BANKPRES		-0.671***	-0.672***		
		(-4.74)	(-4.74)		
BY-IN				-0.190	-0.193
				(-0.88)	(-0.88)
Traditional relationship charact					
TOP-LENDER	-0.200***	-0.200***	-0.190***	0.250	0.257
	(-8.79)	(-8.79)	(-8.39)	(1.08)	(1.10)
MULTIPLE	0.327***	0.328***	0.317***		
	(9.94)	(9.98)	(9.65)		
LENGTH	0.658***	0.658***	0.662***	0.587**	0.586**
	(37.47)	(37.47)	(37.70)	(3.16)	(3.15)
Other controls					
FIRM	RE	RE	RE	FE	FE
ECON. BRANCH	FE	FE	FE		
GEOGR. LOC.	FE	FE	FE		
BANK	FE	FE	FE	FE	FE
Firm's financial charact.					
TANGIBILITY	-0.600***	-0.599***	-0.604***		
	(-11.13)	(-11.11)	(-11.21)		
PROFITABILITY	-0.00716***	-0.00715***	-0.00696***		
	(-6.51)	(-6.50)	(-6.33)		
COVERAGE	0.240***	0.240***	0.232***		
	(3.47)	(3.47)	(3.35)		
LIQUIDITY	-0.547***	-0.548***	-0.549***		
	(-9.81)	(-9.82)	(-9.84)		
SALES	-0.483***	-0.483***	-0.485***		
	(-20.39)	(-20.39)	(-20.43)		
EQUITY/DEBT	-0.422***	-0.420***	-0.425***		
	(-13.93)	(-13.89)	(-14.05)		
PUBLIC	-0.199	-0.175	-0.189		
	(-0.25)	(-0.22)	(-0.24)		
Observations	57,136	57,136	57,136	1,386	1,386
R^2	0.345	0.345	0.345	0.260	0.301

Table 7: Summary statistics for the variables used in the 'All loans' regressions.

Table presents summary statistics for the variables used in the 'All loans' regressions. The sample consists of a cross-section based on 2005 data of loans reported in the Central Credit Register by 32,407 firms. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of the firm. NOLEND-BANKPRES (firm with a non lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. BY-IN is a binary variable defined at loan-level that equals 1 if the loans is extended by the on-the-board lender. BY-OUT is a binary variable that equal 1 if the loan is extended by the out-of-the-board lenders.

Variable	Mean	Std. Dev.	Min.	Max.	N
INTEREST RATE	5.153	2.772	0	16.629	305,530
CREDIT LINE (0,1)	0.286	0.452	0	1	305,530
ACCOUNTS RECEIV. (0,1)	0.397	0.489	0	1	305,530
FIXED-TERM (0,1)	0.317	0.465	0	1	305,530
TRANCHE	799,962	8,348,697	1	2,163,180,032	305,530
COLLATERAL (0,1)	0.067	0.249	0	1	299,827
BANKPRES (0,1)	0.041	0.198	0	1	305,530
NOLEND-BANKPRES (0,1)	0.023	0.149	0	1	305,530
LEND-BANKPRES (0,1)	0.018	0.132	0	1	305,530
BY-IN (0,1)	0.003	0.057	0	1	305,530
BY-OUT (0,1)	0.015	0.12	0	1	305,530
TANGIBILITY	0.254	0.317	0	1	300,594
PROFITABILITY	5.222	13.959	-41.2	55.22	275,229
COVERAGE	0.72	0.247	0	1	291,472
LIQUIDITY	1.152	0.361	0	2.75	300,865
SALES	146,60	11,732	0	57,318	273,771
EQUITY/DEBT	0.551	0.570	0	3.47	276,444
Z-SCORE	5.362	1.542	1	9	305,202
PUBLIC (0,1)	0.001	0.039	0	1	305,530
MULTIPLE	6.836	3.532	1	33	305,530
TOPLENDER (0,1)	0.251	0.434	0	1	305,530
LENGTH	7.091	3.499	1	11	302,873

Table 8: Bank directors on corporate boards and loan interest rates. 'All loans'.

Table reports results from regression where the dependent variable is the interest rates charged by bank i to firm j. The definition of variables can be found in Table 1. BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. NOLEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of that firm. LEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of that firm. BY-IN is a binary variable defined at loan level for firms having *lending* bankers on boards, that equals 1 if the loans is extended by the on-the-board lender. FE means 'fixed effects', RE means ' random effects'. t statistics are reported in brackets. Robust Huber-White standard errors are computed. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DEP VAR INTEREST RATE	(1) full sample	(2) full sample	(3) full sample	(4) only firms with lenders on boards	(5) only firms with lenders on boards
Contract characteristics					
TRANCHE	-0.158***	-0.158***	-0.156***	-0.207***	-0.205***
	(-52.30)	(-52.29)	(-50.89)	(-10.29)	(-10.06)
COLLATERAL			-0.246***		-0.132
			(-13.95)		(-1.18)
FIXED-TERM	0.101***	0.101***	0.137***	0.543***	0.557***
	(14.97)	(14.97)	(19.30)	(7.89)	(7.70)
CREDIT LINES	3.713***	3.713***	3.720***	2.942***	2.947***
	(286.49)	(286.49)	(286.69)	(23.52)	(23.54)
Governance-signaling charact.					
BANKPRES	-0.265***				
	(-6.63)				
NOLEND-BANKPRES		-0.210***	-0.210***		
		(-4.24)	(-4.16)		
LEND-BANKPRES		-0.362***	-0.369***		
		(-5.53)	(-5.55)		
BY-IN				0.0664	0.0904
				(0.94)	(1.31)
Traditional relationship charact.					
TOP-LENDER	-0.0334***	-0.0334***	-0.0206*	0.0104	-0.00484
	(-3.67)	(-3.67)	(-2.21)	(0.15)	(-0.07)
MULTIPLE	0.134***	0.134***	0.134***		
	(9.11)	(9.15)	(8.96)		
LENGTH	0.343***	0.343***	0.349***	0.244***	0.252***
	(43.81)	(43.81)	(44.23)	(4.08)	(4.18)
Other controls					
FIRM	RE	RE	RE	FE	FE
ECON.BRANCH	FE	FE	FE		
GEOGR. LOCAL.	FE	FE	FE		
BANK	FE	FE	FE	FE	FE
Firms' financial charact.					
TANGIBILITY	-0.378***	-0.377***	-0.385***		
	(-15.65)	(-15.63)	(-15.65)		
PROFITABILITY	-0.00497***	-0.00496***	-0.00496***		
	(-9.52)	(-9.51)	(-9.39)		
COVERAGE	0.0768*	0.0770*	0.0528		
	(2.47)	(2.47)	(1.66)		
LIQUIDITY	-0.334***	-0.334***	-0.350***		
	(-13.06)	(-13.06)	(-13.39)		
SALES	-0.294***	-0.294***	-0.302***		
	(-25.54)	(-25.53)	(-25.79)		
EQUITY/DEBT	-0.263***	-0.262***	-0.265***		
	(-20.36)	(-20.34)	(-20.23)		
PUBLIC	-0.142	-0.131	-0.119		
	(-0.46)	(-0.42)	(-0.38)		
Observations	204,005	204,005	200,246	5,177	5,046
R^2	0.554	0.554	0.553	0.420	0.422

Table 9: Description of variables used for regressions of Tables 8 and 10.

Variable name	Description
Dep. var: Interest rate on loan (loan-level)	
Loan contract characteristics:	
CREDIT LINES (loan-level)	=1 for loans extended through credit lines
ACCOUNTS/REC (loan-level)	=1 for loans secured by accounts receivable
FIXED-TERM (loan-level)	=1 for fixed-term loans
TRANCHE (loan-level)	(log of) amount of loan in Euros
COLLATERAL (loan-level)	=1 if loan is secured by real collateral
Governance-signaling characteristics:	
BANKPRES (firm -level)	=1 if firm has a bank EXECUTIVE on board
NOLEND-BANKPRES* (firm-level)	=1 if firm has a non-lending bank EXECUTIVE on board
LEND-BANKPRES * (firm-level)	=1 if firm has a lending bank EXECUTIVE on board
BY-IN* (loan-level)	=1 if loan is granted by the bank having the bank EXECUTIVE on board (to the firm with the bank EXECUTIVE on board)
BY-OUT * (loan-level)	=1 if loan is granted by lenders without board positions (to the firm with the bank EXECUTIVE on board)
Firms'financial characteristics:	
EQUITY/DEBT (firm-level)	Equity to debt
COVERAGE (firm-level)	Interest expenses to gross operating margins
LIQUIDITY (firm-level)	Short term assets to short term liabilities
ASSETS LIQUIDITY (firm-level)	Liquid assets to total assets
TANGIBILITY (firm-level)	Tangible assets to total assets
PROFITABILITY (firm-level)	Return on equities
ST-DEBT (firm-level)	Short term debt to total debt
SIZE (firm-level)	(log of) Sales
	Assets
	Number of employees
SCORE (1-9) (firm-level)	Altman Z-Score (probability of)
Traditional relationship characteristics :	
MULTIPLE* (firm-level)	Number of creditors of the firm
TOP-LENDER* (bank/firm-level)	=1 if creditor is the main lender for the firm
LENGTH* (bank/firm-level)	Duration of the bank-firm relationship (number of years)
Industry characteristics: (firm-level)	23 economic branch-level dummies
Local mark.characteristics: (firm-level)	20 regional area-level dummies
Creditor characteristics: (bank-level)	213 individual bank (or 138 bank group) level dummies

* This variable is defined at bank group-level. All individual banks who join a bank group are treated
as they were a sole entity.

Table 10: Bank EXECUTIVES on corporate boards and loan interest rates.

Table reports results from regression where the dependent variable is the interest rates charged by bank i to firm j. The definition of variables can be found in Table 9. BANKPRES is a binary variable that equals 1 if the firm has a member of its corporate boards that serves as an executive of a bank. NOLEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as an EXECUTIVE of a bank which is not a creditor of the firm. LEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as an EXECUTIVE of a bank which is a creditor of the firm. BY-IN is a binary variable defined at loan level that equals 1 if the loans is extended by the bank having the bank EXECUTIVE on board. FE means 'fixed effects', RE means ' random effects'. t statistics are reported in brackets. Robust Huber-White standard errors are computed. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DEP VAR INTEREST RATE	(1) full sample	(2) full sample	(3) full sample	(4) only firms with lenders on boards	(5) only firms with lenders on boards
Contract characteristics					
TRANCHE	-0.158***	-0.158***	-0.156***	-0.212***	-0.206***
	(-52.33)	(-52.33)	(-50.92)	(-8.00)	(-7.61)
COLLATERAL			-0.246***		-0.231
			(-13.93)		(-1.41)
FIXED-TERM	0.101***	0.101***	0.137***	0.494***	0.536***
	(14.96)	(14.96)	(19.28)	(4.63)	(4.67)
CREDIT LINES	3.713***	3.713***	3.720***	2.930***	2.954***
	(286.45)	(286.47)	(286.66)	(17.13)	(17.24)
Governance-signaling characteristics					
BANKPRES	-0.276***				
	(-4.60)				
NOLEND-BANKPRES		-0.177*	-0.171*		
		(-2.36)	(-2.24)		
LEND-BANKPRES		-0.443***	-0.434***		
		(-4.51)	(-4.33)		
BY-IN				0.0192	0.0504
				(0.13)	(0.38)
Traditional relationship charact.					
TOP-LENDER	-0.0335***	-0.0335***	-0.0207*	0.148	0.111
	(-3.68)	(-3.68)	(-2.22)	(1.29)	(0.95)
MULTIPLE	0.134***	0.135***	0.134***		
	(9.13)	(9.15)	(8.96)		
LENGTH	0.343***	0.343***	0.349***	0.167	0.192*
	(43.80)	(43.80)	(44.22)	(1.90)	(2.15)
Other controls					
FIRM	RE	RE	RE	FE	FE
ECON. BRANCH	FE	FE	FE		
GEOGR. LOCAL.	FE	FE	FE		
BANK	FE	FE	FE	FE	FE
Firms' financial characteristics					
TANGIBILITY	-0.381***	-0.380***	-0.388***		
	(-15.76)	(-15.74)	(-15.76)		
PROFITABILITY	-0.00492***	-0.00493***	-0.00493***		
	(-9.43)	(-9.45)	(-9.32)		
COVERAGE	0.0779*	0.0786*	0.0545		
	(2.50)	(2.53)	(1.71)		
LIQUIDITY	-0.334***	-0.334***	-0.350***		
	(-13.04)	(-13.06)	(-13.38)		
SALES	-0.296***	-0.296***	-0.304***		
	(-25.73)	(-25.73)	(-26.00)		
EQUITY/DEBT	-0.264***	-0.264***	-0.266***		
	(-20.47)	(-20.43)	(-20.33)		
PUBLIC	-0.147	-0.154	-0.142		
	(-0.47)	(-0.49)	(-0.45)		
Observations	204,011	204,011	200,252	2,502	2,451
R^2	0.554	0.554	0.554	0.406	0.404

Table 11: Bank directors on corporate boards and loan interest rates. Altman Z-Score controls for firm's riskiness.

Table reports results from regressions where the dependent variable is the interest rates charged by bank i to firm j. The definition of variables can be found in Table 1. BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. NOLEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. LEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its corporate board that serves as a director of a bank which is a creditor of the firm. BY-IN is a binary variable defined at loan level only for firms having *lending* bank directors on boards that equals 1 if the loans are extended by the lenders on boards. The Z-Score (Altman, 1968 and 1993) proxies for firms' probability of default (9 qualitative risk classes) and it is estimated as a discriminant function of the balance sheet items of companies. FE means 'fixed effects', RE means 'random effects'. t statistics are reported in brackets. Robust Huber-White standard errors are computed. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DEP VAR: INTEREST RATE	(1) full sample	(2) full sample	(3) full sample
Contract characteristics			
TRANCHE	-0.163***	-0.162***	-0.160***
	(-64.86)	(-64.84)	(-63.18)
COLLATERAL			-0.263***
			(-17.89)
FIXED-TERM	0.128***	0.128***	0.171***
	(21.52)	(21.53)	(27.10)
CREDIT LINES	3.629***	3.629***	3.635***
	(329.19)	(329.21)	(329.50)
Governance-signaling characteristics			
BANKPRES	-0.345***		
	(-10.16)		
NOLEND-BANKPRES		-0.274***	-0.277***
		(-6.37)	(-6.31)
LEND-BANKPRES		-0.456***	-0.471***
		(-8.50)	(-8.63)
Traditional relationship characteristics			
TOP-LENDER	-0.0352***	-0.0352***	-0.0221**
	(-4.39)	(-4.39)	(-2.69)
MULTIPLE	-0.0643***	-0.0631***	-0.0698***
	(-5.72)	(-5.61)	(-6.07)
LENGTH	0.338***	0.338***	0.346***
	(49.26)	(49.27)	(49.90)
other controls			
FIRM	RE	RE	RE
ECON. BRANCH	FE	FE	FE
GEOGR. LOCAL.	FE	FE	FE
Altman Z-Score			
SCORE=2	0.0411	0.0417	0.0444
	(0.88)	(0.90)	(0.94)
SCORE=3	0.0313	0.0324	0.0330
	(0.72)	(0.75)	(0.75)
SCORE=4	0.176***	0.177***	0.177***
	(4.41)	(4.43)	(4.37)
SCORE=5	0.532***	0.533***	0.541***
	(13.16)	(13.18)	(13.17)
SCORE=6	0.894***	0.894***	0.910***
	(21.39)	(21.40)	(21.42)
SCORE=7	1.319***	1.319***	1.340***
	(31.52)	(31.52)	(31.54)
SCORE=8	1.526***	1.526***	1.551***
	(27.11)	(27.12)	(27.17)
SCORE=9	2.135***	2.135***	2.165***
	(24.27)	(24.27)	(24.30)
Observations	279,275	279,275	274,026
R^2	0.55	0.55	0.55

Table 12: Bank EXECUTIVES on corporate boards and loan interest rates. Altman Z-Score controls for firm's riskiness.

Table reports results from regression where the dependent variable is the interest rates charged by bank i to firm j. The definition of variables can be found in Table 9. BANKPRES is a binary variable that equals 1 if the firm has a member of its corporate boards that serves as an executive of a bank. NOLEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as an EXECUTIVE of a bank which is not a creditor of the firm. LEND-BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as an EXECUTIVE of a bank which is a creditor of the firm. BY-IN is a binary variable defined at loan level that equals 1 if the loans is extended by the bank having the bank EXECUTIVE on board. The Z-Score (Altman, 1968 and 1993) proxies for firms' probability of default (9 qualitative risk classes) and it is estimated as a discriminant function of the balance sheet items of companies. FE means 'fixed effects', RE means ' random effects'. t statistics are reported in brackets. Robust Huber-White standard errors are computed. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DEP VAR: INTEREST RATE	(1) full sample	(2) full sample	(3) full sample
Contract characteristics			
TRANCHE	-0.163***	-0.163***	-0.160***
	(-58.88)	(-58.87)	(-57.27)
COLLATERAL			-0.263***
			(-15.71)
FIXED-TERM	0.128***	0.128***	0.170***
	(15.88)	(15.89)	(20.63)
CREDIT LINES	3.628***	3.628***	3.635***
Governance-signaling characteristics			
BANKPRES	-0.363***		
	(-6.98)		
NOLEND-BANKPRES		-0.263***	-0.261***
		(-4.11)	(-4.01)
LEND-BANKPRES		-0.506***	-0.513***
		(-5.92)	(-5.86)
Traditional relationship characteristics			
TOP-LENDER	-0.0351***	-0.0351***	-0.0221**
	(-4.42)	(-4.42)	(-2.71)
MULTIPLE	-0.0658***	-0.0652***	-0.0721***
	(-6.07)	(-6.01)	(-6.50)
LENGTH	0.338***	0.338***	0.346***
	(46.50)	(46.50)	(46.94)
Other controls			
FIRM	RE	RE	RE
ECON.BRANCH	FE	FE	FE
GEOGR. LOCAL.	FE	FE	FE
Altman Z-Score			
SCORE=2	0.0416	0.0418	0.0442
	(0.95)	(0.95)	(1.00)
SCORE=3	0.0317	0.0318	0.0321
	(0.77)	(0.78)	(0.77)
SCORE=4	0.178***	0.178***	0.178***
	(4.68)	(4.69)	(4.63)
SCORE=5	0.535***	0.534***	0.542***
	(13.75)	(13.76)	(13.78)
SCORE=6	0.898***	0.897***	0.913***
	(22.17)	(22.18)	(22.25)
SCORE=7	1.324***	1.323***	1.344***
	(32.65)	(32.65)	(32.74)
SCORE=8	1.530***	1.530***	1.555***
	(26.77)	(26.77)	(26.82)
SCORE=9	2.144***	2.144***	2.174***
	(25.30)	(25.29)	(25.31)
Observations	279,287	279,287	274,038
R^2	0.55	0.55	0.55

Table 13: Certification effects. Reductions in loan rates benefited by firms with bank presence on boards.

This table summarizes the results on the effect on loan rates of bank presence on corporate boards. The results are presented separately for firms having on boards bank directors (first column) and bank EXECUTIVES (second column). BANKPRES is a binary variable that equals 1 if the firm has a member of its board that serves as a director (first column) or as an EXECUTIVE (second column) of a bank. NOLEND-BANKPRES is a binary variable that equals 1 if the firm has a *non-lending* bank director (or EXECUTIVE) on its board, i.e. if the bank director (or bank EXECUTIVE) on its board is affiliated to a bank which is not a creditor of the firm. LEND-BANKPRES is a binary variable that equals 1 if the firm has a *non-lending* bank director (or EXECUTIVE) on its board, i.e. if the bank director (or bank EXECUTIVE) on its board is affiliated to a bank which is not a creditor of the firm. Robust Huber-White standard errors are computed. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Controls for firm's riskiness:
ALTMAN Z-SCORE

	firms having bank directors on boards	firms having bank EXECUTIVES on boards
BANKPRES	-0.345***	-0.363***
NOLEND-BANKPRES	-0.274***	-0.263***
LEND-BANKPRES	-0.456***	-0.506***

Controls for firm's riskiness:
BALANCE SHEET ITEMS

	firms having bank directors on boards	firms having bank EXECUTIVES on boards
BANKPRES	-0.265***	-0.276***
NOLEND-BANKPRES	-0.21***	-0.17*
LEND-BANKPRES	-0.37***	-0.44***

Table 14: 'Conflict of interests' effects. Deviations (magnitude and significance) between loan rates applied by on-the-board and out-of the boards lenders of a firm.

Table summarizes the estimates for BY-IN. Results are presented separately for firms having bank directors (first column) and bank EXECUTIVES on boards (second column). *t* statistics - associated to Robust Huber-White standard errors - are reported in brackets.

Type of contract		BY-IN COEFFICIENTS	
		firms having bank directors on boards	firms having bank EXECUTIVES on boards
ALL LOANS	coeff.	0.06	0.01
	t	(-0.94)	(0.13)
CREDIT LINES	coeff.	-0.19	-0.42
	t	(-0.88)	(-1.02)
ACCOUNTS RECEIVABLE	coeff.	0.07	0.05
	t	(1.07)	(0.38)
FIXED TERM-LOANS	coeff.	0.05	-0.01
	t	(0.57)	(-0.07)

Table 15: Summary statistics.

Table presents summary statistics for the variables used in the regressions for DEFAULT. The definition of variables can be found in Table 1.

Variable	Mean	Std. Dev.	Min.	Max.	
DEFAULT	0.041	0.198	0	1	168,225
TRANCHE	6,541,578	48,058,469	1	5,817,246,720	168,225
BANKPRES	0.039	0.193	0	1	168,180
LEND-BANKPRES	0.014	0.118	0	1	168,180
NOLEND-BANKPRES	0.025	0.156	0	1	168,180
BY-IN	0.004	0.067	0	1	168,180
BY-OUT	0.01	0.097	0	1	168,225
TANGIBILITY	0.26	0.34	0	1.64	165,600
PROFITABILITY	4.79	5.22	-13.26	22.68	159,925
COVERAGE	0.70	0.30	0	1	160,745
LIQUIDITY	1.22	0.42	0	2.75	162,740
TOTALASSETS	11,708	10,065	0	51,967	154,260
EQUITY/DEBT	0.73	0.73	0	3.47	138,920
Z-SCORE	4.9	1.8	1	9	167,755
TOP LENDER'S SHARE	0.56	0.27	0.06	1	168,225
MULTIPLE	4.59	3.07	1	33	168,225

Table 16: Loan performance and bank presence on corporate boards.

This table reports descriptive statistics on the incidence of DEFAULTS in the sample of firms with and without bank directors on boards. DEFAULT is a dummy variable that equals one if the firm has been declared insolvent at (at least) one lender or is in a basically comparable situation. The sample consists of 168,180 firm-year observations over the 2006 - 2010 time period. The table presents t-statistics for difference in means.

	Firms without bank directors on boards		Firms having bank directors on boards			
	N	Frequency	N	Frequency	Diff.	t-stats
DEFAULTS (2006)	367	1.1%	5	0.04%	-0.7%	-2.57**
TOTAL (2006)	32,328		1,308			
DEFAULTS (2006-2010)	6,719	4.2%	130	2.0%	-2.2%	-8.92***
TOTAL (2006-2010)	161,640		6,540			

Table 17: Loan performance and bank presence on corporate boards

This table reports probit regressions for DEFAULT, a dummy variable that equals one if the firm has been declared insolvent at (at least) one lender or is in a basically comparable situation. The sample consists of 167,145 firm-year observations over the 2006 - 2010 time period. Probit derivatives are computed as the average of the difference in the cumulative normal distributions evaluated with ad without the dummy variable. The definition of variables can be found in Table 1. BANKPRES (firm with bank presence on boards) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank. LEND-BANKPRES (firm with a lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is a creditor of the firm. NOLEND-BANKPRES (firm with a non lending bank presence on board) is a binary variable that equals 1 if the firm has a member of its board that serves as a director of a bank which is not a creditor of the firm. BY-IN is a binary variable defined at loan level only for firms having *lending* bankers on boards which equals 1 if the loan is extended by the lender on board. FE means 'fixed effects' dummy variables. t statistics are reported in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

DEP VAR:DEFAULT (0/1)	(1)	(2)	(3)	(4)
Contract characteristics				
TRANCHE	-0.001	-0.001	-0.001*	0.0003
	(-1.61)	(-1.61)	(-1.69)	(-0.73)
Governance-signaling charact				
BANKPRES	-0.019***			
	(-6.38)			
NOLEND-BANKPRES		-0.020***	-0.022***	
		(-5.51)	(-4.72)	
LEND-BANKPRES		-0.016***	-0.018***	
		(-3.41)	(-3.10)	
BY-IN				0.0009
				(0.28)
relation charact				
TOP-LENDER	-0.037***	-0.037***	-0.029***	-0.04***
	(-13.16)	(-13.18)	(-4.77)	
MULTIPLE	0.002***	0.002***	0.0006**	
	(11.30)	(11.27)	(2.61)	
Firms'financial charact.				
TANGIBILITY			-0.027***	
			(-12.86)	
PROFITABILITY			-0.0001***	
			(-18.34)	
COVERAGE			0.001	
			(0.67)	
LIQUIDITY			-0.027***	
			(-13.06)	
TOTASSETS			0.0026**	
			(2.41)	
EQUITY/DEBT			-0.021***	
			(-15.85)	
Firms'Altman Z-Score				
SCORE=2	-0.006	-0.006		
	(-0.79)	(-0.79)		
SCORE=3	0.012**	0.012**		0.08
	(1.87)	(1.87)		(0.002)
SCORE=4	0.018***	0.018***		0.102
	(3.03)	(3.03)		(0.002)
SCORE=5	0.046***	0.046***		0.112
	(7.69)	(7.69)		(0.001)
SCORE=6	0.066***	0.066***		0.115
	(11.02)	(11.02)		(0.001)
SCORE=7	0.093***	0.093***		0.127
	(15.51)	(15.51)		(0.002)
SCORE=8	0.125***	0.125***		0.162
	(20.49)	(20.49)		(0.01)
SCORE=9	0.178***	0.178***		
	(28.02)	(28.02)		
Other controls				
ECON. BRANCH	FE	FE	FE	FE
GEOGR. LOC.	FE	FE	FE	FE
YEAR	FE	FE	FE	FE
BANK				FE
Observations	167,145	167,145	112,880	16,908
R^2	0.25	0.25	0.17	0.29

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