

Corporate Default with Chinese Characteristics

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Abstract

We study corporate default and its resolution among all commercial loans over RMB¥ 50 million from the largest 19 Chinese banks from 2006 to 2012. We confirm some prior beliefs: borrowers from government-designated strategic industries or owned by the state default more frequently and typically perform poorly after default. Big Five state owned banks and poor regional development aggravate such effects. However, we find significant evidence of beneficial relationship banking, in spite of potential soft budget and hold-up problems and the incomplete development of China's financial system. Thus, as the Chinese economy evolves, some features of its centrally-planned origins persist while other features of a modern effective banking system are emerging.

Keywords: bank loans, corporate default, government bailout, China

JEL Classifications: G21, G28, G33, G38

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1. Introduction

Creative destruction is a key feature of a modern, market-oriented economy. Ideally, markets for goods and services, labor, talent, and capital punish failure and reward success, thereby offering better products to consumers, better inputs to companies, and appropriate rewards to investors. Limited liability corporations, leverage, and the possibility of distress, default, and bankruptcy contribute to this process. Formal and informal mechanisms to resolve default are intended to obtain money to meet obligations to creditors, keep a fundamentally healthy business operating, or, if necessary, liquidate the assets of a firm that cannot be reorganized profitably. The threat of distress gives managers and shareholders incentives to use the firm's assets optimally, thereby reducing the potential for default.

When a corporation cannot meet its obligations, a variety of mechanisms can be invoked to resolve corporate default. Private out-of-court reorganization involves negotiating with creditors and other stakeholders to change the terms of the contracts governing the firm's obligations. More formal bankruptcy involves the legal system and can feature court-directed reorganization such as Chapter 11 in the US or outright liquidation as in Chapter 7. Academic research on the resolution of corporate default suggests that private reorganization is less costly than formal bankruptcy. For example, Gilson, John, and Lang (1990), Hoshi, Kashyap, and Sharfstein (1990), Franks and Torous (1994), and Favara, Schroth, and Valta (2012) present evidence suggesting that private reorganization is less costly than formal bankruptcy, which is avoided unless the structure of debts is relatively complicated (Asquith, Gertner, and Scharfstein, 1994; Brunner and Krahen, 2008). Furthermore, formal bankruptcy can fail to revive a distressed firm or can lead to a sequence of failures if pre-default management is not removed (Hotchkiss, 1995; Hotchkiss and Mooradian, 1997) or if the firm's assets continue to be employed in value-destroying activities (Weiss and Wruck, 1998).

However, the substance of the reorganization process can be more critical than its degree of formality. Gilson (1997) documents how formal bankruptcy can more aggressively reduce leverage and give the distressed firm a stronger fresh start. Furthermore, the workings of corporate finance and the implications for the incidence and resolution of default can be strongly influenced by the non-commercial objectives of governments and regulators who regulate or in

some cases even own and control financial institutions. In some economies, for example, politically connected firms can have better access to bank loans (Cull and Xu, 2005). Using a sample of 450 politically connected firms from 35 countries, Faccio, Masulis, and McConnell (2006) examine the channel through which political connections help borrowing firms obtain credit and the impact on firm performance. They find that banks factor potential government bailout into their lending decisions. Government support can also compromise firm performance. For example, Faccio, Masulis, and McConnell (2006) also find that the performance of politically connected firms is inferior to their non-connected counterparts following a government bailout. Ayyagari, Demirguc-Kunt, and Maksimovic (2010) find that Chinese firms that obtain banks loans with government help do not grow faster than firms that obtain loans without government help.

The workings of corporate finance, default, and the resolution of default can also depend on relationships between borrowers and lenders. Banks match savings to the funding needs of investors, and intermediate the maturity preferences of these borrowers and lenders (Diamond and Dybvig, 1983; Rajan, 1996). Information asymmetries and agency problems that can deter investment (Myers and Majluf, 1984) can be addressed by the economies of scale, experience, and access to information that banks enjoy. The bank loan contract can be thought of as “inside debt” that can address a variety of problems that public bond issues and other debt cannot (Fama, 1985; Rajan, 1992). Thus, a close and enduring bank-borrower relationship can improve credit availability, increase banks' willingness to renegotiate, and enhance the inter-temporal smoothing of loan terms (Boot, 2000). These value-enhancing features have been shown to survive even a systemic financial crisis (Bodenhorn, 2003; Puri, Rocholl, and Steffen, 2011). However, these benefits do not come without costs. First, the soft budget constraint problem can arise when the borrowing firm becomes distressed. Knowing that banks have incentives to support the firm to recoup the original loan, distressed firms face perverse incentives to take inefficient risks or exert insufficient effort (Dewatripont and Maskin, 1995). Second, relationship banking limits competition and creates barriers for market entry, leading to a “holdup” problem. As the relationship progresses, banks become better informed about borrowing firms and thus gain greater opportunities through long term dealings to shift more default risk onto firms (Sharpe 1990; Rajan 1992). Moreover, ex post rent extraction by banks can distort entrepreneurial

incentives ex ante and lead to a suboptimal choice of investment projects (Berglof and Von Thadden, 1994).

We extend the study of corporate default and its resolution to China, a novel but rarely studied setting in which to examine the process of default and its associations with political connections and bank-borrower relationships. In a survey of the efficiency of the formal bankruptcy process across 88 countries, Djankov, Hart, McLiesh, and Shleifer (2008) report only limited information on the foreclosure process in China, and do not report any information on reorganization or liquidation, perhaps because of the uncertainty and lack of precedents as China's legal system evolves away from that appropriate to a centrally-planned economy. Private resolution of corporate default seems sensible given the state of the legal system in China. As described below, the resolution of corporate default in China is largely conducted out of court. While the literature on corporate default confirms the value of informal approaches, other aspects of Chinese capital markets and political economy can dilute or even reverse the benefits of private reorganization. In a study of European companies, Borisova and Megginson (2011) find that government-owned firms enjoy reduced ex ante borrowing costs, suggesting either implicit or explicit government guarantees. For China in particular, Bailey, Huang, and Yang (2011) find evidence consistent with the use of loans from the largely state-controlled banking sector to support weak firms. There is also limited evidence that some dimensions of banking in China reflect relationships between banks and borrowers, among firms, and between borrowers and a bank's decision-making process.¹

In the financial systems of many developing countries like China and more than a few developed countries, banks are not merely one component of the capital market but are the central or exclusive institutions. Bank lending is the primary channel for Chinese firms to obtain external financing although some small and medium sized firms also rely on informal financing

¹ Using a proprietary database from a single credit guarantee firm in China, Dybvig, Shan, and Tang (2012) distinguish the risk assessments and collateral-related motivations of lenders versus third-party guarantors. Using a proprietary database from a single Chinese state-owned bank, Chang, Liao, Yu, and Ni (2013) find that "soft" (relationship) information has high predictability for loan default. Using detailed loan records from a Chinese state-owned bank, Qian, Strahan, and Yang (2014) study the effect of delegating loan decisions from committees to individual loan officers.

(Allen, Qian, and Qian, 2005). Relationships have traditionally been a key component of Chinese business culture. In addition to the privately formed relationships between the banks and the borrowing firms through repeated or long-term business transactions (Boot, 2000), political connections serve as a special type of relationship and can influence credit decisions and the default rate of granted loans. As China's economy has grown and evolved, banks have come under great political pressure to meet competing goals of supporting social stability while transforming themselves into modern financial institutions (Dobson and Kashyap, 2006). Furthermore, the Chinese government has encouraged forming business groups to further economic development, perhaps due to their successful use in neighboring Japan and Korea. The size, importance, rapid evolution, and unique characteristics of the Chinese economy warrant a comprehensive look at associations between loan defaults, banking practices, relationships among banks, firms, and business groups, and government intervention.

While China's capital market remains centered on bank debt rather than public bond issues, the significance of public bond issues, and defaults on those bonds, is growing as the Chinese economy matures. Two recent credit events involving Chinese corporation bonds have received much attention. Suntech Power Holdings, once the world's largest producer of solar panels, defaulted on over half a billion dollars in bonds due to be repaid in March 2013. Court actions were launched in the US where the bonds and common stock of the firm trade. The default also breached terms of other debt including bank loans from China Development Bank. The first default on a local bond issue occurred a year later when another solar technology firm, Shanghai Chaori Solar Energy Science and Technology Company, announced it could not meet interest payments of RMB 89.8 million on a billion RMB bond issue floated in China in 2012.

We contribute to understanding the role of political influences, relationship banking, and other features of China's evolving financial system in explaining loan defaults and their resolution. In particular, we look at how political connections that imply potential government bailout and borrower-bank relationships can be associated with credit decisions, defaults, and the resolution of default for a data set of all bank loans over RMB¥ 50 million from the 19 largest Chinese banks from 2006 to 2012. A summary of our findings is as follows. Unsurprisingly, borrowers from government-designated strategic industries or owned by the state default more frequently and typically perform poorly after default. Furthermore, Big Five state

owned banks and poor regional development aggravate these effects. However, there is also significant evidence of benefits from what we can think of as “inside debt” or “relationship banking”. This is observed in spite of potential soft budget and hold-up problems associated with relationship banking and the incomplete development of China’s financial system. Many of these findings echo the predictions of a simple model that we present below.

The balance of this paper is organized as follows. Section 2 presents a model and organizes its implications into testable hypotheses. Section 3 describes the data set and the econometric method we employ. Section 4 presents preliminary empirical evidence while Section 5 briefly sketches planned additional work. Section 6 is a summary and conclusion.

2. Theory and testable hypotheses

We begin with a simple model that organizes many of our ideas. We then present an array of testable propositions.

2.1 A model of managerial effort, government bailout, and lender behavior

Our model addresses three related questions concerning how political connections affect loan decisions, loan default rates, and default resolution:

(A1) Is a bank more likely to grant a loan to a politically-connected firm, knowing its potential to receive a government bailout?

(A2) Does the possibility of a politically motivated government bailout reduce the incentives of the manager of a politically-connected firm to apply high effort, thus increasing the probability that the firm defaults on a bank loan?

(A3) If the firm defaults on an initial loan, do the political connections of the firm affect the bank’s decision to grant a subsequent loan?

A similar set of questions, which we will not list but will refer to as (B1), (B2), and (B3), substitutes bank-firm relationships for political connections.

The first assumption of the model specifies the investment opportunities that are available to the borrowing firm. The borrowing firm operates over two periods delineated by three time points, and can choose to invest in one project in each of the two periods. At time 0, the firm can choose to invest in a project that returns R_1 at time 1 if it succeeds or zero otherwise. At time 1, the firm can start a second period project that returns R_2 at time 2 if it succeeds or zero otherwise. The first period project is financed with a bank loan, with the amount normalized to 1. The funding of the second period project depends on the outcome of the first period project. If the first period project succeeds, the firm can fund the second period project entirely with internal funds and no new bank loan is required. However, if the first period project fails, then the firm needs a new bank loan to start the second period project. The required loan amount for the second period project is X . If the bank rejects the loan application, the firm turns to other external channels and funds the second period by promising to pay C ($C > rX$) at the end of the second period. Assume the interest rate for both the first period and second period loans is fixed exogenously at r ($r > 1$) and cannot be renegotiated.² For both projects, the probability of success depends on the effort level chosen by the firm's manager. With high managerial effort, a project succeeds with certainty. With low effort, a project succeeds with probability p ($0 < p < 1$).

Suppose the firm decides to undertake the first period project at time 0. Upon obtaining the loan needed to initiate the project, the firm's manager works with high effort but immediately encounters a private benefit shock, \tilde{b} , with distribution F . Only the manager observes the realization of \tilde{b} at the time of the shock, though the bank knows its distribution, F . The manager obtains the private benefit only by making low effort. Therefore, the manager switches to low effort if the realization of \tilde{b} exceeds some threshold value, to be determined endogenously by the model. We assume the manager chooses the same effort level for both the first and second period projects so the bank infers the effort level on the second period project through the outcome of the first period project.

The bank decides at time 0 whether to approve the loan to the borrowing firm based on prior beliefs about the firm to be specified in the model. We assume no direct political influence

² This is realistic given conditions in the Chinese corporate loan market during the period we study.

on the loan decision as the bank approves a loan only if it is expected to be profitable. However, as we will explain with the model, the government can help politically connected firms pay off its debt so the loan decision might still be subject to indirect political influence.³

Default occurs if, at the end of the first period, the first period project fails so that the first period loan cannot be repaid. If the first period project fails, we assume that the firm can still repay both the initial loan and an additional second period loan if the bank agrees to a second round of financing and the second project succeeds, that is, $R_2 > r + rX$. Therefore, the bank can either liquidate the loan immediately at time 1 or finance the second period project. If the bank chooses to liquidate the firm, it receives γ ($0 \leq \gamma < 1$), which is the salvage value of the first period project. Alternatively, if the bank lends for the second period project, it will get repayment of both loans if the second period project succeeds. The bank's decision to liquidate or continue with the borrower will be determined endogenously by the model.

A borrowing firm can either be politically connected or not. If the borrower is politically connected and the second period project also fails, the firm approaches bankruptcy but the government assists the firm in repaying the loans with probability p^B . p^B depends on the strength of the firm's political connections and can be thought of as a function of the number of employees, its contribution to local GDP, the fraction of shares owned by the government, and other politically motivated considerations. If the firm is private, p^B is zero because the government will not bail it out.

Additionally a borrowing firm can either have an enduring bank relationship or not. If the borrower has such a bank relationship, the bank incurs an opportunity cost D if the firm is liquidated to resolve a loan default: the bank has accumulated soft information beyond what is required for the current loan and this information becomes worthless if the borrower disappears. D can be thought of as a function of factors such as the duration and frequency of bank-firm interactions and the personal ties between the firm's manager and the banker. If the firm has no enduring bank relationship, D is zero.

We assume that the borrowing firm's manager maximizes her personal benefit and the bank maximizes its expected profit. We then use our model to answer three questions for the

³ This corresponds to recent reforms of Chinese banking practices.

three types of firms the model imagines: firms that are politically connected, firms that have a close enduring relationship with the bank, and firms that have neither of these characteristics. Will the bank approve a loan to the firm, as in question A1 stated above? Will the firm's manager make low effort and thus increase the chance of default (A2 above)? Will the bank liquidate the firm if the first period project fails or finance the second period project (A3)? We discuss below these three questions in reverse order. We first make some intuitive assumptions, amenable to the different characteristics of the firms, on whether the bank will liquidate the firm if the first period project fails. We then solve the model using backward induction based on these assumptions and answer the first two questions. Put another way, the derivation of the model first infers the firm effort level and given the firm effort level, we infer the loan decision for the first period loan.

First, what will the bank do if the first period loan is not repaid when due? Suppose that at time 0, the bank holds the prior belief that the firm's manager will exert high effort equal to ρ_0 . If the first period project fails at time 1, the bank knows that the borrower's level of effort is low, and thus by assumption knows that the manager will apply the same low effort for the second period project. The bank must choose either to liquidate the firm or finance the second period project. If the firm is liquidated, the bank receives γ ($0 \leq \gamma < 1$) and incurs an opportunity cost, D , which is non-zero only if there is a relationship between the bank and the borrower. If the bank instead chooses to finance the second project, the bank has probability $p + (1 - p)p^B$ of receiving $r(1 + X)$ (both loans are paid conditional on the success of the second period project) and probability $1 - p - (1 - p)p^B$ of receiving 0. Recall that p is the probability of success of the second period project given low managerial effort, and p^B is the probability of bailout if the second period project fails. If the borrowing firm has no political connections, p^B equals zero. Therefore, the bank chooses to continue if and only if the expected net profit of financing the second period loan

$$\left[p + (1 - p)p^B \right] r(1 + X) - \left[1 - p - (1 - p)p^B \right] (1 + X)$$

is greater than the net profit of liquidating the firm $(\gamma - 1) - D$.

We assume that there are no firms that are both eligible for a government bailout and have a relationship with a bank. That is, firms fall into three categories, those eligible for a bailout, those with a relationship with a bank, and others with neither political influence or a relationship with a bank. Furthermore, for this draft of the paper, we assume a specific relationship among the expected payoffs to a second period loan to each of the three types of borrowers:

$$\begin{aligned} & \left[p + (1 - p)p^B \right] r(1 + X) - \left[1 - p - (1 - p)p^B \right] (1 + X) \\ & \geq \gamma - 1 > pr(1 + X) - (1 - p)(1 + X) \geq (\gamma - 1) - D. \end{aligned} \quad (1)$$

The first term in (1) is the expected payoff to the bank from extending a second period loan to a politically-connected borrower that has defaulted on the first period loan. The second term, $\gamma - 1$, is the payoff from liquidating a borrower that does not have a relationship with a bank and has defaulted on the first period loan. The third term is the expected payoff to the bank from extending a second period loan to a borrower that does not have political connections and has defaulted on the first period loan. The fourth term, $(\gamma - 1) - D$, is the payoff from liquidating a borrower with whom the bank has a relationship and that has defaulted on the first period loan. Therefore, Equation (1) imposes three consequences.⁴ First, the probability of bailout, p^B , is sufficiently high that the bank will always extend a second period loan to a defaulting borrower with political connections (that is, the first term in (1) is greater than or equal to the second term). Second, the value of the bank-borrower relationship, D , is sufficiently high that the bank will always extend a second period loan to a defaulting borrower with whom the bank has a relationship (that is, the third term in (1) is greater than or equal to the fourth term). Third, the bank will always liquidate a borrower that defaults on a loan and has neither political connections nor a relationship with the bank (that is, the third term in (1) is less than the second

⁴ Thus, the first and second terms in (1) apply to a politically connected borrower. The third and fourth terms apply to a borrower with a relationship with a bank. The second and third terms apply to a borrower with neither political connections or a relationship with a bank.

term). We will relax (1) and allow these conditions to emerge naturally in a planned revision of the model.

Next, anticipating the lending bank's strategy after observing default of the first period loan, which level of effort will the firm's manager choose at time 0? By selecting high effort, the firm's manager cannot obtain the private benefit, b , but increases the probability that the project succeeds. We differentiate between two cases. First, if both p^B and D are 0, equation (1) shows the bank will liquidate the firm if the first period loan is not paid on time. Accordingly, the expected payoff to high effort is $R_1 - r + R_2$ and the expected payoff to low effort is

$$b + p[(R_1 - r) + p(R_2 - rX)] + (1 - p)p(R_2 - C).$$

Therefore, the firm selects high effort if and only if:

$$b \leq (1 - p)(R_1 + R_2 - r) + p^2rX + (1 - p)pC \equiv b^*. \quad (2)$$

Hence, prior to the realization of \tilde{b} , the probability that high effort is selected is $F(b^*)$. If either p^B or D is greater than zero, the bank will continue to finance the second period project even if the first period project fails given our assumption, Equation (1). Accordingly, the expected payoff to high effort is still $R_1 - r + R_2$ and the expected payoff to low effort is

$$b + p[(R_1 - r) + p(R_2 - rX)] + (1 - p)p(R_2 - rX).$$

Therefore, the firm selects high effort if and only if:

$$b \leq (1 - p)(R_1 + R_2 - r) + p^2rX + (1 - p)prX \equiv b^* - (1 - p)p(C - rX). \quad (3)$$

Hence, prior to the realization of \tilde{b} , the probability that high effort is selected is $F(b^* - \Delta)$, where $\Delta = (1 - p)p(C - rX)$ is greater than zero. Notice that $F(b^* - \Delta)$ is less than $F(b^*)$, that

is, the potential bailout and the bank relationship reduce the manager's incentive to make high effort.

Finally, at time 0, anticipating the firm's choice between high effort and low effort, will the bank extend a loan to the firm for the first period project? At time 0 the bank anticipates the manager's private benefit shock and the threshold values in (2) and (3) that determine effort. We differentiate between our three types of borrowing firms. Recall that, at time 0, the bank's prior belief that the firm will take high effort is ρ_0 . If both p^B and D are 0, the expected net profit to approving the loans is

$$[\rho_0 + (1 - \rho_0)p]r + [1 - \rho_0 - (1 - \rho_0)p](\gamma - 1).$$

The bank will lend to the firm if and only if the expected profit is not smaller than zero:

$$\rho_0 \geq \Gamma(\gamma - 1), \quad (4)$$

where $\Gamma(x) = \frac{\frac{x}{1-p} - p}{1-p}$. If p^B is greater than 0 but D is 0, the expected net profit of extending the loans is

$$[\rho_0 + (1 - \rho_0)p]r + [1 - \rho_0 - (1 - \rho_0)p]([p + (1 - p)p^B]r(1 + X) - [1 - p - (1 - p)p^B](1 + X)).$$

The bank will lend to the firm if and only if the expected profit is not smaller than zero, that is, if the probability of high effort is sufficiently large:

$$\rho_0 \geq \Gamma([p + (1 - p)p^B]r(1 + X) - [1 - p - (1 - p)p^B](1 + X)). \quad (5)$$

Given (1) and $\Gamma(x)$ is decreasing in x when $x < r$, we have:

$$\Gamma\left([p+(1-p)p^B]r(1+X)-[1-p-(1-p)p^B](1+X)\right)\leq\Gamma(\gamma-1). \quad (6)$$

Comparing (5) to (4), we can see that the possibility of a bailout decreases the threshold confidence required by the bank to extend the initial first period loan. Alternatively, if p^B is 0 but D is greater than 0, the expected net profit of extending the loans is

$$[\rho_0+(1-\rho_0)p]r+[1-\rho_0-(1-\rho_0)p](pr(1+X)-(1-p)(1+X)).$$

The bank will lend to the firm if and only if the expected profit is not smaller than the potential 1 opportunity cost, $-D$, that is, if the probability of high effort is sufficiently large:

$$\rho_0\geq\Gamma^D(pr(1+X)-(1-p)(1+X)), \quad (7)$$

where $\Gamma^D(x)=\frac{\frac{D+x}{1-p}-p}{1-p}$. Due to (1), we have:

$$\Gamma^D(pr(1+X)-(1-p)(1+X))\leq\Gamma(\gamma-1). \quad (8)$$

The bank relationship decreases the threshold confidence required by the bank to extend loans.

In summary, given equation (1), in equilibrium, the optimal choices for the bank and the borrowing firm are as follows. First, the bank will approve a loan to the firm if and only if its prior belief that the manager will take high effort, ρ_0 , satisfies:

$$\rho_0\geq\begin{cases} \Gamma(\gamma-1), & p^B=D=0; \\ \Gamma\left([p+(1-p)p^B]r(1+X)-[1-p-(1-p)p^B](1+X)\right), & p^B\neq 0, D=0; \\ \Gamma^D(pr(1+X)-(1-p)(1+X)), & p^B=0, D\neq 0. \end{cases} \quad (9)$$

Since both the latter two thresholds are less than the first one, the bank applies a looser standard to firms which are eligible for a bailout or have a relationship with the bank. Second, after obtaining a loan, the borrowing firm's manager will select low effort if and only if the realized private benefit satisfies:

$$b > \begin{cases} b^*, & p^B = D = 0; \\ b^* - \Delta, & \text{otherwise.} \end{cases} \quad (10)$$

In other words, the manager of a firm that is eligible for a bailout or has a sustained relationship with the bank has a stronger incentive to select low effort and, therefore, is more likely to default. Third, once the first period project has failed, the bank treats a firm that is eligible for a bail-out or has a sustained relationship with the bank more favorably than other borrowers. For a firm that is eligible for a bailout or has a relationship with the bank, the bank finances the second period project without requiring the firm to repay the first period loan immediately. For another type of firm, the bank liquidates the project.⁵

2.2 Testable hypotheses and their relationship to the model

In our model, p^B reflects the possibility that the government can intervene to rescue a firm if it defaults on a loan, D encapsulates the idea that the banker-borrower relationship can add value to the lending process, and b is the benefit to the manager of the borrowing firm if a low level of managerial effort is elected. These forces affect the level of effort that the firm's manager chooses and hence the success of the project. We develop testable hypotheses that relate to, and extend, these concepts. We also relate the testable hypotheses to specific facets of China's process of economic reform and development.

We begin with predictions about the likelihood of default:

H1a: The likelihood of default increases if the borrower is politically connected.

⁵ These optimal choices for the lender and borrower match the empirical findings of Faccio, Masulis, and McConnell (2006).

H1b: The likelihood of default increases with the duration and frequency of the relationship between borrower and bank.

H1a and H1b state that the borrower is more likely to choose the benefit, b , that comes from electing low effort if another force (a possible government bailout, p^B , or the value of bank-borrower relationship capital) blunts the cost of default to the bank. The model also has clear implications for the likelihood that second-period financing is obtained in the event of default on first-period financing:

H2a: Following a default, the likelihood of subsequently obtaining credit increases with the duration and frequency of the borrower - bank relationship.

H2b: Following a default, the likelihood of subsequently obtaining credit increases if the borrower is politically connected.

Next, we offer predictions about the process of default resolution that go beyond the model but are consistent with its spirit:

H3a: Following a default, resolution time decreases, and the ease of subsequently obtaining credit increases, if the borrower is politically connected.

H3b: Following a default, resolution time decreases, and the ease of subsequently obtaining credit increases, with the duration and frequency of the borrower - bank relationship.

The idea behind H3a and H3b is that, if the government (or bank with a relationship with a borrower) has an interest in the survival of a borrower, they will expedite the process of default resolution. In the case of H3a, the government can enforce its will with moral suasion or arm twisting. In the case of H3b, the bank can have access to information and

resources to speed the process of restructuring a loan to a borrower with which there is a significant borrower-bank relationship. We also predict how the extent of economic development and reform can affect the probability of default and the likelihood of receiving subsequent financing afterwards:

H4a: The increased likelihood of default (H1a) and subsequent financing (H2a) for a politically connected borrower is mitigated by the degree of economic development and reform in the borrower's home province, particularly if the lender is not a Big Five bank.

H4b: The increased likelihood of default (H1b) and subsequent financing (H2b) for a borrower enjoying an enduring borrower-banker relationship is mitigated by the degree of economic development and reform in the borrower's home province, particularly if the lender is not a Big Five bank.

As the process of economic reform and development advances, government intervention is reduced, competition among firms becomes more intensive, and the regulatory and legal system becomes more efficient. Therefore, the likelihood of a bailout, p^B , and the value of a borrower-bank relationship, D , is expected to decline with the degree of economic reform and development.⁶ This effect varies across regions at different stages of development. However, any such effect will be lessened for loans from Big Five banks which are more likely to function on non-commercial principles even as reform and development progress. Finally, we also imagine H5a and H5b which are analogous to H4a and H4b, and predict that the associations described in H3a and H3b decline with the extent of economic reform and development of the borrower's home region, particularly if the loan is not from a Big Five bank.

⁶ Competition shortens the borrower-lender relationship and reduces the incentives to invest in information (Diamond, 1991; Petersen and Rajan, 1995). However, Boot and Thakor (2000) argue that banks can respond to greater competition by developing closer relationships with their clients, increasing differentiation and loyalty. Since the 19 banks in our sample account for a substantial share of the credit market across the nation, different marketization phases mainly reflect different competition intensity among business firm rather than among banks.

3 Database description and econometric specifications

3.1 Sample

Our data is provided by China's bank supervising body, the China Banking Regulatory Commission (CBRC). The CBRC database contains a broad variety of characteristics for all new commercial loans over RMB 50 million granted by the largest 19 Chinese banks in the years 2006 to 2012.⁷ The sample period we select for a first preliminary look at the data is the year 2010. The top 19 banks account for over 80% of the market share of all commercial loans, with 1,500,000 loans in 31 provinces, autonomous regions, and municipalities provided to firms in 20 sectors and 95 industries. We exclude loans extended to financial services firms. We also delete firms that do not have a business group membership. These firms account for less than 5% of the sample. Some of our preliminary results focus on short term loans (not exceeding one year of maturity) as these large short term loans dominate our data set (67.3% of the sample).⁸ After applying these sample selection criteria, our sample has a total of 753,082 loans.

3.2 Variables

We use two proxy variables to indicate if a firm is politically connected. One variable is the strategic industry dummy. It equals one if the firm is in an industry that is considered strategically important by the central government and zero otherwise. The second variable is the provincial capital dummy. It equals one if the firm is headquartered in a provincial capital. Because provincial capitals are typically the economic and political center of a province, location in these cities yields easier access to political resources and thus potentially stronger political connections. For firms listed on the Shanghai or Shenzhen stock exchange, we also create the state ownership dummy to more directly indicate ownership and control by a government entity.

Paralleling what we do for the notion of political connections, we create two variables to capture the extent of the relationship between a borrower and a bank. We measure the duration

⁷ The Chinese banking sector is dominated by five state-owned banks (Agricultural Bank of China, Industrial and Commercial Bank of China, Bank of China, People's Construction Bank of China, Bank of Communications). Other important institutions include commercial banks (such as China Everbright Bank) and regional banks such as city banks. The five state-owned banks and the major commercial banks and regional banks are included in our database.

⁸ In China, long-term loans are structured as a sequence of short-term ones and monitoring the repeating short-term loans (rollovers) is an important part of risk management for banks.

(number of months) and frequency of interactions (number of loans) for each borrower-bank pair to measure the extent that the pair firm has a close enduring relationship.

The Appendix summarizes the definitions of the political connections and bank relationship variables along with other loan, firm, and group characteristics. These include a dummy variable indicating whether a particular firm-bank-loan month is in default, firm size, firm leverage, loan size, recent non-performing loan ratio of the firm, number of banks from which the firm has obtained loans, the size and non-performing loan ratio for the group of firms which includes this borrower, a dummy variable to indicate a non-zero “risk signal” on at least one of five dimensions that bank managers assess borrowers on, and a dummy variable to indicate if a particular loan is granted by one of the five big banks.

The two variables that characterize the borrowing firm’s “group” reflect another interesting aspect of the Chinese economy and financial system. Khanna and Rivkin (2001) describe business groups as a “set of firms which, though legally independent, are bound together by a constellation of formal and informal ties”. Business groups can facilitate greater use of internal factor markets (Stein, 1997), which can lead to economic benefits, especially when external financing is scarce and uncertain. They can also imply risk reduction through diversification and coinsurance (Khanna and Yafeh, 2007). These benefits can be particularly relevant in Chinese financial markets because they continue to feature incomplete market information, poorly specified property rights, underdeveloped legal system, and institutional instability (Allen, Qian, and Qian, 2005). Limited contract enforcement, weak rule of law, corruption, and an inefficient judicial system can all lead to high transaction costs between unrelated parties. Under such circumstances, intragroup relationships are common and can be efficient (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Chang, Khanna, and Palepu, 1999; Claessens, Djankov, and Lang, 2000).

At the same time, the complex ownership structure in business groups can result in conflicts among shareholders. The deviations of voting rights from cash flow rights through stock pyramids, cross shareholdings and, to a lesser extent, dual class shares can allow a controlling shareholder in the group or an intermediate firm to gain effective control of a firm with low cash flow rights. As argued by Stulz (1988) and Shleifer and Vishny (1997), and shown by Claessens, Djankov, Fan, and Lang (2002) and La Porta, Lopez-de-Silanes, Sheifer, and

Vishny (2002), the resulting managerial entrenchment can affect corporate policies and firm value. Business groups can also exacerbate agency problems since there is a substantial divergence between control and ownership (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000). In particular, controlling shareholders can expropriate minority shareholders for their own private benefit.

The CBRC requires banks to report three dimensions of group membership. One is the firm's "relatives," that is, those firms which are controlled by the same legal representative or the same major shareholder. Another is upstream or downstream corporations which have close and direct business ties with the firm. The third type includes the closest clients and customers. These memberships are gathered by CBRC into a large and complex database. CBRC then employs a sophisticated network algorithm to break the entire network into smaller networks depending on the strengths of the ties. The firms are then assigned to these smaller networks or business groups. Each firm is affiliated with only one group. While the underlying information is publicly available, the specific group assignments are not known to the banks or the client firms.

To motivate an additional explanatory variable, we recognize that a significant institutional factor in China is uneven development across geographic regions (Jiang, Lee, and Yue, 2010). Fan, Wang, and Zhang (2001) create a widely cited index to measure the different stages of what they refer to as the "marketization" process in each province of China. The index captures different aspects of economic development and financial market reforms with five components: the relationship between market and government, the development of the non-state-owned economy, the development of product markets, the development of markets for factors of production, and the development of market intermediaries and the legal environment. Existing studies find that firms located in provinces that have a higher index value benefit from less government intervention, easier access to financial intermediaries, and better intellectual property protection (Chen, Firth, and Xu, 2009). We also collect quarterly data on the GDP growth rate of each province.

We use two dependent variables in our analysis. The first dependent variable is the default dummy indicating whether the i th firm defaulted on any loan from the j th bank in month t . We define default as either being three months delinquent on a loan or going bankrupt.⁹ The

⁹ This standard is employed by the CBRC. See CBRC file 2007.54 "Guidelines on Loan Risk Classification".

second dependent variable is a dummy variable indicating whether the i th firm obtained a new loan from the j th bank in the three months following its default in month t .

3.3 Econometric specification

For this draft of the paper, our empirical approach relies on a binomial logistic model:

$$P\{D_{i,j,t} = 1\} = F\{\mathbf{A}'\mathbf{X}_{i,j,t}\} \quad (1)$$

$P\{D = 1\}$ is the probability that a loan defaults (or, in other tests, the likelihood of receiving a loan after a default), with i , j , t , and m subscripts for the borrowing firm, bank, and month respectively. $F\{\cdot\}$ is the logistic distribution function. \mathbf{X} is a vector of loan, firm, and group characteristics, firm – bank relationship characteristics, and market and macroeconomic conditions, along with bank and industry fixed effects and a constant. \mathbf{A} is a vector of coefficients. Robust standard errors account for heteroscedasticity across firms and groups and serial correlation.

4. Some preliminary empirical findings

Panel A of Table 1 reports descriptive statistics for bank loan characteristics over our sample of borrowers. Larger borrowers (as measured by assets) obtain higher credit lines and larger loans. More importantly, a higher percentage of borrowers that obtain a large amount of credit are politically connected (that is, they are in a strategic industry or located in a provincial capital). Similarly, a higher percentage of borrowers that obtain a large amount of credit have enduring relationships with banks (longer and more frequent relationships, and also have relationships with more banks). There are more borrowers in the more developed regions, although the average sizes of loans and borrowers are smaller. In the least developed regions, a significantly higher proportion of borrowers is politically connected (as indicated by the strategic industry dummy). Interestingly, we do not observe such a strong regional effect for bank-firm relationships. Significantly more borrowers get loans from Big Five banks than from the other banks in our sample. Loans from the Big Five banks are significantly larger while borrowers are only slightly larger in size. More politically connected borrowers borrow from the Big Five

banks. Firms that borrow from the Big Five banks also seem to be significantly more engaged in an enduring firm-bank relationship, as suggested by all three proxies.

Panels B and C of Table 1 describe the subsample of listed firms. State owned borrowers are larger, obtain larger loans, and experience more frequent loan activity with a greater number of lenders than other firms. Interestingly, state owned borrowers significantly underperform other listed borrowers based on book return on assets. The findings are similar if listed firms are separated into those from strategic industries and others, or those headquartered in provincial capitals versus others. For state-owned borrowers, a longer bank-borrower relationship is associated with larger borrower size, larger average loan size, but relatively poor performance. This is also true though muted for other borrowers.

Other summary statistics are presented in Table 2. The average value of 0.012 for the default dummy variable indicates default in only about 1.2% of firm-bank-month observations. Average borrower assets are close to four billion yuan (that is, about half a billion US dollars). Loans average about 62 million yuan. Firms in strategic industries are over a quarter are involved in over a quarter of the firm-bank-month observations. Default rates, borrower size, loan size, and number of banks are somewhat higher for listed firms.

Panel A of Table 3 reports default rates across different types of borrowers. Politically connected borrowers (indicated by the strategic industry dummy) have higher default rates. In contrast, borrowers with an enduring firm-bank relationship have lower default rates. Loans from lenders other than the Big Five banks seem to have higher default rates. Panel B indicates complex associations between political connections or bank relationship and the level of regional development. For example, borrowers from strategic industries (or those that are state owned) default more frequently than other borrowers in less developed regions but default less frequently in more developed regions. Lending by Big Five banks is associated with more frequent default by state-owned enterprises but less frequent default if there is a long bank-borrower relationship. Panels C and D of Table 3 looks at the combined effects of political connections and bank-firm relationships on borrower default rates for the whole sample of firms and for listed firms only. Borrowers that are politically connected but do not have an enduring relationship with a bank have the highest default rates. Political connections also seem to dominate in less developed regions: given the degree of political connection, an enduring

relationship with the bank does not reduce the default rate. In the more developed regions, however, political connections increase default rate whereas an enduring relationship with the bank decreases the default rate. Higher default rates for loans by Big Five banks appear to be mitigated by the strength of the bank-borrower relationship.

Panels A and B of Table 4 reports tests of H1a and H1b. Using loan, firm, bank, and group characteristics in several combinations, we confirm the prediction of H1a that the likelihood of default increases with borrowers' political connections when strategic industry dummy or (for listed firms) state-owned dummy are used to proxy for political connections. However, we reject H1a when the provincial capital dummy is used. It is particularly interesting that the results reject H1b: a more intense bank-borrower relationship appears to reduce rather than enlarge the likelihood of default. Panels C and D employ interactive terms to confirm and refine these findings. Compared to borrowers that are not politically connected and do not have an enduring firm-bank relationship, prominent firm-bank relationship tends to reduce the default rate (except using the provincial capital dummy). However, the magnitude of reduction is greater for the firms that are not politically connected. Control variables have signs consistent with the previous literature and our expectations.

Table 5 reports tests of H4a and H4b. While the pernicious effect of political connections on default rates is mitigated by greater regional economic development, borrowing from Big Five lenders seem to greatly reinforce such negative effects. On the other hand, greater regional economic development reinforces the effect of an enduring firm-bank relationship whereas borrowing from a Big Five lender counters the effects of such a firm-bank relationship. For all borrowers (Panel A) and listed borrowers only (Panel B), the size of the detrimental impact of loans from Big Five banks is substantial.

Panel B of Table 6 reports the average time to resolve a loan default and subsequent loan availability after a default occurrence. Both political connections and enduring bank-firm relationships reduce resolution time when default occurs and increase the likelihood of obtaining a new loan within the next three months following a default occurrence, which confirm H3a and H3b. This result appears stronger for bank-firm relationship than political connections. When combined with earlier results, this suggests that the bank-firm relationship helps rapidly resolves

defaults and reduces the incidence of default while political connections merely speed the process of propping up a defaulting borrower without repairing that borrower's health.

Table 7 report further tests of H3a, and H3b. The results are consistent with the hypotheses. Political connections or enduring firm-bank relationships contribute positively to the likelihood of obtaining new loans after a default. Political connections and enduring firm-bank relationships also reinforce each other in increasing the borrower's chance of obtaining a new loan after default. Most control variables have expected signs.

Table 8 conditions loan availability subsequent to default on regional development, reports tests of H4a, and H4b. As seen in previous tables, both political connections and firm-bank relationships increase loan availability for the borrower after default occurrence. When interacted with the regional development index, however, higher regional development or an enduring bank relationship is associated with less likelihood of a defaulting firm in a strategic industry getting a subsequent loan. In contrast, default on a loan from a Big Five bank is associated with obtaining more loans subsequent to the default. This suggests that defaulting state owned firms tend to receive continuing support if dealing with Big Five banks.

Table 9 provides some evidence on the effects of default on corporate performance and valuation. Leverage appears to increase, particularly for state-owned borrowers and borrowers with relatively weak borrower-lender relationships. This is consistent with the pattern in previous findings: political connections have the predicted negative impact on firm health while the borrower-lender relationship seems to contribute positively. Surprisingly, Tobin's Q can rise a bit, though this is mitigated for firms with a relatively short relationship with lenders.

While this draft of the paper is only preliminary, we have reported a large number of findings in many tables and panels. We summarize what we have found more succinctly as follows. Political connections result in higher credit lines, more loans, less time resolving default, and better loan availability after default. However, default rates for strategic or state owned firms are relatively high. A substantial firm-bank relationship is also associated with higher credit lines, more loans, and less time resolving default. However, in contrast to political connections, relationship banking is associated with less default and perhaps even (Table 9) less risky behavior after default. Put another way, the potential problems with relationship banking do not seem as powerful as the benefits. Furthermore, when interacting political connections and

firm-bank relationships, the positive effect of the firm - bank relationship can dominate.. More advanced regional development seems to mitigate costly effects and reinforce beneficial effects. In contrast, lending by Big five banks seems to be mostly detrimental in that it negates the benefits of regional development.

5. Agenda for subsequent drafts

The next step in our work is to design a few other tests to more fully identify or reject the forces we believe to be at work in the process of default and default resolution among Chinese corporate bank borrowers. For example, an event like China's massive monetary stimulus of 2009 has implications for the predictions of our testable hypotheses, and a differential impact on different types of firms such as state-owned versus other, strategic industry versus other, and so on. Given a predicted relationship, changes in the workings of that relationship predicted before and after an economic event, and different types of firms, the difference-in-difference methodology is applicable and, by validating or rejecting our predictions, can clarify what is driving the observed process of default and default resolution

6. Preliminary summary and conclusions

Our database of about 1.5 million loans represents all significantly large commercial loans from the largest 19 Chinese banks from 2006 to 2012. A number of dimensions of our empirical findings suggest that Chinese banking sometimes contradicts classic notions of insider debt and the relative efficiency of private renegotiation of default. We confirm some prior beliefs: borrowers from government-designated strategic industries or owned by the state default more frequently and typically perform poorly after default. Big Five state owned banks and poor regional development aggravate these effects. However, we find significant evidence of beneficial relationship banking, in spite of potential "soft budget" and "hold-up" problems and the incomplete development of China's financial system. Thus, the reform and development of China's banking system is working in some dimensions but continuing old practices in others, and the pace of these changes varies across different parts of the country.

Though the Chinese government has vowed to bring discipline to China's borrowers and lenders, the recent prominent default of Chaori Solar resulted in a bailout of the firm's creditors

and continued partial operation by the borrower.¹⁰ Other looming issues related to resolving credit problems involve everything from non-bank financial products to municipal debts, in addition to many problems among corporate borrowers. Therefore, an understanding of the workings of corporate default in China's capital market is increasingly important to a variety of decision-makers ranging from portfolio managers to policy makers.

¹⁰ "Chinese Debt: A Moral Deficit", *The Economist*, 18th October 2014.

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Appendix: Variable definitions

Default	A dummy variable equal to 1 if the loan is in default and 0 otherwise. We define default as going bankrupt or three months delinquent.
Assets (Billion)	Total assets of the firm
Leverage	The ratio of liabilities to assets
Loan Size (Million)	The total amount of outstanding bank loans
Historical Default	The ratio of historical non-performing loans during the past year over all the loans obtained by the firm from the bank.
Number of Banks	Proxy for the financial resources of a firm, equal to the total number of distinct banks that the firm has a relationship with.
Group Assets (Billion)	The total assets of all group members.
Group Default	CRBC's measure of credit risk of a group equals the ratio of nonperforming loans to total loans for all group members from all banks as of the current month.
Risk Signal	Dummy variable that equals 1 if any of the five "risk" signals (A through E) as assessed by loan managers presents, else 0. The five types of risks are: (A) bad corporate governance, (B) complex corporate structure and network of relationships (with other firms), (C) excessive product and geographic diversification, (D) highly volatile cash flows and potential, (E) high leverage.
Strategic Industry	Strategic Industry is a dummy variable for sectors of interest to the government: mining, real estate, media and culture, power, gas, and water, transportation and storage, banking, finance and insurance, metals and non metals, petrochemicals, and rubber.
Provincial Capital	Provincial Capital is a dummy derived from the location of the firm's headquarters (postcode data are collected from the China's National Bureau of Statistics) in a specially governed municipality (like Beijing or Tianjin) or a provincial capital.
Duration (Month)	Months since the borrower first borrowed from this bank.
Frequency	The number of times that a firm has obtained loans from this bank during the sample period.
GDP Growth	Quarterly GDP growth in the borrower's home province

Regional Development	Index of economic development and financial reform in the borrower's home province developed by Fan, Wang, and Zhang (2001).
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Table 1. Descriptive Statistics on Bank Loans

This table presents statistics of commercial loans from the 19 largest Chinese commercial banks. Panel A describes the full sample of 119,241 firm-year observations from the CBRC database. Loan Size is the average amount of loans granted by all banks to the borrowing firm within a year. Credit Line is the annual amount of credit extended to the firm by banks. Panels B and C summarize the listed sample consists of 4,762 firm-year observations with information available from both CBRC and CSMAR databases. Statistics are averages across firm-years. ROA and ROE are yearly accounting returns on assets and equity. Two proxies for political connections: strategic industry and provincial capital dummies. Two proxies for the bank-borrower relationship are the duration of the relationship, frequency of loans with a given bank, and the number of banks a borrower has relationships with. For listed borrowers we an additional proxy for political connection is, state ownership.

Panel A: All borrowers

		Number of Observations	Loan Size (Million)	Assets (Billion)	Political Connections		Firm-Bank Relationship		
					Strategic industry	Provincial Capital	Duration	Frequency	No. Relationships
Year	2008	22667	292.15	2.40	32.41%	32.81%	14.66	165.76	1.75
	2009	33666	319.25	2.16	31.46%	29.46%	17.66	157.02	1.75
	2010	39069	260.20	2.16	30.13%	26.41%	22.87	190.52	1.71
	2011	23839	327.36	2.39	27.47%	25.73%	25.65	132.88	1.66
Credit Line	Low	29970	29.20	0.53	23.61%	21.28%	12.40	35.49	1.05
	Medium	59485	145.38	1.10	30.65%	25.55%	20.00	120.74	1.41
	High	29786	866.74	6.28	36.77%	41.05%	29.21	383.02	3.00
	Low-High		-837.55	-5.75			-16.81	-347.50	-1.95
	T-value		-312.22	-102.69			-134.7	-109.37	-185.85
Regional Development	Low	9560	358.61	3.15	45.83%	32.18%	21.00	141.08	1.74
	Medium	47511	305.79	2.31	35.75%	28.72%	20.00	159.15	1.73
	High	62170	279.60	2.07	23.96%	27.48%	20.60	172.82	1.71
	Low-High		79.01	1.07			0.40	-31.74	0.04
	T-value		16.04	14.50			2.14	-8.74	1.81
Bank Ownership	State-Owned	81186	320.34	2.27	32.14%	25.42%	22.34	197.70	1.76
	Joint-Stock	38055	245.21	2.21	26.71%	34.60%	16.24	94.64	1.64
	Low-High		75.14	0.07			6.09	103.10	0.12
	T-value		31.09	1.85			60.07	51.48	15.77

Table 1 Descriptive Statistics on Bank Loans (continued)

Panel B: Listed borrowers

Borrower		Number of observations	Loan Size (Million)	Assets (Billion)	Firm-Bank Relationships			ROA	Industry Average ROA	Diff	T-value	ROE	Industry Average ROE	Diff	T-value	
					Duration	Frequency	Number									
State-Owned	1	2249	1142.01	8.91	33.18	545.40	3.25	0.04	0.04	0.00	-5.24	0.09	0.12	-0.03	-13.66	
	0	2513	656.58	4.04	32.81	334.70	2.82	0.05	0.04	0.01	7.53	0.11	0.13	-0.02	-12.24	
		(Diff)	485.42	4.91	0.36	210.70	0.43	-0.01					-0.02			
		(T-value)	13.69	19.55	0.87	5.06	7.30	-9.85				-6.96				
Strategic industry	1	1384	1498.58	11.19	33.19	531.70	3.49	0.04	0.04	0.00	3.71	0.09	0.09	0.00	1.79	
	0	3378	634.79	4.35	32.90	394.30	2.83	0.05	0.04	0.01	6.12	0.10	0.13	-0.03	-1.34	
		(Diff)	863.78	6.84	0.28	137.40	0.66	-0.01				-0.01				
		(T-value)	18.67	20.98	0.62	2.84	9.51	-2.63				-1.65				
Provincial Capital	1	2723	1111.85	7.91	33.05	439.70	3.29	0.04	0.04	0.00	2.19	0.09	0.13	-0.04	-7.75	
	0	2034	718.59	5.16	32.92	430.60	2.82	0.05	0.04	0.01	5.05	0.10	0.11	-0.01	-3.15	
		(Diff)	393.26	2.75	0.13	9.08	0.47	-0.01				-0.01				
		(T-value)	10.69	10.56	0.31	1.81	7.79	-7.55				-4.30				

Table 1 Descriptive Statistics on Bank Loans (continued)

Panel C: Two-way comparisons for listed borrowers

		Firm-Bank Duration	Number of Observations	Assets (Billion)	Loan Size (Million)	ROA	Industry Average ROA	Diff	T-value	ROE	Industry Average ROE	Diff	T-value
State- Owned	1	Long	1165	9.65	1353.28	0.03	0.04	-0.01	-2.70	0.08	0.12	-0.04	-14.10
	1	Short	1084	8.11	914.95	0.05	0.04	0.01	10.13	0.10	0.12	-0.02	-5.08
		Difference		1.55	438.32	-0.02	0.00			-0.03			
		T-value		3.51	7.35	-9.16	0.76			-7.55			
	0	Long	1305	4.83	831.20	0.05	0.05	0.00	0.41	0.09	0.13	-0.04	-13.60
	0	Short	1208	3.19	467.93	0.06	0.04	0.02	10.38	0.12	0.13	-0.01	-3.76
		Difference		1.64	363.27	-0.01				-0.03			
		T-value		7.41	10.18	-6.73				-6.25			

Table 2. Summary Statistics for Borrower-Bank-Month Observations

This table presents summary statistics on loan and borrower characteristics. Default is a dummy variable equal to one if the firm has defaulted on at least one loan from this bank during the current month.

Panel A: All borrowers

	Mean	Standard deviation	Median	Minimum	Maximum
Default	0.012	0.111	0.000	0.000	1.000
Assets (Billion)	3.779	9.083	0.999	0.068	66.638
Leverage	0.683	0.151	0.680	0.170	0.989
Loan Size (Million)	62.669	97.244	30.000	0.890	620.000
Historical Default	0.032	0.060	0.000	0.000	0.312
Number of Banks	2.923	2.069	2.000	1.000	13.000
Group Assets (Billion)	149.586	411.711	9.375	0.010	2624.297
Group Default	0.006	0.016	0.000	0.000	0.115
Risk Signal	0.010	0.100	0.000	0.000	1.000
Strategic Industry	0.276	0.447	0.000	0.000	1.000
Provincial Capital	0.182	0.386	0.000	0.000	1.000
Duration (Month)	25.783	17.897	25.000	0.000	62.000
Frequency	48.270	110.596	14.000	0.000	788.000
GDP Growth	9.610	1.955	9.870	0.380	11.800
Regional Develop	0.162	0.052	0.166	0.006	0.323

Panel B: Listed borrowers

	Mean	Standard deviation	Median	Minimum	Maximum
Default	0.014	0.116	0.000	0.000	1.000
Assets (Billion)	8.028	13.586	3.068	0.068	66.638
Leverage	0.653	0.145	0.660	0.170	0.989
Loan Size (Million)	72.231	105.935	38.500	0.890	620.000
Historical Default	0.053	0.064	0.033	0.000	0.312
Number of Banks	4.427	2.370	4.000	1.000	13.000
Group Assets (Billion)	326.513	601.981	62.026	0.010	2624.297
Group Default	0.009	0.019	0.003	0.000	0.115
Risk Signal	0.020	0.139	0.000	0.000	1.000
State-Owned	0.464	0.499	0.000	0.000	1.000
Strategic Industry	0.289	0.453	0.000	0.000	1.000
Provincial Capital	0.186	0.389	0.000	0.000	1.000
Duration (Month)	30.533	16.497	29.000	0.000	62.000
Frequency	70.345	141.719	21.000	0.000	788.000
GDP Growth	9.290	1.976	9.020	0.380	11.800
Regional Develop	0.161	0.054	0.165	0.006	0.323

Table 3. Default Rates across Firm Types

This table compares default rates of different types of firms. Default rate is defined as the average of the default dummy across borrower-month observations. Panels A and C are based on 119,241 firm-year observations for all borrowers. Panels B and D are based on 4,757 firm-year observations for listed borrowers. All borrowers included have information available from both CBRC and CSMAR databases.

Panel A: All borrowers

		Number of observations	Default Rate								
			Regional Development Low		Regional Development High		Big Five lender	Other lender			
Strategic industry	1	147281	0.017	51583	0.018	95698	0.016	63186	0.015	84095	0.019
	0	435973	0.014	240036	0.014	195937	0.015	191754	0.013	244219	0.016
	Difference		0.003		0.004		0.001		0.002		0.003
	T-value		6.57		4.88		4.03		2.62		6.19
Provincial Capital	1	104650	0.010								
	0	478604	0.017								
	Difference		-0.007								
	T-value		-18.08								
Duration	1	279830	0.014	112213	0.013	167617	0.015	128977	0.013	150853	0.015
	0	303424	0.016	179406	0.016	124018	0.016	125963	0.014	177461	0.017
	Difference		-0.002		-0.003		-0.001		-0.001		-0.002
	T-value		-5.84		-7.85		-1.63		-3.24		-4.39
Frequency	1	287510	0.015	137224	0.014	150266	0.016	126896	0.013	160614	0.016
	0	295754	0.016	154375	0.016	141369	0.016	128044	0.015	167700	0.017
	Difference		-0.001		-0.002		0.000		-0.002		-0.001
	T-value		-3.56		-4.64		-0.64		-3.22		-1.88

Table 3 Default Rates across Firm Types (continued)

Panel B: Listed borrowers

		Number of Observations	Default Rate								
			Regional Development Low		Regional Development High		Big Five lender		Other lender		
Strategic industry	1	15145	0.014	8866	0.016	5889	0.010	5619	0.013	9526	0.015
	0	37325	0.013	31436	0.013	6279	0.016	19859	0.012	17466	0.015
	Difference		0.001		0.003		-0.006		0.001		0
	T-value		1.39		1.89		-2.74		1.14		0.61
State-owned	1	24358	0.014	15879	0.016	8479	0.012	9410	0.015	14948	0.014
	0	28112	0.012	24423	0.013	3689	0.015	16068	0.012	12044	0.015
	Difference		0.002		0.003		-0.003		0.003		-0.001
	T-value		2.14		2.35		-1.45		2.22		-0.88
Duration	1	25843	0.012	18996	0.012	6847	0.013	12089	0.010	13754	0.014
	0	26627	0.015	21306	0.015	5321	0.013	13389	0.015	13238	0.015
	Difference		-0.003		-0.003		0.000		-0.005		-0.001
	T-value		-2.12		-2.3		0.02		-3.01		-0.23
Frequency	1	26649	0.013	18779	0.013	7042	0.014	11877	0.012	13944	0.014
	0	25821	0.014	21523	0.015	5126	0.011	13601	0.013	13048	0.015
	Difference		-0.001		-0.002		0.003		-0.001		-0.001
	T-value		-1.27		-1.81		1.76		-0.32		-0.71

Table 3 Default Rates across Firm Types (continued)

Panel C: Two-way default rate comparisons for all borrowers

	Firm-Bank Duration	Number of Observations		Regional Development				Bank Type				
					Low	High		Big Five	Other			
Strategic Industry	1	Long	71271	0.016	18588	0.018	52683	0.015	57239	0.017	14032	0.011
	1	Short	76010	0.018	18208	0.020	57802	0.018	52864	0.020	23146	0.014
		Difference		-0.002		-0.002		-0.003		-0.003		-0.003
		T-value		-3.16		-1.15		-3.09		-3.53		-2.15
	0	Long	208559	0.014	20184	0.018	188375	0.013	166868	0.015	41691	0.009
	0	Short	227414	0.016	22157	0.018	205257	0.015	152297	0.018	75117	0.011
		Difference		-0.002		0.000		-0.002		-0.003		-0.002
		T-value		-4.95		-0.05		-5.31		-6.85		-2.38

Panel D: Two-way default rate comparisons for listed borrowers

	Firm-Bank Duration	Number of Observations		Regional Development				Bank Type				
					Low	High		Big Five	Twelve			
State -owned	1	Long	12236	0.012	3047	0.012	9189	0.013	9532	0.014	2704	0.007
	1	Short	12122	0.016	3096	0.024	9026	0.014	8773	0.019	3349	0.009
		Difference		-0.004		-0.012		-0.001		-0.005		-0.002
		T-value		-2.52		-3.71		-0.53		-2.98		-0.62
	0	Long	13607	0.012	1605	0.013	12002	0.012	10959	0.014	2648	0.008
	0	Short	14505	0.013	1504	0.013	13001	0.014	10440	0.014	4065	0.013
		Difference		-0.001		0.000		-0.002		0.000		-0.005
		T-value		-1.54		-0.01		-1.61		0.23		-2.31

Table 4. Regressions to Explain Default Occurrence by Borrower-Bank-Month

This table presents results of Logit regressions of the default dummy (equal to one if the borrower has defaulted on any loan from this bank during that month) averaged over the borrower-bank-month on borrower and market characteristics. Borrowers are included if information is available in both CBRC and CSMAR databases. Panels C and D include interactions of political connections and firm-bank relationships. For example, Strategic Industry*Long Duration equals 1 if the firm is in a strategic industry and the duration of its bank relationship is above the sample median.

Panel A: All borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-4.206**	-4.088**	-3.996***	-4.058***	-3.937**	-4.101***	-3.786***	-3.851*
Strategic industry	0.161***				0.127**			
Provincial Capital		-0.506***				-0.475**		
Log(Duration)			-0.058***				-0.118***	
log(Frequency)				-0.036***				-0.072**
log(Assets)					-0.023**	0.005	0.001	-0.023*
Leverage					0.746**	0.849**	0.714**	0.739**
Historical Default					9.030***	8.896***	9.136***	9.090***
log(Number of.Banks)					-0.326	-0.398*	-0.321	-0.319
log(Group Assets)					-0.028*	-0.019*	-0.024**	-0.016*
Group Default					12.517***	12.559***	12.432***	12.486***
Risk Signal					0.963***	0.974***	0.997**	0.968***
Regional Development					-0.030*	-0.028*	-0.031**	-0.031*
GDP Growth					-1.490*	-1.726*	-1.315**	-1.449**
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	583254	583254	583254	583254	583254	583254	583254	583254
Pseudo r-squared	0.001	0.003	0.002	0.001	0.095	0.097	0.097	0.096

Table 4 Regressions to Explain Default Occurrence by Borrower-Bank-Month (continued)

Panel B: Listed borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-4.275***	-4.323***	-4.018***	-4.236***	-4.378**	-4.332***	-4.128**	-4.317***
Strategic industry	0.023***				0.117***			
State-Owned		0.086***				0.021***		
Log(Duration)			-0.084***				-0.122***	
log(Frequency)				-0.015***				-0.022***
log(Assets)					-0.029***	-0.038***	-0.031***	-0.040***
Leverage					0.610**	0.596***	0.608**	0.591*
Historical Default					9.058***	9.038***	9.081***	9.033***
log(Number of Banks)					-0.112**	-0.111**	-0.103**	-0.103*
log(Group Assets)					-0.014*	-0.015**	-0.012**	-0.013**
Group Default					6.661***	6.832***	6.627***	6.804***
Risk Signal					0.921**	0.917**	0.941**	0.917*
Regional Development					-0.027*	-0.024*	-0.020*	-0.022**
GDP Growth					-1.424**	-1.428**	-1.292**	-1.425***
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	52470	52470	52470	52470	52470	52470	52470	52470
Pseudo r-squared	0.001	0.001	0.001	0.001	0.075	0.075	0.075	0.074

Table 4 Regressions to Explain Default Occurrence by Borrower-Month-Bank continued.

Panel C: All borrowers, interaction terms

Variable	Model 1	Model 2	Model 3	Model 4
Constant	-3.931**	-3.971***	-4.107***	-4.142***
Strategic industry*Long Duration	-0.115***			
Strategic industry*Short Duration	0.130***			
Non-strategic industry*Long Duration	-0.215***			
Strategic industry*High Frequency		-0.080***		
Strategic industry*Short Frequency		0.212***		
Non-strategic industry*High Frequency		-0.084***		
Provincial Capital* Long Duration			-0.786***	
Provincial Capital*Short Duration			-0.449***	
Non-Provincial Capital*Long Duration			-0.233***	
Provincial Capital*High Frequency				-0.890***
Provincial Capital*Short Frequency				-0.288***
Non-Provincial Capital*High Frequency				-0.106***
log(Assets)	-0.009*	-0.026**	0.020	-0.002
Leverage	0.716**	0.735**	0.820**	0.858*
Historical Default	9.097***	9.058***	8.965***	8.924***
log(Number of Banks)	-0.315**	-0.309*	-0.387*	-0.385**
log(Group Assets)	-0.026*	-0.023*	-0.017*	-0.012**
Group Default	12.358***	12.512***	12.405***	12.590***
Risk Signal	0.992*	0.967*	1.007***	0.983***
Regional Development	-0.029*	-0.028*	-0.026*	-0.025*
GDP Growth	-1.631**	-1.457*	-1.893*	-1.720*
Year fixed effects	Yes	Yes	Yes	Yes
Number of Observations	583254	583254	583254	583254
Pseudo r-squared	0.096	0.097	0.099	0.099

Table 4 Regressions to Explain Default Occurrence by Borrower-Month-Bank continued.

Panel D: Listed borrowers, interaction terms

Variable	Model 1	Model 2	Model 3	Model 4
Constant	-4.297***	-4.321**	-4.370***	-4.499***
SOE*Long Duration	-0.219**			
SOE*Short Duration	0.084***			
Non SOE*Long Duration	-0.070**			
SOE*High Frequency		-0.065***		
SOE*Short Frequency		0.045***		
Non SOE* High Frequency		-0.070***		
Strategic industry*Long Duration			-0.441**	
Strategic industry*Short Duration			0.076**	
Non-strategic industry* Long Duration			-0.060***	
Strategic industry*High Frequency				-0.359*
Strategic industry*Short Frequency				0.548***
Non-strategic industry*High Frequency				-0.053*
log(Assets)	-0.033**	-0.039**	-0.021*	-0.003
Leverage	0.621**	0.597*	0.633*	0.576*
Historical Default	9.065***	9.039***	9.109***	8.949***
log(Number of Banks)	-0.111**	-0.111**	-0.109**	-0.139**
log(Group Assets)	-0.014*	-0.013*	-0.013*	-0.009
Group Default	6.225**	6.816**	6.052*	6.638**
Risk Signal	0.925***	0.917***	0.937***	0.915***
Regional Development	-0.027**	-0.024*	-0.030**	-0.025**
GDP Growth	-1.711**	-1.425**	-1.735**	-1.556*
Year fixed effects	Yes	Yes	Yes	Yes
Number of observations	52470	52470	52470	52470
Pseudo r-squared	0.076	0.076	0.075	0.077

Table 5: Regressions relating Default Occurrence, Regional Development Status, and Bank Type

This table shows analysis of how the regional development status and the type of the bank affect the relationship between the defaults per borrower-month and political connections and the relationship between the default rate and firm-bank relationships. Observations have information available in both CBRC and CSMAR databases.

Panel A: All borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-4.438***	-4.152***	-4.376***	-4.189*	-4.225**	-4.055**	-4.231**	-4.016***
Strategic industry	0.139***	-0.104*						
Provincial Capital			0.943*	-0.664*				
Log(Duration)					-0.006**	-0.198***		
log(Frequency)							0.005*	-0.199***
Strategic Industry*R Development	-0.003**							
Strategic Industry*Big Five		0.262***						
Provincial Capital*R Development			-0.149**					
Provincial Capital* Big Five lender				0.269*				
Log(Duration)*R Development					-0.008**			
Log(Duration)*Big Five						0.129***		
Log(Frequency)*R Development							-0.007*	
Log(Frequency)*Big Five lender								0.144***
log(Assets)	0.008	0.004	0.035	0.029	0.019	0.024	0.000	-0.001
Leverage	0.818*	0.829*	0.927*	0.929*	0.800*	0.848*	0.819*	0.869*
Historical Default	9.090**	9.050**	8.920**	8.912*	9.136*	9.056*	9.119*	9.020*
log(Number of Banks)	-0.387**	-0.372**	-0.462**	-0.440**	-0.366**	-0.361**	-0.362**	-0.347*
log(Group Assets)	-0.035*	-0.038*	-0.025**	-0.029**	-0.034**	-0.037**	-0.026**	-0.028**
Group Default	12.024***	12.003*	12.080*	12.020*	12.011*	12.183**	11.931**	12.118**
Risk Signal	0.946**	0.930**	0.956*	0.940*	0.959*	0.944**	0.937**	0.913*
Regional Development		-0.018*		-0.019**		-0.018*		-0.018*
GDP Growth	-0.329*	-0.769*	-1.697*	-1.405**	-0.725*	-0.772*	-0.745*	-0.877**
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	583254	583254	583254	583254	583254	583254	583254	583254
Pseudo r-squared	0.104	0.104	0.107	0.107	0.107	0.107	0.107	0.107

Table 5 Regressions relating Default Rate, Regional Development Status, and Bank Type continued.

Panel B: Listed borrowers								
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-3.947**	-4.002**	-3.955**	-3.933*	-3.476*	-3.783**	-3.091**	-3.896*
Strategic Industry	0.244***	0.113**						
State-Owned			0.182**	-0.459*				
Log(Duration)					0.200*	-0.192**		
log(Frequency)							-0.310**	-0.116*
Strategic Industry*R Development	-0.015**							
Strategic Industry*Big Five		0.032*						
SOE* R Development			-0.025*					
SOE*Big Five				0.547*				
Log(Duration)*R Development					-0.028**			
Log(Duration)*Big Five						0.100***		
Log(Frequency)*R Development							0.033**	
Log(Frequency)*Big Five								0.109***
log(Assets)	-0.005*	-0.003	-0.012*	-0.014*	-0.011*	-0.011*	-0.012*	-0.017*
Leverage	0.673**	0.673**	0.661**	0.628**	0.673**	0.686**	0.650*	0.667**
Historical Default	9.099***	9.112***	9.090**	9.074**	9.128**	9.079**	9.080**	9.048**
log(Number of Banks)	-0.162*	-0.167*	-0.166*	-0.161*	-0.154*	-0.143*	-0.143*	-0.136*
log(Group Assets)	-0.022	-0.022	-0.023*	-0.021	-0.020	-0.019	-0.023	-0.020
Group Default	6.193**	6.215***	6.419***	6.606**	6.503*	6.706*	6.405*	6.611*
Risk Signal	0.907**	0.909**	0.904*	0.891*	0.933*	0.921*	0.902*	0.883*
Regional Develop	-0.038*	-0.034*	-0.030*	-0.028*	-0.062*	-0.025*	-0.127*	-0.029*
GDP Growth	-3.234*	-3.191*	-3.244*	-3.522*	-3.199*	-3.369*	-3.179*	-3.510*
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	52470	52470	52470	52470	52470	52470	52470	52470
Pseudo r-squared	0.082	0.082	0.082	0.083	0.088	0.085	0.083	0.082

Table 6: Default Resolution

This table compares the resolution period and the probability of obtaining a new loan given an existing loan is overdue and unpaid across firms classified by political connections and firm-bank relationship. The sample of all borrowers has 48,067 loans that defaulted and the sample of listed borrowers has 3,495 such loans.

Panel A: Public announcements (NOT COMPLETED YET)

Total Amounts	Announcement Categories			
	In court	Liquidation	Restructure	Interest relief/Subsidy
SOE				
Non SOE				

Panel B: All borrowers

	Observations	Resolution time in months	New loan obtained after default
Strategic Industry	13633	8.220	31.70%
Non-Strategic Industry	34434	8.996	30.49%
Diff		-0.775	1.21%
T-value		-7.82	2.58
Provincial Capital	13036	8.366	34.46%
Not Provincial Capital	35031	8.928	29.49%
Difference		-0.562	4.97%
T-value		-5.38	10.37
Long Duration	20024	7.706	45.53%
Short Duration	17364	7.793	31.76%
Difference		-0.286	13.77%
T-value		-2.86	27.61
High Frequency	19627	7.775	49.07%
Low Frequency	17761	7.910	28.15%
Difference		-0.135	20.91%
T-value		-1.36	42.58

Table 6 Default Resolution (continued)**Panel C: Listed borrowers**

	Observations	Resolution time in months	New loan obtained after default
SOE	1758	7.864	44.71%
Non SOE	1737	8.585	40.88%
Difference		-0.721	3.83%
T-value		-2.13	2.29
Long Duration	1729	6.324	57.95%
Short Duration	1766	10.062	27.97%
Difference		-3.720	29.98%
T-value		-11.29	18.77

Table 7: Regressions to Explain New Loan Availability after Default

This table presents the results of Logit regressions of new loan availability within three months after an existing loan defaults. The dependent variable is a dummy that takes the value of 1 if a new loan is approved within three months after an old loan becomes overdue and yet not repaid. In Panels C and D, 12 dummy variables capture the interaction of political connections and firm-bank relationships.

Panel A: All borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	-0.436 ^{***}	-0.443 ^{***}	-2.216 ^{***}	-2.003 ^{***}	-1.179 ^{***}	-1.169 ^{***}	-2.049 ^{***}	-1.940 ^{***}
Strategic Industry	0.144 ^{***}				0.088 ^{***}			
Provincial Capital		0.169 ^{***}				0.051 ^{***}		
Log(Duration)			0.538 ^{***}				0.275 ^{***}	
log(Frequency)				0.432 ^{***}				0.342 ^{***}
log(Assets)							0.013 ^{**}	0.044 ^{**}
Leverage					-0.034 ^{**}	-0.055 ^{**}	-0.036 ^{**}	-0.121 ^{**}
Historical Default					-0.218 ^{**}	-0.249 ^{***}	-0.291 ^{**}	-0.282 [*]
log(Number of .Banks)					1.040 ^{***}	1.048 ^{***}	0.899 ^{**}	0.457 [*]
log(Group Assets)								
Group Default					-6.619 ^{**}	-6.615 ^{**}	-6.474 ^{**}	-6.702 [*]
Risk Signal					-0.005	0.006	-0.013	-0.081 [*]
Regional Development					-0.054 ^{**}	-0.056 ^{**}	-0.051 [*]	-0.053 ^{**}
GDP Growth					-0.294 [*]	-0.304 [*]	-0.368 [*]	-0.140 ^{**}
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	48067	48067	37388	37388	48067	48067	48067	48067
Pseudo r-squared	0.002	0.003	0.035	0.118	0.097	0.097	0.104	0.147

Table 7 Regressions to Explain New Loan Availability after Default (continued)

Panel B: Listed borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-0.107***	-0.224***	-1.137***	-2.074***	-2.424**	-2.361***	-2.069***	-2.447***
Strategic Industry	0.111***				0.124**			
State-Owned		0.283***				0.056***		
Log(Duration)			0.301***				0.192***	
log(Frequency)				0.473***				0.337***
log(Assets)					0.113***	0.086**	0.091**	0.109**
Leverage					-0.156**	-0.208***	-0.193***	-0.191***
Historical Default					-0.206**	-0.266**	-0.342**	0.236**
log(Number of Banks)					0.709**	0.715**	0.721**	0.511*
log(Group Assets)					0.095*	0.092*	0.095*	0.003
Group Default					-5.464*	-5.593**	-5.725**	-6.366***
Risk Signal					0.151	0.148	0.146	0.102
Regional Development					-0.078*	-0.064*	-0.068*	-0.062*
GDP Growth					-0.877*	-0.801*	-0.773*	-0.297*
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	3495	3495	3495	3495	3495	3495	3495	3495
Pseudo r-squared	0.001	0.002	0.001	0.128	0.129	0.127	0.127	0.162

Table 7 Regressions to Explain New Loan Availability after Default (continued)

Panel C: Two-way comparison of new loan availability for all defaulting borrowers

Variable	Model 1	Model 2	Model 3	Model 4
Constant	-0.599 ^{***}	-0.444 ^{**}	-0.606 ^{***}	-0.449 ^{***}
Strategic industry*Long Duration	0.740 ^{***}			
Strategic industry*Short Duration	0.101 ^{**}			
Non-strategic industry*Long Duration	0.662 ^{**}			
Strategic industry*High Frequency		1.071 ^{**}		
Strategic industry*Short Frequency		0.059 ^{**}		
Non-strategic industry*High Frequency		0.978 ^{***}		
Provincial Capital*Long Duration			0.850 ^{**}	
Provincial Capital*Short Duration			0.142 ^{***}	
Non-Provincial Capital*Long Duration			0.640 ^{***}	
Provincial Capital*High Frequency				1.147 ^{***}
Provincial Capital*Short Frequency				0.105 ^{**}
Non-Provincial Capital*High Frequency				0.966 ^{***}
Regional Development	-0.024 [*]	-0.049 [*]	-0.025 [*]	-0.051 [*]
GDP Growth	0.838	-0.154	0.887	-0.118
Year fixed effects	Yes	Yes	Yes	Yes
Number of observations	48067	48067	48067	48067
Pseudo r-squared	0.034	0.077	0.037	0.078

Table 7 Regressions to Explain New Loan Availability after Default (continued)

Panel D: Two-way comparison of new loan availability for listed borrowers who defaulted

Variable	Model 1	Model 2	Model 3	Model 4
Constant	-2.724***	-1.898***	-2.778**	-2.131***
SOE*Long Duration	0.551**			
SOE*Short Duration	0.241**			
Non SOE* Long Duration	0.703***			
SOE*High Frequency		0.571***		
SOE* Short Frequency		0.099**		
Non SOE* High Frequency		0.529***		
Strategic industry*Long Duration			0.128**	
Strategic industry*Short Duration			0.049***	
Non-strategic industry*Long Duration			0.657**	
Strategic industry*High Frequency				0.228**
Strategic industry*Short Frequency				0.025**
Non-strategic industry*High Frequency				0.604**
log(Assets)	0.072**	0.094**	0.098**	0.125**
Leverage	-0.307**	-0.248**	-0.215**	-0.211*
Historical Default	-0.068**	-0.127**	-0.043*	-0.032*
log(Number of banks)	0.697*	0.666*	0.669*	0.664*
log(Group Assets)	0.089*	0.045*	0.097*	0.049*
Group Default	-4.325**	-6.183*	-4.552*	-6.273**
Risk Signal	0.181	0.122	0.155	0.117
Regional Development	-0.055*	-0.065*	-0.069*	-0.075*
GDP Growth	0.214	-0.736*	-0.081*	-0.684*
Year fixed effects	Yes	Yes	Yes	Yes
Number of observations	3495	3495	3495	3495
Pseudo r-squared	0.144	0.141	0.148	0.143

Table 8: Loan Availability after Default, Regional Development Status, and Bank Type

This table studies how regional development and lender type affect the relationship between new loan availability and political connections and the relationship between new loan availability and firm-bank relationships after an existing loan is defaulted on.

Panel A: All borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-0.686 ^{***}	-0.519 ^{***}	-0.382 ^{**}	-0.523 ^{**}	-0.985 ^{***}	-0.891 ^{***}	-1.179 ^{**}	-0.823 [*]
Strategic industry	0.622 ^{***}	-0.249 [*]						
Provincial Capital			-0.245 ^{**}	-0.168 ^{**}				
Log(Duration)					0.286 ^{***}	0.207 ^{***}		
log(Frequency)							0.576 ^{**}	0.387 ^{***}
Strategic Industry*R Development	-0.063 ^{***}							
Strategic Industry*Big Five		0.383 ^{***}						
Provincial Capital*R Development			0.039 ^{**}					
Provincial Capital*Big Five				0.378 ^{***}				
Log(Duration)*R Development					-0.005 ^{**}			
Log(Duration)*Big Five						0.042 [*]		
Log(Frequency)*R Development							-0.021 ^{***}	
Log(Frequency)*Big Five								-0.005 ^{**}
log(Assets)					0.109 ^{**}	0.089 [*]	0.084 [*]	0.081 ^{**}
Leverage	-0.044 ^{**}	-0.048 ^{**}	-0.041 ^{**}	-0.050 ^{**}	-0.059 ^{**}	-0.064 ^{**}	-0.073 ^{**}	-0.077 [*]
Historical Default	-0.309 ^{**}	-0.297 ^{**}	-0.301 ^{**}	-0.319 ^{**}	-0.276 ^{**}	-0.287 ^{**}	-0.303 ^{**}	-0.291 [*]
log(Number of Banks)	0.765 ^{**}	0.684 [*]	0.694 ^{**}	0.712 ^{**}	0.590 ^{**}	0.673 ^{**}	0.559 [*]	0.639 ^{**}
log(Group Assets)					0.085 [*]	0.076 [*]	0.067 [*]	0.071 [*]
Group Default	-5.374 ^{**}	-4.978 ^{**}	-5.139 ^{**}	-5.125 ^{**}	-5.019 [*]	-5.020 [*]	-5.312 [*]	-5.098 [*]
Risk Signal	-0.042 ^{**}	-0.033 [*]	-0.041 [*]	-0.056 ^{**}	-0.049 [*]	-0.042 [*]	-0.038 [*]	-0.036 [*]
Regional Development	-0.071 ^{**}	-0.061 ^{**}	-0.063 ^{**}	-0.059 ^{**}	-0.101 ^{**}	-0.073 [*]	-0.043 [*]	-0.054 ^{**}
GDP Growth	-0.188 ^{**}	-0.190 ^{**}	-0.201 ^{**}	-0.209 ^{***}	-0.487 ^{**}	-0.341 [*]	-0.349 [*]	-0.361 ^{**}
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	48067	48067	48067	48067	48067	48067	48067	48067
Pseudo r-squared	0.113	0.111	0.111	0.106	0.108	0.103	0.107	0.111

Table 8 Loan Availability after Default, Regional Development Status, and Bank Type (continued)

Panel B: Listed borrowers

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	-0.022**	0.036***	-0.072**	-0.008*	-0.409*	-0.466**	-0.616**	-0.499***
Strategic industry	0.312**	-0.203**						
State-Owned			0.143***	0.125***				
Log(Duration)					0.398***	0.246***		
log(Frequency)							0.668**	0.589***
Strategic Industry*R Development	-0.031***							
Strategic Industry*Big Five		0.321***						
SOE*R Development			-0.016**					
SOE*Big Five				0.017**				
Log(Duration)*R Development					-0.042**			
Log(Duration)*Big Five						0.108**		
Log(Frequency)*R Development							-0.009***	
Log(Frequency)*Big Five								0.031***
log(Assets)	0.064**	0.081**	0.074*	0.067*	0.064**	0.064*	0.073*	0.071*
Leverage	-0.311*	-0.308*	-0.319*	-0.309*	-0.321**	-0.318**	-0.307**	-0.312**
Historical Default	-0.071**	-0.068**	-0.076*	-0.081**	-0.067**	-0.068**	-0.063*	-0.077*
log(Number of Banks)	0.631**	0.628**	0.621**	0.619**	0.616*	0.623*	0.614*	0.621**
log(Group Assets)	0.033*	0.046*	0.055*	0.047*	0.053*	0.051*	0.053*	0.049*
Group Default	-4.321**	-4.194*	-4.127*	-4.134*	-4.136*	-4.209*	-4.114*	-4.135*
Risk Signal	0.145	0.151	0.139	0.134	0.144	0.147	0.152	0.145
Regional Development	-0.081**	-0.077*	-0.079*	-0.081**	-0.068*	-0.076*	-0.071*	-0.075*
GDP Growth	-0.124*	-0.142**	-0.133*	-0.141**	-0.138*	-0.132*	0.145*	-0.139*
Year Fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	3495	3495	3495	3495	3495	3495	3495	3495
Pseudo r-squared	0.079	0.081	0.081	0.082	0.087	0.086	0.085	0.083

Table 9: Risk-Taking and Performance around Default for Listed Borrowers

This table compares firm risk-taking and performance before and after default on a bank loan by a listed borrower.

		Pre Default		Post Default		Difference	T-value
Leverage	SOE	0.542	(0.149)	0.577	(0.161)	0.035	5.38
	Non-SOE	0.523	(0.146)	0.544	(0.151)	0.021	3.12
	Difference	0.019		0.033			
	T-value	1.57		2.63			
	Difference-in-Difference					0.014	1.62
	Long Relation	0.513	(0.164)	0.538	(0.170)	0.025	2.48
	Short Relation	0.540	(0.141)	0.570	(0.151)	0.030	5.74
	Difference	-0.027		-0.032			
	T-value	-1.92		-2.16			
	Difference-in-Difference					-0.005	-0.42
Tobin's Q	SOE	1.438	(0.703)	1.973	(1.083)	0.536	8.63
	Non-SOE	1.563	(0.808)	2.115	(1.055)	0.552	8.47
	Difference	-0.125		-0.141			
	T-value	-2.05		-1.65			
	Difference-in-Difference					-0.016	-0.18
	Long Relation	2.014	(1.087)	1.867	(0.988)	-0.157	-2.12
	Short Relation	1.297	(0.439)	2.111	(1.095)	0.814	16.36
	Difference	0.717		-0.254			
	T-value	8.44		-2.79			
	Difference-in-Difference					0.972	10.89