Bank Loans with Chinese Characteristics

Warren Bailey, Wei Huang, and Zhishu Yang *

Cornell University, University of Hawaii, and Tsinghua University

We examine stock price responses to announcements of bank loans in China's rapidly evolving economy, in which banks in general are unable to provide the certification role as 'insiders' to mitigate information asymmetry. Previous researchers find positive stock price reactions when U.S. borrowers obtain bank loans. However, we find significantly negative bank loan announcement effects for Chinese firms, particularly when the loan is intended to repay existing debt or originates with a local bank branch. Furthermore, this negative effect is typically associated with borrowers who display more frequent related party transactions or subsequent poor corporate performance. Our evidence highlights the limited alternatives for raising capital in China and the political goals that the Chinese banking system serves.

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* Address for Correspondence: Warren Bailey, Johnson Graduate School of Management, Cornell University, Sage Hall, Ithaca, NY 14853-6201, U.S.A., wbb1@cornell.edu; Wei Huang, Shidler College of Business, University of Hawaii at Manoa, 2404 Maile Way, Honolulu, HI 96822, U.S.A., weih@hawaii.edu; Zhishu Yang, School of Economics and Management, Tsinghua University, Beijing, 100084, China, yangzhsh@em.tsinghua.edu.cn. We thank David Tang and Jun Wang for their research assistance. We thank conference participants at the May 2007 International Finance Conference at Queen's University, Junkoo Kang, Mark Leary, Nicholas Lardy, and Rick Smith for helpful comments or other assistance.

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Abstract

We examine stock price responses to announcements of bank loans in China's rapidly evolving economy, in which banks in general are unable to provide the certification role as 'insiders' to mitigate information asymmetry. Previous researchers find positive stock price reactions when U.S. borrowers obtain bank loans. However, we find significantly negative bank loan announcement effects for Chinese firms, particularly when the loan is intended to repay existing debt or originates with a local bank branch. Furthermore, this negative effect is typically associated with borrowers who display more frequent related party transactions or subsequent poor corporate performance. Our evidence highlights the limited alternatives for raising capital in China and the political goals that the Chinese banking system serves.

1. Introduction

In supplying capital to firms, financial markets feature institutions and practices intended to mitigate problems such as transactions costs, information asymmetries, and agency conflicts, and to adapt to the regulatory environment. Much research focuses on the purposes that banks serve. Banks can intermediate the maturity preferences of lenders and borrowers (Diamond and Dybvig 1983, Rajan 1996). As a form of "inside" debt, bank loans may solve information and agency problems that public bond issues or other "outside" debt cannot (Fama 1985, Rajan 1992). If, for example, managers cannot perfectly communicate their information to capital market participants (Myers and Majluf 1984), banks may serve a very important intermediating role between savers and borrowers.

The notion that banks are special because they produce information about borrowers has motivated some interesting empirical tests. If firms can choose between bank debt and public debt, and if banks can mitigate an information problem, raising money with a bank loan, instead of a public issue of bonds or other securities, should be a strongly positive signal, particularly for newer, smaller, or otherwise information-poor borrowers. Consistent with the information role of bank debt, while stock market responses to announcements of a bond issue are typically zero or slightly negative (see, for example, Eckbo 1986), announcements of bank loans typically yield significantly positive abnormal return for the borrower's stock (see, for example, Mikkelson and Partch 1986 and James 1987). Furthermore, this effect appears stronger for high quality lenders (Billet, Flannery, and Garfinkel 1995), loan renewals (Lummer and McConnell 1989, Best and Zhang 1993), smaller borrowers (Sloven, Johnson, and Glascock 1992), and borrowers with high dispersion in expected earnings or negative earnings realizations (Best and Zhang 1993). Harvey, Lins, and Roper (2004) find positive abnormal returns for emerging-market borrowers who

obtain internationally-syndicated term loans, with most prominent effects for subsequent, rather than first, loans and for firms with certain governance characteristics.[1]

These results suggest that banks do indeed serve to generate information as suggested by "inside debt" theories of banking and bank loans. Approval of a bank loan is perceived by the stock market as a good signal, particularly for information-poor borrowers. Renewals or subsequent loan approvals may compound this effect. On the other hand, negative abnormal stock returns and poor operating performance are often observed for a few years after the announcement of a bank loan (Billett, Flannery, and Garfinkel 2006).

Economists, policy-makers, business managers, and investors continue to follow with great interest the rapid evolution of China's economic and financial system starting with the ascension of Deng Xiaoping as the country's leader in 1978. Under "Socialism with Chinese Characteristics", demand for banking services has skyrocketed, but the banking system is troubled. Chinese banking is dominated by state-owned banks, operates in an uncompetitive environment, and faces much pressure to contribute to political and social stability.[2] Perhaps as a consequence, Chinese banks continue to be plagued with substantial amounts of non-performing loans.[3] The web page of the Chinese Banking Regulatory Commission[4] reports a total of 1.3 trillion yuan (about 165 billion U.S. dollars, or 8.61% of total loans) of non-performing loans on the books of commercial banks at the end of 2005. Other estimates of the problem are even larger. Asset management companies formed by the Chinese government have

[1] They also report positive abnormal returns for international bond issues, echoing Kim and Stulz (1988).
[2] See Dinc (2005) for a study of political influences on banks in developing countries.
[3] Podpiera (2006) reports that the ratios of non-performing loans (NPLs) to total loans for the four major state banks are 25.6%, 20.1%, and 15.6% in 2002, 2003, and 2004, respectively.
[4] http://www.cbrc.gov.cn/mod_en00/jsp/en001000.jsp

liquidated substantial volumes of bank assets at heavy discounts. Poorly-performing state-owned enterprises are the heaviest borrowers.[5]

More generally, the poor state of law, regulation, and disclosure in China's capital market is a severe constraint on the efficiency of banks and their borrowers.[6] Recent research has shown that Chinese listed companies are subject to mismanagement and outright theft in the form of "tunneling" by controlling shareholders.[7] At the same time, the poor state of the capital market makes it difficult for firms to raise money with securities issues (Allen, Qian, and Qian 2005) as the stock market is relatively small and corporate bond issues are almost unheard of. Therefore, Chinese firms largely rely on retained earnings and bank loans to finance their activities.

Therefore, China offers a unique setting in which to develop further evidence on whether banks are "different", especially in a system that banks are hardly able to provide certification role as 'insiders'. We seek to learn more about how banks function in an environment that combines rapid economic growth with very underdeveloped capital markets. Our findings are of interest to a variety of academics, policy-makers, and practitioners, and contribute to problems ranging from improving banking law and regulation to pricing bank stock issues such as the recent large bank IPOs from China.

In this paper, we employ the event study method to examine stock price reaction to bank loan announcements and analyze the cross-sectional difference in the loan announcement effect. We also examine long term performance following loan announcements as well as lenders' stock price reaction. A brief summary of our findings is as follows. Using bank loan announcements from 1999 to 2004, we find significant declines in stock prices of Chinese borrowers at times of

[5] Podpiera (2006) finds that state-owned commercial banks lend significantly more in provinces with lower enterprise profitability. This suggests that the lending decisions of these banks have been policy-driven.
[6] See Anderson (1999) for a case study of how Brazil's bond market has adapted to an underdeveloped environment.
[7] See, for example, Jian and Wong (2003), Jiang, Lee, and Yue (2005), and Cheung, Jing, Rau, and Stouraitis (2006) on the use of "tunneling", loans, and other related-party transactions to extract value from Chinese listed companies.

bank loan announcements. These negative responses are heightened for borrowers that use loans to repay existing debt. Chinese corporate borrowers typically display increased related party transactions after obtaining bank loans. Furthermore, the receipt of a bank loan predicts poor subsequent accounting performance. Finally, for the small number of loans originating from listed banks, we find no evidence that the lender's stock price drops at the time a loan is announced.

This paper is organized as follows. Section 2 presents testable hypotheses based on both the existing literature and the peculiarities of China's banking system. Section 3 describes the data we have gathered and the sample selection criteria employed. Section 4 presents empirical results, while Section 5 is a summary and agenda for future research.

2. Testable hypotheses

We organize our results around several testable hypotheses inspired by the mainstream banking literature or the specific characteristics of the Chinese capital market. We also set up an alternative set of testable hypotheses given the unique political and economic setting of the Chinese banking system.

We begin with the standard prediction from the mainstream bank loan announcement literature:

H1a: Announcement of a bank loan is associated with a positive abnormal return on the borrower's stock.

As explained previously, H1a implies that receipt of a bank loan is a positive signal that yields a positive return on the borrower's stock because the bank loan is "inside" debt that overcomes

information asymmetry between the borrower's managers and sources of finance. Alternatively, the bank loan may convey negative information in the context of China's banking system:

> H1b: Announcement of a bank loan is associated with a negative abnormal return on the borrower's stock.

The poorly developed state of China's capital market and related institutions largely restricts corporations to retained earnings and bank loans as sources of finance. Therefore, the need to obtain a bank loan can signal that a firm performs poorly, is short of cash, and, therefore, must turn to the banking system to raise money for new investments or even to pay down existing liabilities. Thus, the announcement of a bank loan elicits a negative response by the borrower's stock price.

Aside from predictions about the sign of the bank loan announcement effect, we can make more specific predictions about the size of the announcement and borrower characteristics:

> H2a: The borrower's bank loan announcement return is particularly positive for firms that are information-poor, in legal or regulatory trouble, weakly governed, have greater financial and operating risk, poorer operating performance, or frequent related party transactions.

If the positive signal hypothesis for bank loan announcements, H1a, is valid, the positive effect of a bank loan announcement should be particularly pronounced for borrowers that are difficult to evaluate or seem troubled in other respects. Indicators of problematic firms include book

income and balance sheet measures, indicators of audit or regulatory scrutiny, large ownership by the state, large divergence between ownership and control rights, and potentially abusive related party transactions. If a firm that scores poorly on these measures is nonetheless able to obtain a bank loan, it is a particularly strong positive signal.

Alternatively, a bank loan to a weak firm may merely confirm the impression, H1b, that the borrower is a bad firm being bailed out to support employment or other political goals:

> H2b: The borrower's bank loan announcement return is particularly negative for firms that are information-poor, in legal or regulatory trouble, weakly governed, have greater financial and operating risk, poorer operating performance, or frequent related party transactions.

Put another way, the need for a bank loan confirms that the borrower is a "zombie" firm in need of a transfusion from the banking system.

We can describe similar competing hypotheses that predict firm performance depending on whether we invoke the "positive signal" or "zombie borrower" hypotheses:

> H3a: The announcement of a bank loan and size of the borrower's stock return response are positively correlated with subsequent corporate performance.

> H3b: The announcement of a bank loan (the size of the borrower's stock return response) is negatively (positively) correlated with subsequent corporate performance.

If a bank loan is a positive signal, it is met by an immediate positive stock market response and predicts good subsequent corporate performance. If a bank loan is a negative signal, it is met with an immediate negative stock market response and predicts poor subsequent corporate performance.

Finally, we present two additional hypotheses which should hold under either H1a or H1b:

H4: The borrower's bank loan announcement return is smaller for a loan from one of the Big Four state banks.

If the state owned banks are particularly weak at evaluating a borrower's creditworthiness or are under special pressure to supply "policy loans", the signaling value of a loan will be less positive under H1a and more negative under H1b.

H5: The borrower's bank loan announcement return is smaller for loans that are used to repay earlier loans.

Under H1a, the announcement of a bank loan intended to replace existing financing is less positive than the announcement of a bank loan intended to finance new value-creating investment projects. Under H1b, the announcement of a bank loan that merely replaces existing debt suggests a struggling firm rolling over its debt.

3. Data and sample selection

3.1. Overview of China's banking system

China's banking sector has been the primary source of financing for China's growing economy, with the banking and credit industry accounting for over 80 percent of China's financial assets. The outstanding amount of bank loans is significantly greater than that of equity or corporate bonds. At the end of 2004, for example, total bank loans comprised 138.1% of GDP while the combined market value of China's two stock exchanges was only 27.1% of GDP.[8] Raising money with corporate bonds, rather than bank loans, is almost unheard of.[9] With bank loans accounting for 87% of total funds raised by China's non-financial sector as of June 2006, bank lending remains the dominant source of financing in China's economy.

Under its traditional communist system, China's government collected revenues from state-owned enterprises and provided financing to those firms according to the state budget. Eventually, the allocation of financing to firms was organized as bank loans from the Peoples Bank of China (PBOC) and, starting in the late 1970s, from the four newly-established state-owned specialty bank, as well as joint-equity banks, city commercial banks, policy banks, and rural credit co-operatives.[10] Though their share of bank loan activity is declining, the "Big Four" state-owned banks still hold over 50% of the banking sector's assets as of June 2006. Joint-equity banks and city commercial banks account for nearly 16% and 6% of the sector's assets,

[8] Federal Reserve Bank of Dallas report, issue 4, July/August 2005.

[9] Corporate bond issuance began in 1984 and, by 1986, 10 billion yuan ($1.2 billion) were outstanding. However, many companies defaulted, leading to social unrest and subsequent government's limitation of bond issuance to a small number of large state-owned enterprises. Currently only about a dozen such bonds trade on securities exchanges. Other barriers to issuing corporate bonds include high issuer qualifications, illiquidity, poor creditor protection in bankruptcy, and cheaper equity financing.

[10] Four state-owned commercial banks (China Industrial and Commercial Bank, Bank of China, China Construction Bank, and Agricultural Bank of China) were formed to replace the mono-bank system and separate commercial lending from central banking functions. Joint-equity banks are incorporated as limited companies and typically feature a state-dominated shareholding structure. City commercial banks evolved from urban credit co-operatives with business mainly in the city of location. Given strong ties to local governments, they typically obtain their deposits from local governments and corporations, and suffer high loan concentration and related party transactions. Other types of banks include policy banks, rural credit co-operatives, postal savings, and branches of foreign banks.

respectively, while other financial institutions such as policy banks and rural credit co-operatives hold the remaining assets.[11]

As a result of politically-oriented lending practices and the lack of repayment guarantees, the Big Four state-owned banks have historically been plagued by large ratios of non-performing loans (NPLs) to total loans. Under the current tax regime, both lenders and borrowers receive favorable tax treatment. Banks can, in general, deduct losses from bad loans and contributions to a bad loan reserve account from pre-tax income. Actual bad loan losses are written off against the reserve and any excess can be subtracted from pre-tax income.[12] Borrowers can fully deduct interest on bank loans from pre-tax income.[13] In recent years, the government has been implementing a series of reforms to improve the efficiency and profitability of the state banks, particularly given the impending opening of the domestic financial sector to foreigners under the WTO. First, a large percentage of bad loans have been transferred from the state banks to wholly state-owned asset management corporations (AMCs) in return for bonds guaranteed by the Ministry of Finance.[14] Second, three of the Big Four state banks have changed from wholly state-owned to corporations owned by shareholders, though the state remains the largest shareholder. Shareholders' meetings, boards of directors, board of supervisors, and other western-style governance measures have been adopted. Perhaps most significantly, the government has allowed foreign investors (typically global financial services firms) to take minority ownership stakes in the state banks, and loosening foreign ownership ceilings in the

[11] Deutsche Bank Research, China Special, December 7, 2006.
[12] "Policy Details for Pre-tax Deduction of Bad Loan Losses in Financial Companies," State Tax Bureau of China, Policy No. 4, 2002.
[13] People's Republic of China Corporate Income Tax, Provisional Code, December 13, 1993.
[14] Given the poor cash recovery rate (less than 25%) on these bad loans, the government is effectively transferring large amount of funds to the state banks. In some cases, there were direct cash injections. In 2003, for example, Bank of China and China Construction Bank each received US$22.5 billion from China's foreign reserves.

hope that foreigners will provide additional capital, technology, and management skill.[15] Lastly, three of the Big Four have recently gone public in Hong Kong, with China Construction Bank listed in Hong Kong in 2005, and Bank of China and Industrial and Commercial Bank of China listed in Hong Kong and Shanghai in 2006. Public listing is intended to improve management, governance, transparency and, ultimately, profitability. Beyond the state banks, reforms have also extended to joint-equity banks and city commercial banks, a number of which have obtained foreign partners or listing on Chinese or Hong Kong stock exchanges.

In spite of these efforts, many problems remain in China's banking system. The ownership shares of foreign strategic investors are relatively small and their involvement in governance is still minimal. The banking system is still dominated by state-owned enterprises, and bank lending continues to be driven by the availability of funds, not borrower profitability.[16] China's banks remain largely constrained by government intervention at different levels and subject to substantial political influence, and continue to lack sound credit-risk analysis and effective monitoring of borrowers. Dobson and Kashyap (2006) provide anecdotal evidence that government influence on bank loan decisions is still widespread despite the substantial progress of reform. As they suggest, banks in China are forced to meet contradictory goals of supporting employment and changing themselves into modern commercial banks.

A symptom of the continuing problems in China's financial system are the highly publicized cases of embezzlement of corporate funds from listed companies through "related party transactions" (also known as "connected transactions") with controlling shareholders. Controlling shareholders extract assets or cash from a listed company to another private

[15]In 2005, for example, Bank of America Corporation (BOA) and Temasek invested $3.0 billion and $2.5 billion for approximately 9 and 6 percent ownership in China Construction Bank. The deal included one seat on the board of directors and transfer of some staff.

[16] See Podpiera (2006) for details.

company mostly through self-dealing transactions. Existing studies have found negative impact of related party transaction on listed companies' share value. For example, Cheung et al. (2005) find that Chinese firms with higher state ownership experience lower excess return at the announcement of related party transactions. A variation on this "tunneling" directly involves the banking system: a listed company uses bank loans to obtain funds that are subsequently transferred, via related party transactions, to its parent company or other related privately-held company. In some particularly notorious cases, the controlling shareholder subsequently sold off the heavily-indebted listed company.

3.2. Data

We first search for all credit and bank loan related announcements in the Chinese newspapers, magazines, and websites designated by the Chinese Securities Regulatory Commission (CSRC).[17] Existing regulations require listed firms to disclose any transactions worth more than 10% of the book value of equity and exceeding 10 million yuan. Thus, only relatively large loans are announced in the financial press. Our search yields a total of 509 bank loan and "credit approval" announcements by Shanghai and Shenzhen listed companies between May 12th 1999 and Oct 15th 2004.[18] To minimize the effect of confounding events, we exclude 91 announcements accompanied by other corporate events such as financial reporting, mergers and acquisitions, CEO turnovers, board of director meetings, and lawsuits within the [-1,+4} window of the loan announcement. Our final sample contains 270 announcements of actual bank

[17] The officially-designated media for corporate disclosure include seven newspapers (China Securities Journal, Securities Daily, China Daily, Financial Times, China Reform Daily, Securities Times, Shanghai Securities News), one magazine (Securities Market Weekly), and two websites (www.cninfo.com.cn , www.cnstock.com).

[18] In a "credit approval" announcement, a commercial bank indicates the maximum amount of loans, trade credit, and other financing that may be granted to a particular borrower. In our sample, there are a total of 148 credit approval announcements. Some loan announcements are preceded by a related "credit approval" announcement.

loans, with 110 announcements for 71 companies listed on the Shanghai Stock Exchange and 160 announcements for 77 companies listed on the Shenzhen Stock Exchange. Finally, to confine our sample to non banking firms, we drop three announcements made by one financial company, yielding a final sample of 267 bank loan announcements. We retain announcements of "credit approval", which are not specific loan commitments, for study as a distinct sample.

We obtain additional market and accounting data from GTI Financial Information (www.gti.cn). We collect data on related party transaction from annual reports that listed companies are required to file online.[19] The Accounting Criteria of Corporations issued by China's Ministry of Finance defines a "related party" as capable of benefiting from significant influence or control rights over a listed firm's financial and operational activities. Related parties of a public company may include its parent company or subsidiary companies, other companies that share its parent, its large and influential investors, its joint venture or joint operating partners, the principal individual investor or key management personnel and their family members, and other companies controlled or heavily influenced by its principal individual investor, key managers or family members. CSRC regulations require listed companies to report significant transactions with related parties such as payments for (or transfers of) goods, services, rent or intellectual property, transfers of assets or stock ownership, joint investments, providing or obtaining loans, or providing collateral or other guarantees for loans.[20] In particular, companies must disclose any related party transaction with value exceeding 30 million yuan, 5% of book value of equity, or 10% of net profit. We collect information about related party transactions

[19] See www.jrj.com.cn, which we cross-check against www.sse.com.cn and www.cninfo.com.cn.
[20] See "Disclosure Requirements for Publicly Listed Companies – Criteria of Content and Format, No. 2 – Annual Report", CSRC, 8th December 1999, at http://www.csrc.gov.cn

from the "Related Party Relationships and the Business Transactions" [21] category in each annual report. In particular, we include "accounts receivables", "other accounts receivables" and "pre-payments" in our analysis.

4. Empirical results

4.1 Summary statistics

Panel A of Table 1 provides the descriptive statistics on borrowers and loans. Panel A indicates that borrowers are typically listed on an exchange for several years. The firm size of our sample firms is smaller than the average of all listed companies. The average total assets of sample firms is 2.1 billion Yuan (about 260 million U.S. dollars), while the median is 0.92 billion Yuan, slightly less than the mean and median of the total assets of all listed companies.[22] Loans are typically very large, averaging 135 million Yuan (about 16.8 million U.S. dollars), consistent with the fact that only companies obtaining large loans are required to report. There is a moderate variation in maturity of loans, with the average maturity of 2 years. Notably, there is little variation in the interest rate on loans. The mean (median) interest rate is 5.59% (5.52%). Chinese banks have enjoyed little flexibility in determining lending rates which is reflected in the relatively low range of rates. In recent years, the central bank has applied a floating band for the lending rate. Panel A also presents descriptive statistics for sample firms with credit approval announcements during our sample period. The average market value of tradable shares for credit

[21] The three primary types of related party transactions for which CSRC requires disclosure are purchase and sale of goods and services between a listed company and a related party, asset acquisition or stock ownership transfer between a listed company and a related party, and corporate lending or guarantees for obtaining collateral loans provided by (for) a listed company for (by) a related party. From the Related Party Transactions part of each annual report, we manually collect "accounts receivables", "other accounts receivables", and "pre-payments". We use these accounting items in our analysis, because they reflect receivables (generated from the above three types of related party transactions) owed by a related party but not paid, or at risk of never being paid and thus are likely to reflect transactions related to "tunneling" activities such as embezzlement of corporate assets by related parties.

[22] The mean (media) of the total assets of all stock exchange listed companies is 2.4 (1.2) billion Yuan.

approval sample firms (1.3 billion yuan) is nearly 50% larger than that for bank loan sample firms (0.88 billion yuan). In addition, the average size of credit approvals (373 million yuan) is almost triple the average size of bank loans (135 million). These differences imply that perhaps larger and stronger firms are more likely to obtain credit approvals, whose values are typically greater than bank loans.

Panel B of Table 1 summarizes additional characteristics of the loans and borrowers. Slightly more than half of the loans (158 out of 267) or credit approvals (56 out of 95) are from one of the four state owned banks. Most firms are majority-owned by government entities. For example, 182 (61) bank loan (credit approval) announcements are from firms with the largest shareholder being the state or state related institutions. Note that most of the Chinese listed companies are effectively controlled by government entities due to large, if not majority, ownership.

There is some information on the intended use of loan proceeds. For example, 48 announcements indicate that the loan will be used for new investment projects while 42 indicate that the loan will be used to repay existing debt. Furthermore, 29 announcements are for borrowers with audit problems during the announcement year, 26 are for borrowers that have been admonished for improper behavior by the China Securities Regulatory Commission (CSRC) and 17 announcements are for borrowers currently under "Special Treatment" status.[23]Finally, the majority of the loan announcements (over 140) are for borrowers in manufacturing industries, while over 40 announcements are for borrowers in government regulated industries such as energy, public utilities, agriculture, aircraft, airline, coal, high-tech material, and publishing. State banks and joint equity banks provide most of the loans in our sample.

[23] In February 2001, the CSRC started delisting companies that had lost money for three consecutive years. To monitor troubled firms, the stock exchanges categorize those companies that have recorded two consecutive years of losses as "special treatment" (ST) shares.

4.2 Abnormal returns around bank loan announcements

We first examine the average abnormal stock returns (AAR) and average cumulative abnormal returns (CAR) of borrowers around loan announcements. We compute AAR and CAR using the market model. The estimation window for calculating the market model parameters is the event time interval [-120, -21], with time 0 being the announcement day. AAR and CAR are tested for significance using a two-tail t-test with the null hypothesis that abnormal returns are not statistically different from zero. We also report the nonparametric sign test and Wilcoxon signed-rank test results. The sign test categorizes data into binary outcomes with null hypothesis being the percentage of negative AAR (CAR) equal to the percentage of positive AAR (CAR). The alternative hypothesis is that the percentage of negative return is greater than the percentage of positive returns. The Wilcoxon signed-rank test embeds the information of magnitudes with the null hypothesis being that there is no difference in magnitudes between the negative and positive AAR (CAR). The alternative hypothesis is that there is a difference in the magnitude between the two populations.

Panels A and B of Table 2 present summary statistics on abnormal returns for bank loan and credit approval announcements. After the exclusion of announcements with confounding events over the period of [-1, 4], the sample size is 267 for loan announcements and 95 for credit approval announcements. Panel A shows that except for the largest windows (such as [-4,4] and [-5,5]), CARs are strongly significantly *negative* under three alternative parametric and non parametric significance tests. For example, the average [-1, 1] CAR is -0.308% and the average [-1, 4] CAR is -0.480%, and they are statistically significant. Thus, the typical effect of a bank loan announcement is a decrease of one-third to one-half percent in the value of the borrowing firm's equity over several days following the announcement. On the other hand, the negative

announcement effect is much weaker for credit approval announcements. AAR is significantly negative only on days 2 and 3 after the announcement, and CAR is not significant for any windows. We therefore focus on the bank loan announcement for the rest of the paper.

Thus, the negative stock market reaction to bank loan announcements in China supports hypothesis H1b and contrasts with what earlier studies of other countries have found. To further characterize this negative reaction, we group our events into pairs according to firm and loan characteristics. For example, we group bank loan announcements as those intended to repay or extend an old loan, versus those intended to supply cash for operations or fund new investments. We then conduct univariate tests to compare whether the abnormal returns are statistically different between the two groups in each pair.

Table 3 provides summary statistics on [-1, 4] cumulative abnormal returns broken down by firm and loan characteristics. Following Harvey, Lins, and Roper (2004), we focus on a six-day event window [-1, 4] CAR. Some interesting results are noteworthy. The negative stock return effect of a loan announcement is significantly greater for loans used for repayment of old loans (-2.3%) versus other uses of the funds (-0.12%), with a t-test of -3.05 for the mean difference. This result is consistent with hypothesis H5 and suggests that the stock market does not like firms that appear to need to repeatedly roll over their debt. Furthermore, firms with above-median ratio of long term investment to total assets (perhaps an indicator of heavy industry companies) have greater negative cumulative abnormal return than below-median firms and the difference is statistically significant (-1.18% versus 0.24% with a t-statistic of -2.73 for the mean difference). This suggests that the market may not favor loans to troubled “rust belt” firms.

To assess the connection between related party transactions and the strength of the negative bank loan announcement return reaction, we divide the sample into above and below

median firms according to the change in accounts receivables categorized as related party transaction (scaled by total assets) from the fiscal year of the loan announcement to the following fiscal year. Table 3 shows that the negative stock return effect of loan announcement is greater for firms with above median change in related party accounts receivables (-1.02%) than for firms with below median change in related party accounts receivables (-0.15%). This suggests that the market has a negative view of loans to poorly-governed firms that are more likely to engage in transferring or 'tunneling' borrowed funds. The univariate test results also indicate that the negative stock return effect of loan announcement is greater for firms with above median listing years than (-0.69%) for firms with below median listing years (0.27%). In addition, the negative CAR is larger for loans from the Big Four state banks than for loans from other banks, (-0.75% versus -0.09%). This evidence supports hypothesis H4 which predicts that the borrower's loan announcement return is even more negative if the loan is obtained from one of the Big Four state banks. Further highlighting lender characteristics, the negative CAR is stronger for loans issued by a bank's local branch below the provincial level (-0.841%). In contrast, the average 5-day CAR for loans issued by the provincial level branches and headquarters is not significantly different from zero (0.060%) . Local branches seem to be different. Indeed, the banking system in China remains fragmented and a significant portion of loans are made through widespread local branches.[24] The objectives of local banks often differ from those of the bank's headquarters. They often share common interests with the corresponding local government and therefore may be subject to the local officials' influence. Lastly, the negative CAR is smaller for firms that offer B or H shares. Collectively, these results suggest that the strength of the negative market reaction to bank loan announcement relates to firm and loan characteristics.

[24] For example, the Agriculture Bank of China still has 31,000 branches even after eliminating 20,000 branches as of 2005 (Dobson and Kashyap, 2006).

4.3. Multivariate cross-sectional analysis

Next, we conduct a cross-sectional regression analysis on the variation of stock price response to bank loan announcements. The dependent variable is the cumulative abnormal returns for a six-day event window of [-1, 4]. We select independent variables to proxy for firm, loan, and lender characteristics as follows. Firm size (log of market capitalization) captures the idea in Diamond (1991) that bank monitoring may be especially valuable to small firms with no established reputation (MKT_CAP). Measures of profitability and investment are ROA, sales growth rate (SALES_GROWTH), and long term investment (scaled by total assets) for the accounting year before the announcement (LTINV/ASSET). Corporate governance proxies reflect the board of directors has government connections (POLITICAL) and whether a borrower is financially distressed and officially categorized as under 'Special Treatment' (DISTRESSED).[25] To account for possible expropriation, we include the change in accounts receivables (scaled by total assets) categorized as related party transactions from the announcement year to the following year (RPT). Loan and lender characteristics include loan size scaled by total assets,[26] maturity, a dummy indicating intended use is repaying existing debt (PURPOSE_REPAY), a dummy indicating intended use is investment (PURPOSE_INVEST), a dummy indicating the lender is one of the Big Four state banks (BIG4_LENDER), a dummy variable indicating whether a loan is issued by a bank's local branches below the provincial level (SUB_BRANCH), and a dummy indicating the loan announcement was preceded by another such announcements by the same company within 12 months (MULTIPLE_LOANS). Table 4

[25] We examined other variables such as the number of employees, a dummy variable if government is the largest shareholder, a dummy variable for geographic location, earning's opacity, a dummy variable for heavily regulated firms, and the number of institutional investors in the top 10 largest shareholders. All proved insignificant, and are not reported for brevity.

[26] Liu (2006) reports that U.S. banks monitor larger loans more intensely.

reports correlations among the regression variables. Some are highly correlated. For example, the maturity of a loan is highly positively correlated with borrower size.

Table 5 presents the regression results. Some significant results stand out. First, larger companies tend to have more negative [-1, 4] CAR than smaller firms. This result is consistent with fact that larger firms in China are more likely to obtain policy loans whose purpose is to keep the firms afloat. Moreover, it is also consistent with the prediction of Diamond (1991) that bank monitoring may be more valuable to small firms with no established reputation. Second, RPT, the change in accounts receivables due to related party transactions, is significantly negative. This result is robust to the inclusion of other explanatory variables. This finding suggests that firms with greater negative stock price reaction are associated with higher growth of related party transactions. This supports hypothesis H2b. To the extent that accounts receivables in the related party transaction reflect "tunneling" behavior, this suggests that Chinese investors recognize that controlling shareholders of a particular firm may be more prone to "steal" borrowed funds. Once again, the CAR is significantly more negative for firms with larger ratio of long term investment to assets (indicator of heavy industry firm). There is also evidence that the [-1, 4] CAR is marginally larger (that is, less negative) for firms with "B" or "H" shares. Note that firms issuing such shares to overseas investors are subject to more stringent disclosure requirements. Therefore, it may be more difficult for such firms to conduct related party transactions, steal borrowed money, or suffer other governance and management problems.

Consistent with the univariate analysis in Table 3, the dummy variable for repaying debt is significantly negative, suggesting that investors react negatively to a loan used to roll over the existing debt. For the variables reflecting lender characteristics, the dummy for state banks is

negative but not significant in the multivariate analysis. The coefficient for SUB_BRANCH is, however, significantly negative in most of the regressions. This result suggests that investors view local branches as more likely to be influenced by the local government. They are more likely to engage in policy-oriented loans or loans based on political connections rather than lending based on borrower creditworthiness.

4.4. Long-run performance following bank loan announcements

Our results thus far indicate that there is typically a decline in share price following an announcement of borrowing from a bank. To examine whether this reaction is merely transient or instead predicts a long term change in firm value, we investigate long term financial performance after bank loan announcements. If a bank loan is followed by increased related party transactions, the potential for expropriation by controlling shareholders may cause a deterioration in the firm's long term performance. Therefore, we examine the change in both the original value and the industry adjusted values of the return on assets (ROA) and return on equity (ROE) around bank loan announcements. We compute the average of ROA and ROE in the year before, during, and after the announcement. We then perform significance tests on the change in mean ROA and ROE following the bank loan announcement. We first report the original values and we then report the industry adjusted values, where the median and mean ROA or ROE of industries are subtracted from the original value to account for industry variation in those financial ratios. We exclude 9 companies that were under special treatment status (ST), as their financial numbers are often biased due to possible government propping. In addition, companies with more than one announcements in a particular year are only included once for that year. The final sample size for this analysis is 191.

Table 6 presents summary statistics and significance tests on corporate performance of borrowers before and after the announcement of a bank loan. We find that firms that obtained bank loans have significantly lower ROA and ROE in the year following the announcement. For example, the original value of ROE declined to -4.49% in the accounting year after the announcement from 5.05% in the announcement year. Over the same period, the ROE adjusted for industry average declined to -3.50% from 6.08%. The declines in ROE are statistically significant at the 5% level. ROA shows the same pattern, but with weaker statistical significance. For ROA and ROE in the second year after the announcement, we again see that, on average, firms with bank loans continue to deteriorate. The results suggest that firms that obtain bank loans typically experience deterioration in long term financial performance. Our evidence supports hypothesis H3b and is consistent with political goals behind some of the Chinese banking system's lending activity: state banks offer loans to keep state-connected firms afloat.

As we discussed earlier, only companies with relatively large loans are required to issue announcement. In addition, if firms are aware of the negative stock price reaction to bank loan announcement, some companies may have the incentive of avoiding an announcement even if they are required to do so. To overcome any possible selection bias in our data, we conduct an additional matching sample test of whether receipt of a bank loan predicts subsequent poor long run financial performance. We examine the change in ROA and ROE for two groups of firms matched on total assets and the book value of long term loans. The first group consists of companies that do not have bank loan announcements but report increases in long-term loans for a particular accounting year during our sample period of 1999 to 2004. This indicates that they have obtained smaller loans which do not require a public announcement. We obtain 119 such firms. The second group consists of companies that do not record increases in long-term loans

for any particular accounting year during our sample period. We obtain 153 such firms. Similar to Table 6, we compute summary statistics for ROA and ROE for the accounting year before, during, and after the announcement. We also compute significance tests on the changes in means and medians of ROA and ROE across the three year periods. Table 7 reports the results, with Panel A reporting the first matching group and Panel B reporting the second matching group.

Panel A of Table 7 shows that for companies that do not have bank loan announcements but have recorded increases in long-term loans on their balance sheet for a particular accounting year during our sample period, there are significant declines in the mean (or media) of ROA and ROE in the accounting year following the long term debt increase. In contrast, Panel B shows that for companies without increases in long-term loans on their balance sheet, there is no significant change in ROA or ROE. Once again, this result is consistent with the fact that in many cases, bank loans in China may be used to keep financially troubled firms afloat, instead of being used to fund positive NPV projects.

To further check robustness and test hypothesis H3b, we group the companies based on their [-1,4] CAR and test for the significance of changes in ROA and ROE before versus after loan announcements. Table 8 reports results for companies grouped on positive versus negative CAR, and on the highest and lowest CAR declines. Among the 152 events with negative CAR, ROA and ROE decline significantly from the year before to the year after the loan announcement. In contrast, the changes in ROA and ROE are much weaker for the 115 events with positive CAR. Echoing those findings, significant declines in ROA and ROE are observed for firms in the lowest CAR quintile while no significant changes are observed for firms in the highest CAR quintile. Overall, the results are consistent with hypothesis H3b: the size of the borrower's stock return response is positively correlated with subsequent corporate performance.

4.5 Do bank loan announcements also affect the lender's stock price negatively?

We have established that the announcement of a bank loan by a Chinese corporate borrower is often associated with a significant decline in the borrower's stock price. If these loans signal, or even subsidize, poorly-performing firms, there should be a response somewhere else in the banking system. Therefore, following Kang and Liu (2006), we also investigate the impact of bank loan announcements on the stock returns of lenders. Unfortunately, the largest Chinese banks were not yet listed on stock markets during our sample period and we must rely on a small sample of loan events associated with smaller listed banks. We conducted an event study on 28 bank loan announcements involving lenders that were listed on the stock market at the time of the announcement. The results (unreported but available upon request) indicate no statistically significant market response for the stock price of the lending bank. This insignificant finding may be due to the very small sample size or the small size of our sample of bank loans relative to typical bank assets. The structure of the relationships between individual banks and the banking authorities may also subsidize bad loans to corporate borrowers. For example, state commercial banks have been permitted to liberally write-off bad loans against their earnings, effectively reducing their tax liability. State-owned asset management companies were set up to purchase troubled assets (mainly non-performing loans) from the "Big Four" state banks. Some bonds issued by the Ministry of Finance have been used to inject funds into state banks. Recently, the government has formalized the process of topping up bank balance sheets by establishing Central Hui Jin (Remittance) Investment Ltd. Co., whose shareholders include the central bank and other government agencies. The company has injected large amounts of foreign reserves onto the balance sheets of state commercial banks.

5. Summary and Conclusions

We study the effect of bank loan announcements on borrower stock price for a sample of large loans from Chinese banks to listed Chinese borrowers. In contrast to what previous authors have found for bank loans in developed countries, we find that stock values for Chinese borrowers typically decline significantly in the days following a bank loan announcement. We also find that these negative announcement effects are heightened for borrowers that use loans to repay existing debt and for loans that originate with local bank branches. Chinese corporate borrowers typically display increased related party transactions in the year following a bank loan announcement. Furthermore, borrowers experience lower long-run ROA and ROE than a group of matching firms that do not have increased bank debt over the same period.

Our results are of interest to a variety of policy makers and regulators. China's banking system is still a work-in-progress, as indicated by the associations between bank borrowing and poor corporate performance. Aside from pointing out the state of China's banking reforms, our study provides lessons for many other countries at a lower level of economic and financial development than China. Furthermore, the condition of China's banking system is of interest to both small and large potential investors in Chinese banks. For example, in 2006, Bank of China and Industrial and Commercial Bank of China raised $22 billion and $11 billion respectively in initial public offerings on global stock markets. Other investors placed huge amounts of funds in these banks with large direct purchases of ownership stakes. Our results highlight the substantial risks that China's banks pose for investors. Given limited investment alternatives, China's high savings rate (40% of GDP) helps keep the country's banks afloat. However, a financial crisis or significant drop in the savings rate could easily expose the poor quality of many of the banking system's assets and precipitate bank runs.

Our results also contribute to understanding broader paradoxes in China's economy. Given large imbalances in trade and investment, China has come under pressure from the U.S. to make the yuan a fully convertible currency valued purely by market forces. It is commonly believed that such a move by China's government will lead to appreciation of the yuan and a reduction in trade and investment imbalances. However, if controls are removed and China's citizens send their savings overseas for diversification or other purposes, it is plausible that a freely-floating yuan will decline in value, rather than appreciate. A stampede out of the yuan would be associated with massive withdrawals of funds from Chinese banks which, in turn, would impede the ability of the banks to continue subsidizing poor-performing Chinese corporations. This in turn could lead to massive unemployment and social instability as these firms collapse. Thus, our study of Chinese bank loans reminds us of the potential consequences that China's leaders face in reforming their financial and economic system.

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Table 1. Sample characteristics and descriptive statistics

The sample consists of loan and credit approval announcements by companies listed on the Shanghai or Shenzhen stock exchanges between May 12th 1999 and Oct 15th 2004.

Panel A: Descriptive statistics on borrowers and loans

	Bank loans					Credit approvals				
	Mean	Median	Min	Max	Number of Obs	Mean	Median	Min	Max	Number of Obs
Years borrower listed on stock exchange	6.06	6.16	0.75	12.19	267	5.55	5.22	1.02	13.57	93
Total assets (million yuan)	2106.52	924.47	207.30	150054.60	267	2335.04	1329.26	333.27	12193.08	95
Tradable shares market value (million yuan)	875.76	629.00	121.92	9619.66	267	1309.37	938.40	236.34	5336.17	95
Amount of loan (million yuan)	134.75	60.00	2.00	5796.00	267	373.12	200.00	20.00	10000.00	93
Maturity of loan (years)	1.97	1.00	0.08	33.00	257	n.a.	n.a.	n.a.	n.a.	n.a.
Interest rate on loan (%)	5.59	5.52	3.51	7.25	183	n.a.	n.a.	n.a.	n.a.	n.a.

Panel B: Sample characteristics

	Number of observations	
	Bank loans	Credit approvals
All loan observations	267	95
Loan from one of the four state banks	158	56
Largest shareholder is state or state related institutions	182	61
Loan used for new project investment	48	-
Loan used to repay existing debt	42	-
Borrower censured by Chinese Securities Regulatory Commission	26	3
Borrower had problems in audit in announcement year	28	2
Borrower under Special Treatment (ST) status	17	0
Borrower in regulated industries	43	16
Borrower in manufacturing industry	142	42
Borrower in information technology industry	21	9
Borrower in real estate industry	20	5
Borrower in transportation industry	18	5
Borrower equity includes B or H shares	10	5

Table 2. Abnormal returns around bank loan and credit approval announcements

Average abnormal returns (AAR) and average cumulative abnormal returns (CAR) are calculated using the market model and the standard event study methodology. The estimation window for calculating the market model parameters is the event time interval [-120, -21]. The announcement day is 0. AAR and CAR are tested for significance using a two-tail t-test with the null hypothesis that AAR (CAR) are not statistically different from zero. The sign test categorizes data into binary outcomes with null hypothesis being the percentage of negative AAR (CAR) equal to the percentage of positive AAR (CAR). The Wilcoxon signed-rank test embeds the information of magnitudes with the null hypothesis being that there is no difference in magnitudes between the negative and positive AAR (CAR). "***", "**", and "*" indicate significance at the 1, 5, and 10 percent levels, respectively. Panel A reports the AAR and CAR on bank loan announcements with a sample size equal to 267 for all windows. Panel B reports the AAR and CAR on bank credit approval announcements. The sample size for this group is 95 for all windows.

	Panel A. Bank loan announcements					**Panel B. Credit approval announcements**				
Event day or window	AAR or CAR	Proportion of AAR or CAR greater than zero	T-test	Sign-test	Wilcoxon Signed Rank test	AAR or CAR	Proportion of AAR or CAR greater than zero	T-test	Sign-test	Wilcoxon Signed Rank test
-5	0.144%	46.44%	1.32	1.10	0.13	-0.154%	41.05%	-1.07	-1.16	1.43
-4	0.148%	50.56%	1.30	0.12	0.29	0.023%	40.00%	0.16	1.56	0.38
-3	0.090%	46.06%	0.78	1.22	0.87	0.021%	49.47%	0.15	0.32	0.31
-2	-0.115%	43.44%	-1.05	-2.08**	1.78*	-0.046%	45.26%	-0.46	-0.42	0.81
-1	-0.171%	42.32%	-1.71*	-2.45**	2.50**	0.107%	45.26%	0.61	0.32	0.43
0	0.000%	43.07%	0.002	2.20**	1.02	0.219%	52.63%	1.00	0.41	0.99
1	-0.138%	42.32%	-1.54	-2.45**	2.39**	-0.052%	42.11%	-0.37	-1.24	0.84
2	0.021%	43.82%	0.23	1.96*	0.87	-0.270%	41.05%	-2.10**	-1.45	2.27**
3	-0.189%	38.95%	-1.75*	-3.55***	2.41**	-0.231%	40.00%	-2.08**	-1.47	2.24**
4	-0.005%	44.56%	-0.04	-1.71*	1.20	-0.006%	40.00%	-0.04	-1.66*	1.06
5	-0.021%	46.44%	-0.21	-1.10	0.66	0.301%	47.37%	1.42	0.00	0.84
[-1, 1]	-0.308%	45.69%	-1.77*	-1.35	1.88*	0.278%	52.63%	0.89	0.62	0.77
[-2, 2]	-0.402%	41.94%	-1.97*	-2.57**	2.18**	-0.041%	46.32%	-0.12	-0.52	0.57
[-3, 3]	-0.501%	43.82%	-1.88*	-1.96*	2.27**	-0.252%	45.26%	-0.67	-0.72	0.98
[-4, 4]	-0.357%	45.69%	-1.10	-1.35	1.45	-0.228%	42.11%	-0.50	-0.85	1.06
[-5, 5]	-0.234%	44.94%	-0.64	-1.59	1.44	-0.085%	47.37%	-0.16	-0.31	0.67
[-1, 2]	-0.287%	45.31%	-1.47	-1.47	1.40	0.007%	47.37%	0.02	0.00	0.36
[-1, 3]	-0.476%	43.07%	-2.05**	-2.20**	2.25**	-0.223%	43.16%	-0.57	-1.04	0.98
[-2, 3]	-0.591%	38.95%	-2.45**	-3.55***	2.75***	-0.274%	45.26%	-0.68	-0.62	1.17
[-1, 4]	-0.480%	43.07%	-1.83*	-2.20**	2.07**	-0.227%	43.16%	-0.53	-1.14	1.36
[-2, 4]	-0.596%	41.57%	-2.22**	-2.69***	2.65***	-0.278%	42.11%	-0.63	-1.15	1.57

Table 3. Cumulative abnormal returns sorted on firm and loan characteristics

This table reports [-1,4] cumulative abnormal returns (CAR) around bank loan announcements by sub-samples with parametric and nonparametric significance tests. "Related party transactions" equals the change in accounts receivables categorized as "related party transactions" (scaled by total assets) from the announcement fiscal year to the following fiscal year. The sign test has null hypothesis being the percentage of negative AAR (CAR) equal to the percentage of positive AAR (CAR). The Wilcoxon signed-rank test embeds the information of magnitudes with the null hypothesis being that there is no difference in magnitudes between the negative and positive AAR (CAR).

Category	No. of obs.	CAR [-1, 4]	T-test of CAR=0	% CAR positive	Sign test	Wilcoxon signed rank test	CAR difference (Higher – Lower)	t-test of mean difference
All announcements	267	-0.48%*	-1.83	43.1%	-2.20**	2.06**		
Related party transactions	151							
Above median firms	75	-1.02%**	-2.01	45.33%	-0.69	1.67*	0.87%	1.23
Below median firms	75	-0.15%	-0.31	41.33%	-1.39	1.11		
Purpose of loan	267							
Repay old debt	42	-2.30%***	-2.90	28.6%	-2.62***	2.98***	2.16%***	3.05
Other	225	-0.14%	-0.52	45.8%	-1.20	0.83		
Lender type	267							
Big 4 state bank	158	-0.75%**	-2.12	43.7%	-1.51	1.81*	0.66%	1.24
Other	109	-0.09%	-0.22	42.2%	-1.53	1.05		
Offshore shares	267							
Firms with B, H shares	10	0.61%	0.35	50.0%	0.32	0.10	1.13%	0.82
Other firms	257	-0.52%**	-1.98	42.8%	-2.25**	2.16**		
Leverage	267							
Above median firms	133	-0.45%	-1.16	45.1%	-1.04	1.17	0.06%	0.12
Below median firms	133	-0.51%	-1.43	41.0%	-1.99**	1.76*		
Market value	267							
Above median firms	133	-0.55%	-1.62	42.1%	-1.73*	1.81*	0.14%	0.26
Below median firms	133	-0.41%	-1.01	44.4%	-1.21	1.08		
Long term investment/ total assets	267							
Above median firms	133	-1.18%***	-3.38	35.3%	-3.30***	3.36***	1.43%***	2.73
Below median firms	133	0.24%	0.61	51.1%	0.17	0.50		
Firm age (years listed)	267							
Above median firms	133	-0.69%*	-1.74	43.6%	-1.39	1.83	0.42%	0.80
Below median firms	133	-0.27%	-0.79	42.5%	-1.64	1.10		

Audit problem or censure by CSRC	267							
Firms with such problems	51	-0.10%	-0.16	51.0%	-0.00	0.44	0.47%	0.70
Other firms	216	-0.57%**	-1.97	41.2%	-2.52**	2.07**		
Bank Levels	267							
Loans issued by local branches	160	-0.841%**	-2.556	41.9%	-1.976*	2.355**	-0.902%*	1.691
Loans issued by headquarters or main provincial branches	107	0.060%	0.141	44.9%	0.967	0.359		

Table 4. Correlation matrix for regression variables

This table reports correlation coefficients of the variables used in cross-sectional regressions. CAR[-1,4] is the cumulative average abnormal return from one day prior to a bank loan announcement to 4 days after the announcement. RPT is the change in accounts receivables categorized as "related party transactions" (scaled by total assets) from the announcement fiscal year to the following fiscal year. MKT_CAP is the natural log of the market value of tradable shares. ROA is net earnings divided by assets. SALES_GROWTH is the growth rate of sales for the year prior to the announcement. LTINV/ASSET is long term investment divided by assets. LOAN/ASSET is size of the bank loan divided by assets. MATURITY is maturity of the loan, in years. ***, **, and * denote significance at 1%, 5%, and 10%.

	RPT	MKT_CAP	ROA	SALES_ GROWTH	LTINV /ASSET	LOAN /ASSET	MATURITY
CAR[-1,4]	-0.09	-0.10	0.01	0.10*	-0.17***	-0.05	0.10
RPT		-0.10	0.08	0.01	0.08	0.03	-0.05
MKT_CAP			0.11	-0.07	0.03	-0.09	0.18***
ROA				0.00	0.06	0.05	0.01
SALES_GROWTH					-0.08	0.07	-0.04
LTINV/ASSET						-0.07	-0.11*
LOAN/ASSET							0.09

Table 5. Regressions explaining cumulative abnormal returns around bank loan announcements

This table reports the results of regression of cumulative abnormal return on variables in firm and loan characteristics. In particular, the dependent variable is cumulative abnormal return over the period of one day prior to a loan announcement to 4 days after the announcement, (CAR[-1,4]). MULTIPLE is a dummy set to 1 if the loan announcement is preceded by another from the same company within 12 months. PURPOSE_REPAY is a dummy set to 1 if intended purpose of the loan is to repay existing debt. PURPOSE_INVEST is a dummy set to 1 if the intended purpose of the loan is investment. BIG4_LENDER is a dummy set to 1 if the lender is one of the four largest state-owned banks, B_H_SHARES is a dummy set to 1 if the borrower has foreign classes of equity outstanding. POLITICAL is a dummy set to 1 if a board director of the borrower has ever worked in a government agency. DISTRESSED is a dummy set to 1 if regulators classified the borrower as under "special treatment". SUB_BRANCH is a dummy set to 1 if a loan is originated with a bank's local branch below the provincial level. Other explanatory variables are defined in the previous table. White heteroskedasticity-consistent t-statistics are reported in parentheses. "***", "**", and "*" indicate significance at the 1, 5, and 10 percent levels, respectively.

Model							
MKT_CAP	-0.009**	-0.008*	-0.011***	-0.008**			
	(-2.470)	(-1.816)	(-2.952)	(-2.193)			
RPT		-0.029***				-0.026***	-0.025***
		(-2.722)				(-2.919)	(-3.030)
ROA					-0.0001	0.0004	0.0001
					(-0.417)	(0.524)	(0.191)
SALES_GROWTH	0.0003					0.001	0.0008
	(1.391)					(0.311)	(0.197)
LTINV/ASSET					-0.085***		
					(-2.743)		
MULTIPLE_LOANS							-0.005
							(-0.621)
LOAN/ASSET			-0.042				
			(-1.326)				
MATURITY					0.001**	0.003*	0.002
					(2.150)	(1.859)	(1.033)
PURPOSE_REPAY	-0.026***		-0.024***		-0.021**	-0.021**	-0.021*
	(-2.928)		(-2.876)		(-2.300)	(-2.008)	(-1.925)
PURPOSE_INVEST	-0.0003		0.001	0.005	-0.011	-0.016	-0.018
	(-0.043)		(0.165)	(0.690)	(-1.229)	(-1.176)	(-1.320)
BIG4_LENDER	-0.006			-0.008	-0.008	-0.005	-0.005
	(-1.208)			(-1.521)	(-1.586)	(-0.685)	(-0.676)
B_H_SHARES	0.013			0.005			0.038**
	(0.826)			(0.284)			(1.985)
POLITICAL	0.0003			0.002			-0.006
	(0.060)			(0.410)			(-0.783)
DISTRESSED							-0.010
							(-0.745)
SUB_BRANCH	-0.009	-0.013*	-0.012**	-0.010*			
	(-1.622)	(-1.746)	(-2.118)	(-1.796)			
INTERCEPT	0.066**	0.056*	0.079***	0.059**	0.008	0.005	0.002
	(2.566)	(1.729)	(3.006)	(2.174)	(1.610)	(0.670)	(0.231)
Adj. R – squared	0.056	0.019	0.055	0.014	0.057	0.023	0.030
Observations	267	151	267	267	257	145	145

Table 6. Accounting performance before and after bank loan announcements

This table reports the return on asset (%) (ROA) and return on equity (ROE) around bank loan announcements. ROA_{-1} and ROE_{-1} are the ROA and ROE of a company in the accounting year before the bank loan announcement, respectively. ROA_0 and ROE_0 are the ROA and ROE in the announcement year, while ROA_1 (ROA2) and ROE_1 (ROE2) are the ROA and ROE in the first (second) accounting year after the announcement. We report both original values and the industry adjusted values. In particular, the median and mean ROA or ROE of industries are subtracted from the original value to account for industry variation in financial ratios. We exclude 9 companies that were under special treatment status (ST), as their financial numbers are often biased due to possible government propping. In addition, multiple announcements in a particular year by the same company are only included once in the sample. The final sample size is 191. T-test (sign-test) is for testing the difference in mean (median) of ROA and ROE. "***", "**", and "*" indicate the test in the mean (median) difference is at the 1%, 5%, and 10%, respectively.

		ROA_{-1}	ROA_0	ROA_1	ROA_2	ROE_{-1}	ROE_0	ROE_1	ROE_2	T-test on mean difference (ROA_1-ROA_0)	Sign test on median difference (ROA_1-ROA_0)	T-test on mean difference (ROE_1-ROE_0)	Sign test on median difference (ROE_1-ROE_0)	T-test on mean difference (ROA_2-ROA_1)	Sign test on median difference (ROA_2-ROA_1)	T-test on mean difference (ROE_2-ROE_1)	Sign test on median difference (ROE_2-ROE_1)
Original value	Mean	3.26	2.09	0.57	-4.47	4.74	4.39	-2.50	-10.46	-3.19***	-4.49***	-3.89***	-3.33***	-2.19**	-0.29	-2.44**	-1.30
	Median	3.38	2.64	1.77	1.49	7.08	6.57	4.85	3.74								
	Max	16.14	13.71	13.29	26.67	27.91	31.26	34.73	115.88								
	Min	-21.86	-40.99	-37.33	-312.00	-99.98	-57.68	-138.20	-180.03								
	Std. Dev.	4.10	5.28	7.12	32.71	16.85	12.55	29.05	48.67								
Value after adjusting industry median	Mean	-0.15	-0.84	-1.95	-7.02	-2.01	-1.76	-8.14	-15.89	-2.34**	-0.87	-3.61***	-1.38	-2.22**	-0.58	-2.39**	-0.43
	Median	0.00	-0.23	-0.58	-0.92	0.12	0.53	-0.28	-1.47								
	Max	13.29	10.68	11.59	23.65	21.34	25.87	30.46	111.64								
	Min	-24.94	-42.56	-38.89	-314.28	-106.69	-61.88	-143.59	-185.94								
	Std. Dev.	4.04	5.23	7.10	32.57	16.64	12.35	28.92	48.36								
Value after adjusting industry average	Mean	1.43	0.73	0.08	-4.54	5.615	7.05	4.11	-4.92	-1.32	-0.87	-1.49	-3.04***	-2.04**	-0.43	-2.67***	-1.45
	Median	1.45	0.87	1.17	0.89	4.700	5.67	8.59	6.30								
	Max	14.11	13.47	16.00	26.91	444.54	54.10	55.65	120.32								
	Min	-22.10	-41.75	-37.19	-311.91	-109.77	-58.68	-143.29	-182.88								
	Std. Dev.	4.53	5.61	7.21	32.25	36.83	15.72	31.09	49.59								

Table 7. Accounting performance of matching companies

The table reports the changes in return on assets (%) (ROA) and return on equity (ROE) of companies in the matching group. The matching group is constructed by first selecting companies that have similar total assets to our sample companies. Then companies are grouped into two sub-samples based on their long term loans on the balance sheet. In panel A, the matching group includes companies that do not have bank loan announcements but have recorded increases in long-term loans on their balance sheet for a particular accounting year during our sample period. In panel B, the matching group includes companies that do not have increases in long-term loans in their balance sheet for any particular accounting year during our sample period. T-test (sign-test) is for testing the difference in mean (median) of ROA and ROE. "***", "**", and "*" indicate the significance at the 1%, 5%, and 10%, respectively.

Panel A: Companies with increases in long-term loans on their balance sheet but without bank loan announcements (Sample size: 119)

	ROA_{-1}	ROA_0	ROA_1	ROE_{-1}	ROE_0	ROE_1	T-test on Mean difference (ROA_1-ROA_0)	Sign test on Median difference (ROA_1-ROA_0)	T-test on Mean difference (ROE_1-ROE_0)	Sign test on difference of (ROE_1-ROE_0)
Mean	0.77	1.65	0.17	-12.12	0.63	-166.32	-2.02**	-4.96***	-1.77*	-2.93***
Median	2.91	2.17	1.74	6.06	5.35	4.20				
Maximum	10.94	13.28	12.03	27.30	43.59	33.57				
Minimum	-41.37	-34.90	-70.60	-574.00	-230.36	-13479.38				
Std. Dev.	8.46	6.15	9.74	78.45	31.59	1479.91				

Panel B: Companies without increases in long-term loans on their balance sheet (Sample size: 153)

Mean	2.92	3.15	2.75	4.57	4.24	4.26	-0.74	-1.47	0.02	0.07
Median	3.43	3.16	2.54	6.10	5.96	5.28				
Maximum	22.53	22.53	21.86	44.33	44.33	30.22				
Minimum	-37.99	-21.25	-49.71	-50.24	-122.52	-142.80				
Std. Dev.	6.71	5.10	5.71	11.41	15.82	13.93				

Table 8. Accounting performance for sub-groups

	ROA_{-1}	ROA_0	ROA_1	ROE_{-1}	ROE_0	ROE_1	T-test on mean difference (ROA_1-ROA_0)	Sign test on median difference (ROA_1-ROA_0)	T-test on mean difference (ROE_1-ROE_0)	Sign test on median difference (ROE_1-ROE_0)
Panel A: Companies with negative CAR[-1,4] (Number of observations = 152)										
Mean	2.270	-0.784	-2.037	1.985	5.657	-0.681				
Median	3.222	2.454	1.626	6.950	6.700	5.400				
Maximum	16.143	13.705	13.289	27.910	315.860	34.730	-0.422	-4.299***	-2.203**	-3.277***
Minimum	-42.933	-311.996	-311.996	-301.980	-106.080	-138.200				
Std. Dev.	6.753	26.625	26.929	30.632	30.295	23.371				
Panel B: Companies with positive CAR[-1,4] (Number of observations = 115)										
Mean	1.856	-1.567	-3.354	3.655	-10.202	-4.991				
Median	3.263	2.376	1.227	7.250	6.410	4.300				
Maximum	10.441	11.788	12.622	23.160	29.140	315.860	-0.460	-1.865*	-0.528	-1.228
Minimum	-66.205	-311.996	-311.996	-106.080	-1076.870	-491.910				
Std. Dev.	7.958	29.869	31.041	15.838	110.912	73.478				
Panel C: Companies in the lowest 20% CAR [-1,4] (Number of observations = 54)										
Mean	1.993	1.671	-0.667	2.645	9.872	-4.024				
Median	3.222	2.082	1.349	6.950	6.725	3.761				
Maximum	11.174	13.705	9.546	24.740	315.860	20.810	-2.549**	-3.130***	-2.211**	-2.041**
Minimum	-21.858	-12.410	-22.999	-99.980	-27.840	-138.200				
Std. Dev.	5.755	5.492	7.661	20.302	44.014	26.885				
Panel D: Companies in the highest 20% CAR [-1,4] (Number of observations = 54)										
Mean	2.471	-4.852	-2.519	5.090	-25.019	-9.700				
Median	3.404	2.555	1.421	7.150	6.290	4.300				
Maximum	10.441	11.788	12.622	21.470	29.140	25.290	0.400	0.953	-0.347	-0.416
Minimum	-23.723	-311.996	-84.580	-54.240	-1076.870	-491.910				
Std. Dev.	5.048	43.308	15.133	11.140	160.919	72.862				