Qing He, Liping Lu and Steven Ongena

Who gains from credit granted between firms?
Evidence from inter-corporate loan announcements Made in China

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Abstract

Who gains from inter-corporate credit? To answer this question we investigate the reactions of the stock prices of both the issuing and receiving firms to the announcements of 719 inter-corporate loans that took place between 2005 and 2012 in China. We find that the average abnormal return for the issuers of inter-corporate loans is significantly negative, whereas the corresponding return for those firms receiving credit is positive. Investors may worry that issuing firms may have run out of other worthwhile projects to finance, while at the same time they may view credit-receiving firms as being certified as worthy borrowers. The issuance of intra-group loans, especially those with higher interest rates, is associated with lower returns overall since such loans may signal a spreading of financial distress to the rest of the group. After issuing inter-corporate loans, firms are also found to have lower accounting performance, which confirms the aforementioned signaling interpretation.

Key words: entrusted loan, inter-corporate loan, credit misallocation, certification.
JEL Classification: G30, G140, G210.

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1   Introduction

Credit between firms, such as trade-related or regular credit, plays a crucial role in most economies around the world. Yet, research on inter-corporate credit continues to be hampered by a lack of direct firm-to-firm level data.[1] In this paper we break new empirical ground by investigating the reactions of the stock prices of both the issuing and receiving firms to announcements of inter-corporate loans.

Analyzing the stock price reaction to a corporate financing event can provide an immediate and comprehensive assessment of the valuation effect of such an event. Following the work by Mikkelson and Partch (1986), James (1987), for example, studies the average price reactions of the firms' stock prices following public announcements of bank loan agreements and finds that bank loan announcements are associated with positive and statistically significant stock price reactions of almost 200 basis points (bp) in a two-day event window, while announcements of privately placed and public issues of debt generate zero or even negative stock price reactions. This result holds independently of the type of loan, the default risk, and the size of the borrower. The positive stock price reaction for a bank loan is generally interpreted as supporting the Fama (1985) argument that a bank loan provides accreditation for a firm's ability to generate a certain level of cash flows in the future.[2]

Credit between firms is ubiquitous around the world, but particularly important in emerging economies where, due to weak legal enforcement of formal contracts, formal credit provided by financial institutions may be rationed. Inter-corporate lending, which in essence is a type of informal financing based on reputation and inter-firm relationships, may be less subject to rationing and may therefore support the high growth rates observed in an emerging economy like China (Allen, Qian and Qian (2005)).

Indeed, because small- and medium-sized enterprises (SMEs) may face substantial obstacles in obtaining bank credit, the Chinese government has allowed firms to obtain

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[1] Garcia-Appendini and Montoriol-Garriga (2014) study U.S. firms' liquidity positions and Boissay and Gropp (2014) study defaults on payments to suppliers in France. An exception is Ellingsen, Jacobson and von Schedvin (2014) who study trade credit arrangements among 51 large suppliers and all their customers in Sweden. See also Petersen and Rajan (1997), Love, Preve and Sarria-Allende (2007), and Burkart, Ellingsen and Giannetti (2011), among others.

[2] Results in James (1987) spawned numerous other event studies. See for example Lummer and McConnell (1989), Slovin, Johnson and Glascock (1992), Best and Zhang (1993), and Billett, Flannery and Garfinkel (1995), among many others. Degryse, Kim and Ongena (2009) provide a critical review of the methodology and the extant empirical evidence.

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credit from other non-financial firms, with coordination by financial institutions. These inter-corporate loans, also called "entrusted loans", are playing an increasingly important role in supplying credit to firms in China.[3]

Inter-corporate loans can be categorized as *inter-group* or *intra-group* loans, depending on whether lender and borrower are both affiliated with the same business group. When the firm grants a loan to a firm outside the business group, it is called an inter-group loan. The lending firm screens and monitors the borrowing firm as well as bearing the default risk. Inter-group lending is one type of informal finance covered e.g. in Allen, Qian and Qian (2005). The issuance of inter-group loans may convey the idea that the issuing firms are running out of worthy projects to finance, which may lead to negative market reactions for the issuing firms` stocks.[4]

A firm may also lend to another firm within the same business group, which is then called an intra-group loan. These loans in effect funnel credit within the group`s internal capital market. Stein (1997), for example, shows that an internal capital market can channel credit from less efficient projects to more efficient ones, and that the reallocation of credit within business groups is more common and important in countries with underdeveloped external capital markets. And indeed Buchuk, Larrain, Muñoz and Urzúa I. (2014) find that intra-group loans in Chile actually enhance firm investment and return and that, due to the country's strict regulation and disclosure requirements, such loans do not suffer from tunneling.[5] Thus, intra-group loans may be the outcome of an efficient credit reallocation decision within the business group, which may lead to a positive market reaction.

Gopalan, Nanda and Seru (2007) show that in India the internal capital market within business groups is a support mechanism for financially weaker firms to avoid de-

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[3] According to the *China Securities Regulatory Commission* (CSRC), an entrusted loan is a type of loan in which the lender (i.e., the principal) extends credit to the borrower (i.e., the trustee) at specified amount, maturity, interest rate, and usage of the loan. Banks and other financial institutions only act as account managers who earn commissions but bear no default risk. Instead, the lending firm bears all the default risk. Entrusted loans amounted to 2.55 trillion RMB in 2013 (i.e., about $400 billion) and accounted for 14.7 percent of the total amount of financing in the country. Data source: *People's Bank of China*. The increase in entrusted loans in 2013 was equivalent to nearly 30% of bank loans, which almost doubled the portion of 2012. The *Wall Street Journal* featured reports on entrusted loans in China on December 8th, 2011, and May 1st, 2014.

[4] Similar to acquirers whose stock prices suffer from negative market reactions to M&A announcements, possibly revealing that the acquirers may have run out of worthwhile other projects to finance (Yook (2003)).

[5] The internal capital market may also come with a potential dark side, which is the expropriation of minority shareholders due to a separation of ownership and control (Claessens, Djankov and Lang (2000); Jiang, Lee and Yue (2010); Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000)) and the rent seeking behavior of divisional CEOs (Scharfstein and Stein (2000)). Fan, Jin and Zheng (2014) show the tradeoff between the negative and positive sides of the internal capital market in China, i.e., tunneling corporate resources versus alleviating credit constraints.

fault and thus the negative spillovers to the rest of the business group. Also, large recipients of intra-group loans have lower abnormal stock returns and operating performance in the subsequent one- and two-year period. Similarly, Khanna and Yafeh (2005) show that the internal capital market provides mutual insurance within business groups among affiliated firms in unstable periods in Japan, Korea and Thailand. As a result, the issuance of intra-group loans may signal financial distress for a group firm among the uninformed investors, which may lead to a negative market reaction.

To examine whether announcements of inter-group versus intra-group loans convey information to investors about these non-financial corporate lenders and borrowers, we hand-collected the announcements of 719 inter-corporate loans that took place between 2005 and 2012. There were 564 announcements made by the lenders and 155 by the borrowers. We find that the stock market reacts negatively to the issuance of inter-corporate loans, and positively to their receipt. For example the two-day cumulative abnormal returns (CARs) on the stocks of the lending firms amounted to (statistically significant) –42 basis points (bps), while the CARs on the stocks of the borrowing firms amounted to 91 bps.

Specifically, we find that the issuance of intra-group loans to subsidiaries is associated with negative CAR, possibly signaling (to uninformed investors) financial distress for the group firm. Our results are consistent with firms supporting other firms in the group. Moreover, because the issuance of inter-group loans also generates negative CARs, this may again signal a lack of worthy projects to finance for the lending firms.

In contrast, the receipt of both intra-group and inter-group loans generates positive CARs, which indicates a type of certification for the borrowing firms by these non-financial corporate lenders. The receipt of inter-corporate loans stands in pointed contrast to Bailey, Huang and Yang (2011) and Huang, Schwienbacher and Zhao (2012) for example who show that bank loan announcements in China result in negative abnormal returns for the borrowing firms. This may be due to banks' limited information and their well-known soft budget problem. Hence lenders of inter-corporate loans may have better private information and be less subject to social and political pressure to subsidize low-quality firms. Thus, receiving an inter-corporate loan in China may provide a type of certification similar to that associated with the receipt of a bank loan in the U.S.

We also find that the CARs on the issuance and receipt of inter-corporate loans are also associated with certain loan, counter-party, and (loan-announcing) firm variables. These findings deepen our understanding of inter-corporate loan announcements. On the

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one hand, the issuance of inter-corporate loans generates lower CARs on loans with high interest rate spreads, on intra-group loans, and on loans to firms with higher market-to-book ratios and larger amounts of other accounts receivable (i.e., larger amounts of outstanding inter-corporate lending). On the other hand, the receipt of inter-corporate loans is associated with lower CARs on loans with a higher interest rate spreads, loans from state-owned lenders, and loans to non-state controlled borrowers. The results support the hypothesis that the issuance of inter-corporate loans signals (to uninformed investors) a lack of worthwhile projects to finance for the issuing firms, while the issuance of intra-group loans conveys additional information of financial distress for the group firm.

Our study contributes to the literature in the following ways. Firstly, we provide a novel result on the market reaction to announcements of inter-corporate loans, which extends the literature on information production by non-financial firms as creditors along side banks and non-bank financial institutions (Best and Zhang (1993); Billett, Flannery and Garfinkel (1995)). We show that the receipt of inter-corporate loans from non-financial firms is associated with positive market reactions, which indicates a certification effect by these non-financial firms as creditors. Secondly, our study is also related with the literature on the internal capital market of business groups (Gopalan, Nanda and Seru (2007); Stein (1997)). We show that the issuance of inter-corporate loans by a listed firm to another firm within the same business group is associated with negative market reactions, which indicates that the uninformed investors perceive the use of the internal capital market as a signal of rescuing distressed group firms, and that the lending firm is running out of worthy projects to finance. Finally, our findings shed light on informal finance (Allen, Qian and Qian (2005)). We show that the issuance of inter-corporate loans to firms outside the business group (i.e. informal loans) is associated with weakly negative market reactions, which indicates that uninformed investors perceive these informal loans as unfavorable investments.

The rest of this paper is organized as follows. Section 2 introduces the Chinese financial system. Section 3 sets out our hypotheses. Section 4 discusses the data and methodology. Section 5 provides summary statistics and event studies of the issuance and receipt of inter-corporate loans. Section 6 links CARs to a set of loan, counter-party and firm-specific characteristics and describes the post-performance of inter-corporate loan announcements. Section 7 concludes.

2   The financial system in China

In China, the formal financial sector is dominated by banks (Allen, Qian and Qian (2005)), which is reflected in a bank credit to GDP ratio (1.11) that is substantially higher than the average ratio for the other countries in their sample (0.73). According to *National Bureau of Statistics of China*, banks provided 51.4 percent of the total financing for Chinese firms in 2013. However, most of the bank credit is extended by state-owned banks to state-owned enterprises (SOEs) or to large private firms. The capital market is relatively under-developed and a majority of listed firms are owned / controlled by the government. Thus, a majority of credit is channeled to the SOEs and large private firms, while private SMEs face substantial obstacles in obtaining external finance from the formal financial sector.

China's capital markets comprise a bond market and an equity market. The bond market remains under-developed, although corporate bonds were first issued already in 1986. The market value of newly issued bonds in China was only 1.74 percent of GDP at the end of 2012, and corporate bond issuance accounts for just 11.19 percent of total bond issuance in China. In contrast, the newly established *Shanghai Stock Exchange* and *Shenzhen Stock Exchange* have enjoyed rapid expansion since their founding in 1990. As measured by total market capitalization, both of these stock exchanges ranked in the world's top ten at the end of 2011. However, the combined stock market is still quite small compared to the banking system. The market capitalization-to-GDP ratio was 51.50 percent in 2011 in China, which is much lower than the U.S. Despite its rapid growth, the stock market does not play a proper role in the country, where insider trading and speculation are prevalent (He and Rui (2014)). For example, the turnover rates on the *Shanghai* and Sh*enzhen Stock Exchanges* are 178.50 and 344.30 percent, respectively, which is higher than most industrial countries and may indicate widespread speculative trading (Allen, Qian, Zhang and Zhao (2013)). Moreover, the two stock exchanges were established so as to provide a new source of funding to SOEs and to reduce the financial burden of government bailouts. Up until 2005, about 80 percent of the (more than 1,100) listed enterprises were converted from SOEs in China. The Chinese government's dual role as both regulators and shareholders reduces the effectiveness of the stock market in terms of resource allocation and risk diversification.

Informal financing, which has been growing rapidly in China (due to the current financial repression), channels credit from state-owned and large private firms to SMEs in

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support of the rapid growth of the Chinese economy (Allen, Qian and Qian (2005); Bose (1998)). The formal financial sector is inefficient in allocating credit due to a severe information asymmetry and weak law enforcement. Informal financing based on reputation and relationship may be filling the gap thanks to an advantage in screening, monitoring, and enforcement (Stiglitz (1990); Arnott and Stiglitz (1991)).

One type of informal financing is the inter-corporate loan. Because direct lending activities among non-financial firms are prohibited in China, entrusted loans have moved in to facilitate inter-corporate lending.[6] Under financial regulations in China, non-financial firms can extend credit to other firms via entrusted loans in a process that is coordinated by banks and other financial institutions (banks hereafter). Lenders and borrowers can negotiate loan terms subject to certain financial regulations[7] regarding e.g. amount, interest rate, maturity, and purpose. Banks merely act as agents on behalf of the lenders and coordinate the loan procedures, i.e., the contract signing, loan withdrawals, and repayment. However, banks do not bear any default risk for the entrusted loans, which are often treated as off-balance sheet items. Appendix 1 gives a timeline for the related laws and regulations (for what we will henceforth call inter-corporate loans).

The Chinese financial authorities imposed only a mild set of regulations on entrusted loans because of their beneficial effect on credit reallocation. The market for entrusted loans has witnessed a rapid expansion with a gradual liberalization of interest rates in China, and it has recently become a key source of financing.[8] The interest rate ceiling for entrusted loans was abolished by PBOC in October 2004, which enabled lenders to negotiate freely with borrowers on interest rates. Appendix 2 shows that the market share of inter-corporate loans has been growing rapidly, accounting for 14.70 percent of total fi-

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[6] On March 8th, 1993, *People's Bank of China* (PBOC) promulgated administrative decrees on entrusted loans as regards financial trust companies. On April 5th, 2001, the PBOC released a regulation on entrusted loans, "*Issues on Commercial Banks' Provision for Launching Entrusted Loans*". For an overview of the evolution of financial regulation of entrusted loans in China, see Appendix 1 for a survey of the laws relating to entrusted loans.

[7] *Lending General Provisions* by the *People's Bank of China* were formulated in accord with the *Law of the Commercial Banks* and other relevant laws on August 1st, 1996. Article 7 states that entrusted loans should comply with the *Lending General Provisions*.

[8] The interest rates are under extensive regulation by the People's Bank of China (PBOC). PBOC set the benchmark interest rate along with a rate floor and rate ceiling. The interest rate is only allowed to vary within specified bounds. For example, PBOC set the benchmark lending rates, and the interest rate of commercial loans, including entrusted loans, must be between the floor and ceiling around the benchmark lending rate. China began its interest rate liberalization in 1996 by abolishing the ceiling on interbank lending rates. From 1998 to 2004, the ceiling for the lending rates gradually raised, and was abolished in October 2004 (except for credit cooperatives), while the floor remained unchanged at 90% of the benchmark lending rate. Recently, China took a further step toward a market-oriented rate by removing the lending rate floor on July 19th, 2013.

nancing in 2013 (the second largest financing source after bank lending) and totaling 2.55 trillion RMB.

The rapid growth in entrusted lending has however generated substantial concern about the credit risks involved, especially in light of the gloomy prospects for the Chinese economy since the global financial crisis. SOEs and large private firms often have very limited investment opportunities (as they struggle with inefficient organizational structures, policy burdens, and overcapacity problems) but still have easy access to bank credit. This abundant credit can be channeled to private SMEs at interest rates above the bank lending rate.[9] However, inter-corporate loans may also be extended to poor borrowers if lenders do not conduct proper screening and monitoring: e.g., 27.52 percent of outstanding inter-corporate lending by the *Sunny Loan Top Co., Ltd* as at end-2013 could not be recovered at maturity.[10] The risks of inter-corporate lending can increase the systemic risks of the financial system as such credit often ends up in the real estate market and local municipal government investment platforms, which have become a major concern as regards financial stability in China.

Although inter-corporate loans have come under substantial scrutiny in China itself, the gains and losses from such loans have not been assessed yet in the academic literature. We will provide such an evaluation by examining the market reactions to the announcements of issuance and receipt of inter-corporate loans.

3   The hypotheses

Institutional lenders, such as banks, can enhance firm valuation by alleviating the information asymmetry of borrowers (Fama (1985); Boot (2000); Ongena and Smith (2000)). Approval of a bank loan is often perceived by uninformed investors as a good signal, especially for borrowers who suffer from severe information asymmetries. The positive excess returns on borrowers` stocks following bank loan announcements are widely documented

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[9] Beijing, June 25th, 2013 (*Reuters*) - A deputy general manager in a state-owned steel firm says that the firm doesn't use the bank credit to expand production, as the average loss is 100 - 200 RMB per ton of steel sold. Entrusted loans are an attractive business option for his company. The firm borrows from banks at the benchmark lending rate (about six percent), and issues entrusted loans to borrowers at twice that rate.

[10] The firm is listed in *Shanghai Stock Exchange* (i.e. stock ID: 600830). Among the 1.12 billion RMB entrusted loans outstanding at the end of 2013, 306 million is classified as doubtful and 5 million is classified as losses. Data from the announcement by the *Sunny Loan Top Co., Ltd*: www.cninfo.com.cn/finalpage/2014-06-07/64111840.PDF.

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in the literature. For example, James (1987) finds positive CARs of almost 200 basis points in a two-day period surrounding bank loan announcements. Billett, Flannery and Garfinkel (1995) show significant positive CARs on loans from non-bank financial institutions which are indistinguishable from bank loans. However, Lummer and McConnell (1989) show that the market reacts positively to loan renewals but not to new bank loan agreements.

The CARs on bank loan announcements are higher for borrowers who suffer more from information asymmetries (Best and Zhang (1993)), e.g., for the smallest borrowers (Maskara and Mullineaux (2011)). Lender identification can also alleviate the information asymmetry of bank loan agreements, as in the case of internationally syndicated loans in emerging economies (Harvey, Lins and Roper (2004)), and loans by foreign or local banks, except for domestic banks that are located far from their borrowers (Ongena and Roscovan (2013)) and lenders with higher credit ratings (Billett, Flannery and Garfinkel (1995)).

However, the CARs on bank loan announcements change over time. Fields, Fraser, Berry and Byers (2006) for example show that CARs on bank loan announcements were positive in the 1970s and 1980s, whereas they disappeared afterwards except for smaller and poorly performing firms and periods of high credit risk spreads. And Li and Ongena (2014) find that the CARs on bank loan announcements were positive during the global financial crisis although they were close to zero before that. Wang and Xia (2014) show that banks exert less effort in ex-ante screening and ex-post monitoring when they can securitize loans, which may explain the changes in CARs on bank loans over the time.

Despite considerable anecdotal evidence, little direct evidence has been provided so far on the market reactions of lenders' stocks to loan announcements. A few studies investigate the loan announcement effect of lending financial institutions. For example, Megginson, Poulsen and Sinkey (1995) show that the announcements of syndicated loans to Latin American borrowers in the 1970s are associated with negative CARs for the lending banks, while syndicated loans to U.S. borrowers in the 1980s are associated with positive CARs. However, little is known about the announcement effect of loans made by non-financial firms. Yook (2003) show that the acquirers' stock prices suffer from negative market reactions to M&A announcements, which may be seen to indicate that the acquirers have run out of other worthwhile projects to finance. Similarly, the issuance of inter-corporate loans may suggest that the issuing firms have run out of worthy investment projects, which can lead to negative market reactions. Thus, our first hypothesis:

Hypothesis 1: *The announcement of the issuance of an inter-corporate loan will lead to significantly negative excess returns on the stock of the issuing firm.*

In contrast to bank loans, the granters of inter-corporate loans are non-financial firms, and loan default risks should incentivize them to acquire proprietary information about the borrowers, e.g., through long-term business relationships such as business group affiliation, supplier-customer, etc. Thus, obtaining an inter-corporate loan may certify the borrower and convey positive information to uninformed investors. Thus, our second hypothesis:

Hypothesis 2: *The announcement of the receipt of an inter-corporate loan will lead to significantly positive excess returns on the stock of the receiving firm.*

Business groups are prevalent in emerging economies (Claessens, Fan and Lang (2006)), where weak creditor protection may make it too costly to raise external finance (Bae and Vidhan (2009)). Firms with good investment opportunities can obtain credit through the internal capital market if and when the headquarters of the business group allocates credit efficiently among group firms (Stein (1997)). But the headquarters of the group may also channel credit to other group firms in financial distress in order to avoid negative spillovers to the rest of the business group (Gopalan, Nanda and Seru (2007)).

Ownership is often concentrated in business groups, and voting rights exceed cash flow rights through pyramid structures and cross-holdings by controlling shareholders in emerging economies (Claessens, Djankov and Lang (2000)). Thus, a majority of decision rights are often in the hands of controlling shareholders, which may enable them to tunnel corporate resources for private benefits (Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000)). For example, controlling shareholders used to tunnel resources away from listed firms through intra-group loans in China (Jiang, Lee and Yue (2010)). However, intra-group loans to controlling shareholders have been prohibited by the Chinese government since 2006, which alleviates the tunneling concerns with respect to inter-corporate loans in the country. As a result, intra-group loans among Chinese listed firms are likely reveal a lack of worthwhile projects and financial distress rather than tunneling.

The receipt of intra-group loans, however, resembles bank loan agreements though the lenders are affiliated within the same business group. Firms may have proprietary information due to affiliation within the same business group. Thus, our third and fourth hypotheses:

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Hypothesis 3: The announcement of the issuance of an intra-group loan will lead to significantly negative excess returns on the stock of the issuing firm.

Hypothesis 4: The announcement of the receipt of an intra-group loan will lead to significantly positive excess returns on the stock of the receiving firm.

Inter-group loans are extended by one non-financial firm to another not in the same business group. But inter-group loans often occur between firms with certain business relationships, e.g., customers, suppliers, or firms in the same industry. Lending firms may have an informational advantage over banks in screening and monitoring the borrowers when extending inter-corporate loans. In addition, lenders can benefit from inter-group loans via a higher rate of return than in alternative investments (e.g., bank deposits). What is even more important is that inter-group loans provide an alternative financing channel for credit constrained borrowers such as private SMEs.

Lenders of inter-group loans, especially SOEs and large private firms, can raise external finance more easily than private SMEs. The issuance of inter-group loans may signal to uninformed investors that the issuing firms have run out of worthwhile projects to finance, even though the inter-corporate loans indeed improve the credit allocation in the issuing firms as in Bose (1998) and Hoff and Stiglitz (1997). We surmise that the signaling effect dominates the credit reallocation effect, which results in a negative market reaction to the issuance of inter-group loans.

The receipt of inter-group loans, however, is also quite similar to the receipt of bank loans. Although the lenders are non-financial firms, which may lack sufficient expertise in lending, they may have proprietary information obtained through long-term business relationship (e.g., suppliers or customers). Thus, our fifth and sixth hypotheses:

Hypothesis 5: The announcement of the issuance of an inter-group loan will lead to significantly negative excess returns on the stock of the issuing firm.

Hypothesis 6: The announcement of the receipt of an inter-group loan will lead to significantly positive excess returns on the stock of the receiving firm.

4   Data and methodology

4.1   Data

Our sample consists of non-financial firms traded on the Chinese stock market (both the *Shanghai* and *Shenzhen Stock Exchange*). We firstly identify a sample of 1,024 announcements on inter-corporate loans during 2005–2012 from *Resset* (www.resset.cn), which is a widely used database for the Chinese stock market (Calomiris, Fisman and Wang (2010)). The CSRC requires all listed firms to announce major events which may influence their stock prices.[11] We then crosscheck the announcements with the official documents of corporate announcements published on the websites designated by the CSRC,[12] and the websites of *Shanghai* and *Shenzhen Stock Exchange*. We identify another 249 announcements of inter-corporate loans. So we reach a sample of 1,273 announcements of inter-corporate loans. Appendix 3–1 shows an original inter-corporate loan announcement file in Chinese, with an English version translated by the authors in Appendix 3–2.

We exclude all observations that coincide with other confounding corporate events (i.e., release of annual reports, announcement of seasonal offerings, dividend, law suits, etc.) within the [–2, 2] trading day window around the announcements date of an inter-corporate loan. We obtain a sample of 719 unaffected announcements of issuance and receipt of inter-corporate loans. Appendix 4 tabulates the total volume of inter-corporate loans by all listed firms on the *Shanghai Stock Exchange*, which shows that our sample covers a quarter of the total volume of inter-corporate loans.

We record the announcement date, loan type (i.e., issuance / receipt), existing relationship between lender and borrower (i.e., inter-group and intra-group, where the latter

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[11] According to Article 67 of Chapter 3 of the *Securities Law of China* (effective as of Oct 27, 2005), the term "major event" means: (1). A major change in the company's business guidelines or scope of business; (2). A decision made by the company concerning a major investment or major asset purchase; (3). Conclusion by the company of an important contract which may have an important effect on the company's assets, liabilities, rights, interests or business results; (4). Incurrence by the company of a major debt or default on an overdue major debt; (5). Incurrence by the company of a major deficit or incurrence of a major loss; (6). A major change in the external conditions of the company's production or business; (7). A change in the board of directors, no less than one-third of directors, supervisors or managers of the company; (8). A considerable change in the holdings of shareholders who hold no less than five percent of the company's shares; (9). A decision made by the company to reduce its capital, to merge, to divide, to dissolve, or to apply for bankruptcy; (10). Major litigation involving the company, or lawful cancellation by a court of a resolution adopted by the shareholders' general meeting or the board of directors; (11). Criminal cases involving the company, and the arrest of board of directors, supervisors or senior management staff; (12). Other events specified by the *China Securities Regulatory Commission*.

[12] The official designated websites for corporate disclosures are www.cninfo.com.cn and www.cnstock.com.

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is further broken down into controlling shareholders, subsidiaries, and firms with other relationships (i.e., firms affiliated with the same business group but without equity ownership of each other), and ownership of the counter-party. In addition, we also record whether an inter-corporate loan is a new loan (issuance / receipt) or a loan revision. A new loan indicates that the borrower and lender do not have a prior inter-corporate loan between them, while a loan revision means there is an existing loan. The announcement files for inter-corporate loans enable us to identify loan terms such as the loan amount, interest rate, maturity, and collateral, and also the name of the financial institution involved, among other characteristics.

The inter-corporate loan announcements are matched with stock prices and a set of firm characteristics at the fiscal year-end before the announcement year. We collect financial information for non-listed firms from the announcement files of inter-corporate loans, and also from the survey of industrial firms by the *National Bureau of Statistics of China*.[13] As a result, we can compile a set of firm characteristics which may be associated with the CARs on announcements of inter-corporate loans.

4.2   Methodology

A standard market model (as in Mikkelson and Partch (1986) and James (1987) for example) is used to estimate the benchmark returns and then to calculate the abnormal returns. In order to measure market returns, we use the equally-weighted market return for the Chinese stock market (A-shares) from the *China Stock Market & Accounting Research* (CSMAR) database. We define the announcement date as the event date (i.e., "day 0"). For each "clean" announcement of entrusted loans, we run a daily market model for the firms over the estimation window of [–250, –21]. Specifically, The abnormal return for firm i on day t is defined as:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \tag{1}$$

where R_{it} is the rate of return for firm *i* on day *t*, R_{mt} is the rate of return for the equally-weighted market index of the Chinese stock market (A-shares) on day *t*. The coefficients

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[13] We use the dataset for industrial firms in China, which include all state-owned enterprises (SOEs) and all non-state owned firms with annual sales revenues above five million RMB, from 1998-2010.

α_i and β_i are estimates of firm i's market model parameters for the period from 250 trading days to 21 trading days before the event date.

The average abnormal return on event day t for a sample of size N is:

$$AR_t = \frac{1}{N}\sum_i^N AR_{it} \tag{2}$$

The significance tests are based on standardized abnormal returns:

$$SAR_{it} = \frac{AR_{it}}{S_{it}} \tag{3}$$

where

$$S_{it} = \left[V_i^2\left[1 + \frac{1}{M} + \frac{(R_{mt}-R_m)^2}{\sum_j^M(R_{mj}-R_m)^2}\right]\right]^{1/2} \tag{4}$$

and V_i^2 is the residual variance of the market model for firm i; M is the number of days used in the market model regression (230); R_m is the average market return over the estimation window. If individual abnormal returns follow a normal distribution, SAR_{it} will follow a Student's t-distribution with $M - 2$ degrees of freedom.

Cumulative abnormal returns, i.e., $CAR[T_1, T_2]_i$, are the summation of abnormal returns over the event window $[T_1, T_2]$ for firm i, the average CAR for a sample size N is:

$$CAR[T_1, T_2] = \frac{1}{N}\sum_{i=1}^N\sum_{t=T_1}^{T_2} AR_{it} \tag{5}$$

The statistic for the significance test of $CAR[T_1, T_2]$ is:

$$Z_{(T_1,T_2)} = \frac{1}{\sqrt{N}}\sum_{i=1}^N\sum_{t=T_1}^{T_2} SAR_{it}/(\sqrt{T_2 - T_1 + 1}) \tag{6}$$

Since December 16, 1996, the Chinese stock market has imposed restrictions on the daily price ceiling and floor. Based on the previous trading day's closing price, the ceiling and the floor for the stock prices are set at ten percent for all stocks and five percent for stocks that are labeled for special treatment ("ST").[14] Thus, the stock price may continue to react

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[14] According to CSRC, a company can be downgraded to ST status if: (1) The firm records a net loss in two consecutive fiscal years; (2) The company is found to have committed financial fraud and, after taking remedial action, records a net loss in two consecutive fiscal years; (3) The company is found to have committed

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after the announcement day, which makes CAR[–1, +1] an informative measure to capture a full market reaction besides the standard CAR[–1,0]. We also report results for various event windows (e.g., CAR[–2,+2]) to check the robustness of the estimates.

Finally we link the CARs to a certain loan, counter-party and firm characteristics in a regression equation:

$$CAR[-1,0]_i = \beta_0 + \beta_1 Loan_i + \beta_2 Counter-party_i + \beta_3 Firm_i + \beta_4 Industry_i + \beta_5 Year_i + \epsilon_i \quad (7)$$

Table 1   Definitions of variables

Variable category	Variable name	Definition
Loan	Loan size	The amount of inter-corporate loan, in millions of RMB
	Spread	The annual interest rate on the inter-corporate loan over the basis lending rate minus one, i.e., the interest premium over the basis lending rate
	Maturity	The maturity of the inter-corporate loan, in months
	Guarantee	=1 if the loan is collateralized or guaranteed by a third-party, 0 otherwise
	Loan revision	=1 if the loan terms are revised, 0 otherwise
Counter-party Firm	Intra-group loan	=1 if the counter-party firm is a loan-announcing firm's subsidiary, controlling shareholder, or belongs to the same business group
	Counter-party ownership	A loan-announcing firm's equity ownership in the counter-party firm, or the controlling shareholder's equity ownership in a loan-announcing firm
	Counter-party industry	=1 if the industry of the counter-party firm is the same as the loan-announcing firm, 0 otherwise
	Counter-party size	The logarithm of the total assets of the counter-party firm
	State-owned counter-party	=1 if the counter-party firm is state-owned, 0 otherwise
(Loan-announcing) Firm	Firm size	The logarithm of total assets
	Sales growth	The annual sales` growth rate
	Market to book ratio	The ratio of the market value over the book value of assets
	Cash holding	Cash over total assets
	Free cash flow	Operating cash flow minus the capital expenditure over total assets
	Leverage	Total liabilities over total assets
	State control	=1 if the ultimate owner is the state, 0 otherwise
	Other accounts receivable	Other accounts receivable over total assets
	Other accounts payable	Other accounts payable over total assets

financial fraud, the company has failed to take remedial action within a specified period after being urged by the CSRC to do so, and the company has been temporarily delisted for two months; (4) The company has failed to issue its annual report or semi-annual report on the designated date and has been temporarily delisted for two months. Any company that fails to take steps to improve its situation after being designated ST will ultimately be delisted from the stock exchange.

We include loan variables in the regression (loan size, interest rate, maturity, guarantee, and loan revision), as well as counter-party variables (intra-group and inter-group counter-party, counter-party industry, counter-party size, and state-owned counter-party). In addition, we include a set of firm variables: size, age, market-to-book ratio, free cash flow, leverage, state-control, other accounts receivable, and other accounts payable. Finally, we include industry and year fixed effects in the regression. All variable definitions are listed in Table 1.

5   Results

5.1   Summary statistics

We focus on 2005–2012, as our sample covers all announcements of inter-corporate loans in that period. Appendix 5–1 shows the distribution of 719 "clean" announcements by type and year. A total of 564 announcements were made on the issuance of inter-corporate loans, and 155 announcements on their receipts. The number of announcements increases over the years, with a slight decrease in 2012, and there are more announcements of issuances than of receipts.

Appendix 5–2 shows the distribution of inter-corporate loan announcements by industry. A majority of the inter-corporate loans are in the manufacturing industry. The utilities industry ranks second in the number of announcements of issuance of inter-corporate loans, whereas the real estate industry ranks second for receipt announcements.

Table 2 shows the characteristics of inter-corporate loans for issuance versus receipts as well as for intra-group versus inter-group loans. A majority of the announced inter-corporate loans are intra-group loans, on both issuance and receipts. Appendix 6 shows a further decomposition of the intra-group loans into controlling shareholders, subsidiaries, and firms with other relationships. All issuances of intra-group loans go to the subsidiaries of listed firms except for four loans to the controlling shareholders, while a majority of the receipts of intra-group loans comes from the controlling shareholder. Table 2 also shows that issuance size (in million RMB) is smaller than the receipt size for inter-corporate loans, the respective average loan sizes for issuance and receipt of inter-corporate loans being 185.23 and 300.26 (216.57 and 298.28 for intra-group loans).

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Table 2   Characteristics of inter-corporate loans

	Issuance			Receipt			Test of mean difference
	# Obs.	Mean	Median	# Obs.	Mean	Median	T-stat
All loans							
Loan size	564	185.23	70.00	155	300.26	180.00	–2.59***
Maturity	500	16.29	12.00	146	18.99	12.00	–2.14**
Spread	452	0.45	0.06	143	0.05	0.00	6.24***
Guarantee	564	0.29	0	155	0.12	0	4.19***
Loan revision	564	0.11	0	155	0.10	0	0.47
Intra-group loans							
Loan size	396	216.57	80.00	140	298.28	150.00	–1.50
Maturity	339	18.22	12.00	134	19.07	12.00	–0.57
Spread	312	0.14	0.00	132	0.04	0.00	2.44**
Guarantee	396	0.13	0	140	0.09	0	1.05
Loan revision	396	0.11	0	140	0.11	0	0.05
Inter-group loans							
Loan size	168	111.36	60.00	15	318.80	200.00	–3.97***
Maturity	161	12.24	12.00	12	18.17	12.00	–2.44**
Spread	140	1.15	1.21	11	0.17	0.00	3.79***
Guarantee	168	0.66	1	15	0.40	0	2.03**
Loan revision	168	0.11	0	15	0.00	0	1.38

Loan size is the amount of inter-corporate loans in millions of RMB; Maturity is the loan maturity in number of months; Spread is the percentage increase in the interest rate from the basis lending rate; Guarantee equals one if a loan is collateralized or guaranteed by a third party, zero otherwise. Loan revision equals one if the loan terms are revised, zero otherwise. The test of mean difference between issuance and receipt reports the t-statistics with significance *** at one percent, ** at five percent, and * at ten percent level.

Table 2 also shows that the maturity is 18.22 months on average for the issuance of intra-group loans and 12.24 months for the issuance of inter-group loans. The maturity for the receipt of inter-corporate loans is slightly longer than that for inter-group loans. In addition, the average interest rate spread is 14 versus 115 percent over the basis lending rate for the issuance of intra-group versus inter-group loans; and four versus seventeen percent for the receipt of intra-group versus inter-group loans. Furthermore, the issuance of intra-group loans has a lower proportion of guarantees than inter-group loans (i.e., thirteen versus 66 percent), which also applies to the receipt of intra-group versus inter-group loans (i.e. nine versus 40 percent).

5.2 Market reactions to the issuance of inter-corporate loans

The top panel of Table 3 shows the abnormal returns on the issuance of inter-corporate loans. The two-day cumulative abnormal return, i.e., CAR[–1,0], is –0.42 percent and statistically significant at the one percent level in a Student's t-test and significant at the one percent level in a Wilcoxon signed-rank test (i.e., the proportion of positive CARs is less than 50 percent). The results for AR[0] and CAR[–1,1] are qualitatively similar. The upper panel of Appendix 7 shows the average abnormal returns for the issuance of inter-corporate loans in the [–20, 20] window, which exhibits a substantial drop in the average abnormal return on the event day.

Table 3   CARs on issuance of inter-corporate loans

	All loans				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	440	–0.37	–0.26	–4.14***	0.42***
CAR[–1,0]	440	–0.42	–0.41	–3.08***	0.40***
CAR[–1,1]	440	–0.49	–0.56	–2.74***	0.42***
CAR[–2,2]	440	–0.70	–0.59	–3.02***	0.42***
	Single event				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	350	–0.40	–0.31	–4.00***	0.39***
CAR[–1,0]	350	–0.48	–0.56	–3.07***	0.38***
CAR[–1,1]	350	–0.51	–0.66	–2.52**	0.41***
CAR[–2,2]	350	–0.67	–0.59	–2.53**	0.42***
	Multiple-events				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	90	–0.26	0.12	–1.28	0.54
CAR[–1,0]	90	–0.17	0.02	–0.65	0.50
CAR[–1,1]	90	–0.41	–0.26	–1.08	0.44
CAR[–2,2]	90	–0.81	–0.61	–1.72*	0.39*

Inter-corporate loans are classed as single-events if there is a single announcement for issuing a loan on the same date, and vice versa for multiple-events. The t-test of the CARs reports the t-statistic, and the Wilcoxon signed-rank test report the proportion of positive CARs. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

As multiple inter-corporate loan issuances may be announced on a single day, we split the sample into single-event versus multiple-events subsamples in order to get a cleaner effect. Thus, the middle panel of Table 3 shows that the CAR[–1,0] is –0.48 percent and statistically significant for the single-event subsample in a t-test, and –0.17 percent and insignifi-

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cant for the multiple-events subsample. We will focus on the single-event subsample for the issuance of inter-corporate loans hereafter.

Table 4 shows the issuance of inter-corporate loans by intra-group versus inter-group loans. The CAR[–1,0] for the issuance of intra-group loans is –0.62 percent and significant at the one percent level in both a t-test and a Wilcoxon singed-rank test, while it is –0.25 percent for inter-group loans and significant at one percent level in a Wilcoxon signed-rank test although statistically insignificant in a t-test. Furthermore, the results for AR[0] and CAR[–1,–1] are qualitatively similar. In sum, the issuance of inter-corporate loans generates a negative market reaction, sending unfavorable signals to uninformed investors for both intra-group and inter-group loans. The issuance of inter-corporate loans may reveal a credit misallocation in a listed firm, e.g., a listed firm may run out of worthwhile projects to finance even when the inter-corporate loans may enhance the credit allocation.

Table 4　　　CARs on issuance for intra-group versus inter-group borrowers

	Intra-group borrowers				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	222	–0.44	–0.29	–3.71***	0.41***
CAR[–1,0]	222	–0.62	–0.43	–3.32***	0.39***
CAR[–1,1]	222	–0.58	–0.54	–2.44**	0.43***
CAR[–2,2]	222	–0.56	–0.47	–1.82*	0.44**
	Inter-group borrowers				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	128	–0.32	–0.48	–1.81*	0.35***
CAR[–1,0]	128	–0.25	–0.63	–0.88	0.36***
CAR[–1,1]	128	–0.37	–0.73	–1.03	0.38**
CAR[–2,2]	128	–0.86	–0.79	–1.75*	0.40**

Inter-corporate loans are in the intra-group borrowers subsample if the borrowers are in the same business group, and vice versa for the inter-group borrowers subsample. The t-test of the CARs reports the t-statistic, and the Wilcoxon signed-rank test reports the proportion of positive CARs. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

We also show the CARs separated into issuance of intra-group loans to controlling shareholders, subsidiaries, and borrowers with other relationship. Table 5 shows that the issuance of intra-group loans to subsidiaries constitutes a majority of the sample, while the set of loans issued to controlling shareholders contains only four observations due to government sanctions since 2006. Consistent with the tunneling of intra-group loans to control-

ling shareholders in Jiang, Lee and Yue (2010), the CAR[–1,0] equals –1.97 percent, though it is not statistically significant due to the limited number of observations. In addition, CAR[–1,0] is –0.65 percent for the issuance of intra-group loans to subsidiaries, which is significant at the one percent level in both a t-test and a Wilcoxon signed-test. We do not find any significant CARs for the issuance of intra-group loans to borrowers with other relationships.

Besides indicating a lack of worthwhile projects in the issuing firm, the issuance of intra-group loans to subsidiaries may also reveal financial distress in this subsidiary, which may spill over to the rest of the business group. Our results provide evidence consistent with the role of ICMs in supporting financially weaker firms in a business group (Gopalan, Nanda and Seru (2007)).

Table 5   CARs on issuance of intra-group loans to controlling shareholders, subsidiaries, and borrowers with other relationships.

	# Obs	Mean	Median	T-stat	Signed-rank test
Intra-group loans to controlling shareholders					
AR[0]	4	–0.61	–0.55	–1.28	0.25
CAR[–1,0]	4	–1.97	–0.83	–1.33	0.25
CAR[–1,1]	4	–1.42	–1.32	–1.15	0.50
CAR[–2,2]	4	–5.32	–4.13	–2.05	0.00*
Intra-group loans to subsidiaries					
AR[0]	206	–0.45	–0.25	–3.64***	0.42***
CAR[–1,0]	206	–0.65	–0.43	–3.35***	0.38***
CAR[–1,1]	206	–0.63	–0.54	–2.48**	0.43***
CAR[–2,2]	206	–0.51	–0.47	–1.60	0.44**
Intra-group loans to borrowers with other relationships					
AR[0]	12	–0.17	–0.54	–0.35	–0.42
CAR[–1,0]	12	0.43	–0.32	0.67	0.50
CAR[–1,1]	12	0.44	–0.48	0.57	0.42
CAR[–2,2]	12	0.22	0.45	0.20	0.50

Intra-group loans are in subsamples according to controlling shareholders, subsidiaries, and borrowers with other relationships. The t-test of the CARs reports the t-statistic, and the Wilcoxon signed-rank test reports the proportion of positive CARs. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

In sum, the negative CARs for the issuance of inter-corporate loans may reveal a credit misallocation to the uninformed investors, or rather a lack of worthwhile projects to fi-

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nance for the issuing firms, even when such loans would improve credit allocation. Furthermore, the negative CARs for the issuance of intra-group loans to subsidiaries may reveal financial distress in the subsidiary which may spill over to the rest of the business group. The negative CARs for the issuance of inter-group loans, however, may also show inefficient informal loans, i.e., non-financial corporate lenders may lack sufficient lending expertise as banks.

5.3 Market reactions to the receipt of inter-corporate loans

Table 6   CARs on receipt of inter-corporate loans

	All loans				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	140	0.35	0.04	1.45	0.51
CAR[–1,0]	140	0.91	0.10	2.67***	0.51*
CAR[–1,1]	140	1.01	0.49	2.55**	0.54*
CAR[–2,2]	140	0.90	0.51	2.14**	0.56*
	Single event				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	125	0.46	0.18	1.74*	0.53
CAR[–1,0]	125	1.09	0.57	2.95***	0.54**
CAR[–1,1]	125	1.31	0.84	3.04***	0.58**
CAR[–2,2]	125	1.15	0.62	2.52**	0.60**
	Multiple events				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	15	–0.58	–0.52	–2.14*	0.33*
CAR[–1,0]	15	–0.59	–1.34	–0.86	0.33
CAR[–1,1]	15	–1.45	–2.02	–1.97*	0.20**
CAR[–2,2]	15	–1.15	–2.36	–1.27	0.27

Inter-corporate loans are classed as single-events if there is a single announcement of a loan receipt on the same date, and as multiple-events if there are multiple announcements of loan receipts on the same date. The t-test of the CARs reports the t-statistic, and the Wilcoxon signed-rank test reports the proportion of positive CARs. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

Table 6 shows the abnormal returns for the receipt of inter-corporate loans. The CAR[–1,0] is 0.91 percent and statistically significant at the one percent level in a t-test, and also at the ten percent level in a Wilcoxon signed-rank test. In addition, CAR[–1,0] is 1.09 percent and statistically significant at the one percent level in a t-test for the receipt of inter-corporate loans in the single-event subsample and –0.59 percent in the multiple-events

subsample (but not significant). Similarly, we will focus on the single-event subsample for the receipt of inter-corporate loans hereafter. The results are qualitatively similar for other event windows, such as AR[0], CAR[–1,1], and CAR[–2,2]. The lower panel of Appendix 7 shows a substantial jump in the average abnormal return on the event day of the receipt of inter-corporate loans. In sum, the receipt of inter-corporate loans has a certification effect for the borrowing firms in China, as do bank loans in the U.S.

We further tabulate the receipts of inter-corporate loans by intra-group versus inter-group loans. The top panel of Table 7 shows that the CAR[–1,0] for the receipt of intra-group loans is 1.06 percent and statistically significant at the one percent level in a t-test and also at the five percent level in a Wilcoxon signed-rank test. The CAR[–1,0] is 1.33 percent for inter-group loans (but not statistically significant). The results are qualitatively similar for other event windows, e.g., AR[0], CAR[–1,1], and CAR[–2,2]. We find that the intra-group loans also have a certification effect for the borrowing firms, which may be due to their proprietary information due to affiliation with the same business group.

Table 7   CARs on receipts from intra-group versus inter-group lenders

	Intra-group lenders				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	110	0.43	0.18	1.69*	0.54
CAR[–1,0]	110	1.06	0.62	2.79***	0.55**
CAR[–1,1]	110	1.19	0.81	2.76***	0.59**
CAR[–2,2]	110	1.04	0.60	2.12**	0.58*
	Inter-group lenders				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	15	0.68	–0.73	0.56	0.47
CAR[–1,0]	15	1.33	–0.03	0.97	0.40
CAR[–1,1]	15	2.16	1.42	1.26	0.53
CAR[–2,2]	15	1.93	1.75	1.56	0.73

Inter-corporate loans are in the intra-group lenders subsample if the lenders are in the same business group, and as inter-group lenders if the lenders are not in the same business group. The t-test of the CARs reports the t-statistic, and the Wilcoxon signed-rank test reports the proportion of positive CARs. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

We also tabulate the receipts of intra-group loans by those from controlling shareholders, subsidiaries, and lenders with other relationships. Table 8 shows that intra-group loans from controlling shareholders constitute a majority of the sample. The CAR[–1,0] is 1.42 percent for the receipt of intra-group loans from controlling shareholders and is statistically

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significant at the one percent level in both a t-test and a Wilcoxon signed-rank test. Furthermore, the receipt of intra-group loans from lenders with other relationship has a CAR[–1,0] of 0.37 percent (but not statistically significant). However, we do not find any clear evidence for the receipt of intra-group loans from subsidiaries, likely due to the limited number of observations.

Table 8   CARs on receipt of intra-group loans from controlling shareholders, subsidiaries, and lenders with other relationship

	Intra-group loans from controlling shareholders				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	81	0.55	0.30	1.99*	0.58
CAR[–1,0]	81	1.42	0.72	3.07***	0.58***
CAR[–1,1]	81	1.70	0.85	3.12***	0.60***
CAR[–2,2]	81	1.54	1.15	2.53**	0.60**
	Intra-group loans from subsidiaries				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	7	–0.60	–1.14	–1.13	0.29
CAR[–1,0]	7	–0.98	–1.35	–0.96	0.43
CAR[–1,1]	7	–1.15	–1.75	–0.93	0.43
CAR[–2,2]	7	–2.23	–1.96	–1.46	0.43
	Intra-group loans from lenders with other relationship				
	# Obs	Mean	Median	T-stat	Signed-rank test
AR[0]	22	0.28	–0.06	0.39	0.45
CAR[–1,0]	22	0.37	–0.08	0.51	0.50
CAR[–1,1]	22	0.04	0.72	0.07	0.59
CAR[–2,2]	22	0.28	0.34	0.33	0.55

Intra-group loans are in subsamples according to controlling shareholders, subsidiaries, and borrowers with other relationship. The t-test of the CARs reports the t-statistic, and the Wilcoxon signed-rank test reports the proportion of positive CARs. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

In sum, the receipt of inter-corporate loans may provide certification for the borrowing firms. In particular, the receipt of loans from controlling shareholders' can provide proprietary information to uninformed investors, which leads to positive CARs. The intra-group loan from controlling shareholders is consistent with the corporate propping-up by controlling shareholders in emerging markets (Friedman, Johnson and Mitton (2003); Jian and Wong (2010); Peng, Wei and Yang (2011)).

Table 9   CARs sorted by loan, counter-party and firm characteristics

		Issuance of intragroup loans to subsidiaries			Issuance of inter-group loans			Receipt of intra-group loans from controlling shareholders		
		# Obs.	CAR[−1,0]	CAR difference	# Obs.	CAR[−1,0]	CAR difference	# Obs.	CAR[−1,0]	CAR difference
Loan	Loan size — > median	103	−0.0085***	−0.0039	64	0.0010	0.0070	41	0.0161**	0.0038
	Loan size — ≤ median	103	−0.0046*		64	−0.0060		40	0.0123*	
	Spread — > median	69	−0.0044	0.0018	57	−0.0052	−0.0079	18	0.0136	−0.0005
	Spread — ≤ median	95	−0.0062**		56	0.0027		60	0.0141**	
	Maturity — > 1 year	51	−0.0055	0.0005	24	−0.0017	0.0002	23	0.0136	−0.0010
	Maturity — ≤ 1year	133	−0.0061**		100	−0.0019		57	0.0146***	
	Guarantee — Yes	28	0.0055	0.0140**	84	−0.0055	−0.0089	7	0.0059	−0.0091
	Guarantee — No	178	−0.0084***		44	0.0033		74	0.0150***	
	Loan revision — Yes	20	−0.0181**	−0.0128*	18	−0.0003	0.0025	6	0.0238*	0.0103
	Loan revision — No	186	−0.0053***		110	−0.0028		75	0.0135***	
Counter-party	Counter-party ownership — > median	103	−0.0060**	0.0012				41	0.0201**	0.0120
	Counter-party ownership — ≤ median	103	−0.0071**					40	0.0082*	
	Counter-party industry — Same	109	−0.0067**	0.0001	17	−0.0061	−0.0055	30	0.0129*	0.0014
	Counter-party industry — Different	88	−0.0068**		90	−0.0006		49	0.0114**	

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		N	CAR	Diff	N	CAR	Diff	N	CAR	Diff
	Counter-party size									
	> median	89	−0.0063**	0.0013	40	0.0043	0.0081	27	0.0199**	0.0139
	≤ median	88	−0.0077**		40	−0.0038		27	0.0060	
	State-owned counter-party									
	Yes	150	−0.0064***	0.0013	30	0.0062	0.0109	58	0.0119**	−0.0083
	No	54	−0.0077*		94	−0.0047*		23	0.0202**	
	Firm size									
	> median	103	−0.0052*	0.0028	64	−0.0001	0.0049	41	0.0149***	0.0014
	≤ median	102	−0.0080***		64	−0.0049		40	0.0135*	
	Age									
	> median	103	−0.0043	0.0046	68	−0.0009	0.0034	45	0.0099**	−0.0097
	≤ median	102	−0.0089***		60	−0.0043		36	0.0196**	
	Sales growth									
	> median	101	−0.0050*	0.0037	61	−0.0001	0.0035	41	0.0209***	0.0126
	≤ median	101	−0.0087***		61	−0.0035		38	0.0083	
	Market to book ratio									
	> median	103	−0.0058*	0.0016	62	−0.0032	−0.0020	40	0.0199**	0.0099
	≤ median	102	−0.0074***		62	−0.0012		40	0.0100*	
Firm	**ROA**									
	> median	103	−0.0063**	0.0006	64	−0.0017	0.0017	41	0.0224***	0.0165*
	≤ median	102	−0.0069***		64	−0.0033		40	0.0059	
	Cash holding									
	> median	103	−0.0055*	0.0021	64	−0.0003	0.0043	42	0.0155**	0.0025
	≤ median	102	−0.0076***		64	−0.0047		39	0.0129**	
	Free cash flow									
	> median	99	−0.0098***	−0.0063	59	−0.0026	−0.0010	40	0.0042	−0.0168**
	≤ median	98	−0.0035		59	−0.0016		37	0.0210***	
	Leverage									
	> median	103	−0.0057**	0.0017	65	−0.0001	0.0049	41	0.0091**	−0.0104
	≤ median	102	−0.0074**		63	−0.0050		40	0.0195**	
	State control									
	Yes	155	−0.0060**	0.0024	80	−0.0015	0.0028	59	0.0124**	−0.0068
	No	50	−0.0084**		48	−0.0042		22	0.0192*	

Other accounts receivable	> median	103	−0.0098***		64	−0.0010		41	0.0122**	
				−0.0065*			0.0030			−0.0040
	≤ median	102	−0.0033		64	−0.0040		40	0.0163**	
Other accounts payable	> median	103	−0.0090***		68	0.0000		41	0.0170***	
				−0.0049			0.0053			0.0056
	≤ median	102	−0.0041		60	−0.0053		40	0.0114	

Loan size is the amount of inter-corporate loans in millions of RMB; Maturity is the loan maturity in number of months; Spread is the percentage increase in the interest rate from the basis lending rate; Guarantee equals one if a loan is collateralized or guaranteed by a third party, zero otherwise; Loan revision equals one if a loan revises previous loan terms, zero otherwise; Counter-party ownership is the ownership of the controlling shareholder in a loan-announcing firm, or the ownership of a loan-announcing firm's subsidiary; Counter-party industry equals one if the counter-party and loan-announcing firm are in the same industry, zero otherwise; Counter-party size is the logarithm of total assets of the counter-party; State-owned counter-party equals one if the counter-party is state-owned, zero otherwise; Firm size is the logarithm of the total assets; Age is the number of years listed on the stock exchanges; Sales growth is the annual sales growth rate; Market to book ratio is the market value of equity plus the book value of total liabilities scaled by the book value of total assets; ROA is the return on assets; Cash holding is cash over total assets; Free cash flow is the free cash flow over total assets; Leverage is the total liabilities over total assets; State-control equal one if the ultimate controller of the firm is state-owned, zero otherwise; Other accounts receivable is the other accounts receivable over total assets; Other accounts payable is the other accounts payable over total assets. The t-test of the CAR difference between subsamples reports the t-statistics with significance *** at one percent, ** at five percent, and * at ten percent level.

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6   CARs and loan, counter-party and firm characteristics

We tabulate CARs in terms of sample median and by loan type, counter-party and firm characteristics in Table 9. The issuance of intra-group loans to subsidiaries generates higher CARs for loans with a guarantee, and lower CARs for loan revisions, and also lower CARs for those where the issuers have higher other accounts receivable (i.e., more inter-corporate loans outstanding). For the receipt of intra-group loans from controlling shareholders, the CARs are higher when the receiving firms have higher ROAs and lower free cash flow.

We also regress the CARs on loan, counter-party, and firm level variables according to equation (7). Firstly, we include loan variables, i.e., loan size, spread of the interest rate over basis lending rate, maturity, guarantee status (whether a loan is collateralized or guaranteed by third-parties), loan revision (whether a loan announcement relates to a revision of loan terms). We also include a set of counter-party variables, i.e., intra-group versus inter-group loans, whether the counter-party and the listed firm are in the same industry, counter-party size, and whether the counter-party is state-owned, etc. Finally, we include a set of firm level variables, i.e., firm size, age, market-to-book ratio, free cash flow, leverage, state control, and other accounts receivable, and other accounts payable. The balance of the issuance of inter-corporate loans is typically recorded in other accounts receivable, and while their receipt is recorded in other accounts payable. Jiang, Lee and Yue (2010) show that other accounts receivable captures the tunneling activities of controlling shareholders. Because this channel has been closed since 2006, only four inter-corporate loans were issued to controlling shareholders. We include other accounts receivable and payable to measure the balance of inter-corporate loans outstanding at the fiscal year-end before these announcements. All variable definitions are given in Table 1.

Appendix 8 shows summary statistics for the variables in the regression. Firms announcing the issuances of inter-corporate loans are more likely to be larger, more mature, state-controlled, and to have lower growth potential, lower leverage ratio, and lower other accounts receivable (i.e., lower inter-corporate loans issuances in the past) than those without any inter-corporate loan announcement. However, firms issuing inter-corporate loans are more likely to have lower free cash flow, which shows that the issuing firms may not simply relocate abundant cash for higher investment returns, e.g., rescuing group firms even though the list firm does not have abundant cash. In contrast, firms announcing the

receipt of inter-corporate loans are more likely to be larger, more mature, state-controlled, and have higher leverage ratio, and higher other accounts payable (i.e., higher inter-corporate loans receipts in the past).

Table 10 shows the regressions of CAR[–1,0] for the issuance and receipt of inter-corporate loans on the loan, counter-party and firm characteristics. Models (1) to (3) of Table 10 give the estimates for the issuance, and Models (4) to (6) for the receipt of inter-corporate loans.

Model (1) of Table 10 shows that the CARs on the issuance of inter-corporate loans are negatively associated with the interest rate spread over the basis lending rate. Model (2) shows that the CARs on the issuance of intra-group loans to subsidiaries are lower for intra-group loans, which may be due to a signaling effect as to the financial distress of a group firm. Specifically, intra-group loans to subsidiaries at a higher interest rate may reveal a high default risk in these subsidiaries, which could spill over to the rest of the business group.

Model (3) of Table 10 shows that the more mature firms in the stock market generate higher CARs on the issuance of inter-corporate loans, as the uninformed investors may be less concerned about default risks for the borrowing subsidiaries. Furthermore, firms with higher market-to-book ratios have lower CARs due to more severe credit misallocation in the fast-growing firms. In other words, an issuance of an inter-corporate loan by a firm with higher growth prospects may provide more valuable proprietary information to the uninformed investors on a lack of worthwhile projects to finance in the issuing firm. Finally, the CARs are lower for issuers with higher other accounts receivable, i.e., the issuing firms already have substantial issuances of inter-corporate loans outstanding, which may further confirm credit misallocation in the issuing firm, and financial distress in a group firm.

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Table 10   The regression of CAR[–1,0] on loan, counter-party and firm characteristics

		Issuance of inter-corporate loans			Receipt of inter-corporate loans		
		(1)	(2)	(3)	(4)	(5)	(6)
Loan	Log loan size	–0.10	–0.04	–0.08	–0.52	0.01	1.16
		(0.17)	(0.23)	(0.26)	(0.54)	(0.65)	(1.15)
	Spread	–0.69**	–0.90*	–1.10**	–1.19	–5.44*	–11.42*
		(0.30)	(0.49)	(0.53)	(1.81)	(2.78)	(5.75)
	Log maturity	0.24	0.04	–0.00	–0.50	–0.40	0.28
		(0.35)	(0.43)	(0.49)	(0.93)	(1.09)	(1.31)
	Guarantee	0.62	0.72	0.95	–0.31	0.93	2.91
		(0.43)	(0.54)	(0.62)	(1.47)	(2.30)	(2.91)
	Loan revision	–0.64	–1.04	–1.11	1.48	0.58	–1.10
		(0.76)	(0.90)	(0.92)	(1.55)	(1.48)	(2.35)
Counter-party	Intra-group loan		–1.64**	–1.74**		–0.20	–0.09
			(0.78)	(0.84)		(3.81)	(6.09)
	Counter-party industry		0.22	0.19		0.46	1.17
			(0.57)	(0.59)		(1.35)	(1.99)
	Counter-party size		–0.14	–0.23		0.20	–0.36
			(0.14)	(0.15)		(0.35)	(0.52)
	State-owned counter-party		0.73	0.72		–1.86	–7.40**
			(0.52)	(0.62)		(1.99)	(3.28)
Firm	Firm size			–0.08			–1.03
				(0.29)			(1.50)
	Age			0.10*			–0.30
				(0.06)			(0.32)
	Market to book ratio			–0.42*			0.43
				(0.24)			(1.05)
	Free cash flow			–1.58			–9.27
				(1.37)			(7.30)
	Leverage			–1.16			–6.47
				(2.03)			(5.80)
	State control			–0.19			9.04*
				(0.59)			(4.70)
	Other accounts receivable			–14.49**			
				(7.16)			
	Other accounts payable						7.07
							(8.65)
	Constant	2.71	3.19	6.34	9.58	4.21	23.05
		(1.85)	(2.60)	(5.94)	(6.49)	(10.24)	(34.72)
	Industry and year dummies	Yes	Yes	Yes	Yes	Yes	Yes
	Observations	277	207	194	92	57	53
	R-squared	0.117	0.192	0.234	0.301	0.429	0.668

The dependent variable is the CAR[–1,0] in percentage points. Log loan size is the logarithm of the amount of inter-corporate loans in millions of RMB; Log maturity is the logarithm of the loan maturity in number of months; Spread is the percentage increase in the interest rate from the basis lending rate; Guarantee equals one if a loan is collateralized or guaranteed by a third party, zero otherwise; Loan revision equals one if a loan revises the previous loan terms, zero otherwise; Intra-group loan equals one if the counter-party is in a same business group, zero otherwise; Counter-party industry equals one if the counter-party and loan-announcing firm are in the same industry, zero otherwise; Counter-party size is the logarithm of total assets of the counter-party; State-owned counter-party equals one if the counter-party is state-owned, zero other-

wise; Firm size is the logarithm of total assets; Age is the number of years listed in the stock exchanges; Market to book ratio is the market value of equity plus the book value of total liabilities scaled by the book value of total assets; Free cash flow is the free cash flow over total assets; Leverage is the total liabilities over total assets; State-control equals one if the ultimate controller of the firm is state-owned, zero otherwise; Other accounts receivable is the other accounts receivable over total assets; Other accounts payable is the other accounts payable over total assets. Industry and year dummies are included and the coefficients are omitted. Coefficients are reported with robust standard errors in parentheses. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

Model (4) of Table 10 shows the regression results for CARs on the receipt of inter-corporate loans on loan variables, with no variables being statistically significant. The CARs are lower for loans with higher interest rate spreads, and these are significant at the ten percent level when we control for counter-party variables in Model (5) and further the firm characteristics in Model (6). A wider interest rate spread shows a higher default risk in the borrowing firm, which may attenuate the certification effect for these non-financial corporate lenders. However, there is no difference between intra-group and inter-group lenders.

State-owned lenders are associated with lower CARs in Model (6), which is significant at the ten percent level and shows that these owned lenders are less credit-worthy in terms of certification for the borrowing firm. In contrast, state controlled firms are associated with higher CARs when receiving inter-corporate loans. State controlled firms are often worse in terms of performance, and inter-corporate loans may have a larger certification effect for such borrowing firms. Other accounts payable, however, is insignificant though the sign is positive in Model (6) of Table 10. Our results are generally consistent with the bank loan announcement literature in that certification is more effective if given by more credit-worthy lenders (Billett, Flannery and Garfinkel (1995)), and also more effective for poorly performing borrowers (Fields, Fraser, Berry and Byers (2006)).

We also examine the loan-announcing firms' accounting performance after the inter-corporate loan announcements. If the issuance of inter-corporate loans reveals credit misallocation in the issuing firms or financial distress in a group firm, we would expect the post-performance to turn worse after the issuance of inter-corporate loans. In contrast, if the receipt of inter-corporate loans provides certification for the receiving firms, we would expect a stronger higher post-performance after the receipt of inter-corporate loans. Table 11 shows the return on assets (ROA) and return on equity (ROE) adjusted by the industry median in the years before, during, and after the announcement. We find that the ROA and ROE indeed decline after issuing inter-corporate loans, which shows that the issuance of

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inter-corporate loans indicates a lack of worthwhile projects to finance in the issuing firms, or financial distress in a group firm. However, we do not find any significant change in the ROA / ROE after receipt of inter-corporate loans, which shows that the uninformed investors may not have the necessary sophistication to interpret the receipt of inter-corporate loans in China.

Table 11   Post-performance after the inter-corporate loan announcement

		Issuance of Inter-corporate loans				Receipt of Inter-corporate loans		
Summary statistics		Mean	Median	St.Dev		Mean	Median	St.Dev
ROA[−1]	336	0.0024	0.0001	0.0448	103	−0.0072	0.0009	0.0536
ROA[0]	337	−0.0024	−0.0038	0.0410	103	−0.0155	−0.0055	0.0587
ROA[+1]	337	−0.0044	−0.0053	0.0424	102	−0.0098	−0.0001	0.0528
ROE[−1]	336	0.0029	−0.0003	0.0876	94	−0.0003	0.0118	0.1288
ROE[0]	337	−0.0060	−0.0040	0.0798	97	−0.0077	0.0083	0.1554
ROE[+1]	337	−0.0152	−0.0093	0.0980	99	−0.0073	0.0096	0.1496
T-test of mean difference								
ROA[0] – ROA[−1]		−2.18**				−1.33		
ROA[+1] – ROA[−1]		−2.57**				−0.31		
ROA[+1] – ROA[0]		−1.02				1.00		
ROE[0] – ROE[−1]		−1.78*				−1.10		
ROE[+1] – ROE[−1]		−2.88***				−0.76		
ROE[+1] – ROE[0]		−2.14**				−0.22		
Wilcoxon signed-rank test								
ROA[0] – ROA[−1]		0.48***				0.40*		
ROA[+1] – ROA[−1]		0.43***				0.43		
ROA[+1] – ROA[0]		0.45**				0.51		
ROE[0] – ROE[−1]		0.46**				0.46		
ROE[+1] – ROE[−1]		0.45***				0.43		
ROE[+1] – ROE[0]		0.47**				0.51		

ROA[−1] or ROE[−1] is the ROA or ROE in the year before the inter-corporate loan announcement; ROA[0] or ROE[0] is the ROA or ROE in the announcement year; and ROA[+1] or ROA[+1] is the ROA or ROE in the year following the announcement year. The t-test of the mean difference of ROA or ROE reports the t-statistic, and the Wilcoxon signed-rank test reports the proportion of positive changes of ROA or ROE over the time. Significance is indicated as *** at one percent, ** at five percent, and * at ten percent level.

In sum, we find that the CARs on issuance and receipt of inter-corporate loans are associated with various loan, counter-party, and (loan-announcing) firm variables. On the one hand, the issuance of inter-corporate loans generates lower CARs for loans with wide in-

terest rate spreads, for intra-group loans, for firms with a higher market-to-book ratios, and with higher other accounts receivable (i.e., higher issuances of inter-corporate loans outstanding). On the other hand, the receipt of inter-corporate loans generates lower CARs for the loans with a higher interest rate spread, loans from state-owned lenders, and loans to non-state controlled borrowers. The results support the hypothesis that the issuance of inter-corporate loans signals to uninformed investors a lack of worthwhile projects to finance in the issuing firms, while the issuance of intra-group loans conveys additional information of financial distress in a group firm.

7   Conclusion

The granting of entrusted loans in China provides us with a unique setting to evaluate the valuation effects of inter-corporate lending and borrowing. We find that investors react negatively to the issuance of inter-corporate loans but positively to their receipt. The issuing of inter-corporate loans may indicate credit misallocation to uninformed investors, i.e., the issuing firms run out of worthy projects to finance. Furthermore, the issuance of inter-corporate loans to subsidiaries may reveal financial distress in that subsidiary, which may eventually spill over to the rest of the business group.

On the other hand, the receipt of intra-group loans, especially those from controlling shareholders, provides certification for the borrowing firms. In contrast to bank loan announcements, which often provoke negative market reactions (Bailey, Huang and Yang (2011)), non-financial corporate lenders in China can convey proprietary information to the uninformed investors.

We also confirm our results by linking the CARs to loan, counter-party, and firm level variables. The issuance of inter-corporate loans generate lower CARs for the intra-group loans, for loans with higher interest rate spreads, and for loans granted by young issuers, with higher market-to-book ratios and larger outstanding issuances of inter-corporate loans. In contrast, the receipt of inter-corporate loans generates lower CARs on loans with higher interest rate spreads, on loans from state-owned lenders, and on loans to non-state-controlled borrowers. Our results shed light on inter-corporate loans as signaling devices for credit misallocation by issuing firms, and for financial distress in a borrowing subsidiary, which can spill over to the rest of the business group.

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Although the inter-corporate loans have played an increasingly important role in China, we still know little about the welfare gains from these loans. Because inter-corporate loans rarely arise between listed firms, we cannot calculate the net gains from such loans. Further research on the net gains from inter-corporate loans would provide more insight on whether or not such loans should be encouraged.

References

Allen, F., J. Qian, and M. Qian, 2005, "Law, Finance and Economic Growth in China," Journal of Financial Economics 77, 57–116.

Allen, F., J. Q. Qian, C. Zhang, and M. Zhao, 2013, "China's Financial System: Opportunities and Challenges," in J. Fan and R. Morck, eds, Capitalizing China, University of Chicago Press, Chicago IL.

Arnott, R., and J. E. Stiglitz, 1991, "Moral Hazard and Nonmarket Institutions: Dysfunctional Crowding Out of Peer Monitoring?," American Economic Review 81, 179–190.

Bae, K.-H., and G. K. Vidhan, 2009, "Creditor Rights, Enforcement and Bank Loans," Journal of Finance 64, 823–860.

Bailey, W., W. Huang, and Z. Yang, 2011, "Bank Loans with Chinese Characteristics: Some Evidence on Inside Debt in a State-Controlled Banking System," Journal of Financial and Quantitative Analysis 46, 1795–1830.

Best, R., and H. Zhang, 1993, "Alternative Information Sources and the Information Content of Bank Loans," Journal of Finance 48, 1507–1522.

Billett, M. T., M. J. Flannery, and J. A. Garfinkel, 1995, "The Effect of Lender Identity on a Borrowing Firm's Equity Return," Journal of Finance 50, 699–718.

Boissay, F., and R. Gropp, 2014, "Payment Defaults and Interfirm Liquidity Provision," Review of Finance Forthcoming.

Boot, A. W. A., 2000, "Relationship Banking: What Do We Know?," Journal of Financial Intermediation 9, 3–25.

Bose, P., 1998, "Formal–Informal Sector Interaction in Rural Credit Markets," Journal of Development Economics 56, 265–280.

Buchuk, D., B. Larrain, F. Muñoz, and F. Urzúa I., 2014, "The Internal Capital Markets of Business Groups: Evidence from Intra-Group Loans," Journal of Financial Economics Forthcoming.

Burkart, M., T. Ellingsen, and M. Giannetti, 2011, "What You Sell Is What You Lend? Explaining Trade Credit Contracts," Review of Financial Studies 24, 1261–1298.

Calomiris, C. W., R. Fisman, and Y. Wang, 2010, "Profiting from Government Stakes in a Command Economy: Evidence from Chinese Asset Sales," Journal of Financial Economics 96, 399–412.

Claessens, S., S. D. Djankov, and L. H. P. Lang, 2000, "The Separation of Ownership and Control in East Asian Corporations," Journal of Financial Economics 58, 81–112.

Claessens, S., J. Fan, and L. Lang, 2006, "The Benefits and Costs of Group Affiliation: Evidence from East Asia," Emerging Markets Review 7, 1–26.

Degryse, H., M. Kim, and S. Ongena, 2009, Microeconometrics of Banking: Methods, Applications and Results, Oxford University Press.

Ellingsen, T., T. Jacobson, and E. von Schedvin, 2014, Inter-Firm Lending: An Empirical Evaluation of Trade Credit Contracts, Riksbanken, Stockholm.

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Fama, E. F., 1985, "What's Different about Banks?," Journal of Monetary Economics 15, 5–29.

Fan, J. P. H., L. Jin, and G. Zheng, 2014, "Revisiting the Bright and Dark Sides of Capital Flows in Business Groups," Journal of Business Ethics 1–20.

Fields, L. P., D. R. Fraser, T. L. Berry, and S. Byers, 2006, "Do Bank Loan Relationships Still Matter?," Journal of Money, Credit, and Banking 38, 1195–1209.

Friedman, E., S. Johnson, and T. Mitton, 2003, "Propping and Tunneling," Journal of Comparative Economics 31, 732–750.

Garcia-Appendini, E., and J. Montoriol-Garriga, 2014, "Firms as Liquidity Providers: Evidence from the 2007–2008 Financial Crisis," Journal of Financial Economics 109, 272–291.

Gopalan, R., V. Nanda, and A. Seru, 2007, "Affiliated Firms and Financial Support: Evidence from Indian Business Groups," Journal of Financial Economics 86, 759–795.

Harvey, C. R., K. V. Lins, and A. H. Roper, 2004, "The Effect of Capital Structure When Expected Agency Costs Are Extreme," Journal of Financial Economics 74, 3–30.

He, Q., and O. M. Rui, 2014, "Ownership Structure and Insider Trading: Evidence from China," Journal of Business Ethics 1–22.

Hoff, K., and J. E. Stiglitz, 1997, "Moneylenders and Bankers: Price-increasing Subsidies in a Monopolistically Competitive Market," Journal of Development Economics 52, 429–462.

Huang, W., A. Schwienbacher, and S. Zhao, 2012, "When Bank Loans are Bad News: Evidence from Market Reactions to Loan Announcements under the Risk of Expropriation," Journal of International Financial Markets, Institutions and Money 22, 233–252.

James, C. M., 1987, "Some Evidence on the Uniqueness of Bank Loans," Journal of Financial Economics 19, 217–235.

Jian, M., and T. J. Wong, 2010, "Propping through Related Party Transactions," Review of Accounting Studies 15, 70–105.

Jiang, G., C. M. C. Lee, and H. Yue, 2010, "Tunneling through Intercorporate Loans: The China Experience," Journal of Financial Economics 98, 1–20.

Johnson, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer, 2000, "Tunneling," American Economic Review 90, 22–27.

Khanna, T., and Y. Yafeh, 2005, "Business Groups and Risk Sharing around the World," Journal of Business 78, 301–340.

Li, C., and S. Ongena, 2014, Bank Loan Announcements and Borrower Stock Returns Before and During the Recent Financial Crisis, University of Zurich.

Love, I., L. A. Preve, and V. Sarria-Allende, 2007, "Trade Credit and Bank Credit: Evidence from Recent Financial Crises," Journal of Financial Economics 83, 453–469.

Lummer, S. L., and J. J. McConnell, 1989, "Further Evidence on the Bank Lending Process and the Capital Market Response to Bank Loan Agreements," Journal of Financial Economics 25, 99–122.

Maskara, P. K., and D. J. Mullineaux, 2011, "Information Asymmetry and Self-selection Bias in Bank Loan Announcement Studies," Journal of Financial Economics 101, 684–694.

Megginson, W. L., A. B. Poulsen, and J. F. J. Sinkey, 1995, "Syndicated Loan Announcements and the Market Value of the Banking Firm," Journal of Money, Credit and Banking 27, 457–475.

Mikkelson, W. H., and M. M. Partch, 1986, "Valuation Effects of Security Offerings and the Issuance Process," Journal of Financial Economics 15, 31–60.

Ongena, S., and V. Roscovan, 2013, "Bank Loan Announcements and Borrower Stock Returns: Does Bank Origin Matter?," International Review of Finance 13, 137–159.

Ongena, S., and D. C. Smith, 2000, "Bank Relationships: a Review," in P. Harker and S. A. Zenios, eds, The Performance of Financial Institutions, Cambridge University Press, London.

Peng, W. Q., K. C. J. Wei, and Z. Yang, 2011, "Tunneling or Propping: Evidence from Connected Transactions in China," Journal of Corporate Finance 17, 306–325.

Petersen, M. A., and R. G. Rajan, 1997, "Trade Credit: Theories and Evidence," Review of Financial Studies 10, 661–691.

Scharfstein, D. S., and J. C. Stein, 2000, "The Dark Side of Internal Capital Markets: Divisional Rent-Seeking and Inefficient Investment," Journal of Finance 55, 2537–2564.

Slovin, M. B., S. A. Johnson, and J. L. Glascock, 1992, "Firm Size and the Information Content of Bank Loan Announcements," Journal of Banking and Finance 16, 35–49.

Stein, J., 1997, "Internal Capital Markets and the Competition for Corporate Resources," Journal of Finance 52, 111–133.

Stiglitz, J. E., 1990, "Peer Monitoring and Credit Markets," World Bank Economic Review 4, 351–366.

Wang, Y., and H. Xia, 2014, "Do Lenders Still Monitor When They Can Securitize Loans?," Review of Financial Studies Forthcoming.

Yook, K. C., 2003, "Larger Return to Cash Acquisitions: Signaling Effect or Leverage Effect?," Journal of Business 76, 477–449.

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Appendices

Appendix 1   Timeline of laws and regulations related with entrusted loans

Date	Type	Name	Note	Institution
1992/12/30	Entrusted loan	*A reply to the ICBC on the issues of entrusted loan*	It clarifies several issues on entrusted loans correspondingly the request of the *Industrial and Commercial Bank of China* (ICBC), e.g. the definition of entrusted loans.	PBC
1996/5/16	Litigation guidance	*A reply to Sichuan People's Higher Court on the qualification of subjects in the entrusted loan contracts*	It specifies the rules for the subjects in the litigation cases on entrusted loan contracts corresponding a request by the *Sichuan People's Higher Court*.	PSC
1996/8/1	Entrusted loan	*General rules on loans*	It specifies detailed rules on entrusted loans.	PBC
1997/12/13	Litigation guidance	*Issues on the litigation cases on certificates of deposit*	It specifies several rules for the disputes in entrusted loan contracts.	PSC
1998/01	Disclosure requirements	*Regulations of IPO by Shanghai and Shenzhen Stock Exchange*	It specifies the disclosure requirement on entrusted loans, and also related party transactions. It has been revised seven times, and the latest version is effective from July 2012.	SSC and SZSE
1999/4/1	Interest rate lateralization	*Interest rate regulations of RMB*	It specifies the regulations for the interest rate of deposits and loans denominated in RMB.	PBC
2000/4/5	Entrusted loan	*Notice on the issues for entrusted loan by commercial banks*	It specifies a definition of entrusted loans, and switches the approval system to the registration system for entrusted loans.	PBC
2005/10/19	Entrusted loans	*Notice on the suggestion by the CSRC on enhancing the quality of listed firms*	It prohibits the entrusted loans from the listed firms to the controlling shareholders.	SCPRC
2005/10/27	Disclosure requirements	*China securities law*	It specifies the types of major events that should be announcement timely in Article of 67 at Chapter 3, e.g. entrusted loan. It is a revised version and the first version was effective from July 1st, 1999.	NPC
2007/2/2	Disclosure requirements	*Explanatory notice on the regulations on information disclosure of listed firms*	It specifies the information disclosure of extraordinary items for listed firms, e.g., entrusted loans.	CSRC
2013/7/19	Interest rate lateralization	*Notice on the further reform for the marketization of interest rate*	It lifts the regulation on the floor of the lending interest rate, and also the ceiling of the lending interest rate for rural credit cooperatives.	PBC
2013/12/10	Entrusted loan	*Notice on several issues of tightening the regulation on shadow banking*	It tightens the regulation for the shadow banking system including entrusted loans	SCPRC

Abbreviations: NPC is the National People's Council; PBC is People's Bank of China; PSC is the People's Supreme Court; SSC is the Shanghai Stock Exchange; SZSC is the Shenzhen Stock Exchange. SCPRC is the State Council of the People's Republic of China; CSRC is the China Securities Regulatory Commission.

Appendix 2   Market shares of financing sources in China
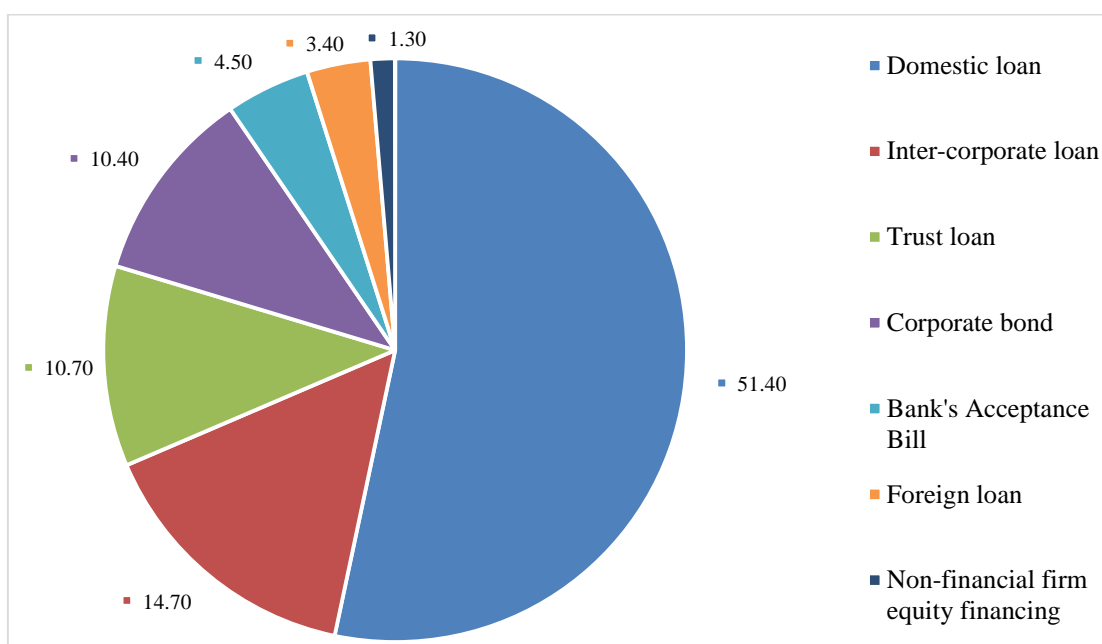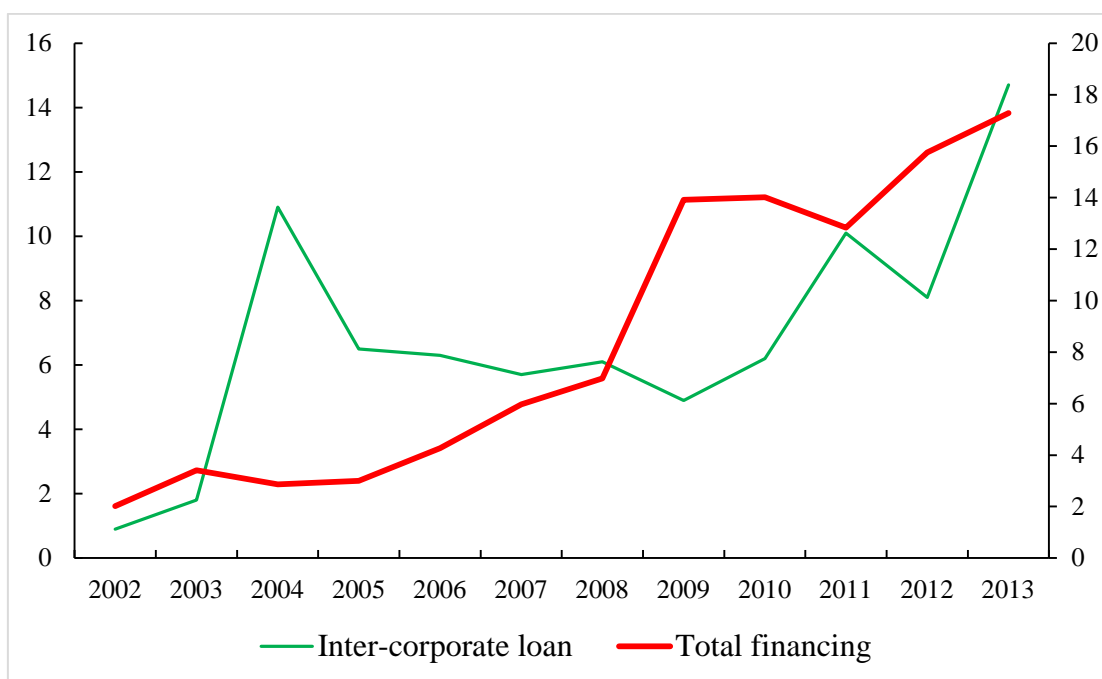
The upper panel shows the proportion of inter-corporate loan over total financing (left-axis, in percentage points) and the trend of total financing (right axis, in trillions of RMB), and the bottom panel shows the market share of various types of financing in the total financing of 2013.
Data is retrieved from the PBOC website.

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Appendix 3–1　Original inter-corporate loan announcement（in Chinese）

证券简称：贵研铂业　　证券代码：600459　　公告编号：临 2011-04

贵研铂业股份有限公司

关于为公司全资子公司提供委托贷款的公告

本公司董事会及全体董事保证本公告内容不存在任何虚假记载、误导性陈述或者重大遗漏，并对其内容的真实性、准确性和完整性承担个别及连带责任。

重要内容提示

● 委托贷款金融机构：中信银行股份有限公司昆明分行
● 委托贷款对象：贵研资源（易门）有限公司（以下简称"易门资源公司"）
● 委托贷款金额：向易门资源公司提供委托贷款人民币叁仟万元整。
● 委托贷款期限：期限为 1 年
● 委托贷款利率：年利率 7.07%

一、委托贷款概述

2011 年 2 月 25 日公司第四届董事会第八次会议审议通过了《关于向公司全资子公司提供委托贷款的议案》，同意向易门资源公司提供委托贷款人民币叁仟万元整。本次委托贷款不构成关联交易。本次委托贷款无需提交股东大会审议。

二、借款人的基本情况

易门资源公司是本公司的全资子公司，注册资本 5,000 万元人民币，2010 年 4 月 1 日经玉溪市易门县工商行政管理局核准成立，注册地为云南省玉溪市易门县龙泉镇西环路小龙口美食城。公司经营范围：贵金属资源冶炼技术的开发和应用；贵金属二次资源（废料）的收购和来料加工；贵金属基础化合物加工制造；特种粉体材料的制备；经营本单位研制开发的技术和产品（以上经营范围中涉及国家法律、行政法规规定的专项审批，按审批的项目和时限开展经营活动）。

截至 2010 年 9 月 30 日，未经审计的该公司总资产为 5476 万元，负债总额为 495 万元，所有者权益合计 4981 万元，净利润为-18.8 万元。

三、委托贷款的主要内容

根据易门资源公司经营与建设的实际需要，公司向易门资源公司提供委托贷款人民币叁仟万元整，期限壹年，年利率 7.07%。

（具体委托贷款内容以实际签订的合同为准。）

四、本次委托贷款的资金来源

本次向易门资源公司提供的委托贷款从本公司自有资金中支付；易门资源公司向本公司还款的方式：一次性还本付息。

五、本次委托贷款的目的和对公司的影响

向易门资源公司提供的委托贷款，用于易门资源公司的经营与建设，本次委托贷款的资金属于公司自有资金，不会影响公司正常生产经营；易门资源公司是本公司的全资子公司，能够保证按期偿还。

特此公告。

贵研铂业股份有限公司董事会
二〇一一年二月二十六日

Appendix 3–2 Translation of an inter-corporate loan announcement

Stock abbreviation: Guiyan Boye   Stock code: 600459   No: Temporary 2011–4

Announcement of an entrusted loan to a fully owned subsidiary

The board of directors and all members declare that this announcement contains no false documentation, misleading statement or omission of important items, and bare individual and joint liability for the truthfulness, validity and completeness of the announcement.

Important notices for the entrusted loan
Financial institution: *Kunming* branch, *China Citic Bank*
Borrower: Guiyan Yimen Ziyuan Ltd (hereafter Yimen Ziyuan Ltd)
Amount: 30 million RMB
Maturity: One year
Interest rate: 7.07 percent per year

1. Summary
On Feb 25th, 2011, the eighth session of the fourth board meeting of the listed firm passes the proposal of providing an entrusted loan to a fully owned subsidiary. The board agrees to extend an entrusted loan of 30 million RMB to *Yimen Ziyuan Ltd*. This transaction does not constitute a related transaction. This entrusted loan does not need an approval from the shareholders' meeting.

2. Basic information about the borrower
Yimen Ziyuan Ltd is fully owned by the listed firm *Guiyan Boye*. It was set up on April 1st 2010 with the approval from the *Industrial and Commercial Administrative Bureau* of *Yimen County* at *Yunnan Province*. It has a registered capital of 50 million RMB, with the registered address: *Xiaolongkou Meishicheng, Xihuan Road, Longquan Town, Yimen County, Yuxi City, Yunnan Province, China*. Main businesses of the firm: the development and applications of the refinery skills for the resources of precious metals; the collection and processing of second-hand resources of precious metals; the manufacturing of basic products of precious metals; the manufacturing of special powder materials; the operation of skills and products made by the listed firm (according to the approved project and maturity if the operation involves special approvals by the law and administrative regulations).
Up until Sep 30th, 2010, the total assets of the *Yimen Ziyuan Ltd* is 54.76 million RMB; the total liabilities is 4.95 million RMB; total shareholders' equity is 49.81 million RMB; net profit is –188,000 RMB. None of the above numbers are audited by a third party.

3. Main content of the entrusted loan
According to the demand of *Yimen Ziyuan Ltd's* operation and development, the listed firm provides an entrusted loan of 30 million RMB to *Yimen Ziyuan Ltd*. The loan has a maturity of one year, and an annual interest rate of 7.07 percent.
(Please refer to the signed contract for the detailed items of the entrusted loan)

4. Sources of the fund for the entrusted loan
The fund is from the listed firm's self-owned fund. *Yimen Ziyuan Ltd* will repay the principal and interest in a lump sum at maturity.

5. Purpose of the entrusted loan and its effect on the listed firm
The entrusted loan will be used for *Yimen Ziyuan Ltd*'s operation and development. It will not affect the listed firm's normal operation as the fund is from the listed firm's self-owned fund. *Yimen Ziyuan Ltd* is fully owned by the listed firm, so it can repay the entrusted loan at maturity.

Here announces the transaction.

The board of Guiyan Boye Co. Ltd.
2011/02/26

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Appendix 4   The size of the entrusted loans in 2011 for firms listed on Shanghai Stock Exchange (in billions of RMB)

Categories	Balance 2010 year end	Loan issued	Loan received	Balance 2011 year end
Subsidiaries with a full or controlling ownership	52.77	65.56	30.25	88.08
Subsidiaries or joint ventures without a controlling ownership	4.18	5.15	2.87	6.47
Unconnected parties	7.26	14.52	8.34	13.44
Other connected parties	0.18	0.78	0.19	0.77
Total	64.38	86.01	41.64	108.75

Data source: "An analysis on entrusted wealth management products and entrusted loans in 2011 for firms listed in Shanghai Stock Exchange" released by Shanghai Stock Exchange.

Appendix 5–1   Distribution of inter-corporate loan announcements by year and type

Year	All	Issuance	Receipt
2005	15	11	4
2006	26	18	8
2007	39	31	8
2008	91	74	17
2009	93	73	20
2010	123	90	33
2011	180	133	47
2012	152	134	18
Total	719	564	155

Appendix 5–2   Distribution of inter-corporate loan announcements by industry

Industry names	All	Issuance	Receipt
Agriculture, forestry, animal husbandry and fishery	9	9	0
Mining	43	41	2
Manufacturing	337	264	73
Utilities	67	55	12
Construction	10	7	3
Transportation	29	22	7
Information technology	28	26	2
Wholesale and retail trade	51	48	3
Real estate	76	35	41
Social service	46	42	4
Communication and culture	5	5	0
Comprehensive	18	10	8
Total	719	564	155

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Appendix 6   Characteristics of intra-group loans

	Issuance			Receipt			t-Test of mean Difference
	To/from controlling shareholders						
	N	Mean	Median	N	Mean	Median	T-statistic
Loan size	4	189.50	340.00	105	305.09	200.00	–0.55
Maturity	4	9.75	12.00	104	19.09	12.00	–1.19
Spread	4	0.12	0.00	102	0.01	0.00	0.79
Guarantee	4	0.00	0.00	105	0.10	0.00	–0.64
Loan revision	4	0.00	0.00	105	0.08	0.00	–0.57
	To/from subsidiaries						
	N	Mean	Median	N	Mean	Median	T-test (mean)
Loan size	375	216.93	80.00	10	165.50	80.00	0.27
Maturity	324	18.51	12.00	9	12.67	12.00	1.20
Spread	294	0.12	0.00	8	0.18	0.00	–0.40
Guarantee	375	0.12	0.00	10	0.00	0.00	1.16
Loan revision	375	0.11	0.00	10	0.00	0.00	1.09
	To borrowers/from lenders with other relationship						
	N	Mean	Median	N	Mean	Median	T-test (mean)
Loan size	16	225.25	60.10	25	322.80	100.00	–0.49
Maturity	10	12.60	12.00	21	21.71	12.00	–1.64*
Spread	13	0.40	0.10	22	0.11	0.00	1.26
Guarantee	16	0.31	0.00	25	0.12	0.00	1.52
Loan revision	16	0.19	0.00	25	0.28	0.00	–0.66

Loan size is the amount of inter-corporate loans in millions of RMB; Maturity is the loan maturity in number of months; Spread is the percentage increase in the interest rate from the basis lending rate; Guarantee equals one if a loan is collateralized or guaranteed by a third party, zero otherwise; Loan revision equals one if a loan revises previous loan terms, zero otherwise. The t-test of mean difference between issuance and receipt reports the t-statistic with significance *** at one percent, ** at five percent, and * at ten percent level.

Appendix 7 Average abnormal returns for issuance and receipt of inter-corporate loans in event window [–20, 20]

Average abnormal returns for the issuance of inter-corporate loans

Average abnormal returns for the receipt of inter-corporate loans

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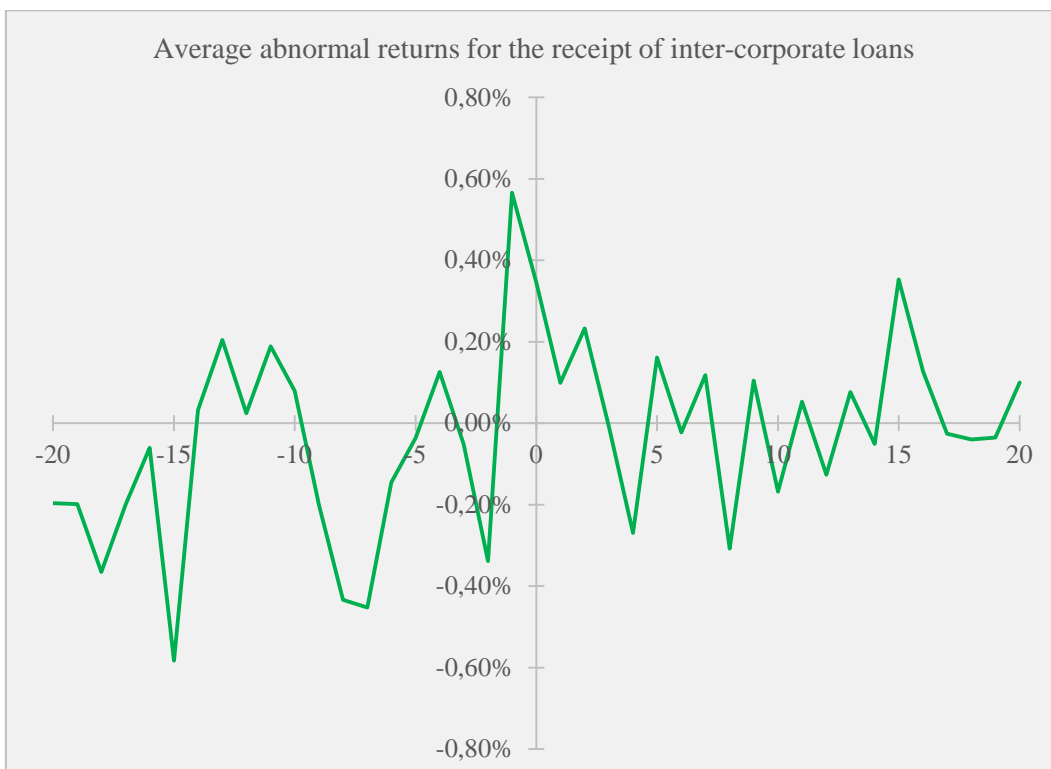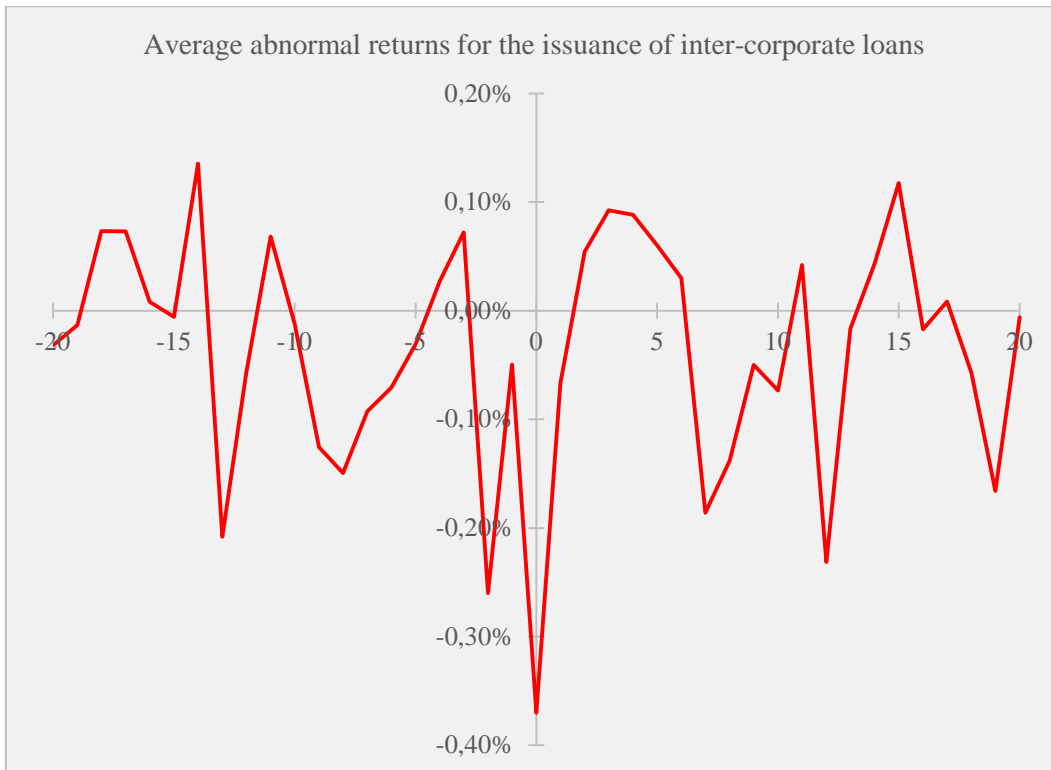
Appendix 8 Summary statistics for the regression of CAR[-1,0] on loan, counter-party and firm characteristics

		Issuance of inter-corporate loans			Receipt of inter-corporate loans			No inter-corporate loan firms			t-Test of mean difference (T-statistic)		
		N	Mean	St.Dev	N	Mean	St.Dev	N	Mean	St.Dev	Issuance v.s. No loans	Receipt v.s. No loans	Issuance v.s. Receipt
Loan	Log loan size	338	4.39	1.26	103	4.95	1.31						–3.90***
	Spread	281	0.54	0.76	95	0.04	0.34						6.21***
	Log maturity	312	2.56	0.61	99	2.63	0.57						–1.02
	Guarantee	338	0.33	0.47	103	0.13	0.33						4.11***
	Loan revision	338	0.11	0.32	103	0.06	0.24						1.61
Counter-party	Intra-group loan	338	0.62	0.49	103	0.85	0.35						–4.52***
	Counter-party	308	0.42	0.49	96	0.41	0.49						0.27
	Counter-party size	261	1.81	1.77	68	4.73	2.1						–11.64***
	State-owned	332	0.55	0.5	103	0.67	0.47						–2.08**
Firm	Firm size	337	22.12	1.11	103	21.86	1.39	11,738	21.46	1.45	8.28***	2.78***	1.98**
	Age	337	10.95	4.71	103	11.34	5.09	10,926	9.61	5.16	4.71***	3.39***	–0.71
	Market to book	333	2.14	1.22	102	2.29	1.59	11,461	2.32	1.58	–2.01**	–0.18	–1.02
	Free cash flow	319	0.02	0.17	97	0.03	0.14	10,441	0.04	0.15	–2.29**	–0.74	–0.94
	Leverage	337	0.47	0.19	103	0.61	0.22	11,738	0.5	0.24	–2.69***	4.81***	–6.64***
	State control	337	0.71	0.45	103	0.67	0.47	11,050	0.51	0.5	7.24***	3.24***	0.76
	Other accounts receivable	337	0.03	0.04	103	0.02	0.03	11,580	0.04	0.06	–2.80***	–2.16**	0.82
	Other accounts payable	337	0.04	0.04	103	0.08	0.1	11,585	0.05	0.07	–4.07***	3.84***	–6.21***

Log loan size is the logarithm of the amount of inter-corporate loans in millions of RMB; Log maturity is the logarithm of the loan maturity in number of months; Spread is the percentage increase of the interest rate from the basis lending rate; Guarantee equals one if a loan is collateralized or guaranteed by a third party, zero otherwise; Loan revision equals one if a loan revises previous loan terms, zero otherwise; Intra-group loan equals one if the counter-party is in the same business group, zero otherwise; Counter-party industry equals one if the counter-party and listed firm are in the same industry, zero otherwise; Counter-party size is the logarithm of total assets of the counter-party; State-owned counter-party equals one if the counter-party is state-owned, zero otherwise; Firm size is the logarithm of total assets; Age is the number of years listed on the stock exchanges; Market to book ratio is the market value of equity plus the book value of total liabilities scaled by the book value of total assets; Free cash flow is the free cash flow over total assets; Leverage is the total liabilities over total assets; State-control equals one if the ultimate controller of the firm is state-owned, zero otherwise; Other accounts receivable is the other accounts receivable over total assets; Other accounts payable is the other accounts payable over total assets. The test of mean difference is conducted between firms, with issuance / receipt of inter-corporate loans versus firms without inter-corporate loan announcements. T-statistics are reported with significance *** at one percent, ** at five percent, and * at ten percent level.

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