Subnational Debt of China: The Politics-Finance Nexus*

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Abstract

Using unique proprietary loan-level data, we provide the first comprehensive study on China's local government debt, which was off-balance sheet. Policy and commercial banks, both of which are state owned, are the main financiers of local governments. We find that notwithstanding their prevalent nonprofit goal of raising social welfare, policy loans perform remarkably better than commercial loans. Distressed local governments would choose to default on commercial bank loans but avoid default on policy bank loans, which are strategically more important for local politicians' promotions. Our findings suggest that career concerns of politicians can serve as a discipline on government borrowers.

Key words: Local Government Debt; China; China Development Bank; Policy Loans; Political Promotion

1. Introduction

Government indebtedness has become a serious issue in many countries, including large ones. In China, the second largest economy worldwide, many local governments are highly indebted, even though the central government has considerable reserve and little debt (Bolton and Huang (2016)). China's local governments are tasked with generating economic growth, but they are severely constrained by national laws in terms of financing sources and tax revenues. Consequently, they use off–balance-sheet local government financing vehicles (LGFVs) to borrow money. A growing concern is that local governments in China have accumulated so much leverage that default is looming for them.[1]

While there is much public discussion and commentary on local government debt in China, empirical evidence is scarce. A consensus on the total amount of local government debt is even lacking: "In many countries, governments struggle to contain their debt. *In China, the authorities struggle even to count it*".[2] Nevertheless, it is important to understand local government debt because, although government intervention in financial markets can be optimal under certain market failures, the success of such state operations has been mixed (Stiglitz (1993)). China had no market for municipal bonds prior to 2015, and by law, local governments could not borrow money directly. Instead, local governments managed to raise off–balance sheet loans to support local development and growth. Direct application of existing theories on local government financing cannot account for China's model because China has a mixture of

[1] See, e.g., "The Coming Debt Bust", *the Economist*, May 7, 2016. "China Places Cap on Local Government Debt", *Wall Street Journal*, August 30, 2015. "China to Cap Local Government Debt", *Financial Times*, October 2, 2014.
[2] "Counting Ghost: China Opens the Books of Its Big-Spending Local Governments," *the Economist*, January 4, 2014.

fiscal decentralization like the U.S. and monetary centralization like the E.U. (Qian and Roland (1998)). However, the lack of quality data makes it difficult, if not impossible, to study local government debt in China. In this paper, we use a proprietary and comprehensive loan-level dataset to identify the off–balance sheet loans and examine local government debt in China.

Our data cover all major bank loans to local governments, which account for approximately 60% of all government debts as of 2013.[3] The loan-level data capture the detailed information on security, maturity, quantity, performance, and much more on bank loans to local government financing vehicles. Our database covers all loans to firms with more than a Renminbi (RMB) 50 million (about US$ 8 million, US$ 1≈RMB 6.3) credit limit with the top seventeen commercial banks in China as well as the China Development Bank (CDB), the big policy bank, from 2007 to 2013. Policy loans from the CDB play instrumental roles in local government financing, whereas commercial loans are presumably more market based. We contrast these two types of loans in order to understand how and why local governments treat them differently.

Our first analysis concerns the performance of LGFV loans in terms of delinquency (i.e., not fully repaid three months after the scheduled due day).[4] We find that among all loans with maturity dates in our sample period, the delinquency rate is 1.8% for commercial loans to LGFVs but only 0.3% for policy loans from the CDB. The low delinquency rate for policy loans is robust to the use of controls for loan, LGFV, and

[3] See National Audit Report 2013. Besides bank loans, LGFVs also issue bonds, especially since 2009 (see the discussion in Ang, Bai, and Zhou (2016)) and, to a lesser extent, tap into shadow banking by using entrusted loans or issue wealth management products via trusts. See Allen, Qian, Tu, and Yu (2015) for a study and Jiang (2015) for an overview on shadow banking in China.

[4] Lucas (2014) studies the cost of government credit support which is important to evaluate the government credit program.

local government characteristics, as well as year, industry, and region fixed effects. Existing studies on other countries show that policy loans perform worse than commercial loans (e.g., Barone and Spratt (2015)).[5] Our findings based on Chinese data are in sharp contrast with the conventional wisdom that policy banks should perform poorly because they do not focus on (short-term) profits and usually invest in undeveloped areas and in non-profitable public goods with positive externalities. There are two potential explanations for the lower delinquency rate of loans from the CDB. First, the CDB has a different investment focus, and it might select better projects than commercial banks. Second, banks may evergreen their nonperforming loans for regulatory or other reasons. After taking these two reasons into account, we still find that CDB loans are associated with a significantly lower delinquency rate. Given that Chinese commercial banks have improved in recent years (see Qian, Strahan, and Yang (2015)), the superior performance by the CDB over commercial banks is remarkable. Our main efforts are then directed to how and why the CDB achieves better lending performance.

Different from many commercial banks, the China Development Bank is a repeated lender of most local governments, making the CDB strategically more important and more valuable to local government borrowers than commercial banks. The value of relationship banking can be demonstrated by the borrower's choice of loan repayment and default. We find that local governments facing financial distress tend to selectively default on commercial bank loans rather than policy loans. Specifically, conditioned on

[5] Policy lending via state-owned banks is often viewed as necessary but inefficient in many countries (see, e.g., Stiglitz (1993) and La Porta, Lopez-De-Silanes, and Shleifer (2002)). Commercial banks may not lend to high social return projects because they cannot internalize positive externalities. Policy banks can lend to negative NPV projects with high positive externalities such as city infrastructure.

being delinquent on any loan, the default rate of LGFVs is significantly greater for commercial loans than for CDB loans. Overall, for LGFVs that have defaulted on their commercial bank loans, they paid off 97.7% of CDB loans that have the same due date as their defaulted commercial loans. This selective default strategy suggests that the CDB has repayment priority over commercial banks, providing a mechanism for the lower delinquency rate of CDB loans.

A milestone for the development of local government debt in China was a large national stimulus package initiated in November 2008 to counter the impact of the global financial crisis. This "big push" from the top encouraged lending by commercial banks to local governments. We find that the delinquency rate for loans initiated by commercial banks during this stimulus period (November 2008-December 2010) is higher than that during the previous period, while the delinquency rate of CDB loans is unchanged. We also find that during the stimulus period, commercial banks lend significantly more to LGFVs if there were more CDB loans due but not the other way around. This suggests that LGFVs use commercial bank loans to pay off CDB loans, consistent with our selective default story.

To understand local governments' incentives of avoiding default on policy bank loans, we examine the role of local politicians, especially their career concerns. Climbing up the political hierarchy is the main incentive of politicians in China and in other countries (Maskin, Qian, and Xu (2000)). China does not have Western style elections. Politician promotion, especially for city-level politicians, is largely dependent on local GDP growth, which in turn is fueled by debt financing. We find that local politicians' promotion chance increases with the amount of credit that the CDB grants to local

governments. Compared with commercial banks, the CDB provides a more stable and longer-term funding source, which is essential for extended local economic growth. Moreover, the CDB is still a vital part of political ranks, and it may have bureaucratic dominance over many local governments.[6] Given that connections and performance are complementary to politician promotion in China (Jia, Kudamatsu, and Seim (2015)), local government officials have strong incentives to maintain good relationships with the CDB in order to increase their chance of promotion.

We further study the unique role of policy loans to politicians by analyzing the political cycle and individual politician power, which are major factors for politician promotion. In China, the typical politician term is five years. Politicians may expect to be evaluated for possible promotion during the last two years in their tenure. We find that, during those two years, they tend to default less with respect to CDB loans but not commercial bank loans. Provincial governors and party secretaries are generally more powerful than CDB top executives in the political hierarchy. Hence, the CDB cannot influence the promotion chance of top provincial leaders. Indeed, we find lower delinquency rates for CDB loans only for LGFVs administrated by city-level (including counties that receive loans through cities) but not for province-level financing vehicles.

Our paper adds to the literature on government interventions and national interest through banking and financial activities along the lines of Stiglitz (1993), Tirole (1994), and Shleifer and Vishny (1994). Although heavily criticized as anti-free market spirit, many governments have actively intervened in banking and financial markets through history including the 2008 financial crisis. Prominent recent examples include the

[6] In the Chinese political ranks, the China Development Bank is at the ministerial level, but the biggest commercial banks are at the vice-ministerial level, making the CDB more powerful politically.

Troubled Asset Relief Program by the U.S. Treasury and Securities Markets Program of the European Central Bank. This study reveals a potential bright side of such state capitalism activities. We provide direct evidence on how different political hierarchies affect the credit allocation and loan performance of local governments. While prior studies have discussed how state-owned banks make loans to achieve politicians' goals, such as winning elections, and how such behavior negatively affects economic growth (e.g., La Porta, Lopez-de-Silanes, and Shleifer (2002)), our study shows that politicians also return the favor to relationship banks by paying off their debt first.

This study uses a novel setting to demonstrate the value of relationship banking, which has been difficult to identify in the corporate setting (Boot (2000)). The literature has focused mostly on the value to corporate borrowers (e.g., Petersen and Rajan (1994)), while little work has been done on the bank or the individual manager of borrowing firms. The present analysis complements prior studies on the political economy of banking such as Sapienza (2004), Khwaja and Mian (2005), Dinc (2005), and Carvalho (2014). Our study shows how banks can benefit, in a particular way only feasible in China owing to the lack of a cross-default clause, from selective debt repayment by banks. Our study also demonstrates the benefit of maintaining good relationships with important lenders at the personal level, as the officials of the borrowing governments obtain promotions by using CDB loans.

The present study contributes to the understanding of the so-called "China model" from the perspective of the political economy of banking.[7] While many countries set up

[7] Previous studies have analyzed the unique aspects of Chinese economies, such as the informal financing of economic growth (Allen, Qian, and Qian (2005)), negative effects of commercial bank loans (Bailey,

development banks to finance projects that commercial banks are not willing to consider and that have high default rates, the China Development Bank appears to be an exception, as our data show, in its way of managing investments and influencing local politicians. Departing from the practice of bank bailouts by federal governments in the West (e.g., Acharya, Drechsler, and Schnabl (2014)), China seems to allow local governments and commercial banks bear much of the debt burden while maintaining a strong central government and policy bank.

Our study based on Chinese data has implications for other countries, such as those with monetary unions or centralized top governments. Government debt has become a major concern in many countries, including the U.S. Disastrous debt accumulation among state and provincial governments has direct negative implications for macroeconomic and political stability (see Rodden (2005) for the examples of Brazil and Argentina). Managing the risk of local government debt has been a top priority of the central government of China since 2010. Around the same time, the E.U. has been trying to improve the debt situation of its member states. Our findings are therefore important for policy makers and market participants.

The rest of this paper is organized as follows. We first describe the historical accounts and institutional background of local government debt and bank lending in China in Section 2. We then present our data and summary statistics in Section 3. Section 4 provides the empirical results regarding loan delinquency rates. Section 5 further analyzes how different delinquency rates are generated. We discuss the role of politicians in local government debt in Section 6. Section 7 concludes.

Huang, and Yang (2011)), high savings rates (Song, Storesletten and Zilibotti (2011)), and weak institutions (Acemoglu and Robinson (2012)).

2. Background

2.1. Chinese local government financing, 1994-2014

Two major events shaping local government debt in China occurred in 1994. The first one concerns how local and central governments share the tax revenues. The arguably most important reform for China's public finance is the 1994 Tax Sharing Scheme, under which a large share of Chinese fiscal revenues has been shifted from local governments to the central government.[8] Consequently, local governments receive only about 30% of tax revenues. Thus, most tax revenues go to the central government. The second major change in 1994 occurred as a result of the Budget Law, which requires local governments to keep a balanced budget and prohibits direct borrowing by local governments.[9] Local governments receive their share of tax revenues from the central government (they are also allocated fiscal transfer payments). If a local government needs to borrow money, it needs to ask the Ministry of Finance to borrow the money and repay the debt on its behalf. Such debt also needs to be approved by the Central Planning Commission (renamed as Development and Reform Commission). Under these two changes in 1994, local governments have very limited fiscal and financing sources.

The promotion of local politicians in the Chinese system is principally based on local economic performance, which in turn is mainly driven by investment (domestic consumption has become a more important element only in recent years). Local

[8] See Tsui (2005) and Xu (2011) for discussions on the 1994 tax reform in China.
[9] China revised the Budget Law in September 2014 to allow local governments to borrow directly. Our sample ends before the new law entered into effect in January 2015.

government officials are responsible for developing local economy including the improvement of infrastructure. Even though they are required to keep a balanced budget, under-resourced local governments are motivated to create other ways to finance and invest in local projects. Local government expenditures have been increasing dramatically to support the economic boom in China. Figure 1 shows that local governments in China have operated under an increasing large fiscal deficit since 1994, in contrast to the surplus for the central government. This is mainly due to the increasing investment needs and financing constraints of local governments. In 2014, the total expenditures of all local governments reached RMB 13 trillion for revenues of RMB 8 trillion, resulting in a RMB 5 trillion deficit (in contrast, the central government had a surplus of RMB 4 trillion).

[Place Figure 1 about here]

2.2. Local government financing vehicles

To solve the financing constraints, with the CDB's help, local governments started to set up corporations (some are in the form of shell companies) to raise debt for them after the 1994 reforms. These corporations are usually fully owned by the local governments and are commonly known as local government financing vehicles. The first example is the local government in Wuhu City of Anhui Province, which established its Urban Construction Finance Company in 1998. It borrowed money from the China Development Bank, and the Wuhu Urban Construction Finance Company received land injection from the Wuhu government, which is the main source of debt repayment.

Moreover, the local government guaranteed the loan by using the fiscal revenues of the entire city, as approved by the local People's Council. Since then, many other cities have followed the Wuhu model and established their own local government financing vehicle (LGFV) to borrow from the CDB (See Chen (2012) and Sanderson and Forsythe (2013)).

Although the debt of LGFVs is ultimately backed by local governments, it is not reported in the balance sheet of local governments. In other words, local governments borrow via LGFVs, and these loans are off balance sheet. Figure 2 illustrates such financing methods of local governments after 1998 Wuhu model. Without the funding from LGFVs, local governments can fund only their local expenditures by using allocations from upper level governments or their own assets, such as local state-owned enterprises. With LGFVs, local governments can finance new projects, especially large projects that require billions of RMBs to complete in multiple stages. These loans are usually backed by land that can be sold at a higher price after the completion of the projects.

[Place Figure 2 about here]

There are three main financing sources for LGFVs: bank loans, bond issuance, and shadow banking such as trust funds. In earlier years, the CDB was the main funding source for LGFVs. In November 2008, the central government in China initiated a 4-trillion economic stimulus package. Since then, commercial banks have dramatically increased their lending to LGFVs. Figure 3 shows that the bank loan issuance to LGFVs spiked in the first half of 2009 to RMB 2.0 trillion (and RMB 3.4 trillion for the full year 2009). LGFVs usually use CDB loans as their long-term financing resource and use commercial bank loans mainly for operation purposes. The maturity of CDB loans is

typically longer than maturity of commercial bank loans (usually shorter than 3 years). On the other hand, since the 4-trillion RMB package, LGFVs started to issue "*Chengtou*" bonds (Chinese name for urban construction and investment bonds) in the public debt market. Although the bond market started small, it has been growing steadily. Figure 3 shows that by 2012, bonds have surpassed loans as the major financing source for LGFVs. In addition, local governments also use shadow banking instruments, arranged by banks, such as entrusted loans and trusts (i.e., wealth management products to sell to the public) in order to raise funding. However, raising money from the shadow banking market accounts for a relatively small fraction of local government financing, especially in earlier years. During our sample period 2007-2012, bank credit is the dominant financing resource for LGFVs.[10]

[Place Figure 3 about here]

At the end of 2012, the total debt amount of local governments in China was close to 2 trillion US dollars. This is about 25% of the GDP in China. Almost all the cities in China have LGFVs. Among those three main financing resources for LGFVs (bank loans, bond issuance, and trust funds), bank credit contributes to about 60% of the total LGFV debts in 2013. Within bank credit, policy loans from the CDB accounts for the lion's share, as commercial banks were not enthusiastic about lending to local governments before 2008.

[10] There were several major policy changes to China local government debt since 2013. For example, in 2015, the central government asked local governments to swap their bank loans for longer-term, lower interest bonds, in order to reduce the burden and leverage of servicing local government debt. Moreover, local government debt has also been more strictly administrated by the central government with a specific cap and debt quota.

2.3 The unique role of the China Development Bank

At the same time that tax reforms and Budget Law were enacted in 1994, the China Development Bank (CDB) was established for policy lending and helping centralize monetary authority and harden budget constraints.[11] The CDB is directly under the jurisdiction of the State Council, and it has authority at the ministerial level (as do the central bank and China Banking Regulatory Commission). All the other policy banks and commercial banks are at the deputy ministerial level. This gives the CDB more political power than commercial banks. The CDB was initially viewed as an extension of the government's fiscal function. It has the mandate to provide subsidized credit for infrastructure and strategic industries in China. In terms of financing, the CDB is entitled to receive disbursements from capital accounts and fiscal subsidies from the state budget for key state projects. Moreover, the CDB mainly raises funds from bond issuance to state-owned financial institutions. Chen (2012) and Sanderson and Forsythe (2013) provide a vivid account of the CDB.

Although the CDB is state owned, it is very different from commercial banks, which are also mainly state owned. First, the CDB focuses on undeveloped areas and non-profitable industries, such as infrastructure. Commercial banks prefer to compete in traditional and profitable commercial areas. This is because, as a policy bank, the CDB has the agenda of investing in these areas, and the investments are more influenced by policy. Importantly, leveraging on China's sovereign ratings, the CDB mainly raises money from bond issuance, and it can provide long-term credit for infrastructure and

[11] There are three policy banks in China. In addition to the CDB, the other two are the Export-Import Bank of China, which focuses on fostering international trade, and the Agriculture Development Bank of China, which focuses on rural areas.

strategic industries. Second, the CDB's long-term loan rates have been set lower than those of state-owned commercial banks. This is because the CDB is less profit driven and because its administrative costs are lower.[12] Moreover, the CDB's funding costs are lower because its bonds enjoy the same status as treasury bonds, with zero risk weight under the Basel capital rules. Furthermore, the CDB has long-term collaborations and relationships with local governments. This potentially gives the CDB information advantages and expertise. Hence, compared with commercial banks in China, the CDB has advantages as long-term stable funding source for local governments.

3. Data and Summary Statistics

3.1. Data description

We utilize several data sets for our empirical analyses. The most important one is a proprietary data set that includes all major bank loans that the China Banking Regulatory Commission (CBRC) compiled for monitoring and regulatory use. The master data set consists of 7,179,136 loan contracts granted by 19 largest Chinese banks to firms with unique organization codes. The data set of the CBRC includes all borrowers with an annual credit line over RMB 50 million (approximately US$8 million). This loan data set spans from January 2007 through to June 2013, which accounts for over 80% of the total bank credit in China. On the whole, the data covers 161,535 distinct borrowing firms located in all 31 provinces and autonomous regions and operating in all of the 20 sectors in accordance with the Economic Industrial

[12] The CDB has only provincial branches and city branches at five coastal cities or special economic zones. Commercial banks usually have branches in cities, counties, and villages. They have many more branches than the CDB. The administrative costs of the CDB could be lower than commercial banks.

Classification Code in China. In addition to the comprehensive coverage, the data also contain details regarding loan-level information, i.e., the unique firm identifier, firm-level fundamentals (e.g., size, leverage and location), banks' information (e.g., the names and location of branches), and loan-level characteristics (e.g., loan amount, loan maturity, credit guarantee providers, internal ratings, issuing date, maturity date on contracts and the final repayment date in reality).[13] Thus, we can clearly identify the delinquency of loans.

The second data set that we use in this paper contains information on local government financing vehicles. We start with the very preliminary name lists of local government financing vehicles, which has also been provided by the CBRC. The LGFV name list starts in 2010.[14] We then manually identify the pre-2010 LGFV names based on the post-2010 names given that LGFVs typically exist for extended period of time without changing its business nature. To improve the matching accuracy, we further manually cross-check the borrowing firms' business scope in the National Enterprise Credit Information Publicity System by using their names. In this way, we identify 11,487 local government financing vehicles up to 2014, for which names, locations, and unique firm identifiers can be matched with our loan data set. After matching the master loan-level data with LGFV names, we obtain 5,672 LGFVs that have loan information covered by the loan data set.

[13] However, the data do not have loan interest rates.

[14] To mitigate the risks associated with banks' lending to local government funding platforms (LGFP), the CBRC required banks to review and examine each and every loan to the LGFVs. Notice on Conducting Research on Ledger of the Lending to Local Government Financing Vehicles (Yin Jian Ban Fa No.338, 2010), issued on November 9, 2010. Notice on Further Promoting the Inspection to Loans to Local Government Financing Vehicles (Yin Jian Ban Fa No.309, 2010), issued on October 11, 2010.

We also collect local government financial and economic data for our empirical analysis in order to control for local fiscal conditions. There are about 300 cities located in 31 provinces and autonomous regions for our sample. Moreover, we also manually collect information on local government politicians at city-year level, such as mayors' gender, age, education level, career path, and other demographical data. We also track the changes in positions for local politicians for our analysis of promotions.

3.2. Data validation

To assure the quality of our data, we compare our data with other circulated public data regarding local government indebtedness in China. Officially, the National Audit Office of the People's Republic of China (NAO) issued two reports on the snapshot of local government debt in 2011 and 2013 for each province. We cross-validate our aggregate CBRC loan-level data with these two reports from the NAO.[15]

The 2013 NAO report documents that the total amount of outstanding loans to LGFVs is RMB 6.97 trillion in June 2013. In our CBRC data, the corresponding number is RMB 7.31 trillion, which is close to and slightly larger than the NAO number. Moreover, during the "2013 Half-year Work Conference on National Banking Supervision & Economic and Financial Situation Analysis", CBRC Chairman, Shang Fulin, noted that the balance of LGFV loans totaled RMB 9.7 trillion by the end of June 2013. This statistic is larger than the total loan size in our sample. This is sensible because our dataset does not cover small LGFVs with a credit line of less than RMB 50

[15] We have also considered other data sources, such as news report by government-owned media and speeches or interviews by government officials in order to further check the quality of our data. For example, we compare our CBRC loan data with an internal CDB report in 2013. At the end of 2012, our data and the CDB report have very similar numbers of outstanding loan amounts from each of the big 4 commercial banks and the CDB.

million. As we discussed before, we cover almost all LGFVs at the provincial and city levels. For county-level LGFVs, our data covers only relatively large LGFVs. This should not affect our conclusions based on provincial- and city-level LGFVs.

The NAO reported that there were 6,576 LGFVs by the end of 2010. In our data, this number is 4,857. Even among different government departments, there is no consensus regarding the definition of LGFVs or the number of LGFVs. There are two main reasons for this. First, central government started to track LGFVs very recently. For example, the first list of LGFVs from the CBRC was reported in 2010. Second, different government departments have different lists of LGFVs. The China Securities Regulatory Commission (CSRC) did not allow LGFVs under the CBRC's supervision to issue bonds in the capital market. This induced local governments to endogenously choose between the CBRC and the CSRC. Moreover, many new LGFVs were founded in order to borrow from both banks and the bond market. The existence of these LGFVs makes it more difficult to track the real numbers of LGFVs. For example, the People's Bank of China (the central bank) in its "2010 regional financial operation report" estimated that there were about 10,000 LGFVs nationwide, and the CBRC reports that there are 9,828 LGFVs. In fact, there were few clear and executable criteria for identifying LGFVs. The State Council released a circular on strengthening local government financing platform management issues to improve the coordination among four ministries and commissions (i.e., Development and Reform Commission, Ministry of Finance, People's Bank of China and CBRC) in order to better manage the situation.

The 2013 NAO report contains data for each province in China, which allows a geographic comparison between our data and the NAO aggregate statistics. We first

aggregate our loan-level data to calculate the outstanding loan amount for each province. There are 31 provinces in China including the centrally administrated cities (i.e., Shanghai, Beijing, Tianjin and Chongqing). The NAO report included 30 provinces in total (Tibet was the one excluded). We then compare these 30 provinces between our CBRC data and NAO report. We plot the provincial debt amounts from NAO report and the loan amounts from CBRC data in Figure 4, which shows that these two data series align very well. The R-square from a simple linear fitting is 80% (correlation between these two data series is about 0.9). This further confirms the good quality of our data from CBRC.

[Place Figure 4 about here]

Because our proprietary loan-level data from the CBRC is collected directly from the banks (lender side) and the data in NAO report is collected from the local governments (borrower side), the good match between these two data from the lenders and from the borrowers assures us the quality of our data and the reliability of our findings.

3.3. Summary statistics

Table 1 shows the summary statistics for the CBRC loan-level data between January 2007 and March2013. As shown in Table 1, in year 2007, there are a total of 2,380 LGFVs borrowing 23,150 loans, which amounts to for RMB 1.3 trillion in terms of newly originated loans. Moreover, for each LGFV, on average, it borrows 540 million RMB with about 10 loans from 2.3 banks in 2007. The LGFVs increased their borrowing dramatically 2009, almost doubling the number and amount of loans from 2008. The

total amount of outstanding loans for LGFVs increased to RMB 7.7 trillion in 2010 and dropped sharply afterwards. This is mainly due to the 4-trillion RMB stimulus package implemented from November 2008 to December 2010. Further, each LGFV borrows 8 loans per year from 2 banks on average. One interesting pattern concerns maturity. From 2007 to 2013, the average maturity of loans increased from 3.4 years to 4.1 years.

[Place Table 1 about here]

LGFVs borrow from the CDB (policy bank) and commercial banks. These two sources are quite different, as we discussed in section 2.c. Table 2 shows the summary statistics for loans from the CDB and commercial banks (including the largest 5 commercial banks and the other 12 joint-equity commercial banks) in China. Panel A shows that the 17 commercial banks together provide much more credit to LGFVs than CDB. For all the loans in our sample, the average maturity of CDB loans is 6.8 years, which is longer than 4.4 years from the commercial bank loans.

To calculate the default ratio, we use 90 days of delinquency as the cut-off; thus, we consider a loan to be in default if its delinquency is greater than 90 days. Since many new loans in our sample have not reached their expiration date, we select the loans with maturity dates before March 30, 2013 (the end of our sample period). In this subsample, we observe exactly whether a loan is in default. There are 90,208 loans out of total 176,074 loans in this subsample. The default ratio is 1.6% on average.[16]

[16] For the loans with an expiration date after March 2013, we do not observe whether they eventually default.

[Place Table 2 about here]

In Table 2, Panel B, we compare the delinquent ratios between the policy bank (the CDB) and the commercial banks. We separate the loans into LGFV credit and non-LGFV credit. On average, for LGFVs, the CDB loan delinquent ratio is 0.30%, which is significantly lower than the delinquent ratio of the commercial bank loans (1.8%). For LGFVs, the gap in the delinquent ratio between CDB loans and commercial bank loans is large and significant. On the other side, for non-LGFV credit, difference in the default ratio between the CDB and other commercial banks is nonsignificant. Both the CDB and commercial banks have default ratio around 0.9%. This shows that, for LGFV credit, CDB loans perform significantly better than commercial bank loans. However, for other loans, the CDB performs similar to commercial banks. To our knowledge, the commercial banks in China lend to finance different businesses than the CDB. The CDB focuses on the blue ocean area, bottlenecked industries, and infrastructure investments where LGFVs usually focus on In contrast, commercial banks usually invest in a wider range of businesses. This might explain the differences in the loan delinquency ratio. The performance of CDB loans is very different than the performance of commercial loans to the local governments. For corporate loans (non-LGFVs), the difference in default rates between CDB loans and commercial bank loans is negligible. The interesting variations between the CDB and commercial banks relate to loans to local governments.

3.4. Distribution analysis of local government debt

We document the heterogeneity of LGFVs' borrowing across different industries and regions. Figure 5 plots the industry distribution of the amount of new loans for LGFVs and non-LGFVs during the period from 2007 to 2012. Panel A shows that for LGFVs, the investments focus on infrastructure, real estate, retail, and leasing industries. Moreover, there is a clear spike in loan issuance in 2009. This is due to the 4 trillion stimulus package initialed in November 2008. This package mainly aims at infrastructure investments, and local governments are the main investors. After this stimulus package, new loan issuance to LGFVs continues to drop. This patterns are cross all industries that LGFVs focus on. Panel B presents the results for non-LGFV loans. In contrasted with those to LGFVs, the loans to non-LGFVs mainly flow into the manufacturing industry. Moreover, new issuances to non-LGFVs have been increasing overtime. Although there is a jump in 2009, new issuances continue to grow after 2009, which is due to the continually growing economy in China. There is a clear difference in credit flows to LGFVs and other firms after 2009. This is consistent with the nature of the 4 trillion RMB program, which mainly targets infrastructure and local government investments. After the pull-back of the 4 trillion RMB package, there was a decrease in loans to LGFVs but not to other firms. This heterogeneity also confirms our identification of LGFVs.

[Place Figure 5 about here]

Figure A2 of the Internet Appendix shows that the CDB (policy bank) appears to have a different focus than commercial banks across regions in China. For example, the CDB lends significantly more than commercial banks in Hainan, Ningxia, Guizhou, Qinghai, and Xinjiang provinces. In some other provinces, commercial banks are more

important. For example, commercial banks substantially lend to the local government in Zhejiang province. This could be due to the different fiscal abilities across different regions. Rich provinces can naturally afford more debts.

Figure 6 shows the debt-to-GDP ratio of the provinces in China. We aggregate the loan amounts on provincial level and divide by provincial GDP numbers. Overall, rich provinces have a higher debt-to-GDP ratio because they have a greater borrowing capacity. However, both Hainan and Qinghai have a high debt-to-GDP ratio and their debt is mainly from the CDB (see Figure A3 in Appendix). The CDB focuses on different areas from commercial banks and mainly invests in undeveloped provinces. There are a couple of reasons behind this. First, the CDB has the agenda of providing credit to undeveloped areas and bottle-necked industries. The projects in these areas are usually not profitable, and they have negative NPV. Commercial banks are profit driven, and they do not want to lend to poor provinces. Most of the provinces that the CDB focuses on are in undeveloped areas. In many cases, the CDB explores the areas that commercial banks do not want to lend to. This can also help the CDB avoid direct competition with commercial banks. Second, different commercial banks have different market shares in different regions. Lending to LGFVs requires coordination between banks and local governments. After the 4 trillion RMB stimulus package in 2008, competition among banks escalated. Banks' connection with local governments is one of the important determinants of borrowing from LGFVs. Third, the CDB has branches only at the provincial level and does not have branches in cities. Commercial banks have branches almost everywhere (e.g., provinces, cities, counties, and villages). Thus, the CDB lends mostly to the large projects since the CDB does not have a comparative advantage in

investing in small projects below the city level. Regarding the political hierarchy, the CDB is at the ministerial level, and commercial banks are at the vice-ministerial level. This gives the CDB more bargaining power to get better and larger projects.

[Place Figure 6 about here]

Figure 6 shows great heterogeneities across different regions in terms of local government debt (Figure A4 shows the dollar amount of debt outstanding in December 2010 for each province). Indeed, the loan-to-GDP ratios vary from almost 0 to 35%. Generally, the LGFV loan amount-to-GDP ratio is low in eastern coastal areas, which are usually richer. Moreover, the city of Chongqing stands out, which is in line with a recent report by Moody's in 2014.

4. Delinquency of LGFV Loan Repayments

In this section, we first present our baseline results on how LGFVs loan repayments depend on the source of capital, i.e., the identity of the lending bank. Then, we consider two potential explanations for the differential treatment of policy and commercial loans: project selection and loan evergreening. Although those two explanations are indeed related to loan performance, we show that our main result prevails after taking them into account, that is, our finding is not completely driven by those two factors.

4.1 Loan delinquency and funding sources

In China, there are very few cases of actual loan defaults, even for commercial loans (partially due to the so-called soft budget constraint and partially due to the good

economic performance). Therefore, delinquency is a more proper measurement of loan performance. We define defaulted loans as those that are paid off in full 90 days after the due dates.[17] Our univariate comparison in Panel B of Table 2 shows that the LGFV loan delinquency ratio of the CDB is significantly lower than the ratio of commercial banks. This is a surprising result because policy banks are not profit driven and often finance low or negative NPV projects that have positive externalities. For commercial banks, maximizing profits and shareholder value is their key goal. Naturally, the CDB should have a higher delinquent ratio and more nonperforming loans, but our data shows the opposite result for LGFV loans.

We conduct multivariate regression analysis to further understand LGFV loan performance. The independent variable is the default indicator and the main independent variable is the CDB dummy. We also control for other loan characteristics, as well as year, industry, and region fixed effects. The logistic regression is:

$$\text{Default}_i = \alpha + \beta_1 CDB_i + Control_i + YearFE + IndustryFE + RegionFE + \epsilon \quad (1)$$

, where *Default* is the indicator for whether loan *i* has been delinquent for more than 90 days. *CDB* is the dummy for whether the loan *i* is from the CDB.

Table 3 reports the estimation results from the logistic regressions. Column 1 shows that the coefficient estimate of *CDB* is -1.84 which is statistically significant at the 1% level, without any control variables or fixed effects. This means that, unconditionally, CDB loans are 85% less likely to default than commercial loans. This finding is consistent with the results of the univariate analyses documented in Table 2

[17] Our findings are robust to alternative definitions of loan default such as 30- or 60-day delinquency.

(commercial bank loan default rate is 1.8%, CDB is 0.3%, which is close to (1-85%)*1.8%=0.27%). Columns 2-4 show that this result is robust to various control variables and inclusion of fixed effects. In column 2, we control for other loan characteristics, such as the loan size, maturity, whether the loan is guaranteed by a third party, and bank internal rating, as well as LGFV characteristics, such as total assets and leverage. The coefficient estimate of the *CDB* dummy is -2.57, which is still statistically significant and stronger in magnitude than the corresponding number in column 1. Moreover, we find significantly positive coefficients on both the loan guarantee dummy and bank internal rating, suggesting that the loans requiring guarantee and viewed more risky by the lending banks are more likely to default. Large LGFV loans are more likely to default than small loans. One potential explanation for this result is that during the 4 trillion RMB stimulus package from November 2008 to December 2010, banks (both the CDB and commercial banks) made bigger loans to local governments. These loans were relatively short term (usually the maturity is less than three years). Many of these loans did not perform well. Furthermore, we include year fixed effects, industry fixed effects, and region fixed effects in columns (3) and (4) to control for the time trend, industry and regional level effects. The results are robust to the inclusion of those fixed effects.

[Place Table 3 about here]

Loans for LGFVs are ultimately backed by local governments. Therefore, the financial ability of local governments could also affect the default ratio. In column 4 of Table 3, we further control for local economic variables such as the GDP, local expanse to revenue ratio, local real estate sales to GDP ratio. The coefficient of the CDB dummy

is -2.85 which is significant a 1% level and slight stronger than the results in other columns. We also include the number of corruption cases of each province (the number of top officials prosecuted, following Ang, Bai and Zhou (2016)), and it is positively associated with default. This is in line with the conjecture that loans from more corrupted places default more.[18]

4.2. Control for ex ante loan credit quality

The finding that CDB loans perform better than commercial bank loans is robust and surprising as commercial banks are more likely to be profit-driven than the policy bank and should care more about loan default. The CDB's chief objective being a policy bank is to invest in projects that have a large positive externality on social welfare. One possible explanation for why the CDB has a lower default ratio is due to better project selection or more effective screening. Because the CDB is at the ministerial level in terms of political rank and commercial banks are at lower level, the CDB might have the priority to select better projects.

The CDB, being a government agency, often has good, long-term relationships with local governments. In fact, the CDB helped Wuhu City to establish the first financing vehicle in 1998 and continued to lend to Wuhu ever since. It is possible that the CDB has the priority to choose better projects than commercial banks. This could lead to a lower default rate for CDB loans to LGFVs. To investigate whether our finding of completely

[18] Corruption in government was pervasive in China. Many government officials receives bribes from banks in variate forms (e.g., Agrawal et al. (2015)). The recent anti-corruption campaign in China has huge impacts on the economy (see Chen et al. (2016) for detailed discussion).

driven by project selection, in Table 4, we match each loan from the CDB with a similar commercial bank loan to LGFV borrowers within the same industry, city, and year. In other words, we exclude the commercial bank loans with no CDB loans in the same industry and city every year, which might be worse than CDB loans. We then run the logistic regressions in equation 1 on this matched sub-sample. In this way, we compare loan default rate between the CDB and commercial banks with respect to the same industry, city, and time.

[Place Table 4 about here]

The results in Table 4 show similar results as those in Table 3. The coefficients of the dummy CDB have significantly negative coefficients in Column 1 to 4. The results on CDB are slightly weaker than Table 3, which means that the CDB indeed select into better projects. The finding that the coefficients of CDB are still significantly negative suggests that the low CDB default ratio does not arise only because the CDB can select better projects. Rather, the variation comes from other sources as well.

4.3 Bank loan evergreening

Evergreening non-performing loans can lower the ultimate default rate and has been a problem in many places including China. Bank loan rollover for LGFVs was officially prohibited in China until 2014. To obtain a new loan from the same bank on the same project, the borrower needed to repay the maturing loan first (often using a bridge loan from a third party). However, in reality, banks may use creative ways to extend loan maturity and avoid defaults. Accordingly, one potential reason for the low

default ratio of CDB loans is that the CDB engages in more debt rollovers than commercial banks. To examine this conjecture, we analyze whether the LGFVs with more maturing loans borrow more in the same quarter.

For each LGFV, we calculate the maturing outstanding loan amounts from different banks for each quarter. We also calculate the new loan issuance amount from that same bank to the LGFV in the same quarter. We regress this new loan issuance on the maturing loan amounts and other borrower characteristics and market conditions. If banks roll over existing loans, we expect to find a positive coefficient on maturing loans in this regression. The estimation results are reported in Table 5.

[Place Table 5 about here]

Table 5 shows significantly positive coefficients for maturing loan amounts in all model specifications with various fixed effects in the regression. These finding suggests that a bank lends significantly more to a LGFV if it has a substantial amount of loans due to that bank in the quarter. In column 3, we control for year, industry and region fixed effects. The coefficient of Log (Maturing Loans) is 0.534. This means that for every RMB 100 million expiring loan, the lending bank will grant RMB 44.8 million new loans to the borrower in the loan maturing month. This finding provides suggestive evidence of prevalent debt rollover in China. Then, we interact the CDB dummy with the maturing loan amount. The interaction term, "*CDB*Log (Maturing Loan)*", has a significantly negative coefficient. This suggests that although banks in China indeed engage in debt rollover, the CDB engages in debt rollover to a significantly less extent than commercial banks. In summary, results from Table 5 reject the hypothesis that

debt rollover within the same bank is the driver for the lower loan default ratio of the CDB compared with commercial banks.

5. Selective Default over Banks

In this section, we show how the lower delinquency rate for CDB loans is engineered, due to the possibility of selective default which is not prohibited by Chinese bankruptcy law.[19] Our focus is on the differential treatment of different loans to the same borrowers by local governments. We also present a detailed discussion of the major event of central government stimulus initiated in November 2008.

5.1 Debt rollover across banks and 4-trillion RMB economic stimulus

We show, in Table 5, that although banks in China rollover their own debts, the CDB engages in significantly fewer debt rollovers than commercial banks. It is also possible that local governments use the credit from commercial banks to pay back CDB loans. The relationship with the CDB is valuable for LGFVs since the CDB is at the ministerial level and has long term relationships with many local governments. Between the CDB and commercial banks, if local governments value the CDB relationship more, they will aim to avoid defaulting on CDB loans. One way to achieve this is to use the commercial bank loans to pay back CDB loans. Commercial banks started to increase their lending

[19] In fact, there is no bankruptcy law on municipalities in China yet.

to LGFVs in 2008 following the 4-trillion RMB economic stimulus package. Before this stimulus package, the CDB was the main source of LGFVs' long-term financing. In November 2008, the State Council of China announced a plan to invest 4 trillion RMB (about US$570 billion) in key areas (e.g., infrastructure, housing, health and education), as well as to loosen access to credit and cut taxes. This 4-trillion RMB package aimed to boost and stabilize the economy as a result of the impacts of the economic slowdown in the U.S. and Europe. Indeed, Ouyang and Peng (2015) show that the stimulus package helped increase China's GDP growth, but the effect was temporary and lasted for about two years. This event has had a significant impact on local government financing and investments in China. Many believe that the stimulus package was a main cause of China's rising debt problems and has serious long-term consequences.[20]

Within this 4 trillion RMB total package, the central government provided only RMB 1.2 trillion.[21] The rest of the funding was reallocated from local governments' budget. Public infrastructure composed the largest portion of the package. In March 2009, China's National Development and Reform Commission (NDRC) published a breakdown of the funds distribution, where 1.5 trillion RMB of the total package was invested in infrastructure. Under this package, commercial banks started to massively increase their lending to LGFVs. Figure 3 shows that between January and June 2009, the total amount of new loan issuance to LGFVs reached above 2000 billion RMB. This represents about a 185% increase from the last 6 months of 2008. We note that the "4

[20] For example, the Carnegie Endowment argues that China's debt problems are rooted in the 2008 stimulus package. http://carnegieendowment.org/2014/09/18/china-s-debt-dilemma-deleveraging-while-generating-growth

[21] *Financial Times*, November 14, 2008.

Trillion" number is nominal. The actual number may be significantly higher (some argue that it may be nine trillion or more).

Local politicians can take advantage of this opportunity to increase infrastructure investments and boost up local economic growth in short run. Taking such an opportunity is in line with politicians' promotion incentives. Many of these loans in the 4-trillion RMB package have ultimately become problematic.[22] In June 2010, the State Council implemented the first official regulation on LGFVs. In this regard, local governments shall only use their fiscal revenue to invest in non-profit public infrastructure projects. In November 2010, the NDRC announced a detailed regulation to tighten the bond issuances of LGFVs. This effectively marked the end of the 4 trillion RMB stimulus package.

In Figure 7, we plot the incremental loan issuance between the CDB and other commercial banks. On the one hand, the big-five commercial banks dramatically increased their lending to LGFVs in 2009 and started to slow down in 2011 after the 4-trillion RMB package. On the other hand, the CDB kept increasing its lending to LGFVs after the 4-trillion RMB package. This makes relationships with the CDB very important to local governments after the withdrawal of the 4-trillion RMB program. During the period of the 4-trillion RMB package, many new projects, especially long-term infrastructure investments, were initiated. These projects were in financial trouble after 2010 when commercial banks stop lending to LGFVs. Support from the CDB became essential for local governments to finish these projects.

[Place Figure 7 about here]

[22] In July 1, 2011, http://www.nbcnews.com/ reported that as much as 20% of the debt under the 4 trillion RMB program may have to be written off as bad debt.

We first compare the changes in default ratios between the CDB and commercial banks before and after this 4-trillion RMB program. Figure 8 plots the default ratio of the loans issued before the program, during the program, and after the program. For commercial banks, the default rates significantly increase from 1.46% to 2.03% during the 4 trillion RMB program and continued to increase to 2.36% after the program. During the stimulus program, local politicians had stronger incentives to invest as much as possible and increase their promotion chances. Bad investment projects were easier to get approved and financed during this period than during normal times. Moreover, there might not have been enough good investment opportunities to necessitate 4 trillion RMB. Surprisingly, on the other hand, the CDB's default rates decreased from 0.4% to 0.2% during the 4 trillion RMB program.[23] It is surprising that the CDB has better loan performance and that commercial banks have worse loan performance during this credit boom. This further strength our findings regarding the low default ratio of CDB loans.

[Place Figure 8 about here]

With considerable credit inflows during the 4 trillion RMB package, local governments were able to use newly raised loans, mainly from commercial banks, to pay off CDB debt first. In China, in addition to the debt rollover from the same bank, it is also common to use new loans to pay off the other banks' loans. In Columns 1 and 2 of Table 6, we regress the net loans from commercial banks (new loan issuances to a LGFV less the expiring loan amount) on the expiring total loan amounts from the CDB of the same LGFV. In Column 1 of Table 6, the coefficients on the CDB expiring loan amounts

[23] The difference between the change in the default rate related to the CDB and the change in the default rate related to commercial banks is statistically significant for this 4 trillion RMB package period.

is 0.913 at 1% significance level. This means that LGFVs almost borrow the same amount of loans from commercial banks as the amount of their expiring CDB loans. We also interact this variable with a dummy for the 4 trillion RMB package period. In Column 2 of Table 6, the interaction term also has a significantly positive coefficient. This suggests that when a LGFV has more CDB loans due, it can borrow significantly more from commercial banks, especially during the 4 trillion RMB package period.

[Place Table 6 about here]

In Columns 3 and 4 of Table 6, we switch the dependent and independent variables in the regressions. In particular, we put net loan issuance from the CDB on the left-hand side and expiring commercial bank loan amount on the right-hand side of the regression. The coefficients on the variable expiring commercial bank loan amount are 0.008 and 0.016, respectively. Although both coefficients are still statistical significant, the economic magnitudes become weaker than that in columns 1 and 2. Moreover, in column 4, for the interaction term with the 4 trillion RMB package, the coefficient is significantly negative. This result contrasts with what we find in column 2. The opposing effects that we find on the interaction terms including the 4 trillion RMB package suggest that during this time period, local governments used credit from commercial banks to pay back CDB loans and not the other way around.

5.2 Selective default of local governments

Most countries have bankruptcy laws to enforce *pari passu*. That is, loans of same seniority have to be treated equally. Moreover, all loan contracts include cross-default

clauses. Default on one loan would automatically trigger default on all other debt. However, China does not practice formal bankruptcy law, and there is no law government default by governments (such as that in Chapter 9 of U.S. Bankruptcy Law).

We further explore LGFVs loan repayment behavior by looking at selective default. Anecdotal evidence suggests that many local governments do not want to default on CDB loans and choose to default on commercial bank loans first. We first select the LGFVs which have defaulted on commercial bank loans. There are 761 LGFVs defaulted in their commercial bank loans. Then, in the default year, we select these LGFVs' CDB loans which are also due in the same year as defaulted commercial loans. 89 LGFVs have both defaulted commercial bank loans and CDB loans due. Among these CDB loans, we find that the default probability is only 2.3%. In other words, for LGFVs with default, they usually pay off 97.7% of their CDB loans. Condition on default, the distressed local governments still pay off almost all their CDB debt. This is the suggestive evidence of selective default

We also perform regressions to test this selective default behavior of LGFVs. To begin with, we explore the selective default evidence at the local government level. We select the loans that satisfy two criteria, i.e., the borrowers have expiring loans and at least one default occurs for any local government financing vehicles owned by the same local government. In other words, whenever there is any LGFV default in a city (either CDB loans or commercial loans), we select all LGFV loans in this city which are due in the default year into our sample (both CDB loans and commercial loans). We choose city level because many LGFVs are backed by city governments in China. If a city is in

distress, all the LGFVs in that city could be affected. The city politicians can choose to default on some of their loans and pay off the others.

We regress the default dummy on CDB dummy and control variables. The regression results are reported in columns 1 and 2 of Table 7. The coefficient on CDB dummy is -2.530 in Column 2. This means that when a city government (with both CDB and commercial bank loan due) defaults on their loans, the chance that the government defaults on CDB loans is 5.6% less than from commercial banks. Moreover, the results are very robust across different regression specifications. This suggests that when a city is in financial distress and has to default on their loans, the politicians usually choose to default on commercial bank loans rather than their due CDB loans. This also means that, for local politicians, the relationship with the CDB is more valuable than with commercial banks.

[Place Table 7 about here]

Furthermore, we also explore the selective default behavior within LGFV. In columns 3 and 4 of Table 7, we perform the same regressions as in columns 1 and 2 but select loans at LGFV level. We tease out all the LGFVs with a default history and merely select the loans of these LGFVs that are due within the same year as the default. We regress the default dummy on CDB dummy as well as on loan, LGFV, and city characteristics. The CDB dummy, again, has significantly negative coefficients. This confirms our selective default story at the micro level. When a LGFV is in trouble, it would choose to default on commercial bank loans first. From Table 7, clearly, Chinese local governments or local politicians are reluctant to default on CDB loans. This finding supports the politician career concern channel, which explains why the CDB has a lower

default ratio than commercial banks. As we mention before, the CDB is at the ministerial level and have more political leverages and powers than commercial banks. Moreover, in China, the promotions of local politicians highly depend on local GDP growth. The CDB can provide long-term credit to support the local economic developments. Politicians aim to avoid defaulting on CDB loans in order to maintain a good relationship with the CDB, as this could help them obtain more loans in the future and increase their chance of promotion.

6. Political Influence in Local Government Borrowing and Repayment

Political power plays a key role in many places, including China, especially with respect to local economic growth. In this section, to understand the lower delinquency rate for CDB loans, we further examine how politicians affect LGFVs borrowing and how loan performance affects the promotion of politicians.

6.1 Politicians' career advancement

How politicians advance their careers is an interesting and complicated issue in China due to lack of real elections and control of China Communist Party. In addition to the head of the government, such as the provincial governor or city mayor, each administration has a Communist Party secretary, who ranks higher than the government head. We obtain data on the top politician profile and merge them with the CBRC loan data. In China, party secretaries are not elected. Instead, they are appointed by higher-level governments, such as provincial governments. Prior studies find that

local politician promotion in China heavily depends on local GDP performance. Further, Li and Zhou (2005) show that the likelihood of promotion of provincial leaders increases with their economic performance, and Ru (2015) finds that CDB loans are positively correlated with city secretaries' promotion chances, especially for loans issued during the early years of city secretaries' tenures.

We conduct several tests on the value of relationships with the CDB in enhancing politicians' promotion chances. A simple definition of promotion is when a city secretary moves to a higher position in the political hierarchy.[24] Since the CDB has greater political power than commercial banks, maintain a sound relationship with the CDB should have a greater impact on a politician's promotion chances. In Table 8, we regress the dummy of politician promotion at the end of term on the amount of CDB loans. The regressions are at the politician term level. Column (1) in Table 8 shows that the coefficient of log (CDB loan) is 0.319 at 1% level significance. This means that a one standard deviation increase in the natural log of loans borrowing from the CDB raises the politician promotion chance of the city secretary by 5.1%. One concern is that loans from commercial banks may also foster promotions among local politicians since these credit can also help local GDP grow. In column (2), instead of the amount of CDB loans, we use the ratio of the total amount of loans obtained from the CDB to the total amount of loans obtained from commercial banks during the politician's term. Promotion is still positively associated with the credit weight of CDB loans over commercial bank loans. This suggests that, compared with commercial bank loans, CDB loans are more important for politicians' promotions.

[24] Promotion opportunities that lie ahead for city secretaries include provincial party secretary, provincial governor, executive vice governor, vice provincial party secretary, membership in the standing provincial committee and other higher-ranking positions in provinces or the state council.

We construct an alternative measure for politician promotion, taking into account the economic size of the city in terms of local GDP. We re-do the promotion analysis to investigate the robustness of our results. Using the modified definitions, we obtain very similar results, indicating that establishing good relationship with the CDB can significantly foster career promotions for local politicians. The results are reported in columns (3) and (4) of Table 8.

We follow prior studies on promotion to control for politician characteristics across all model specifications (e.g., gender, education level, age, and oversea experience) in columns (1) to (4). Basically, politicians with more promotion incentives should exert more effort in screening investments ex-ante and monitoring projects ex-post. In China, there is an age cap of 55 years with respect to promotion to city secretary. Once an individual is older than 55 years at the end of his or her term, he or she cannot be promoted into a higher level governmental position. We use 50 years as the cut-off when city secretaries started their five-year terms. Consistent with the findings of Li and Zhou (2005), we also find that older politicians are less likely to be promoted.

[Place Table 8 about here]

These findings suggest that politicians have better chance to be promoted when they borrow more from the CDB than from commercial banks. As we discuss above, the CDB provides long-term stable credit to LGFVs. This is essential to local economic growth and to the promotion of the politicians. It is also possible that promoted politicians have some other unobservable advantages, such as personal political connections and background, which allow them to borrow more from the CDB. Moreover, commercial bank loans can also help the local economy, and this is why the CDB is so special.

6.2 Political cycle

The above results suggest that politicians' careers are related to their relationships with policy banks. To further understand politicians' strategic loan repayments, we study the default timing across the political cycle. China does not hold elections; however, administrations change every five years. For example, the current term for the central government started in March 2013, and it will end in March 2018. However, the Chinese Communist Party also reshuffles every five years, and changes in government and party leadership occur a few months apart (the 18th party congress was held in November 2012). Local politicians expect to change positions every five. Moreover, different cities have different five-year turnover cycles. In this subsection, we use this very ideal setting to examine whether and how loan performance varies across the political cycle.

We first analyze the national wide political cycle. In China, most of city secretaries leave their city after their first five-year term. Many studies show that the politicians use their power to increase the change in election/promotion during the turnover period (e.g., Dinc (2005), Carvalho (2014) and Ru (2015)). Ru (2015) finds that city secretaries borrow more from the CDB during early periods of their tenure. In China, default sends a negative signal to politicians and has a negative influence on promotion. During these five-year terms, decisions regarding politician promotion are usually made during later years. Accordingly, city secretaries are less willing to default on bank loans during this specific period.

[Place Table 9 about here]

To test this hypothesis, in Table 9, we regress the default dummy on the variables "*Political Cycle*" and "*CDB*". "*Political Cycle*" is a dummy capturing whether loans originate during the politician turnover period.[25] Again, the dummy "*CDB*" has significantly negative coefficients in Columns (1) to (4). More interestingly, we find significantly negative coefficients on the interaction term "*CDB*Political Cycle*". This suggests that city secretaries default less on CDB loans, especially during the very specific turnover period, which is usually critical for their future promotion. In this table, we also control for politician characteristics to examine whether politicians affect loan performance. In line with our intuition on politicians' career incentives, we find a significant positive association between the age dummy and loan default risk. This is among the first result to provide direct evidence on the economic consequences of promotion incentives on loan performance.

[Place Table 10 about here]

We further explore the political time dynamics in city level. As we mentioned before, different cities in China have different five-year turnover cycles. Many cities in China don't exactly follow the national turnover cycle. For each politician's term, we introduce a dummy "*Last Two Years in Term*" to indicate whether city governors are in the last two years of their terms. In Table 10, we separate the sample into CBD loans and commercial bank loans. Consistent with the national-level turnover, the city has significantly fewer defaults on CDB loans if the city secretary is in the last two years of

[25] In our sample period, we define the years of 2006, 2007, 2011 and 2012 as the politician turnover period. For robustness, we also only keep the years of 2007 and 2012, and the results remain quantitatively unchanged.

his or her term. The coefficient on dummy of "*Last Two Years in Term*" is -2.558. This means that during the last two years of the politician's tenure, the default on CDB decreases by 1.5%. In contrast, the timing of turnover does not have a significant effect on commercial bank defaults, as the coefficient is insignificantly positive for commercial banks. The evidence in Table 9 and 10 overwhelmingly suggests that politicians care about default events with respect to LGFV loans. In particular, they try to avoid default on CDB loans during the years that are critical for their promotion.[26]

6.3 Politician power

In China, different local governments have different political hierarchies (e.g., provincial government, vice provincial municipal government, municipal government, and county government). Our hypothesis is that the CDB is powerful enough to influence the promotion decisions on local politicians. In China, the promotion decisions of provincial governors are less affected by economic variables than those of city-level politicians.[27] Shih, Adolph, and Liu (2012) show that promotion at the very top of the China Communist Party is not affected by economic performance but based on connections. Thus, top officials might care less about their relationship with the CBD, and local governments on different political hierarchies may behave very differently. For example, provincial governments usually have more tax revenue income and have stronger ability to pay off debts.

[26] This result is consistent and complementary to the finding in Piotroski and Zhang (2014) that politicians in China boost their local economic performance in anticipation of promotion.
[27] Many provincial party secretaries and governors are members of the Central Committee of the Communist Party of China (the most powerful within the party), while the chairman of CDB at best is an alternate member.

We therefore stratified the LGFVs into provincial government financing vehicles and city-level government financing vehicles. The province level includes provincial governments and vice provincial municipal governments, whereas the city level includes the normal municipal governments and county governments.[28] In general, as shown in appendix Table A4, loans to province-level LGFVs are larger, have longer maturity, and have lower default ratios than loans to city-level LGFVs. This is partly because provincial governments have more resources and deeper pockets than city governments and provincial projects can be larger in size.

In Table 11, we analyze the loan default heterogeneity between provincial governments and municipal governments. We regress the default dummy on CDB dummy, LGFV political hierarchy level (whether it is at provincial level or city/country level), and their interactions. The CDB dummy, again, has significantly negative coefficients with respect to default probability. This means that after controlling for the LGFV political hierarchy differences, the CDB effects are still there. This mitigate the concern that compared with commercial banks, the CDB prioritizes on provincial investments over city level projects, which leads to a lower default ratio for the CDB. Moreover, the interaction between the CDB and city dummies shows a significantly negative coefficient. This suggests that the CDB's default ratio is significantly lower for city-level LGFVs than for province-level LGFVs. This result may appear surprising as the provincial governments usually have more fiscal income and better financial ability to pay off loans. On the other hand, this finding is also reasonable, and it suggests that city-level politicians are less willing to ruin their relationship with the CDB since their

[28] Our data covers most of the city- and province-level LGFVs since most of the LFGVs have a credit line of more than 5 million. However, at the county level, our data covers only large LFGVs. Regarding small LFGVs, they are not covered in our data.

promotions depend more on local economic growth, which makes the CDB more valuable to them.

[Place Table 11 about here]

7. Conclusion

A large part of the economic growth in China in recent years is driven by investments from local governments. Banned from direct borrowing by the Budget Law and subjected to limited tax revenue, local governments use off–balance sheet financing vehicles to raise funds, mostly from banks, in order to finance their investments. Such convoluted local government debt has engendered substantial concerns. In this paper, we provide the first detailed empirical analysis of local government debt in China by using a unique, proprietary, and comprehensive loan-level data. These data covers commercial and policy bank loans to local governments over an extended time period. A key feature of our data set is that it allows us to identify local government financing vehicles and to uncover off–balance sheet loans. We find that policy loans from the China Development Bank (CDB) are characterized by remarkably low delinquency rates. In contrast, commercial bank loans to local government financing vehicles are characterized by relatively high default rates. This result goes beyond the difference in loan quality and delinquency management reflected in evergreening.

To understand the drivers of the low delinquency ratio for CDB loans, we explore the selective default behavior of local governments, which is feasible under Chinese laws. Financially distressed local governments choose to default on commercial bank loans

rather than CDB loans. Moreover, during the national 4-trillion RMB stimulus program from November 2008 to December 2010, LGFVs used more commercial bank loans to pay off CDB loans. Furthermore, we find evidence suggesting that the career concerns of local politicians underlie the selective default behavior since relationships with the CDB are more valuable than those with commercial banks for these politicians. Local governments run by party leaders who are in promotion decision years are less likely to default on loans. We also find that the acquisition of CDB loans positively predicts the promotion of local politicians. However, the CDB effect is nonsignificant when politicians are powerful, such as provincial leaders, as their promotions are hardly affected by loan performance.

Our study sheds lights on the "hidden" subnational debt of China. It also has broad implications for government financing and debt management worldwide arising from fiscal decentralization. A widespread phenomenon in recent years is government debt crises, such as in Greece, Argentina, and Puerto Rico. China uses a model of intervening policy lending with a political system. Such a politics-finance nexus seems to be effective in disciplining government debt performance. To attenuate the local government borrowing problem and improve transparency, China reformed its budget law in 2014, and it is starting to implement a municipal bond market. Such a shift from a bank-based to a market-based financial system for local government financing can be an interesting topic for future research.

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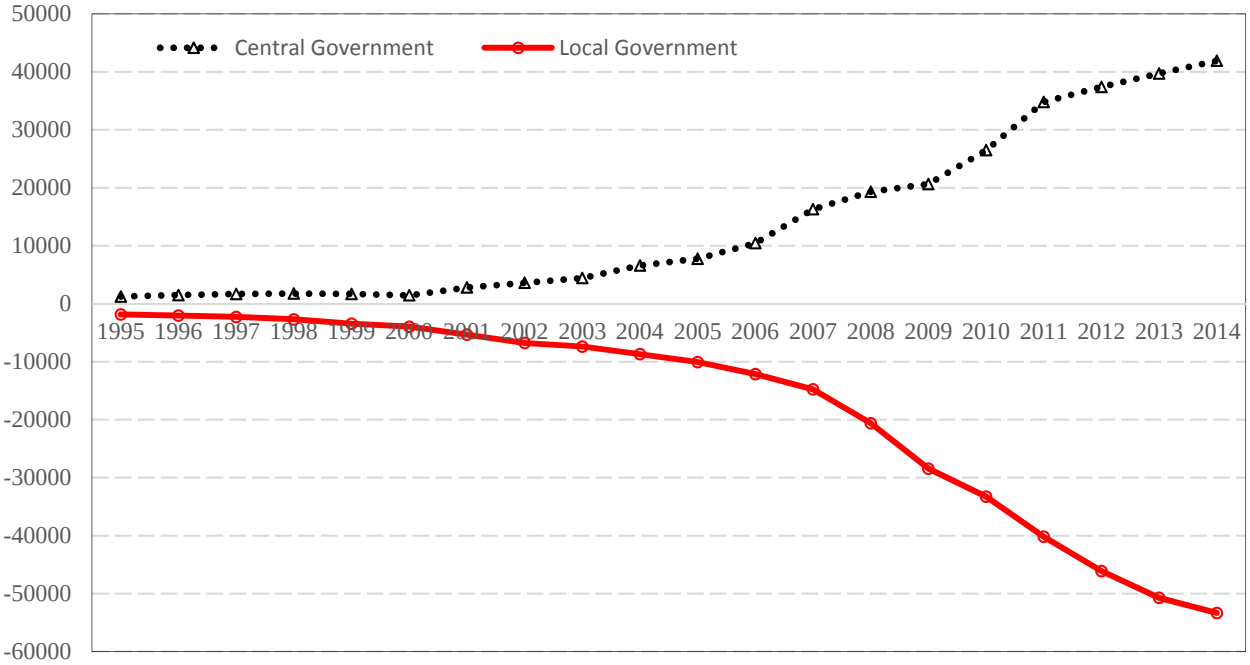


Figure 1: Fiscal Gap of Chinese Governments. This figure plots the fiscal balance (revenues minus expenditures) for central and local governments in China from 1995 to 2014 post the 1994 Tax Sharing Scheme and Budget Law. The vertical axis presents the government budget surplus or deficit. The unit is RMB 100 million. The dashed line is for central government and the solid line is for total 31 provincial local governments in China. Data are from the National Bureau of Statistics of China.

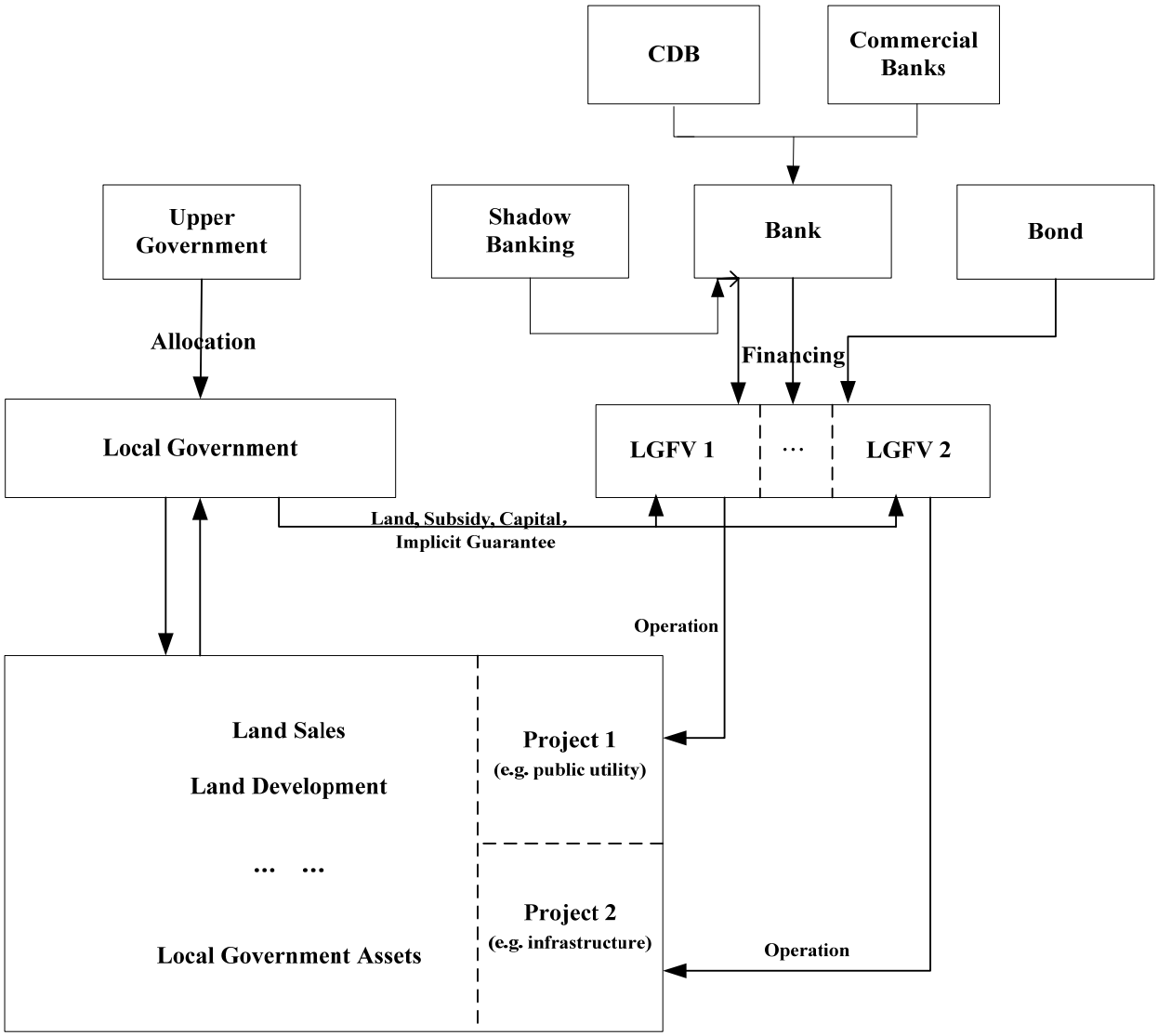


Figure 2: Local Government Financing and Operating Structure. This figure illustrates the typical flows of revenues and expenditures of local governments in China. Local governments receive funding from upper level governments (e.g., central government) including their share of tax and transfer payments. They also generate other incomes from land sales and local assets such as local state owned enterprises. Local government financing vehicles (LGFVs) are entities fully owned and operated by local governments. LGFVs raise funds for specific projects from bank loans including China Development Bank and commercial banks, bond issuances, and shadow banking system which goes through the banks.

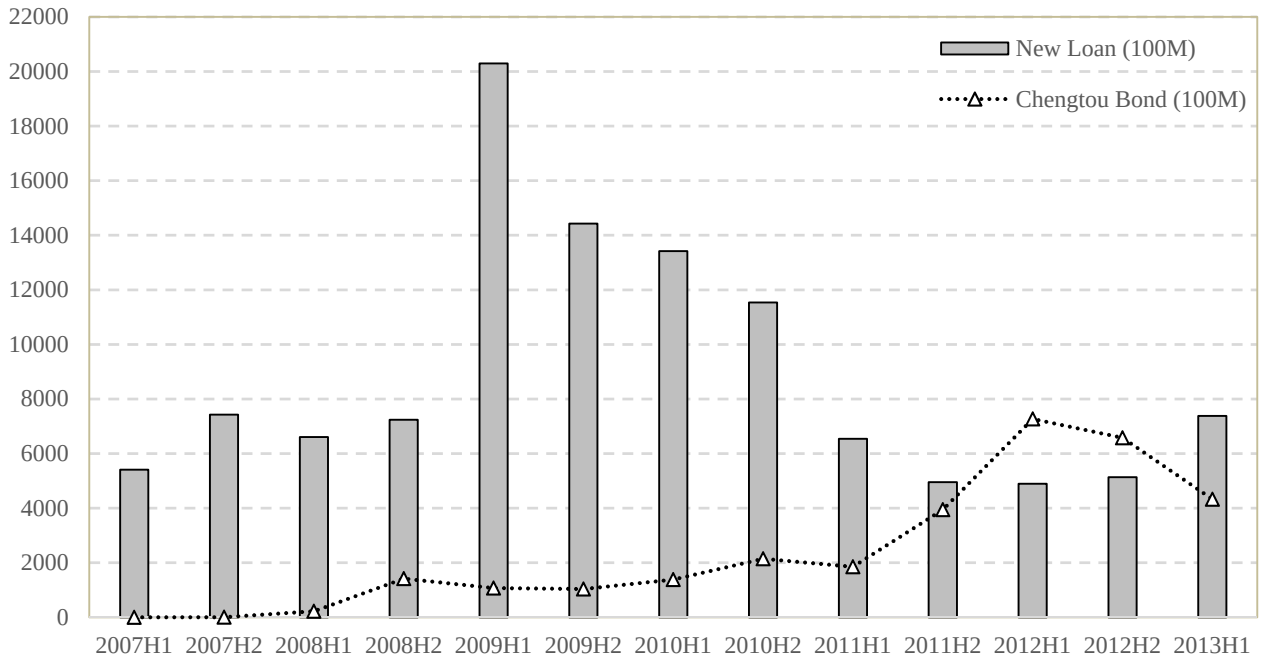


Figure 3: Debt Financing to China Local Governments, 2007-2013. This figure plots the semi-annual new debt issuance by China local governments. The grey bars represent the amount of new issuance of bank loans. The dashed line shows the amount of new issuance of urban construction and investment ("*Chengtou*") bonds. Unit for the vertical axis is in RMB 100 million. Loan data are from the China Banking Regulatory Commission and the *Chengtou* bond data are from Wind database.

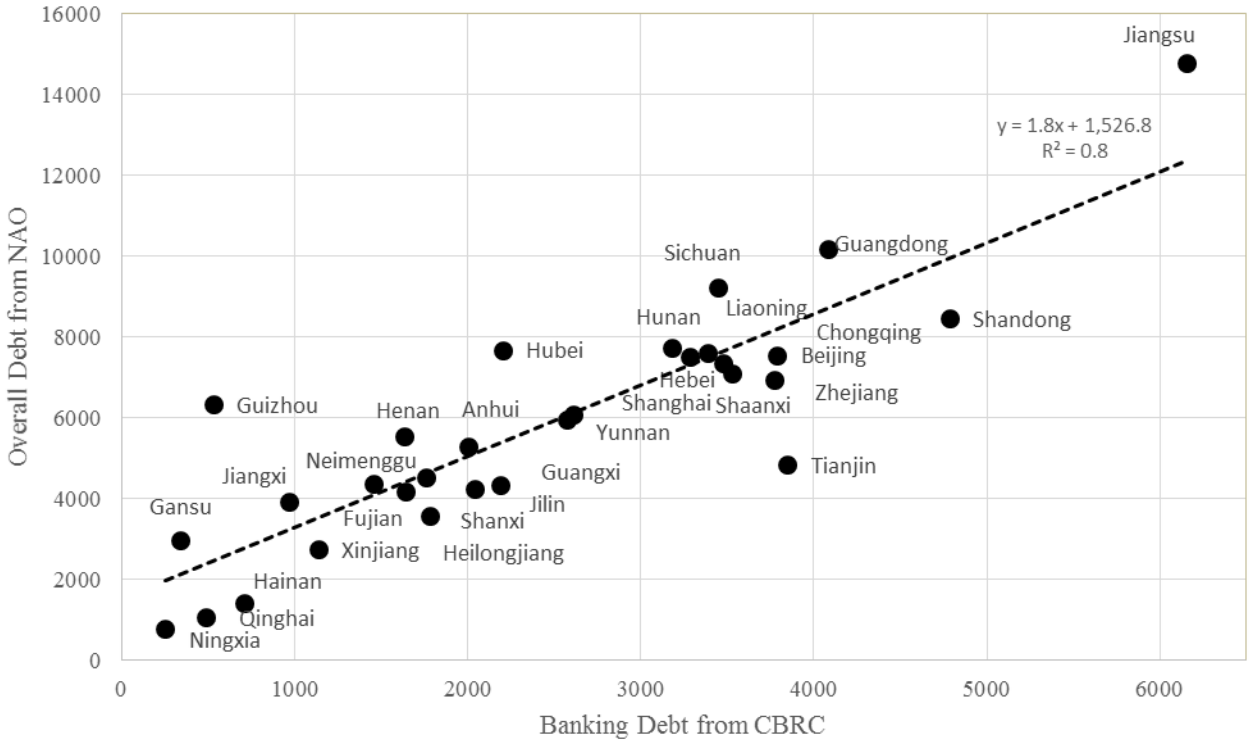
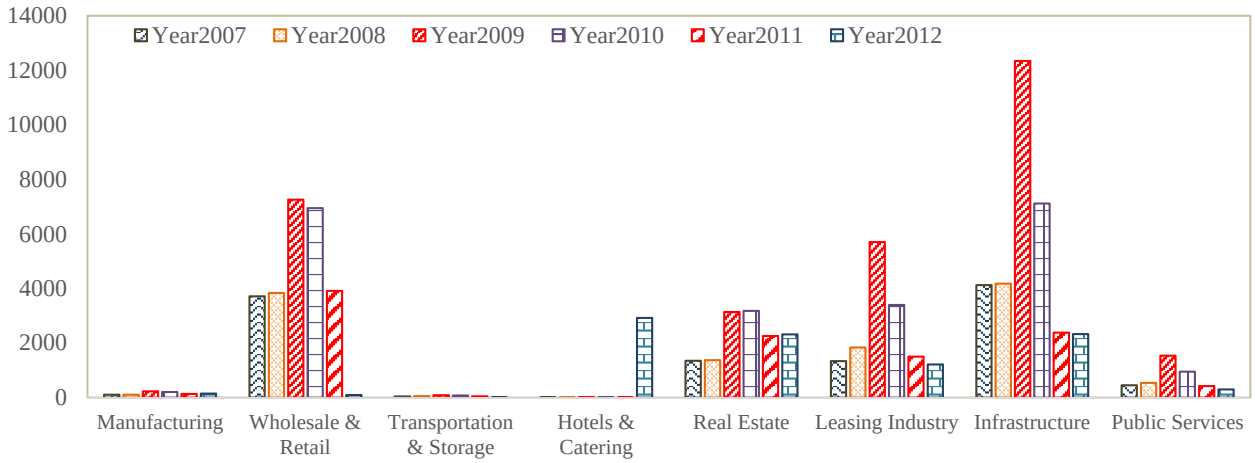
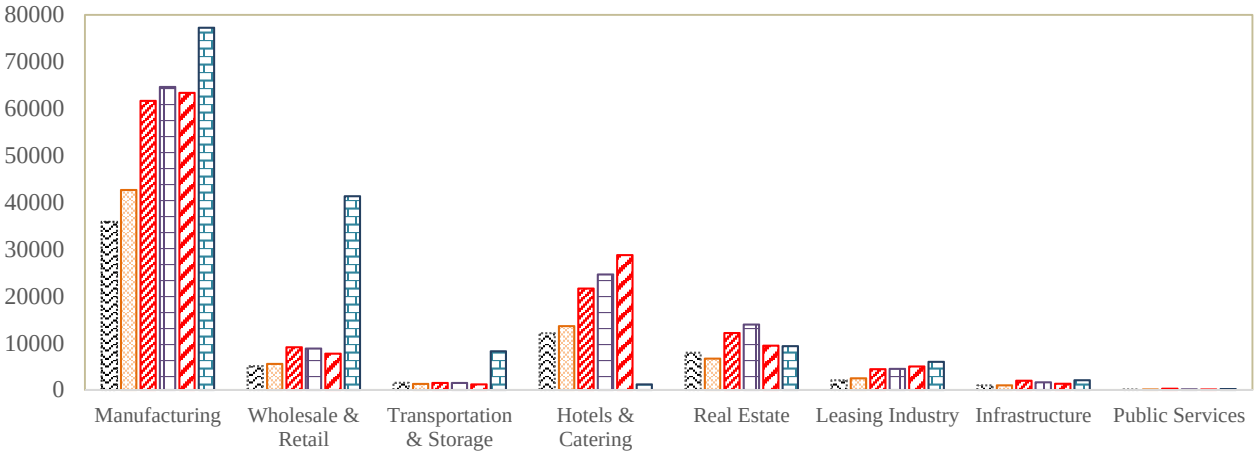


Figure 4: Government Debt from China Banking Regulatory Commission and National Audit Office by Province, 2013. This figure compares aggregate government debt from China Banking Regulatory Commission (*x*-axis) with total government debt reported by National Audit Office (*y*-axis) at province level in 2013. Units are in RMB 100 million.



Panel A: Industry distribution of LGFV loans



Panel B: Industry distribution of Non-LGFV loans

Figure 5: Histogram for New Loans to Major Industries, LGFVs versus Non-LGFVs. This figure plots the volume of new loans to eight industries with most borrowing from 2007 to 2012. Industry definitions are from Industrial Classification of the National Economy (GB/T 4754-2011) by the National Bureau of Statistics. The top panel is for local government financing vehicles (LGFVs) and the bottom panel is for non-LGFVs. The unit for vertical axis is RMB 100 million. Individual loan data are from the China Banking Regulatory Commission.

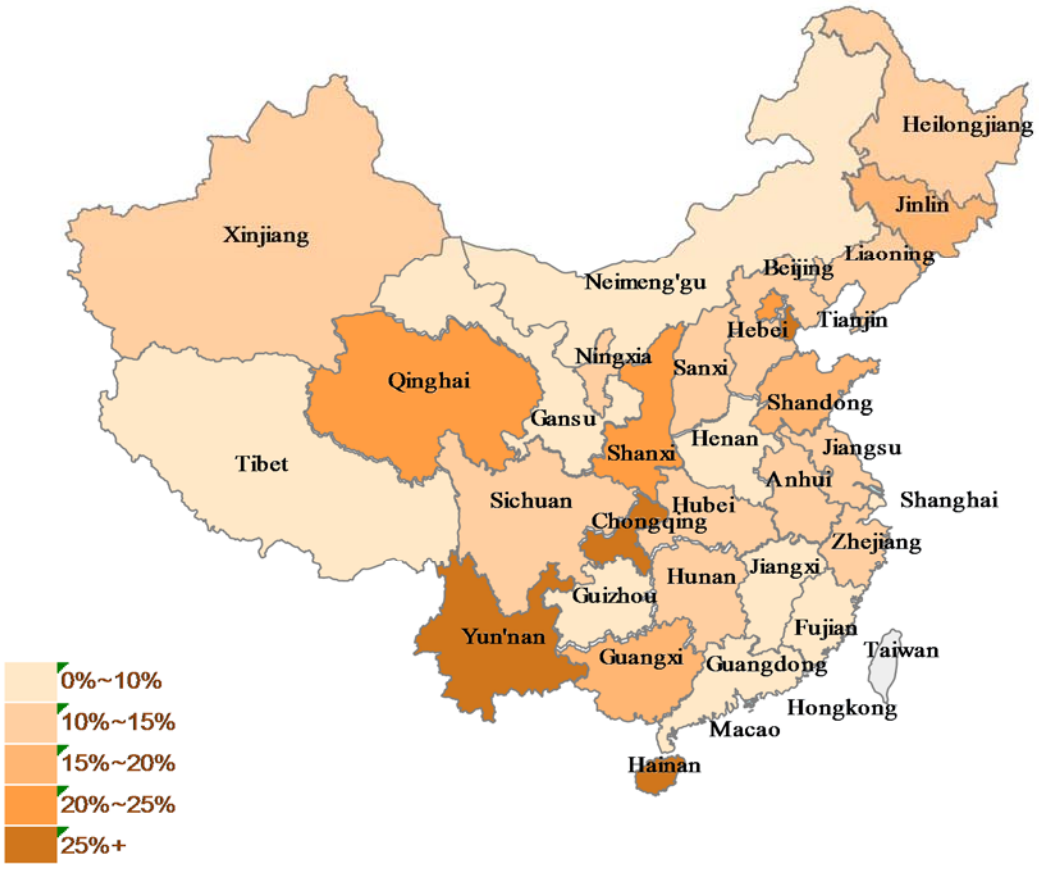


Figure 6: Heat Map of China Local Government Debt across Provinces, 2012. This figure illustrates the level of outstanding loan amount to GDP ratio for all provinces in China at the end of 2012. It covers 31 provinces including four centrally administrated cities (i.e., Shanghai, Beijing, Tianjin and Chongqing). Individual loans from China Banking Regulatory Commission are aggregated to province level.

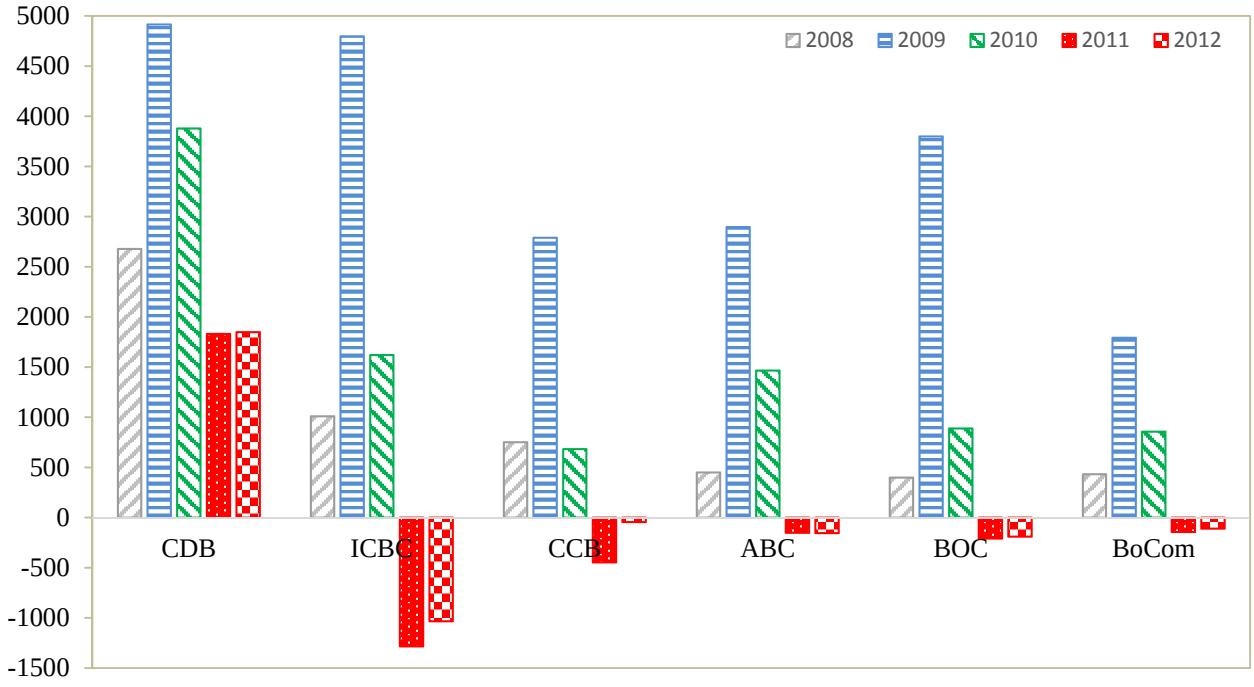


Figure 7: Net Loan Amount to LGFVs, 2008-2012. This figure plots the annual change in outstanding loan balance to local government financing vehicles (LFGVs) from 2008 to 2012 for individual banks. Included are six biggest LGFV lenders in China: China Development Bank (CDB), Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), Agricultural Bank of China (ABC), Bank of China (BOC), and Bank of Communications (BoCom). The unit for the vertical axis of net loan amount is RMB 100 million. Loan data are from China Banking Regulatory Commission are aggregated to bank level.

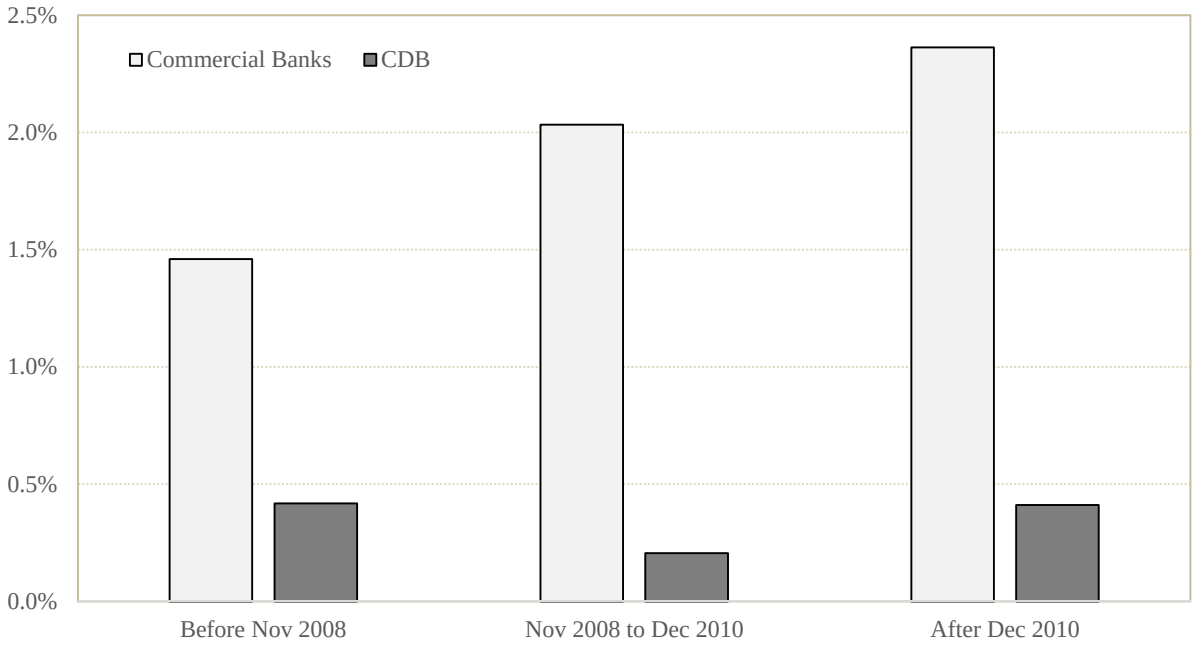


Figure 8: Delinquency Rates of Loans to LGFVs over Three Periods. This figure depicts the delinquency rates of loans to local government financing vehicles (LGFVs), separately for China Development Bank and commercial banks in China. Statistics are conducted for three different time periods: before November 2008, from November 2008 to December 2010, and after December 2010. During the second period, China implemented a nationwide 4-trillion stimulus package. Loan data are from China Banking Regulatory Commission.

Table 1: Summary of Loans to Local Government Financing Vehicles by Year

This table presents the summary statistics of bank loan contracts to local government financing vehicles (LGFVs) by calendar year. Columns (1)-(7) show summaries for new loans and columns (8)-(10) show outstanding loans. *# LGFVs* is the total number of local government financing vehicles each year. *# Issues* is the total number of loan contracts each year. *Total Amount* is the total dollar amount of loan balances each year, in unit of 100 million RMB. *# Loans* is the average number of loans for a LGFV each year. *Loan Amount* is the average total loan amount borrowed by a LGFV each year, in unit of 100 million RMB. *Avg. Maturity* is the average loan maturity across all loans borrowed by each local government financing vehicles each year, in unit of years. *# Banks* is the average number of lending banks to a LGFV each year. Loan data are from China Banking Regulatory Commission.

	New Loans							Outstanding Loans		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	# LGFVs	# Issues	Total Amount (Trillion RMB)	# Loans per LGFV	Loan Amount (100 Million RMB)	Avg. Maturity	# Banks per LGFV	# LGFVs	# Issues	Total Amount (Trillion RMB)
2007	2,380	23,150	1.3	9.7	5.4	3.4	2.3	2,837	37,174	3.1
2008	2,678	24,296	1.4	9.1	5.2	3.5	2.4	3,248	45,216	3.8
2009	4,412	47,539	3.5	10.8	7.9	4.0	2.8	4,725	65,693	6.6
2010	3,772	39,290	2.5	10.4	6.6	4.1	2.3	4,857	73,806	7.7
2011	2,256	17,564	1.1	7.8	5.1	3.9	2.0	4,520	70,556	7.4
2012	1,946	14,829	1.0	7.6	5.2	4.0	2.0	4,194	67,216	7.3
2013	1,733	9,406	0.7	5.4	4.3	4.1	1.7	4,100	65,315	7.3
All	5,672	176,074	11.5	31.1	20.3	4.1	3.4			

Table 2: Comparing Loans from Policy Bank and Commercial Banks

This table presents the comparison for loans from China Development Bank and commercial banks to local government financing vehicles. Panel A reports the summary statistics of loan contract for two groups of banks, i.e. the China Development Bank and the 17 Commercial Banks. The first part of Panel A from column (1) to column (5) is based on the overall loan contract, while the second part from column (6) to column (10) replies upon those loan contracts whose expiration date is prior to Mar 30, 2013. We don't have the delinquent data on the loans after Mar 30, 2013. Panel B particularly performs *t-tests* and *Wilconxon rank sum tests* on delinquency ratio to derive the statistical significance in mean difference for two difference samples, i.e. Non LGFVs versus LGFVs. *# LGFVs* is the total number of local government financing vehicles covered by each type of banking institutions over the whole period. *# Issues* is the total number of loan contracts by each type of banking institutions over the whole period. *Avg. Loan* is the average amount of loan balances over each loan contract granted by each type of banking institutions, in unit of one million RMB. *Avg. Maturity* is the average of loan maturity across all loans borrowed by local government financing vehicles each year, in unit of years. *Loan Rating* is the average of internal rating by loan officers for all the loans granted by each type of banking institutions. *Default* is a binary variable which takes the value of one if the loan is not repaid over 90 days after loan expiration date. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A: Summary statistics across banks

	(1)	(2)	(3)	(4)	(5)
	# LGFVs	# Loans	Avg. Loan (Million RMB)	Avg. Maturity	Loan Rating
	All LGFV Loans Initiated during Sample Period				
CDB	1,993	17,712	58.5	6.8	1.46
Commercial Banks	4,954	158,041	66.1	4.4	1.04
	LGFV Loans Matured in Our Sample Period				
CDB	1,156	6,043	65.5	1.3	1.50
Commercial Banks	4,170	84,150	66.9	1.6	1.06

Panel B: Delinquency rate comparisons between Commercial Banks and China Development Bank

	#Loans	Default Rate	#Loans	Default Rate
	LFGVs		Non-LGFVs	
Commercial Banks	81,899	1.8%	5,226,036	0.9%
CDB	6,043	0.3%	7,658	0.9%
Mean Diff		1.5%***		-0.0%
T-statistic		18.30		-0.32
Wilcoxon rank sum test		8.87		-0.17

Table 3: Loan Default Probability and Lending Bank Type

This table presents the Logit regression results. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent), and the main independent variable "CDB" is a dummy variable for whether the loan is granted by the China Development Bank or not. We control for loan characteristics: *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage* in column 2 to 4. In column 4, we also control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. In column 3 and 4, we control for year-, industry-, and region-fixed effects. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China, Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Default Probability			
	(1)	(2)	(3)	(4)
CDB	-1.843***	-2.570***	-2.757***	-2.852***
	(-7.09)	(-9.45)	(-9.77)	(-10.06)
Bank Loan Rating		1.194***	1.141***	1.078***
		(19.03)	(17.72)	(16.37)
Loan Size		6.982***	6.675***	6.750***
		(15.98)	(14.74)	(14.68)
Maturity		-0.083***	-0.050	-0.054*
		(-2.85)	(-1.62)	(-1.74)
Guaranteed		0.131**	0.164***	0.176***
		(2.27)	(2.76)	(2.96)
Log(LGFV Assets)		-0.173***	-0.190***	-0.184***
		(-9.12)	(-9.60)	(-8.92)
LGFV Leverage		-0.003	-0.002	-0.004
		(-0.45)	(-0.41)	(-0.64)
Log(Local GDP)				0.144***
				(3.70)
Local Expense/Revenue				0.088***
				(5.42)
Local Estate Invest/GDP				-3.838***
				(-5.97)
Local Corruption				0.205***
				(4.07)
Year FE	No	No	Yes	Yes
Industry FE	No	No	Yes	Yes
Region FE	No	No	Yes	Yes
No. Obs.	89,785	88,623	88,360	88,355
Pseudo R2	0.007	0.043	0.054	0.060

Table 4: Loan Default Probability and Lending Bank Type in Matched Sample

This table shows estimation results from Logit regressions. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent), and the main independent variable is a binary variable that takes the value of one if the loan is granted by China Development Bank and zero otherwise. For each loan granted by China Development Bank, we just keep loans from commercial banks of which borrowers have the same industry in the same city at the same year. We control for loan characteristics: *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage* in column 2 to 4. In column 4, we also control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. In column 3 and 4, we control for year-, industry-, and region-fixed effects. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China, Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Default Probability			
	(1)	(2)	(3)	(4)
CDB	-1.212***	-1.639***	-1.854***	-1.843***
	(-4.08)	(-5.05)	(-5.46)	(-5.38)
Bank Loan Rating		0.512*	0.474	0.572*
		(1.71)	(1.56)	(1.88)
Loan Size		6.718***	7.258***	6.590***
		(6.60)	(6.84)	(6.12)
Maturity		-0.135*	-0.129*	-0.142*
		(-1.80)	(-1.69)	(-1.87)
Guaranteed		-0.559***	-0.698***	-0.685***
		(-3.27)	(-4.02)	(-3.92)
Log(LGFV Assets)		-0.159***	-0.117**	-0.140**
		(-3.19)	(-2.15)	(-2.45)
LGFV Leverage		0.000	0.004	0.002
		(0.07)	(0.62)	(0.34)
Log(Local GDP)				0.487***
				(3.70)
Local Expense/Revenue				0.013
				(0.24)
Local Real Estate/GDP				-3.096**
				(-2.18)
Local Corruption				0.036
				(0.27)
Year FE	No	No	Yes	Yes
Industry FE	No	No	Yes	Yes
Region FE	No	No	Yes	Yes
No. Obs.	24,827	24,730	24,119	24,119
Pseudo R2	0.009	0.033	0.051	0.058

Table 5: Loan Evergreening Analysis

This table presents estimation results from OLS regressions. The dependent variable is the total amount of new bank loans (*Log(New Loans)*) and the main independent variable is the total amount of maturing loans at the frim-bank-quarter level (*Log(Maturing Loans)*). *CDB* is a binary variable that takes the value of one is the bank is China Development Bank and zero otherwise. We control for LGFV characteristics: *Log(LGFV Assets)* and *LGFV Leverage*. We also control for city-level local government characteristics: *Log(Local GDP), Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. Some model specifications control for year-, industry-, and region-fixed effects. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Log(New Loans)		
	(1)	(2)	(3)
Log(Maturing Loans)	0.545***	0.543***	0.534***
	(74.93)	(74.29)	(72.56)
CDB	0.156***	0.194***	0.193***
	(6.86)	(8.29)	(8.19)
CDB*Log(Maturing Loans)	-0.114***	-0.157***	-0.165***
	(-4.82)	(-6.61)	(-6.96)
Log(LGFV Assets)	0.018***	0.021***	0.021***
	(6.78)	(7.76)	(7.81)
LGFV Leverage	0.026***	0.021***	0.020***
	(7.13)	(5.67)	(5.47)
Log(Local GDP)	-0.014***	0.012***	0.015***
	(-3.50)	(2.99)	(3.47)
Local Expense/Revenue	-0.005*	0.002	0.003
	(-1.92)	(0.89)	(1.17)
Local Real Estate/GDP	0.246***	0.328***	0.286***
	(4.26)	(5.69)	(4.39)
Local Corruption	0.021***	0.021***	0.015**
	(3.75)	(3.78)	(2.47)
Year FE	NO	YES	YES
Industry FE	NO	YES	YES
Region FE	NO	NO	YES
No. Obs.	30,214	30,214	30,214
Adjusted R2	0.219	0.247	0.249

Table 6: Lending Interactions among Banks

This table reports OLS estimation results on the relationship between LGFV new borrowing and it maturing loans. by the CDB and commercial banks. The dependent variable of the first two columns is the net loans from commercial banks (the amount of new loans minus the expiring loans), while the dependent variable of the last two columns is net loan from the CDB. "*Expiring in CDB*" is the total amount of loans expiring in CDB and "*Expiring in Commercial Banks*" is the total amount of commercial loans expiring in all other commercial banks. *Package* is the dummy for the 4-trillion stimulus package period which is from Nov 2008 to Dec 2010. We control the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage*. We also control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. All model specifications control for year, industry-, and region-fixed effects. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Net Loans from Commercial Banks		Net Loans from CDB	
	(1)	(2)	(3)	(4)
Expiring in CDB	0.913***	0.244**		
	(11.52)	(2.21)		
Expiring in CDB*Package		4.764***		
		(8.67)		
Expiring in Commercial Banks			0.008***	0.016***
			(3.01)	(4.67)
Expiring in Commercial Banks*Package				-0.018***
				(-3.72)
Package	2.890*	-6.626***	-0.585**	-0.524***
	(1.88)	(-12.69)	(-2.25)	(-4.65)
Log(LGFV Assets)	2.707***	2.626***	0.301***	0.304***
	(25.52)	(24.77)	(12.60)	(12.72)
LGFV Leverage	1.287***	1.441***	0.424***	0.422***
	(4.79)	(5.38)	(7.38)	(7.36)
Log(Local GDP)	0.616***	0.681***	-0.135***	-0.137***
	(3.69)	(4.09)	(-3.76)	(-3.81)
Local Expense/Revenue	-0.238***	-0.248***	-0.037*	-0.038**
	(-2.66)	(-2.79)	(-1.90)	(-1.99)
Local Real Estate/GDP	-0.033	0.646	0.589	0.621
	(-0.01)	(0.25)	(1.05)	(1.11)
Local Corruption	0.668***	0.676***	-0.216***	-0.216***
	(2.80)	(2.85)	(-4.23)	(-4.22)
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Region FE	YES	YES	YES	YES
No. Obs.	8,242	8,242	8,242	8,242
Adjusted R2	0.210	0.218	0.078	0.210

Table 7: Selective Default across Banks

This table reports the selective default evidence, in which the first two columns report the regression results for local government selective default and the last two columns report the regression results for LGFV selective default. The coefficients are estimated with Logit model. Our sample for the first two columns are based on 320 city-years with at least one loan default cases, which covers 7,282 LGFV-year observations and 49,975 loan observations. Our sample for the second part analyses is restricted to 2,393 loan observations in which the exact LGFV has at least one default cases in any bank. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent), and the main independent variable is a binary variable that takes the value of one if the loan is granted by China Development Bank and zero otherwise. We control for loan characteristics: *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage*. We further control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. All model specifications control for year-, industry-, and region-fixed effects. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Default Probability			
	Government Selecting		LGFV Selecting	
	(1)	(2)	(3)	(4)
CDB	-2.390***	-2.530***	-1.618***	-1.671***
	(-8.28)	(-8.77)	(-4.25)	(-4.38)
Bank Loan Rating	1.242***	0.987***	0.154	0.110
	(16.07)	(12.05)	(0.36)	(0.25)
Loan Size	5.706***	6.354***	7.083***	6.786***
	(10.39)	(11.47)	(4.98)	(4.76)
Maturity	-0.074**	-0.055	0.078	0.051
	(-2.03)	(-1.51)	(0.72)	(0.46)
Guaranteed	-0.035	0.077	-0.500**	-0.522**
	(-0.53)	(1.13)	(-2.23)	(-2.27)
Log(LGFV Assets)	-0.310***	-0.261***	-0.705***	-0.742***
	(-13.93)	(-11.05)	(-7.99)	(-7.81)
LGFV Leverage	-0.016**	-0.011	-0.063***	-0.067***
	(-2.03)	(-1.39)	(-5.31)	(-5.47)
Log(Local GDP)		-0.268***		0.161
		(-5.18)		(0.93)
Local. Expense/Revenue		0.075***		0.016
		(4.24)		(0.32)
Local. Real Estate/GDP		-6.556***		0.461
		(-8.66)		(0.20)
Local. Corruption		0.429***		-0.265
		(6.64)		(-1.42)
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Region FE	YES	YES	YES	YES
No. Obs.	46,732	46,732	2,373	2,373
Pseudo R2	0.069	0.092	0.120	0.123

Table 8: Logit Regressions of Politician Promotion Likelihood and Relationship with CDB

This table presents the regression results of politician promotion against the borrowing relationship with the CDB. Our sample covers 657 city-politician-term observations from 2007 to 2012, which includes 276 cities and 572 local politicians. We obtain the politician characteristics from CSMAR and manually identify whether the city-party secretary gets promotion after his/her term expires. We initially define the politician promotion based on the position rank, e.g. the secretary is promoted if he/she moves to deputy governor of province, governor of province, provincial deputy secretary, and provincial secretary. In columns (3) and (4), we also include the cases when the politician moves to a city with higher GDP as promotions. Our main independent variables are *Log(CDBLoan)* and *CDB/Total Loan*. *CDBLoan* is the total amount of loans borrowed from the CDB during the politician's term, and *CDB/ALL* is a ratio of total amount of loans from CDB over the total amount of loans obtained from all the banks covered by our loan data during this politician's term. To control the politician characteristics, we also include the gender (*Male*), age (*Age>=50*), birth place (*Local Politician*), education level (*High Education*) and oversea experience (*Oversea Experience*). Besides, we also include city-government level controls: local government GDP (*Log(GDP)*), the public finance conditions measured by the ratio of fiscal expenditure over fiscal revenues (*Local Expense/Revenue*), and the percentage of Tertiary sector GDP (*Tertiary sector/GDP*). Based on the data published by The National Bureau of Statistics of China, there are four grand regions in China: Northeast, East, Central, and West. All model specifications also include year- and region-fixed effects. Robust standard errors are clustered by city. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Politician Promotion			
	Rank Based		Rank Plus GDP Based	
	(1)	(2)	(3)	(4)
Log(CDB Loan)	0.319***		0.256***	
	(3.01)		(2.71)	
CDB/Total Loan		0.313*		0.322**
		(1.93)		(2.25)
Male	-0.601	-0.603	0.145	0.124
	(-1.59)	(-1.60)	(0.40)	(0.34)
Age>=50	-1.095***	-1.105***	-0.645***	-0.659***
	(-5.37)	(-5.46)	(-3.73)	(-3.82)
Local Politician	-0.120	-0.130	0.242	0.225
	(-0.54)	(-0.58)	(1.29)	(1.21)
High Education	1.598	1.562	1.683**	1.674**
	(1.50)	(1.48)	(2.21)	(2.20)
Oversea Experience	-0.309	-0.319	-0.324	-0.318
	(-0.95)	(-0.97)	(-1.19)	(-1.16)
Log(Local GDP)	0.064	0.248*	-0.014	0.151
	(0.40)	(1.67)	(-0.10)	(1.17)
Local Expense/Revenue	-0.035	-0.085	-0.024	-0.053
	(-0.51)	(-1.21)	(-0.47)	(-1.03)
Tertiary sector/GDP	0.023*	0.033***	0.006	0.015
	(1.80)	(2.68)	(0.55)	(1.40)
Year Fixed	Yes	Yes	Yes	Yes
Region Fixed	Yes	Yes	Yes	Yes
N	657	657	657	657
Pseudo R2	0.122	0.110	0.053	0.046

Table 9: Political Cycle Effect on Relationship between Loan Default Probability and Lending Bank Type

This table investigates the impact of political cycle on China Development Bank effect. The coefficients estimated in this table are using Logit model. Our sample covers 68,750 loan-level observations. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent) or not, and the main independent variable is a dummy variable for whether the loan is granted by the China Development Bank or not. *Political Cycle* is a dummy variable which takes the value of one if the loan is originated in election year, i.e. 2007, 2010 and 2011. We control for loan characteristics: *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage*. We further control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. We also include the gender (*Male*), age (*Age>=50*), birth place (*Local Politician*), education level (*High Education*) and oversea experience (*Oversea Experience*) to control for politician level characteristics. We control for industry-, year-, and region-fixed effects across all model specifications. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

(*To be continued*)

Table 9: Political Cycle Effect on Relationship between Loan Default Probability and Originating Bank Type — *continued*

	Default Probability			
	(1)	(2)	(3)	(4)
CDB	-2.618***	-2.139***	-2.852***	-2.371***
	(-9.51)	(-6.61)	(-9.99)	(-7.09)
CDB*Political Cycle		-1.163*		-1.155*
		(-1.94)		(-1.93)
Political Cycle	0.109*	0.124*	0.046	0.059
	(1.73)	(1.96)	(0.63)	(0.81)
Internal Rating	1.224***	1.225***	1.147***	1.148***
	(18.50)	(18.50)	(16.84)	(16.84)
Loan Size	6.481***	6.486***	6.327***	6.335***
	(12.36)	(12.37)	(11.56)	(11.57)
Maturity	-0.119***	-0.119***	-0.096***	-0.096***
	(-3.46)	(-3.46)	(-2.66)	(-2.66)
Guarant	0.042	0.043	0.053	0.052
	(0.64)	(0.64)	(0.77)	(0.76)
Log(LGFV Assets)	-0.213***	-0.212***	-0.228***	-0.228***
	(-9.44)	(-9.43)	(-9.79)	(-9.79)
LGFV Leverage	-0.005	-0.004	-0.006	-0.006
	(-0.76)	(-0.74)	(-0.92)	(-0.91)
Log(Local GDP)	0.161***	0.161***	0.133***	0.133***
	(3.77)	(3.77)	(2.60)	(2.60)
Local Expense/Revenue	0.103***	0.104***	0.082***	0.083***
	(6.82)	(6.88)	(4.77)	(4.84)
Local Real Estate/GDP	-2.214***	-2.224***	-3.115***	-3.116***
	(-3.58)	(-3.60)	(-4.53)	(-4.53)
Local Corruption	0.183***	0.183***	0.232***	0.232***
	(3.15)	(3.15)	(3.71)	(3.72)
Male	0.155	0.156	0.279	0.280
	(0.70)	(0.71)	(1.24)	(1.25)
Age>=50	0.160**	0.160**	0.100	0.099
	(2.35)	(2.35)	(1.44)	(1.43)
High Education	-0.386***	-0.384***	-0.387***	-0.386***
	(-3.16)	(-3.14)	(-3.09)	(-3.08)
Oversea Experience	-0.234**	-0.235**	-0.327***	-0.329***
	(-1.97)	(-1.98)	(-2.70)	(-2.71)
Year FE	NO	NO	Yes	Yes
Industry FE	NO	NO	Yes	Yes
Region FE	NO	NO	Yes	Yes
No. Obs.	68,750	68,750	68,389	68,389
Pseudo R2	0.059	0.059	0.070	0.070

Table 10: Politician Term Effect on Relationship between Loan Default Probability and Lending Bank Type

This table presents the sub-sample regression results using Logit model to investigate the impact of political cycle on China Development Bank effect. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent). *Last Two Years in Term* is a dummy variable which takes the value of one if the loan is originated in the period of last two years of the politician term. The first column reports the regression results based on subsample loans granted by China Development Bank and the second column reports the regression results based on subsample loans granted by commercial banks. Following prior model specifications, we control loan-level, LGFV-level, local government level, and politician characteristics as controls. We control for loan characteristics: *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage*. We further control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. We also include the gender (*Male*), age (*Age>=50*), birth place (*Local Politician*), education level (*High Education*) and oversea experience (*Oversea Experience*) to control for politician level characteristics. We control for year-, industry-, and region-fixed effects across all model specifications. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Default Probability	
	CDB	Commercial Banks
Last Two Years in Term	-2.558**	0.048
	(-2.00)	(0.55)
Loan Controls	YES	YES
LGFV Controls	YES	YES
Local Government Controls	YES	YES
Politician Controls	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Region FE	YES	YES
No. Obs.	2,522	59,956
Pseudo R2	0.390	0.064

Table 11: Impact of Government Administrative Level on Relationship between Loan Default Probability and Originating Bank Type

This table presents the regression results of exploring CDB's effects on different hierarchies of local governments. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent). The main independent variable is a binary variable that takes the value of one if the loan is granted by China Development Bank and zero otherwise. We define the administrative level of local government financing vehicles using identification methodology from WIND *Chengtou* bond database. County/City is a dummy variable that equals one if the local financing platform is owned by city- or county- government and equals zero if the LGFV is owned by provincial government. Following prior model specifications, we also control for loan-level, LGFV-level, local government level, and politician characteristics. We control for loan characteristics: *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage*. We further control for city-level local government characteristics: *Log(Local GDP)*, *Local Expense/Revenue*, *Local Estate Invest/GDP*, and *Local Corruption*. We also include the gender (*Male*), age (*Age>=50*), birth place (*Local Politician*), education level (*High Education*) and oversea experience (*Oversea Experience*) to control for politician level characteristics. We control for year-, industry-, and region-fixed effects across all model specifications. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *Z*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Default Probability			
	(1)	(2)	(3)	(4)
CDB	-1.333***	-1.769***	-1.628***	-1.635***
	(-4.25)	(-5.35)	(-4.92)	(-4.94)
CDB*County/City	-1.644***	-1.889***	-2.224***	-2.244***
	(-2.80)	(-3.18)	(-3.71)	(-3.75)
County/City	0.115***	0.093***	0.082***	0.080**
	(4.28)	(3.09)	(2.58)	(2.45)
Loan Controls	NO	YES	YES	YES
LGFV Controls	NO	YES	YES	YES
Local Government Controls	NO	NO	YES	YES
Politician Controls	NO	NO	NO	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Region FE	YES	YES	YES	YES
No. Obs.	73,828	72,726	72,721	72,721
Pseudo R2	0.024	0.063	0.069	0.072

Internet Appendix

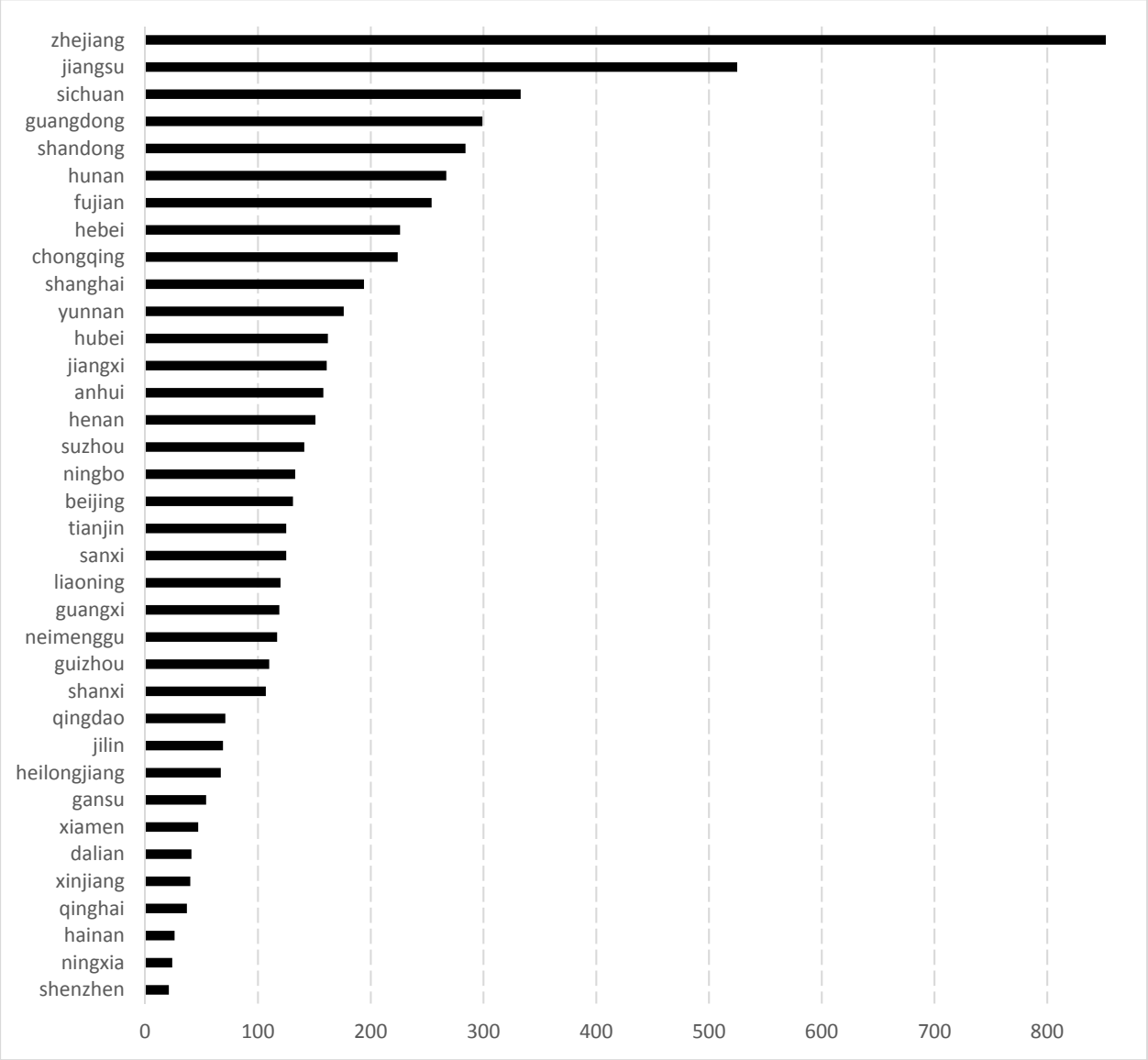
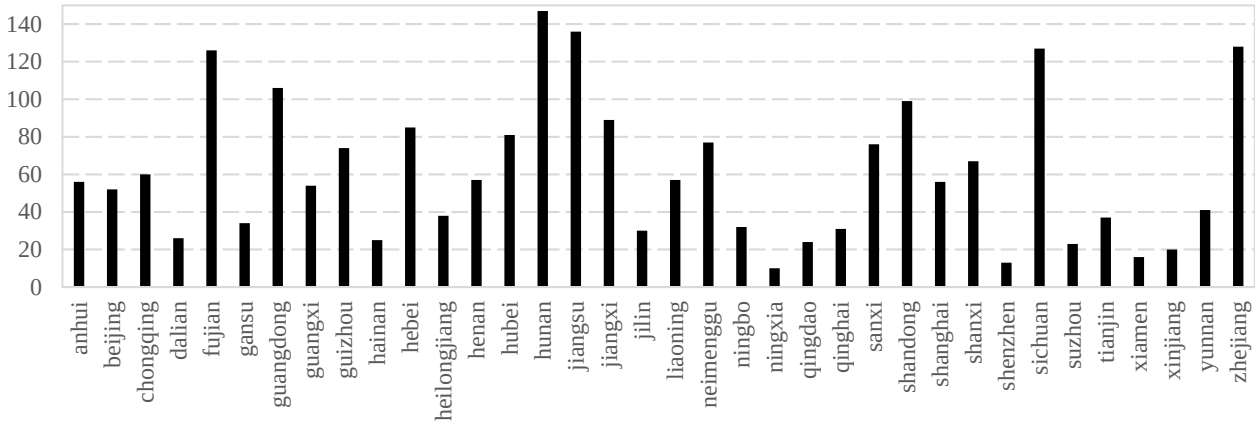
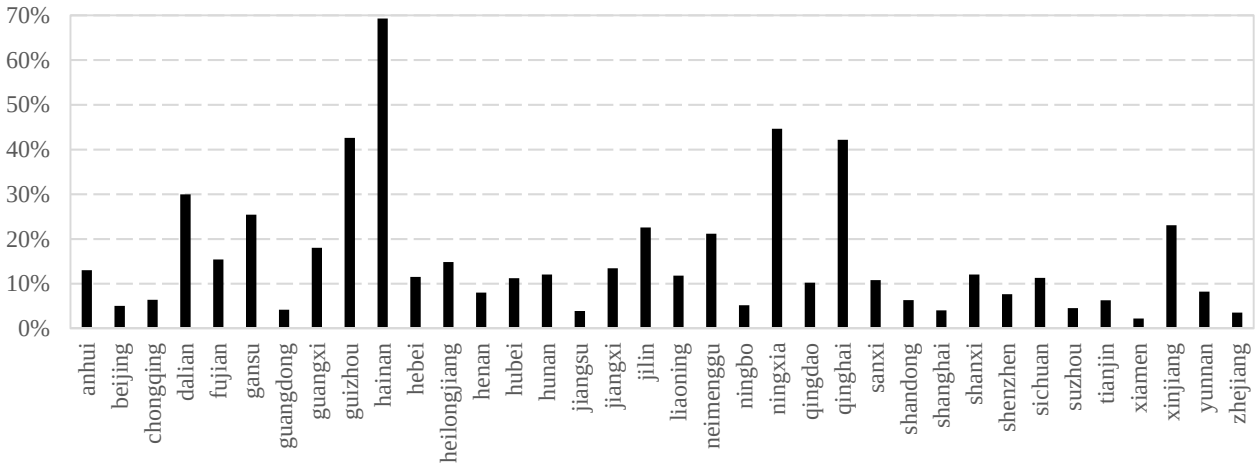


Figure A1: Numbers of Local Government Financing Vehicles across Different Provinces. This figure reports the provincial distribution of the number of local government financing vehicles in our sample period from January 2007 to June 2013. The horizon axis presents the number of local government financing vehicles located in each province. The vertical axis depicts 31 provinces plus 6 cities with independent planning status. The data is from the China Banking Regulatory Commission.

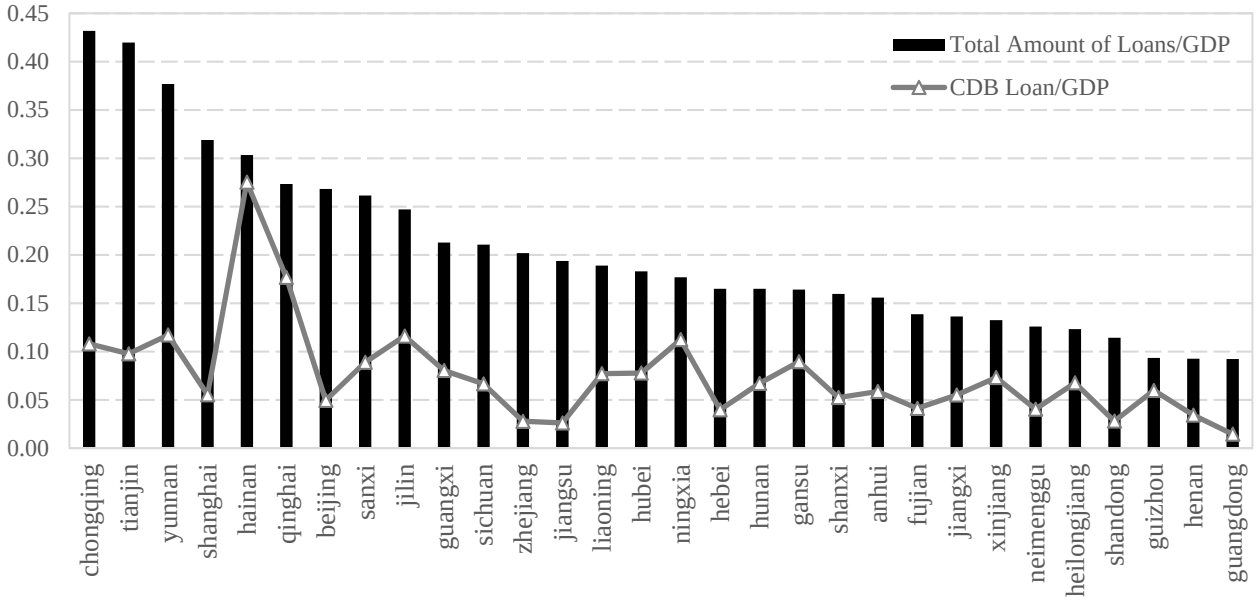


Panel A: Number of LGFVs Borrowing from China Development Bank

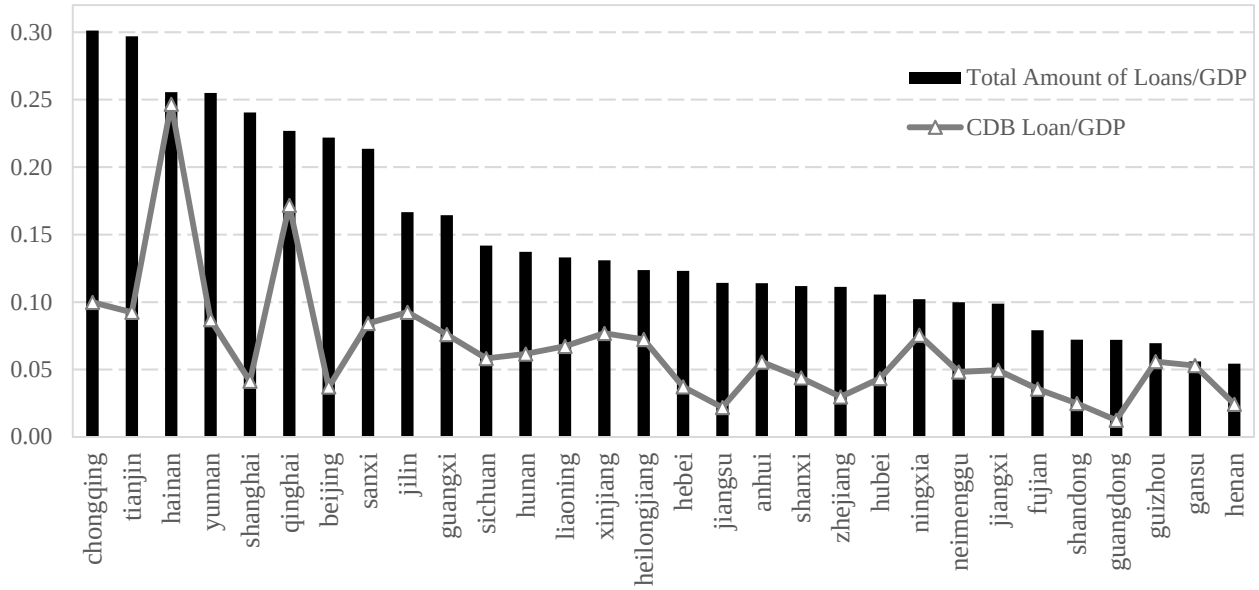


Panel B: Percentage of New Loans from China Development Bank over All Commercial Banks

Figure A2: Provincial Distribution of LGFVs Having Relationship with CDB. Panel A of this figure presents the number of LGFVs borrowing from China Development Bank across different provinces. Panel B depicts the proportions (in percentage) of total loan amount granted by China Development Bank over all commercial banks across provinces in our sample period from January 2007 to June 2013. The data is from the China Banking Regulatory Commission.



Panel A: At the end of 2009



Panel B: At the end of 2012

Figure A3: Debt-to-GDP Ratio across Provinces. This figure presents the province distribution of the ratio of bank debt to local GDP. Panel A reports the distribution at the end of 2009 and Panel B presents the distribution based on the sample of Dec 2012. The bar plots the ratios of total amount of bank loans over local government GDP across different provinces while the line depicts the ratios of loan amount from China Development Bank over local government GDP. The loan information is from the China Banking Regulatory Commission and the local GDP is from China's National Statistics Bureau.

Figure A4: Heat Map of China Local Government Debt across Provinces, 2012. This figure illustrates the level of outstanding local government financing vehicle loan amount, in RMB 100 million, for all provinces in China at the end of 2012. It covers 31 provinces including four centrally administrated cities (i.e., Shanghai, Beijing, Tianjin and Chongqing). Individual loans from China Banking Regulatory Commission are aggregated to province level.

Table A1: The 17 Commercial Banks in Our Sample

This table reports all the commercial banks covered by CBRC loan dataset. # LGFVs is the total number of local government financing vehicles. # Issues is the total number of loan contracts.

	All LGFV Loans		LGFV Loans Expired before March	
	#LGFVs	#Issues	#LGFVs	#Issues
Industrial and Commercial Bank of China (ICBC)	2,074	37,111	1,697	17,856
China Construction Bank (CCB)	2,645	20,727	1,994	12,496
Agricultural Bank of China (ABC)	1,812	28,899	1,279	11,639
Bank of China (BOC)	1,569	15,186	938	4,759
Bank of Communications (BoCom)	1,427	10,965	1,087	5,994
Shanghai Pudong Development Bank	1,300	7,634	1,119	4,949
China Citic Bank	1,190	9,398	1,074	6,806
Industrial Bank	956	3,933	711	2,867
China Minsheng Bank	895	5,689	784	4,131
China Everbright Bank	838	4,714	674	3,341
China Merchants Bank	728	4,610	624	3,348
Huaxia Bank	632	2,633	541	1,789
Ping'an Bank	505	2,581	418	1,792
China Guangfa Bank	375	2,047	263	1,177
China Zheshang Bank	255	932	204	513
Evergrowing Bank	225	670	191	502
China Bohai Bank	107	312	78	191

Table A2: OLS Regressions of Loan Default Probability on Lending Bank Type

This table presents the OLS regression results of estimating equation 1. We restrict our sample by filtering the loan whose expiration date is post to Mar 30, 2013. Our sample covers 89,785 loan-level observations. The dependent variable is the dummy variable indicating whether the loan is default (i.e. over 90 days being delinquent), and the main independent variable "CDB" is a dummy variable for whether the loan is granted by the China Development Bank or not. We control for loan characteristics e.g. *Bank Loan Rating*, *Loan Size*, *Maturity*, *Guaranteed*, and the main LGFV-level characteristics: *Log(LGFV Assets)* and *LGFV Leverage* in column 2 to 4. In column 4, we further control for city-level local government characteristics: *Log(Local GDP)*, *Local. Expense/Revenue*, *Local. Estate Invest/GDP*, and *Local. Corruption*. In column 3 and 4, we control for year-, industry-, and region-fixed effects. Industry dummies represent the loan granting industries according to Industrial Classification of the National Economy (GB/T 4754-2011) released by China's National Bureau of Statistics. Based on the data published by China's National Bureau of Statistics, there are four grand regions in China: Northeast, East, Central, and West. Robust standard errors are clustered by LGFV. *T*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)	(4)
CDB	-0.013***	-0.028***	-0.030***	-0.030***
	(-8.14)	(-15.29)	(-15.15)	(-15.45)
Bank Loan Rating		0.031***	0.030***	0.029***
		(19.14)	(18.77)	(17.58)
Loan Size		0.117***	0.112***	0.114***
		(16.11)	(15.03)	(15.15)
Maturity		-0.001**	-0.000	-0.001
		(-2.40)	(-1.10)	(-1.29)
Guaranteed		0.002*	0.002**	0.002**
		(1.92)	(2.12)	(2.21)
Log(LGFV Assets)		-0.002***	-0.003***	-0.003***
		(-8.47)	(-9.17)	(-8.70)
LGFV Leverage		0.000	0.000	0.000
		(0.26)	(0.21)	(0.00)
Log(Local GDP)				0.002***
				(3.98)
Local Expense/Revenue				0.002***
				(5.53)
Local Real Estate/GDP				-0.042***
				(-4.90)
Local Corruption				0.003***
				(4.18)
Year FE	No	No	Yes	Yes
Industry FE	No	No	Yes	Yes
Region FE	No	No	Yes	Yes
No. Obs.	89,785	88,623	88,623	88,618
Adjusted R2	0.001	0.008	0.010	0.011

Table A3: OLS Regressions of Politician Promotion Likelihood and Relationship with CDB

This table presents the regression results of politician promotion against the borrowing relationship with the CDB. Our sample covers 657 city-politician-term observations from 2007 to 2012, which includes 276 cities and 572 local politicians. We obtain the politician characteristics from CSMAR and manually identify whether the city-party secretary gets promotion after his/her term expires. We initially define the politician promotion based on the position rank, e.g. the secretary is promoted if he/she moves to deputy governor of province, governor of province, provincial deputy secretary, and provincial secretary. In columns (3) and (4), we also include the cases when the politician moves to a city with higher GDP as promotions. Our main independent variables are *Log(CDBLoan)* and *CDB/Total Loan*. *CDBLoan* is the total amount of loans borrowed from the CDB during the politician's term, and *CDB/ALL* is a ratio of total amount of loans from CDB over the total amount of loans obtained from all the banks covered by our loan data during this politician's term. To control the politician characteristics, we also include the gender (*Male*), age (*Age>=50*), birth place (*Local Politician*), education level (*High Education*) and oversea experience (*Oversea Experience*). Besides, we also include city-government level controls: local government GDP (*Log(GDP)*), the public finance conditions measured by the ratio of fiscal expenditure over fiscal revenues (*Local Expense/Revenue*), and the percentage of Tertiary sector GDP (*Tertiary sector/GDP*). Based on the data published by China's National Bureau of Statistics of China, there are four grand regions in China: Northeast, East, Central, and West. All model specifications also include year- and region-fixed effects. Robust standard errors are clustered by city. *T*-statistics of the coefficient estimates are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Politician Promotion			
	Rank Based		Rank Plus GDP Based	
	(1)	(2)	(3)	(4)
Log(CDB Loan)	0.053***		0.056***	
	(3.08)		(2.75)	
CDB/Total Loan		0.049		0.073
		(1.96)		(2.23)
Male	-0.123*	-0.127*	0.031	0.027
	(-1.74)	(-1.77)	(0.37)	(0.32)
Age>=50	-0.188***	-0.192***	-0.151***	-0.156***
	(-5.56)	(-5.64)	(-3.77)	(-3.86)
Local Politician	-0.020	-0.022	0.054	0.051
	(-0.54)	(-0.62)	(1.27)	(1.20)
High Education	0.118	0.122	0.257**	0.260**
	(1.26)	(1.30)	(2.33)	(2.34)
Oversea Experience	-0.049	-0.048	-0.073	-0.071
	(-0.93)	(-0.91)	(-1.18)	(-1.15)
Log(GDP)	0.012	0.045*	-0.000	0.035
	(0.47)	(1.77)	(-0.01)	(1.17)
Local Expense/Revenue	-0.007	-0.013	-0.006	-0.012
	(-0.72)	(-1.28)	(-0.51)	(-1.04)
Tertiary sector/GDP	0.004*	0.006***	0.001	0.003
	(1.87)	(2.76)	(0.60)	(1.39)
Year Fixed	Yes	Yes	Yes	Yes
Region Fixed	Yes	Yes	Yes	Yes
N	657	657	657	657
Adjusted R2	0.122	0.110	0.053	0.046

Table A4: Comparing Loans to Province-level LGFVs and City/County-level LGFVs

This table reports the summary statistics on loan contracts of CBRC across different government administrative level. We follow *WIND's* definitions on the administrative level based on the locations of local government financing vehicles and designate an administrative level (City/County and Province) for each local government financing vehicle. *# LGFVs* is the total number of local government financing vehicles. *# Issues* is the total number of loan contracts. *Avg. Loan* is the average amount of loan balances over each loan contract, in unit of one million RMB. *Avg. Maturity* is the average of loan maturity across all loans, in unit of years. *Loan Rating* is the average of internal rating by loan officers for all the loans. *CDB* is the percentage of loan contracts granted by China Development Bank. Following the standard definition in literature, *Default* stands for being over 90 days delinquent. Column (1) to (6) are based upon all the loan level observations during the period from Jan 2007 to June 2013 while column (7) is based upon the loan level observations of which the expiring date is prior to Mar 2013.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Avg. Loan			CDB	Default
	# LGFVs	# Issues	(Million RMB)	Avg. Maturity	Loan Rating	(%)	(%)
City/County	3,954	78,576	50.0	3.9	1.1	12.9	2.0
Province	2,013	97,498	77.7	5.2	1.0	7.8	1.5