shadow banking is linked to the rising financing demand from certain real sectors, with one such leading historical example being the popularity of state-chartered trust companies in America in the late 19th century associated with the unprecedentedly large-scale railroad construction at that time. The same universal insight prevails in the world's second largest economy today, as our paper argues that the accelerated growth of China's shadow banking after 2012 is tightly linked to its 2009 stimulus plan.

The 4 trillion yuan stimulus plan in China was launched in November 2008, right after the 2007/2008 global financial crisis hit the export-driven Chinese economy hard when its annualized GDP growth dropped from 9.5% in 2008Q3 to 6.4% in 2009Q1. In implementing this infrastructure-centric stimulus plan, Chinese local governments borrowed heavily—mostly in the form of commercial bank loans—during the year of 2009. The 2009 stimulus package caused many unintended consequences on the growth of China's economy and financial markets after 2009, and we show that one of them is the unprecedentedly rapid growth of shadow banking activities in China after 2012.

The dawn of shadow banking in China around 2008 can be attributed to other factors (e.g., Hachem and Song, 2017a; Hachem and Song, 2017b), but it is after 2012 that China's shadow banking started experiencing accelerated growth. For instance, wealth management products (WMPs), a widely used tool to attract off-balance-sheet deposits in China, grew by a total of RMB 3.5 trillion during the three-year period from 2008 to 2011 but increased by RMB 2.5 and 3.1 trillion in the single years 2012 and 2013, respectively. A similar pattern holds for trust loans (including both trust and entrusted loans), which grew a total of 4.6 trillion during 2008–2011 but increased by 7 trillion in 2012–2013.

In contrast to most of the recent literature on China's shadow banking (e.g., Acharya et al., 2017; Hachem and Song, 2017a), our study links the timing of the 2009 stimulus loans to that of a rapid growth of shadow banking after a delay of three to five years, as just described. We term this mechanism the stimulus loan hangover effect: local governments that received stimulus bank loans in 2009 had to repay these loans, which matured three to five years later (Diamond and He, 2014; He and Xiong, 2012), and/or finance the continuation phase of the plan's long-term infrastructure projects. Due to the sheer size of the stimulus loans sitting on the balance sheets of local governments, as well as Beijing's back-to-normal credit policy in 2010, this stimulus loan hangover effect creates a vast financing demand that is unmet by the tightly regulated traditional banking system. Consequently, local governments, together with financial institutions, had strong incentives to engage in regulatory arbitrage, which fostered the shadow banking sector in China starting in 2012 and propelled the swift growth of Chinese corporate bond markets around the same time. As we discuss in Section 5.1, this episode in today's China corresponds remarkably well with US history, whenrailroad financing in the 19th century triggered the rising importance of state-chartered trust companies and even stimulated the corporate bond market on Wall Street (Chandler, 1965; Neal, 1971).

The contribution of this paper is twofold. First, we illustrate how the 2009 stimulus package in China following the 2007/2008 global financial crisis unexpectedly affected the development of Chinese financial markets. Specifically, by instrumenting the heterogeneous stimulus shocks in 2009 across provinces with local governors' tenure terms, we causally establish a hangover mechanism underlying the accelerated growth of shadow banking in China after 2012. Second, and in a more general sense, this paper illustrates a fundamental pattern for the rise of shadow banking by comparing China today with the US more than 100 years ago: the financing demand from certain real sectors along with tighter regulations on the traditional banking system promotes shadow banking development.

We start by describing the background of the 2009 4 trillion yuan stimulus package and its connections to Chinese local governments in Section 2. Unlike standard fiscal policies in developed countries, such as the American Recovery and Reinvestment Act of 2009 (ARRA), where financing involves all levels of government, in China it is mainly those off-balance-sheet local government financing vehicles (LGFVs)—not municipals themselves—that borrowed from banks and carried out the 2009 stimulus plan.

Beijing reverted its aggressive credit policy back to normal in 2010, but these 2009 stimulus loans were left on LGFVs' balance sheets and became a major liability implicitly assumed by Chinese local governments. In December 2010 and June 2013, the National Audit Office (NAO) conducted two comprehensive surveys on local government debts, including those borrowed by LGFVs. We focus on four subcategories on the liability side of local governments: bank loans, munibonds, municipal corporate bonds, and trust loans, with the latter three types being nonbank debt. Consistent with the hypothesis of a stimulus loan hangover effect, Section 3 shows a robust pattern of local government debt changing its composition from bank loans to nonbank debt obligations over the period of 2008 to 2016.

Our paper focuses on the third type of debt, namely, municipal corporate bonds (MCBs hereafter).[1] These bonds are issued by LGFVs and hence are corporate bonds in a legal sense. But on the other hand, they have implicit guarantees from corresponding local governments and hence enjoy the extra safety of typical municipal bonds. Moreover, LGFV-issued MCBs are tightly linked to the shadow banking sector, which is the major funding source of Chinese corporate bond markets.

We perform our main empirical analysis in Section 4. The hypothesis of the stimulus loan hangover effect has the following cross-sectional prediction: provinces with

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[1] It is "cheng-tou-zhai" in Chinese, which literally translates to "city investment bonds." We adopt "municipal corporate bonds" from the English translation of the "cheng-tou-zhai" index provided by the China Securities Index Company, Limited (CSI), which is the leading index provider in China and is jointly owned by the Shenzhen Stock Exchange and the Shanghai Stock Exchange. In the literature, papers have used different translations; for instance, "local government bonds" by Huang et al. (2016), "Chengtou bonds" by Ang et al. (2019), and "urban construction and investment bonds" by Gao et al. (2018). Some practitioners' articles also use the term "LGFV bonds."

more stimulus bank 2009 should have more
issuance years To with endo-

economy exploit was

three years more the stimulus shock

(2015) Liu al. (2018)

a reversal of the trend observed before 2008 (Song et al., 2011), a crowd-out effect of public debt on private investment (Huang et al., 2016), the impact of local government debt on banking sector valuation (Chen and Gu, 2012), and the political economy of local government financing decisions (Gao et al., 2018). First, unlike these studies, our paper focuses on the liability side of local governments and analyzes one of the unintended consequences of the stimulus package in 2009—namely, the delayed upsurge of China's shadow banking sector. Our study sheds light on how a fiscal shock that aims at stimulating real economic growth could unexpectedly shape financial market development in the context of an evolving market economy, where both market forces and government intervention interact with each other.

Second, our main empirical analysis focuses on MCBs, one type of corporate bonds issued by LGFVs. While a couple of other papers examine the cross-sectional pricing determinants of MCBs (Ang et al., 2019; Liu et al., 2017a) and the pledgeability effect on asset pricing (Chen et al., 2018a), we study the quantity of MCBs as well as their issuance purposes. More broadly speaking, our finding about the evolution of local governments' financing from bank loans to bonds and/or other nonbank sources adds to those studies on Chinese local government debt, including LGFV debts (Zhang and Barnett, 2014), LGFV borrowing backed by land sales (Ambrose et al., 2015), and the economic tournament among local governments (Xiong, 2018).

Third, our paper also belongs to the burgeoning literature on China's greatly increased shadow banking activities, including both WMPs and trust loans. To explain the origin of shadow banking in China, some researchers compare the different behaviors of small- and medium-size banks with big banks, such as regulatory arbitrage triggered by regulation change on liquidity requirement (Hachem and Song, 2017a) or competition for deposits using WMPs (Acharya et al., 2017). In contrast, we highlight the stimulus loan hangover effect due to local government debt, which explains the accelerated increase in shadow banking activities after 2012. To the best of our knowledge, our paper is the first study that links the financing of local governments to the fast growth of China's shadow banking markets. According to our paper, the development of trust loans investigated by other papers (Allen et al., 2017; Allen et al., 2019; Chen et al., 2018b) is likely due to the 2009 bank-loan-fueled stimulus as well.

Methodology-wise, our approach is similar to the recent literature on the effect of the 2009 ARRA program on various aspects of economic output in the US based on cross-sectional data, including Conley and Dupor (2013), Leduc and Wilson (2013), Dupor and Mehkari (2016), Crucini and Vu (2017), Leduc and Wilson (2017), and Chhabra et al. (2018). Exploiting the arguably exogenous cross-state variations in highway grants thanks to the pre-existing formulas for grants allocation, researchers investigate the multiplier effect of the ARRA as well as its employment effect; for a recent survey, see Chodorow-Reich (2019).

Finally, we draw a striking similarity between the upsurge of shadow banking in China's post-stimulus period with the US history of financial development during the National Banking Era (1863–1912). Sprague (1910) is perhaps one of the earliest books that portrays banking panics during the Gilded Age, and Chandler (1965) argues that railroad financing helps stimulate the argues

(left scale), together with GDP levels for later years but in 2004 fixed price (right scale). The pattern is even stronger: new bank loans in the two years after 2008, especially 2009, stood out as abnormally high. Panels C and D further show that most of the increase in 2009 new bank loans is toward the nonresidential sector, consistent with the stimulus package being predominantly infrastructure investment oriented.

One caveat in reading Fig. 1 is that the ultra-loose monetary policy in 2009, which aimed to help local governments implement the fiscal expansion, also led to remarkable bank credit growth in other sectors in China (see, e.g., Cong et al., 2019). We estimate that a total of RMB 4.7 trillion "extra" new bank loans was extended to the Chinese economy in 2009, with estimation details given in the Online Appendix A. Among them, LGFVs obtained roughly RMB 2.3 trillion, among which 2.06 trillion came from commercial banks and 0.26 trillion from policy banks.[2] The nonresidential sector (excluding LGFVs) received about RMB 1 trillion in extra new bank loans, and the remaining RMB 1.4 trillion went to the residential sector (mainly in the form of mortgage loans).

2.2.

Shortly after the implementation of the stimulus package, many economists and practitioners raised warnings about the solvency of Chinese local governments. What is worse is that Beijing lacked statistics to even gauge the aggregate outstanding debt of local governments, let alone to monitor the potential default risks of LGFVs. This pushed the NAO of China to conduct two nationwide surveys on local government debts, one dated December 31, 2010 and the other dated June 30, 2013.

Besides bank loans, there are three major forms of nonbank debt obligations in the 2013 NAO report: MCBs, trust, and munibonds. Due to data limitations, we exclude from our analysis several other liability items such as accounts payable, build-and-transfer, fiscal on-lending, and other entity and individual borrowing; they are either common working capital items or standard local-central government arrangements. Specifically, "accounts payable" are mainly unpaid bills owed to business suppliers, "build-and-transfer" is a common arrangement of public-private partnership between local governments and contractors for massive infrastructure project development, "fiscal on-lending" refers to local governments' obligations owed to the central government that raises funds by issuing special Treasury bonds and lends the proceeds to local governments, and "other entity and individual borrowing" includes obligations from all unclassified parties.

MCBs are corporate bonds issued by LGFVs that have implicit government guarantee (Liu et al., 2017a). The words "municipal" and "corporate" reflect two simultaneous features of MCBs: government guarantee as other

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[2] In China, besides commercial banks, there are three policy banks (Agricultural Development Bank of China, China Development

bank loans increased from RMB 8.5 trillion to 10.1 trillion, the fraction of bank loans dropped sharply from 79% to 57%. In contrast, other nonbank debt categories became increasingly important during the period of 2010–2013.

2.3.

In this section, after a brief introduction of China's shadow banking activities, we explain why the Chinese corporate bond market (where MCBs are issued and traded) is an integrated part of the shadow banking sector connected through banks' off-balance-sheet investment vehicles.

2.3.1.

The Chinese shadow banking system is composed of trust loans, WMPs, undiscounted bankers' acceptances, peer-to-peer lendings, and so forth. Among them, the two most important categories are trust loans (including both trust and entrusted loans) and WMPs, though they overlap each other to a great extent.

Trust loans refer to individual-to-firm loans intermediated by a trust company, and entrusted loans refer to firm-to-firm loans intermediated by a bank; both measure the asset side of shadow banking and typically involve banks moving loans off their balance sheets. In contrast, WMPs, which are sold via bank branches to unsophisticated retail investors at a rate above the deposit rate, measure the liability side. WMPs can be used to finance trust companies that then may use the funds to lend to firms, buy corporate bonds, and/or invest in

bank

only available for June 2013; and (3) our main empirical
analyses are based on WIND's data on individual

Table 2

Summary statistics.

This table reports the summary statistics of key variables for provincial MCB issuance and economic conditions. Panel A reports the summary statistics of all variables over the full sample. Panels B and C report the summary statistics of MCB issuance over the 2004–2008 and the 2009–2015 subperiods. Dependent variables include MCB over GDP, MCB for repayment of bank loans over GDP, MCB for investment over GDP, MCB for other purpose over GDP, fixed asset investment over GDP, and GDP per capita, all of which are scaled by 2009 GDP. The main explanatory variable is stimulus bank loan, defined as 2009 bank loans over GDP minus its average value over the past five years. Control variables include fiscal deficit over GDP, fixed-asset investment over GDP, GDP growth, GDP per capita (in RMB thousand), and the Big Four branch share, the former four of which are measured over the one-year window of 2007Q4–2008Q3, and the last one is measured as of 2008Q3. The sample period for dependent variables are from 2004 to 2015, except for the entrusted loan (EL)/GDP with the sample period of 2013–2015.
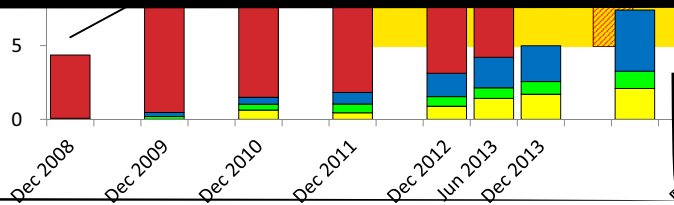
Panel A: Summary statistics of full sample

	Obs	Mean	SD	Min	P25	Median	P75	Max
$/D_{,2009}$	360	0.016	0.027	0.000	0.000	0.003	0.020	0.162
$/D_{,2009}$	360	0.004	0.010	0.000	0.000	0.000	0.003	0.079
$^{v}/D_{,2009}$	360	0.007	0.010	0.000	0.000	0.002	0.009	0.054
$/D_{,2009}$	360	0.002	0.004	0.000	0.000	0.000	0.002	0.032
$/D_{,2009}$	30	0.164	0.050	0.083	0.129	0.158	0.190	0.270
$D/D_{,07\,4-08\,3}$	30	0.086	0.064	−0.002	0.026	0.087	0.105	0.274
$A/D_{,07\,4-08\,3}$	30	0.475	0.121	0.236	0.400	0.452	0.557	0.710
$\Delta D_{,07\,4-08\,3}$	30	0.126	0.024	0.086	0.104	0.128	0.136	0.187
$D_{,07\,4-08\,3}$	30	25.479	14.649	9.087	16.737	19.580	31.645	65.803
$_{,2008\,3}$	30	0.381	0.081	0.237	0.331	0.358	0.439	0.570
$A/D_{,2009}$	360	0.847	0.619	0.149	0.330	0.662	1.215	2.969
$D/D_{,2009}$	360	1.184	0.527	0.321	0.724	1.050	1.631	2.721
$/D$	90	0.033	0.026	−0.018	0.017	0.027	0.041	0.142

Panel B: Summary statistics of MCB issuance for the 2004–2008 subperiod

	Obs	Mean	SD	Min	P25	Median	P75	Max
$/D_{,2009}$	150	0.000	0.001	0.000	0.000	0.000	0.000	0.009
$/D_{,2009}$	150	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$^{v}/D_{,2009}$	150	0.000	0.001	0.000	0.000	0.000	0.000	0.009
$/D_{,2009}$	150	0.000	0.000	0.000	0.000	0.000	0.000	0.001

Panel C: Summary statistics of MCB issuance for the 2009–2015 subperiod

	Obs	Mean	SD	Min	P25	Median	P75	Max
$/D_{,2009}$	210	0.027	0.032					

5

0

Dec 2008   Dec 2009   Dec 2010   Dec 2011   Dec 2012   Jun 2013   Dec 2013

Panel A: Newly issued municipal corporate bonds (MCB)

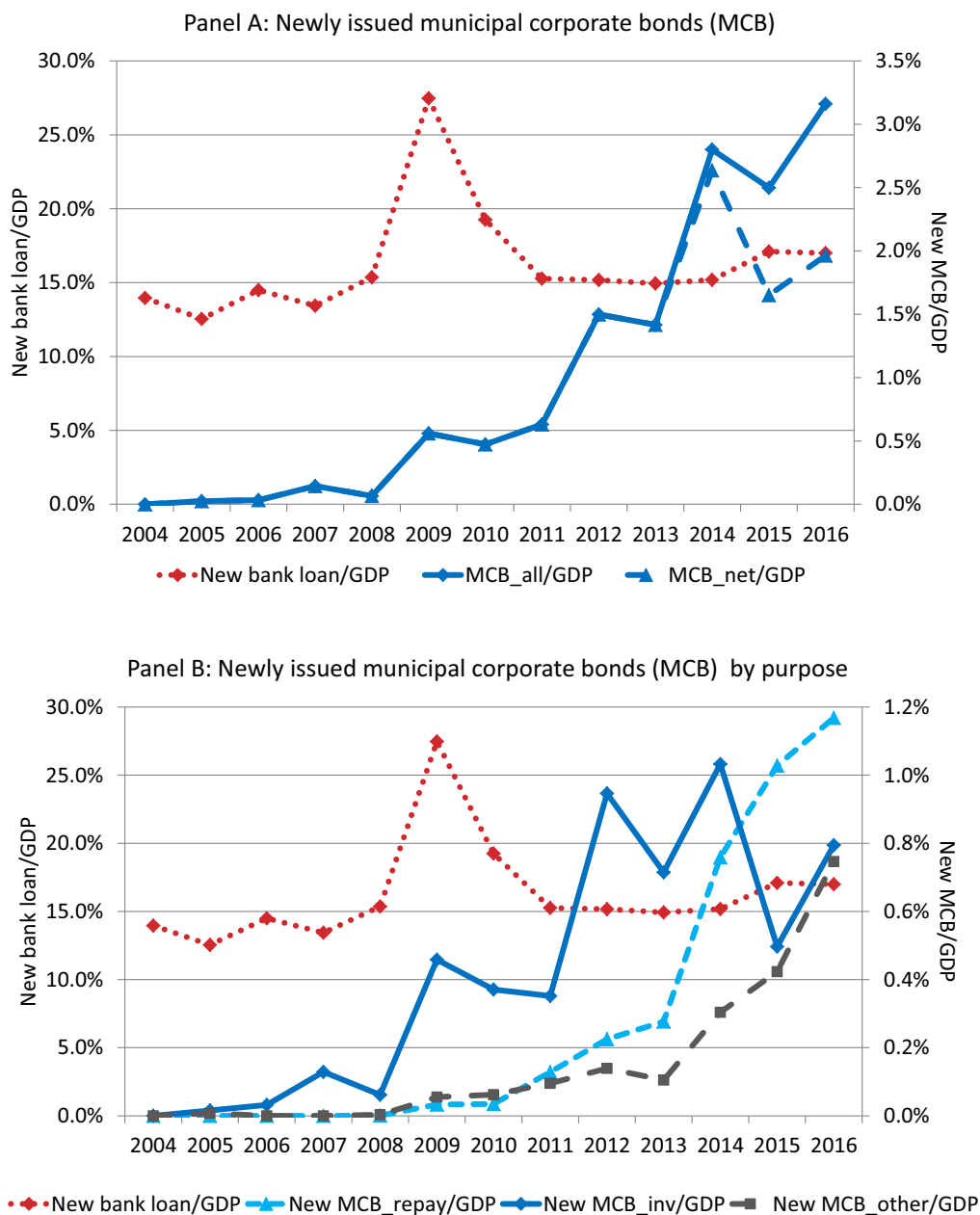Panel B: Newly issued municipal corporate bonds (MCB) by purpose

Fig. 3. Municipal corporate bond issuance, 2004–2016. Panel A plots the total MCB issuance over GDP, the net MCB issuance over GDP, and new bank loans over GDP. Panel B plots the total MCB issuance over GDP by usage, including repayment of bank loans, financing of an investment, and other purposes (including replenishing working capital, financing for other entities through entrusted loan structure, repayment of trust loans or other financial institutional borrowings, and undisclosed purpose). New bank loans over GDP are plotted against the left vertical axis, and MCB issuance over GDP is plotted against the right vertical axis. The annual MCB-issuance data are aggregated from individual municipal corporate bonds downloaded from WIND.

4. Cross-sectional evidences

We now exploit the LGFV-level MCB data to study the stimulus loan hangover mechanism in the cross-section. We emphasize the importance in distinguishing the source

of funds from the use of funds when studying shadow banking in the cross-section. Consider using prospectuses of trust products, which are also available in the WIND database. The prospectuses of trust products usually reveal the location of funds raised but not where the funds are to be used, which poses a serious challenge, as Chinese wealthy individuals in developed coastal cities (e.g., Shanghai) often buy trust products to fund some projects from underdeveloped inland cities (e.g., Qinghai).

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issuance for bank loan repayment to be RMB 0.7 trillion by assuming that the "refinancing" portion is for repaying bank loans.

In contrast, MCBs are issued for the financing need of local governments in some particular region, which is exactly the use of funds. This feature provides researchers an ideal empirical setting to test our cross-sectional prediction.

4.1.

The proposed stimulus loan hangover mechanism has the following testable hypothesis: if a province was more aggressive in taking on bank loans in 2009, this province would issue more MCBs three to five years later. We now present some preliminary evidence that supports this hypothesis.

For each province, we first construct the stimulus bank loan (BL) over GDP at 2009, defined as the 2009 BL/GDP ratio minus its average in the past five years:

$$\frac{,2009}{D_{,2009}} \equiv \frac{,2009}{D_{,2009}} - \frac{1}{5} \sum_{\tau=2004}^{2008} \frac{,\tau}{D_{,\tau}}. \tag{1}$$

Next, we construct the provincial abnormal MCB over GDP in each subsequent year from 2012 to 2015:

$$\frac{,}{D_{,}} \equiv \frac{,}{D_{,}} - \frac{1}{5} \sum_{\tau=2004}^{2008} \frac{,\tau}{D_{,\tau}},$$

with $= 2012, 2013, 2014, 2015.$ \tag{2}

We also consider seven geographic regions commonly used in China (North China, East China, South China, Center China, Northeast, Northwest, and Southwest) and repeat the same exercise.

The 2009 stimulus BL/GDP in various provinces/regions captures the heterogeneous deviations (i.e., the aggressiveness in credit expansion in response to the stimulus plan) away from the province/region-dependent steady state. This treatment is particularly attractive in light of Fig. 1, Panel B, which shows a steady pattern between new bank loans and GDP in China (except in 2009).

Fig. 4, Panel A presents the regional scatter plot of $\frac{,2009}{D_{,2009}}$ and $\frac{,}{D_{,}}$ for each future year during 2012–2015. The Southwest region—which suffered from the exogenous Wenchuan earthquake in May 2008 and hence was qualified for postdisaster reconstruction shortly after—had the largest stimulus loan growth in 2009, and this region did rank first in abnormal MCB issuance in three out of four future years. The scatter plot at the province
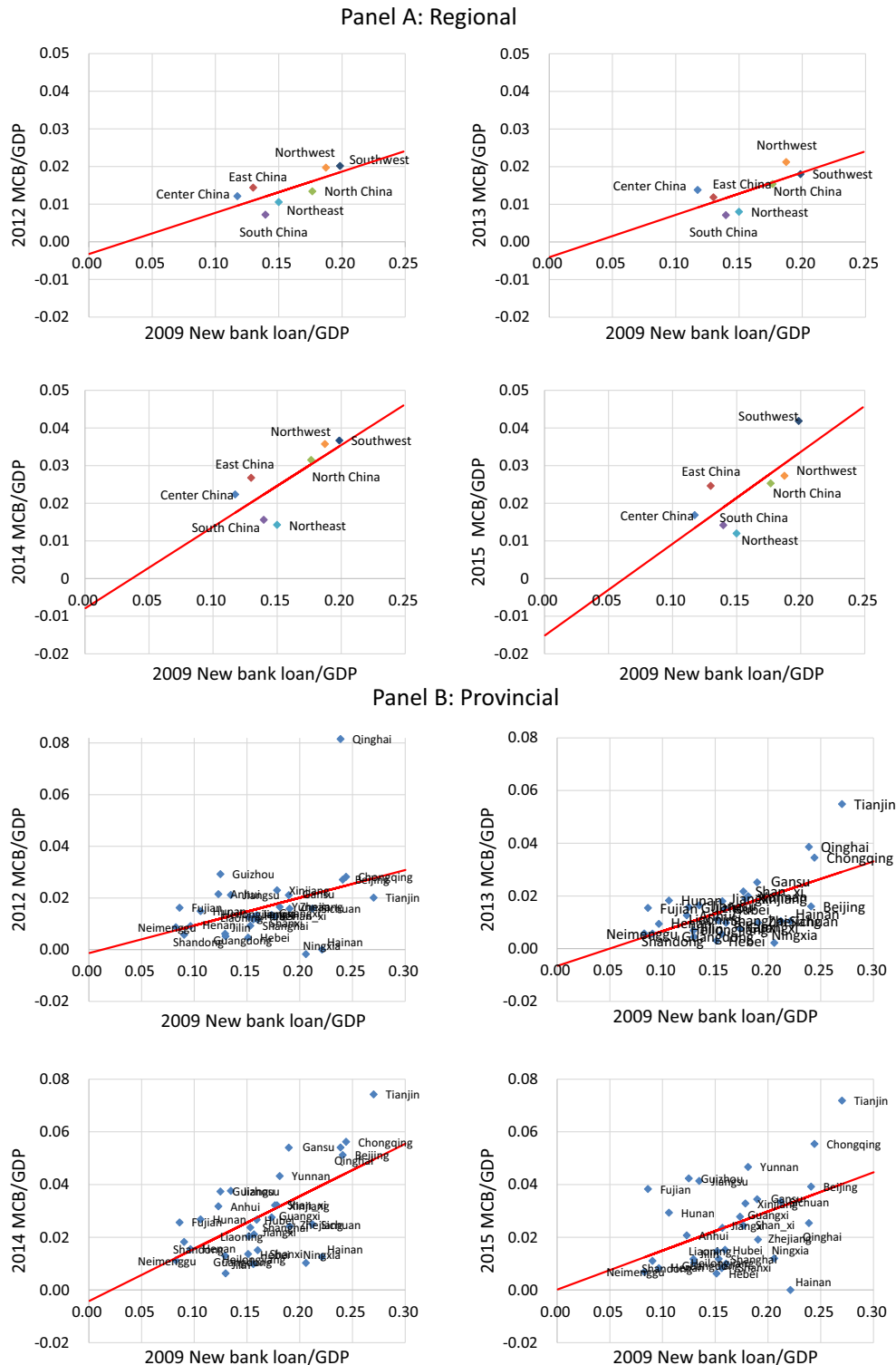
Panel A: Regional

Panel B: Provincial

Fig. 4. 2009 stimulus new bank loan and 2012–2015 abnormal municipal corporate bond issuance. Panel A (B) presents the scatter plot with a fitted line for regional (provincial) data. Stimulus new bank loan and abnormal MCB issuance (as a percentage of GDP) are calculated over their average values between 2004 and 2008, respectively. The bank loan data are from the People's Bank of China, and the MCB-issuance data are from WIND.

Table 3

The effects of 2009 stimulus bank loan on future municipal corporate bond issuance, year-by-year regressions.
This table reports the year-by-year regressions of 2012–2015 MCB issuance on 2009 bank loan. The dependent variable is the abnormal MCB issuance scaled by GDP in years 2012–2015 compared to the average value between 2004 and 2008. Annual MCB issuance at the regional/provincial/city level is aggregated over individual MCB bonds. The explanatory variable is the stimulus bank loan scaled by GDP. Panels A, B, and C report the cross-regional, the cross-provincial, and the cross-city results, respectively. Data on bank loans are obtained from the PBoC, and data on MCBs are obtained from WIND. Constants are not reported. Heteroskedasticity consistent standard errors are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Regional regressions				
	(1) MCB/GDP_{2012}	(2) MCB/GDP_{2013}	(3) MCB/GDP_{2014}	(4) MCB/GDP_{2015}
$/ D_{2009}$	0.109***	0.113**	0.217***	0.244**
	(0.041)	(0.050)	(0.066)	(0.097)
Observations	7	7	7	7
Adj. ^{2}	0.418	0.352	0.443	0.457
Panel B: Provincial regressions				
	(1) MCB/GDP_{2012}	(2) MCB/GDP_{2013}	(3) MCB/GDP_{2014}	(4) MCB/GDP_{2015}
$/ D_{2009}$	0.107	0.132***	0.199***	0.149**
	(0.069)	(0.051)	(0.058)	(0.072)
Observations	30	30	30	30
Adj. ^{2}	0.103	0.315	0.338	0.168
Panel C: City-level regressions				
	(1) MCB/GDP_{2012}	(2) MCB/GDP_{2013}	(3) MCB/GDP_{2014}	(4) MCB/GDP_{2015}
$/ D_{2009}$	0.040**	0.036***	0.075***	0.056***
	(0.018)	(0.010)	(0.019)	(0.021)
Observations	325	325	325	325
Adj. ^{2}	0.068	0.070	0.137	0.073

First of all, although most of the empirical literature focuses on identifying demand and supply forces, in our context it matters little whether the cross-sectional variation in $_{,2009}$ was driven by demand-side shocks (e.g., LGFVs in some provinces being more aggressive in launching infrastructure projects in 2009) or supply-side shocks (e.g., banks in some provinces lowering their lending standards). Either way, bank loans taken out in 2009 needed to be repaid when these loans became due, giving rise to heterogeneous rollover pressures in later years across provinces.

The omitted-variable problem is a major concern for our identification. In other words, in Eq. (4), it is possible that $_{,}$ in later years include some bonds that are issued neither for loan repayment, nor for continuing phases of 2009 infrastructure projects. These bond issuances during 2012–2015 could be correlated with $_{,2009}$ given the significant regional disparity in China. For instance, regions where banks are more effective in extending stimulus loans in 2009 are likely to have a better-functioning banking system, above and beyond the effect that is captured by our controls (say, the Big Four banks' branch share). Then, the better functioning banking system may restrain the growth of shadow banking in that area in later years (if traditional banks and shadow banks are substitutes).

The ideal experiment is a random allocation of 2009 stimulus loans across provinces. Along this line, we exploit the unique environment of the political economy in China by taking advantage of the heterogeneous timing of the terms of local governors in different provinces, an arguably

exogenous cross-province variation in 2009. We explain why this variable captures heterogeneous province-level shocks to 2009 stimulus loans and why it is orthogonal to future MCB/GDP growth across provinces in Section 4.2.3. A well-designed IV estimation also helps us gauge the economic mechanism behind the potential bias of OLS estimators, which is discussed in Section 4.3.

4.2.3.   : $_{,2009}$

In China, the typical official term of a provincial governor is five years. After this term, he or she either gets promoted, stays in the same official rank, or retires. The incentive to comply with Beijing becomes stronger in the later years of a governor's term. In the wake of the 2009 stimulus policy shock, we would expect more aggressive stimulus loans in provinces with governors in their late term because those governors were more motivated to follow Beijing's policy guidance. LGFVs at various levels have a strong incentive to comply with the governor's policy agenda thanks to China's "one-level-up" policy that says that the promotion of an government official is largely determined by his/her superior official at the level immediately above (Chen and Kung, 2019). Another equally plausible mechanism for provinces with late-term governors being more responsive is that newly appointed governors may need time to become familiar with their provinces before they launch new infrastructure projects.

We construct the provincial-level dummy $_{,2009}$, which takes a value of one if the governor of a province has served more than two years in his/her official term as

of 2009, and zero otherwise. As expected, $_{,2009}$ is positively correlated with the stimulus bank loans in 2009 (a correlation coefficient of 0.349 with a -value of 0.059), and hence we use it as an instrument variable (IV) for the key independent variable $\frac{^{2009}}{D_{.2009}}$ in Eq. (4). Our instrument is motivated by the existing literature that links local government officials' promotion to their incentives of pursuing local economic growth during different years of official terms (Tan and Zhou, 2015, Liu et al., 2018, and Ru, 2018), and shares a similar flavor with studies that exploit exogenous variation in political power and how it could affect federal grant apportion on local governments' highway construction in US (Knight, 2002; Leigh and Neill, 2011).

The exclusion restriction requires that other than the stimulus loan hangover channel (which includes both rollover and continuing long-term investment), $_{,2009}$ is uncorrelated

Panel A: Impact of 2009 stimulus bank loan/GDP$_{2009}$
on MCB$_t$/GDP$_{2009}$, OLS

Panel B: Impact of 2009 stimulus bank loan/GDP$_{2009}$
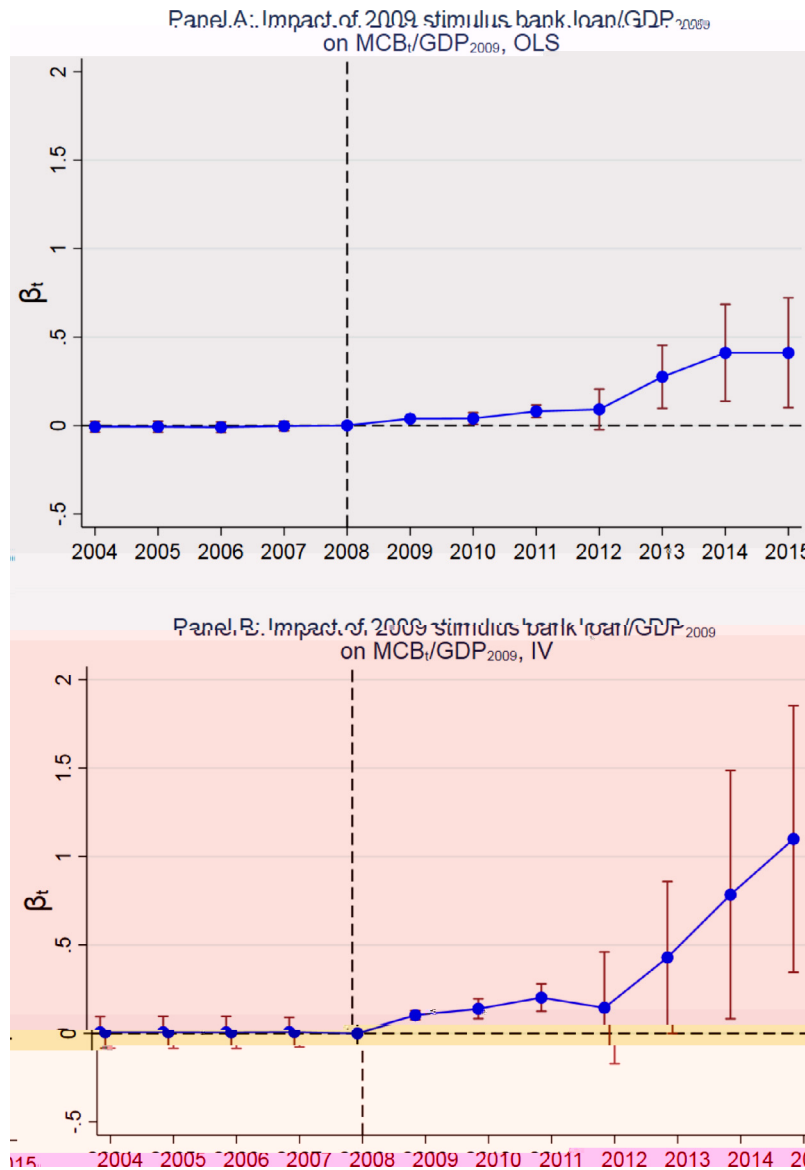on MCB$_t$/GDP$_{2009}$, IV

Fig. 5. Effects of 2009 stimulus bank loan on MCB issuance over 2009 GDP. Panels A and B plot the coefficients along with the 95% confidence intervals for the OLS and 2SLS regressions of MCB issuance over the 2009 GDP on the 2009 stimulus new bank loan scaled by GDP, respectively. The instrumental variable $_{2009}$ equals one if a province governor was not in the first two years of his or her governor tenure as of 2009, and zero otherwise. Province fixed effects, year fixed effects, and the interaction terms of control variables and year dummies are included. Control variables include fiscal deficit scaled by GDP, fixed asset investment scaled by GDP, GDP growth, GDP per capita, and the Big Four branch share, the former four of which are measured over the one-year window of 2007Q4–2008Q3, and the last one is measured as of 2008Q3. Heteroskedasticity-consistent standard errors clustered by province and year are used to calculate the confidence intervals.

significant after 2012 for both OLS and IV estimates, though the pattern of larger IV coefficients persists. When comparing the investment and repayment regressions, we observe much larger β_τ coefficients for investment in years right after 2009, but these coefficients for repayment become larger in 2014 and 2015.

To be clear, if   accurately measure the repayment of 2009 stimulus bank loans, the above "corrective endogeneity" argument—which relies on future MCBs to be issued to finance other LGFV activities—does not apply. There could be two channels for the repayment

regression to have larger IV estimates. First, it is possible that   after 2012 were issued to repay some prestimulus bank loans. The magnitude of this effect is likely to be small, given that typical LGFV bank loans have, on average, four-year maturity (Gao et al., 2018).

There is a second channel that seems more plausible. We have mentioned in Section 3.3 that MCB issuance purposes are self-reported. Given regulatory tightening, there is always a tendency for LGFVs to manipulate the MCB purpose classification toward "repayment." One good example is that the No. 43 Document released in October

Table 4

Panel regressions: OLS and IV.

This table reports the results of provincial panel regressions of both OLS and IV. The dependent variables include MCB issuance, MCB issuance for bank loan repayment, MCB issuance for investment, and MCB issuance for other purposes, all of which are scaled by the 2009 GDP. $_{2009}$ is used as the instrumental variable for the

Table 5

Panel regressions: OLS and IV at the city level.

This table reports the results of city-level panel regressions of both OLS and IV. The dependent variables include MCB issuance, MCB issuance for bank loan repayment, MCB issuance for investment, and MCB issuance for other purposes, all of which are scaled by the 2009 GDP. Both $_{2009}$ and $_{2009}$ are used as the instrumental variables for the 2009 stimulus bank loan scaled by GDP. $_{2009}/$ $_{2009}$ equals one if a province governor/city mayor was not in the first two years of his or her tenure as of 2009, and zero otherwise. City fixed effects, year fixed effects, and the interaction terms of control variables and year dummies are included. Control variables include fiscal deficit scaled by GDP, fixed asset investment scaled by GDP, GDP growth, GDP per capita, the Big Four branch share, the former four of which are measured in 2008, and the last one is measured as of December 31, 2008. Heteroskedasticity-consistent standard errors clustered by city and year are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The sample period is 2004–2015 without the benchmark year 2008.

	$/D_{2009}$		$/D_{2009}$		$/D_{2009}$		$/D_{2009}$	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)	OLS (5)	2SLS (6)	OLS (7)	2SLS (8)
2004	−0.002 (0.004)	0.000 (0.013)	0.000 (0.000)	0.000 (0.000)	−0.002 (0.001)	0.000 (0.005)	0.000 (0.000)	0.000 (0.000)
2005	−0.001 (0.004)	0.001 (0.012)	0.000 (0.000)	0.000 (0.000)	−0.001 (0.002)	[redacted]	0.000 (0.000)	0.000 (0.000)
2006	−0.001	0.001	0.000	0.000	−0.001	0.002	0.000 (0.000)	0.000 (0.000)
2007	0.000 (0.004)	0.005 (0.010)	0.000 (0.000)	0.000	0.000 (0.001)	0.005	0.000 (0.000)	0.000 (0.000)
2009	[redacted] (0.003)	0.043*** (0.005)	0.000 (0.001)	[redacted] (0.003)	[redacted] (0.002)	0.057*** (0.008)	0.000 (0.000)	0.002 (0.001)
2010	0.009*** (0.003)	0.030*** (0.003)	0.001 (0.001)	0.004* (0.002)	0.007*** (0.002)	[redacted]	0.002*** (0.001)	0.010*** (0.001)
2011	0.016*** (0.003)	0.003 (0.011)	0.005*** (0.001)	0.012*** (0.002)	0.009* (0.005)	−0.014	0.004*** (0.001)	0.005** (0.002)
2012	0.060** (0.026)	0.074 (0.052)	0.019** (0.008)	0.034*** (0.013)	0.026*** (0.006)	0.024 (0.034)	0.013*** (0.004)	0.014** (0.007)
2013	0.063*** (0.017)	0.100* (0.056)	0.020*** (0.008)	0.050*** (0.014)	0.016*** (0.006)	0.007 (0.029)	0.008*** (0.003)	0.017*** (0.006)
2014	0.138*** (0.034)	0.341*** (0.106)	0.059*** (0.014)	0.118*** (0.039)	0.026*** (0.007)	0.253*** (0.032)	0.020*** (0.005)	0.010 (0.019)
2015	0.086** (0.038)	0.393*** (0.102)	0.068*** (0.012)	0.208*** (0.043)	0.009** (0.004)	0.089*** (0.021)	0.032*** (0.007)	0.099*** (0.023)
City FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control × Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,900	3,648	3,900	3,648	3,900	3,648	3,900	3,648
$1-\nu$		3.564		3.564		3.564		3.564
Adj. R^2	0.392	0.359	0.345	0.277	0.233	0.234	0.249	0.204

the
China,

$_{2009}$ as two instruments, leaving us 304 cities with information on their mayors' terms. In China, the promotion of mayors is largely determined by their provincial governors, who hence

estimators) get a bit wider but still show significant stimulus loan hangover effects after 2013.

For the city-level IV regression, we still face a weak IV problem, as the effective first-stage -statistic is only 3.6. The city-level regression features overidentified IVs, and we follow the suggestion of Angrist and Pischke (2008) to compare the 2SLS estimator and the limited information maximum likelihood (LIML) estimator, with the

Table 7

Panel regressions: OLS and IV with simultaneous controls.

This table reports the results of provincial panel regressions of both OLS and IV. The dependent variables include MCB issuance, MCB issuance for bank loan repayment, MCB issuance for investment, and MCB issuance for other purposes, all of which are scaled by the 2009 GDP. $_{2009}$ is used as the instrumental variable for the 2009 stimulus bank loan scaled by GDP. $_{2009}$ equals one if a province governor was not in the first two years of his or her governor tenure as of 2009, and zero otherwise. Province fixed effects, year fixed effects, and simultaneous control variables are included. Control variables include fiscal deficit scaled by GDP, fixed asset investment scaled by GDP, GDP growth, GDP per capita, and the Big Four branch share, all of which are as of the same year as MCB issuance. Heteroskedasticity-consistent standard errors clustered by province and year are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The sample period is 2004–2015 without the benchmark year 2008.

	/ D $_{2009}$		/ D $_{2009}$		/ D $_{2009}$		/ D $_{2009}$	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)	OLS (5)	2SLS (6)	OLS (7)	2SLS (8)
2004	−0.009	−0.012	0.013	0.020	−0.022*	−0.033	0.006	0.010
	(0.030)	(0.062)	(0.012)	(0.021)	(0.011)	(0.020)	(0.003)	(0.008)
2005	0.022	0.020	0.019*	0.023	−0.007	−0.014	0.009***	0.013*
	(0.022)	(0.050)	(0.010)	(0.017)	(0.008)	(0.018)	(0.002)	(0.007)
2006	−0.003	−0.002	0.012	0.015	−0.019	−0.024*	0.004	0.007
	(0.027)	(0.039)	(0.011)	(0.013)	(0.011)	(0.013)	(0.003)	(0.005)
2007	−0.004	0.008	0.005	0.010	−0.009	−0.008	0.001	0.004
	(0.027)	(0.044)	(0.009)	(0.012)	(0.011)	(0.019)	(0.005)	(0.008)
2009	−0.006	−0.017	−0.008	−0.013	0.001	−0.012	0.005	0.004
	(0.025)	(0.057)	(0.010)	(0.020)	(0.014)	(0.026)	(0.003)	(0.006)
2010	−0.034	−0.035	−0.018	−0.027	−0.008	−0.006	−0.001	0.001
	(0.051)	(0.099)	(0.023)	(0.044)	(0.019)	(0.039)	(0.006)	(0.010)
2011	0.017	0.015	−0.004	−0.007	0.005	−0.012	0.001	0.001
	(0.062)	(0.125)	(0.030)	(0.059)	(0.018)	(0.040)	(0.007)	(0.014)
2012	0.116	0.207	0.032	0.061	−0.011	−0.026	0.025*	0.057**
	(0.102)	(0.185)	(0.028)	(0.061)	(0.034)	(0.054)	(0.013)	(0.027)
2013	0.189**	0.149	0.090***	0.101*	0.048**	0.008	0.020*	0.032
	(0.076)	(0.118)	(0.031)	(0.061)	(0.021)	(0.035)	(0.011)	(0.021)
2014	0.362***	0.380**	0.143***	0.185**	0.050*	0.106**	0.052***	0.057
	(0.097)	(0.157)	(0.040)	(0.077)	(0.030)	(0.054)	(0.019)	(0.040)
2015	0.255**	0.185	0.135**	0.117*	−0.011	0.013	0.036*	0.056
	(0.128)	(0.180)	(0.054)	(0.067)	(0.029)	(0.039)	(0.020)	(0.039)
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	360	360	360	360	360	360	360	360
Adj. ^{2}	0.743	0.711	0.659	0.625	0.674	0.674	0.555	0.546

4.5.1.

Fig. 6, Panel A plots the new trust loans and increase of WMPs over 2004–2016, together with new bank loans, all scaled by GDP. Both trust loans and WMPs have grown much faster than GDP growth since 2012, a pattern consistent with our stimulus loan hangover mechanism. At the end of 2015, the magnitudes of these two shadow banking activities become comparable to the traditional on-balance-sheet bank credits. The two forms of shadow banking activities seem to move in opposite directions after 2014; this is because when one form of shadow banking (trust) is under tighter regulation, the other form (WMP) increases due to market forces (Allen et al., 2019, p. 20).

Connecting China's shadow banking back to local governments, Fig. 6, Panel B plots the ratio of local government nonbank debts (the sum of MCBs, munibonds, and trust loans in Fig. 2) to the sum of trust and entrusted loans, undiscounted bankers' acceptances, and corporate bonds in the Aggregate Financing to the Real Economy. We observe a steady growth of this ratio, starting from a negligible 1.5% in 2008, to 22% in 2014 and 48% in 2016.

4.5.2.

We further perform a cross-sectional test by replacing MCB issuance with new entrusted loans, some of which go to LGFVs. Unfortunately, province-level entrusted loan data are unavailable before 2013, which prevents us from performing the formal panel regression as in Eq. (4). Instead, we conduct year-by-year regressions similar to that in Eq. (3), with entrusted loans scaled by GDP as the dependent variable.

We include the same set of five control variables as before, and Columns (1) and (2) and Columns (3) and (4) of Table 9 report the results of OLS and IV regressions with prestimulus and simultaneous controls, respectively. The underlying mechanism driving the positive and significant OLS coefficients in 2013–2014 is similar: entrusted loans were used to channel funds to LGFVs and this effect was stronger for provinces with greater stimulus loans. On the other hand, it is possible that some entrusted loans were used to feed (including but not limited to refinance) industrial firms in real estate and overcapacity industries, the origin of which could also be traced back to the stimulus loans (received by other non-LGFV sectors; see, for instance, Cong et al., 2019).

Table 8
Panel regressions: real effects.
This table reports the results of provincial panel regressions of both OLS and IV. The dependent variables include GDP per capita scaled by the 2009 GDP per capita and fixed asset investment scaled by the 2009 GDP. $_{2009}$ is used as the instrumental variable for the 2009 stimulus bank loan scaled by GDP. $_{2009}$ equals one if a province governor was not in the first two years of his or her governor tenure as of 2009, and zero otherwise. Province fixed effects, year fixed effects, and the interaction terms of control variables and year dummies are included. Control variables include fiscal deficit scaled by
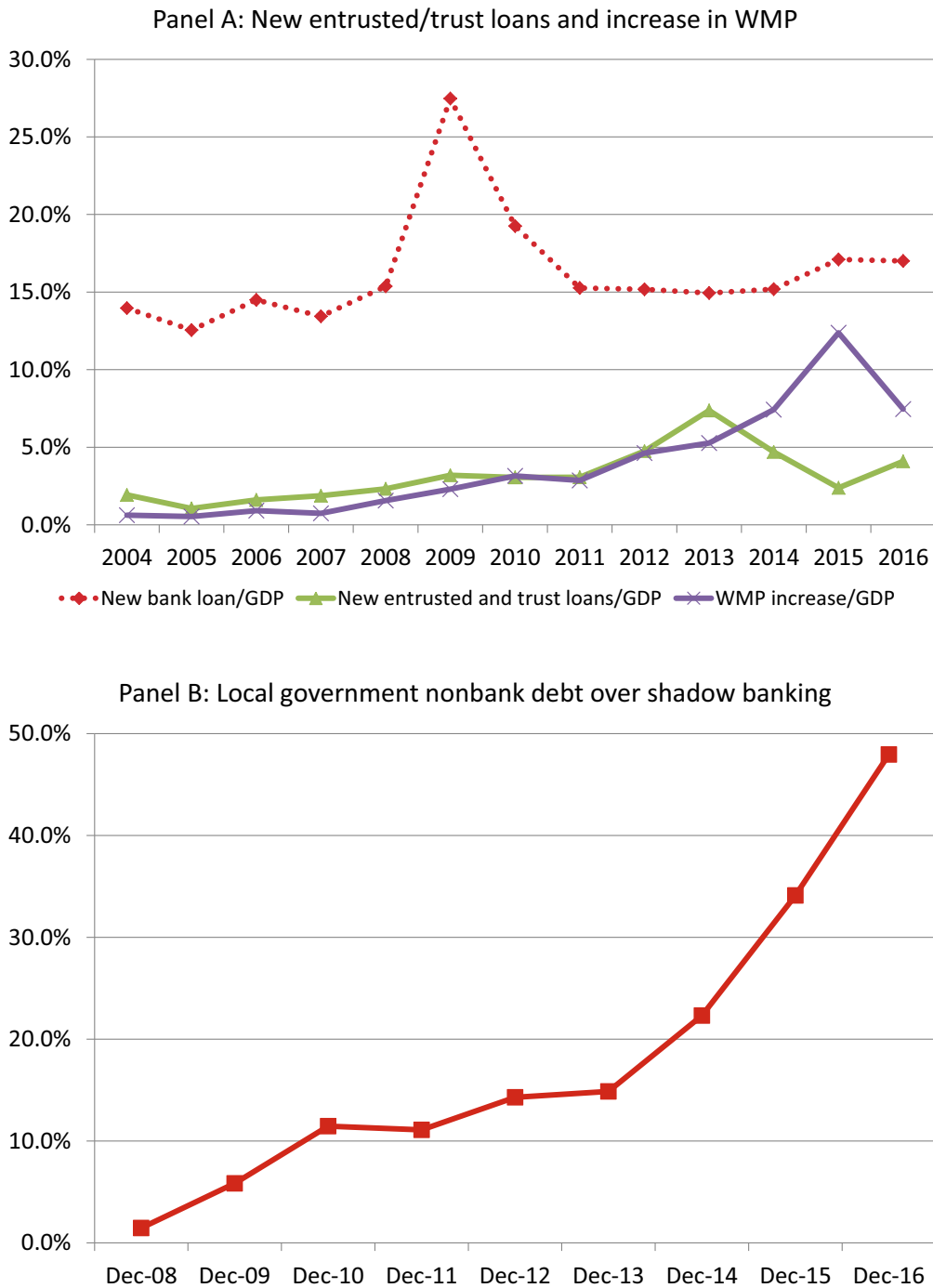
Panel A: New entrusted/trust loans and increase in WMP

Panel B: Local government nonbank debt over shadow banking

Fig. 6. Shadow banking activities and local government nonbank debt. Panel A plots new trust loans (entrusted and trust loans) and change in WMPs over GDP from 2004 to 2016. Aggregate new bank loans over GDP is also plotted for comparison. Panel B plots local government nonbank debt balance as a fraction of China's shadow banking balance from 2008 to 2016. Local government nonbank debt is the sum of MCBs, munibonds, and local government trust balance. Shadow banking balance is proxied by three items in the Aggregate Financing to the Real Economy, including trust loans (trust and entrusted loans), undiscounted bankers' acceptances, and corporate bonds. The annual WMP balance data are from the China Commercial Banks' Wealth Management Products Annual Report issued by the China Banking Wealth Management Registration System. The Aggregate Financing to the Real Economy by category data are from the PBoC.

Table 9

The effects of 2009 stimulus bank loan on future new entrust loans and bank loans.

This table reports the year-by-year regression results of new entrusted loans (EL) and abnormal bank loans (BL) on the 2009 stimulus bank loan. The dependent variable is the new entrusted loans scaled by GDP for Columns (1)–(4) and abnormal new bank loans scaled by GDP over its 2004–2008 average for Columns (5)–(8). The main explanatory variable is the 2009 stimulus bank loan scaled by GDP. Control variables include fiscal deficit scaled by GDP, fixed asset investment scaled by GDP, GDP growth, GDP per capita, and the Big Four branch share, the former four of which are measured over the one-year window of 2007Q4–2008Q3, and the last one is measured as of 2008Q3, or as of the same year as MCB issuance. Data on bank loans and entrusted loans are obtained from the PBoC, and data on control variables are obtained from the National Bureau of Statistics of China. Heteroskedasticity-consistent standard errors are reported in parentheses ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The sample period is 2013–2015.

	EL/GDP				BL	/GDP		
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2013	0.166**	0.270	0.228**	0.021	−0.083	−0.320	0.027	0.153
	(0.079)	(0.196)	(0.105)	(0.333)	(0.106)	(0.300)	(0.093)	(0.393)
Control$_{07\ 4-08\ 3}$	Yes	Yes	No	No	Yes	Yes	No	No
Control	No	No	Yes	Yes	No	No	Yes	Yes
Observations	30	30	30	30	30	30	30	30
Adj. ^{2}	0.400	0.365	0.306	0.157	0.549	0.513	0.565	0.555
2014	0.234***	0.124	0.279***	0.058	−0.118	−0.215	−0.014	0.022
	(0.079)	(0.331)	(0.093)	(0.269)	(0.124)	(0.331)	(0.091)	(0.300)
Control$_{07\ 4-08\ 3}$	Yes	Yes	No	No	Yes	Yes	No	No
Control	No	No	Yes	Yes	No	No	Yes	Yes
Observations	30	30	30	30	30	30	30	30
Adj. ^{2}	0.3432	0.309	0.290	0.138	0.602	0.598	0.547	0.547
2015	−0.025	0.113	0.082	0.096	−0.203	−0.727	−0.024	0.039
	(0.093)	(0.208)	(0.114)	(0.224)	(0.166)	(0.519)	(0.184)	(0.354)
Control$_{07\ 4-08\ 3}$	Yes	Yes	No	No	Yes	Yes	No	No
Control	No	No	Yes	Yes	No	No	Yes	Yes
Observations	30	30	30	30	30	30	30	30
Adj. ^{2}	0.324	0.261	0.098	0.097	0.416	0.321	0.427	0.426
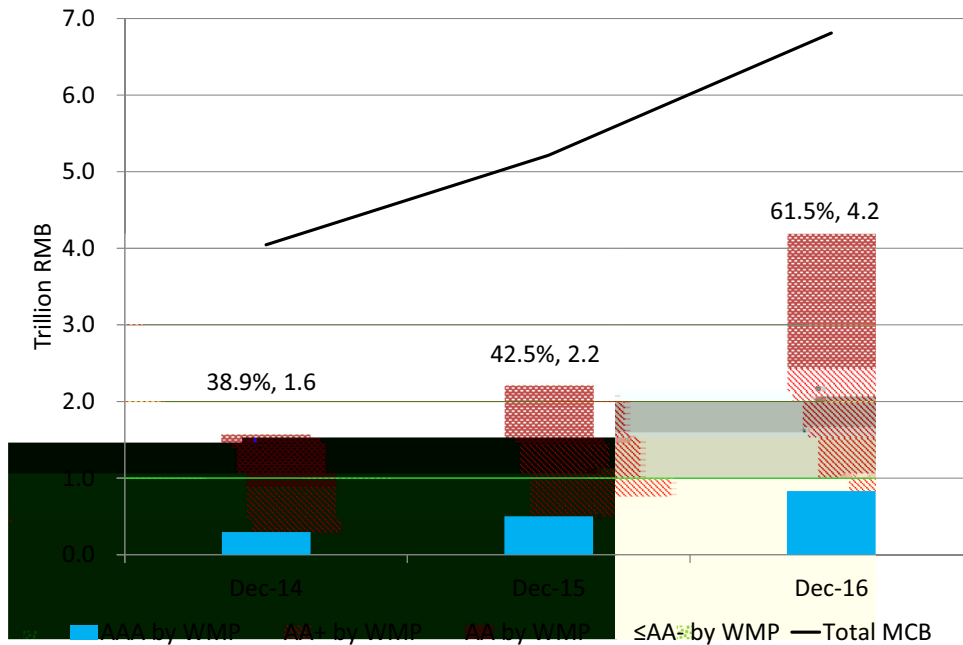
Fig. 7. Wealth management products investment in municipal

5.1.1.   ,   ,   -

During the National Banking Era, the construction of railroads and related infrastructure played a significant role in the development of the US after the Industrial Revolution in the Northeast to the settlement of the West (1850–1890). In 1853, railway construction in Ohio "turned into a mania" (Berry, 1943, p. 513), and railroads turned to local private banks by offering equity as collateral. These private banks were shadow banks by today's standard (Rockoff, 2018).

After the passage of the National Banking Act of 1864, the federal government started granting national banking charters with strict reserve requirements. The National Banking Act more or less followed the "real bills doctrine," which is to say that banks should not issue credit on the basis of "fictitious" bills for speculative goods, such as railroads and related infrastructure projects. Whenever a fast-growing industry with a great business potential— railroads in the late 19th century in the US—is starved of funds, financial intermediaries figure out some ways to serve it. This is a recurring theme everywhere; our paper shows that China's shadow banking activities can be viewed as regulatory arbitrages to serve the growing financing needs of LGFVs.

In the case of the US, the National Banking Act of 1864 imposed entry barriers and constraints on banking activities, which prevented the supply of banking services from keeping pace with the soaring demand as the country expanded westward. As a result, individual states started engaging in regulatory competition of banking legislations. According to the Office of the Comptroller of the Currency's 1895 survey of state legislation, all but 2 states' minimum capital requirement was lower than the federal level, few of which

issues." In China, shadow banking, which helps fund infrastructure investment, accelerates the development of Chinese corporate bond markets (Amstad and He, 2020), a point we turn to shortly.

Last, besides competition brought on by trust companies, these companies were also well-connected to other more traditional banking institutions, forming the "money trust" that was behind many scandals at that time (Neal 1971, p. 51). Leaving aside fraudulent activities, similar industrial organizational forces are also present in China's shadow banking system due to the absolute dominance of traditional commercial banks in China. For example, WMPs, the major funding source of China's shadow banking, are sold through branches of commercial banks (Amstad and He, 2020).

5.1.4.

Many economic historians argue that the unprecedentedly large-scale railroad finance during the late 19th century stimulated the development of a means for tapping public sources, leading segmented securities trading activities to evolve into the first major public market in corporate issues. According to Chandler (1965), "Not only did these railroad companies' demands bring the development of new financial instruments such as preferred stock and mortgage, income, and convertible bonds, but they also led to the centralizing and institutionalizing of the American investment market in New York City."

One of the leading examples is the corporate bond market. Early railroads in densely populated New England primarily relied on equity finance thanks to sufficient local resources, but the railroads constructed through the frontier West after 1850 primarily relied on public bonds, as distant investors preferred bonds with their appearance of secure principal and guaranteed interest. In the 1850s, Henry V. Poor, the editor of American Railroad Journal, even advocated that municipalities guarantee the railroad bonds (Chandler, 1954, p. 256), just like MCBs in China. Railroads in some states "must have obtained virtually all of their capital from bonds" (Baskin, 1988, p. 216), and in 1900 railroad bonds accounted for nearly 80% of total corporate bonds outstanding (Hickman, 1952, Chapter 2).

The popularity of bonds, as opposed to equity, is rooted in information asymmetry (Myers and Majluf, 1984; Gorton and Pennacchi, 1990). When security markets evolve to encompass increasingly larger geographical areas, this growth demands the development of institutions. Besides the uniform accounting standards established in 1887 (Baskin, 1988), services provided by reputable middlemen were crucial. Investment bankers, as the consummate insiders, thrived by offering investors comparative information about bonds on sale. Specialized business/financial presses covering railroads also emerged, along with the establishment of the Mercantile Agency in 1841 that specialized in collecting and disseminating information regarding the creditworthiness of businesses to its subscribers. The modern-day credit rating agencies, started by Moody's in 1909, represents a fusion of functions performed by the above-mentioned information providers (Sylla, 2002).

Just like the US history, Chinese corporate bond markets, where MCBs issued by LGFVs are traded, have experienced similar developments after the 2009 stimulus, especially when LGFVs facing rollover and continuation investment pressures started tapping nonbank financing from the market after 2012. Echoing the rise of the information production industry during American railroad financing, Fig. 8, Panel A shows the number of reports issued by rating agencies in China jumped around 2012; the similar pattern holds for the sell-side research reports on bond markets published by security firms. As both a cause and as a consequence, nonbank institutions are playing an increasingly important role in Chinese bond markets (Fig. 8, Panel B). In short, the 2009 stimulus and its hangover effect served as the catalyst for the rapid development of Chinese bond markets in the past decade.

5.2. A A

Besides the striking similarity between the historical US and China today, it is also worth comparing the stimulus plans launched by the two countries around 2009. In February 2009, President Obama signed the ARRA with a planned spending of USD 787 billion, which aimed to provide a critical "shot in the arm" to the US economy. The majority of ARRA funds went to tax cuts and healthcare, with only about $105 billion, or 0.7% of 2008 US GDP, for infrastructure investment. In contrast, China's 2009 four trillion yuan stimulus, about 12.5% of its 2008 GDP, was almost entirely devoted to infrastructure investment. We focus on infrastructure investment for better comparison.

There are several key differences in the implementation of these stimulus infrastructure packages. In the US, to expedite the process, the ARRA stipulated that states had a maximum of 18 months to obligate the funds from the date of apportionment; this was opposed to the normal four-year window for non-ARRA highway grants. However, the actual ARRA outlays were delayed until as late as 2014 (Lew and Porcari, 2017). Besides, the ARRA also waived the cost-sharing requirement for the states, as typical non-ARRA projects call for states to cover 20% of the costs. In contrast, in China's stimulus plan, almost all new bank loans were extended during year 2009, among which half went to LGFVs (see Section 2.1).

Regarding ex-post policy evaluations, although Section 4.4.5 in our paper finds suggestive (but rather weak) evidence that China's stimulus plan fostered GDP growth in later years, Bai et al. (2016) and Cong et al. (2019) provide a negative assessment by showing a deteriorating efficiency in the Chinese economy after 2009. In contrast, the ARRA in the US seems to receive a moderately positive reception by US policymakers as well as academics. To name a few, Lew and Porcari (2017) claim that the ARRA delivered a significant relationship between transportation investment and outcomes, such as improved conditions of bridges and airports; Leduc and Wilson (2017) show that the ARRA highway grants crowded in private investment, but Dupor (2017) finds a substantial crowd-out effect on local governments' own spending.

From the perspective of this paper, the difference in local government financing structures may have contributed to the divergent long-run outcomes in these two large
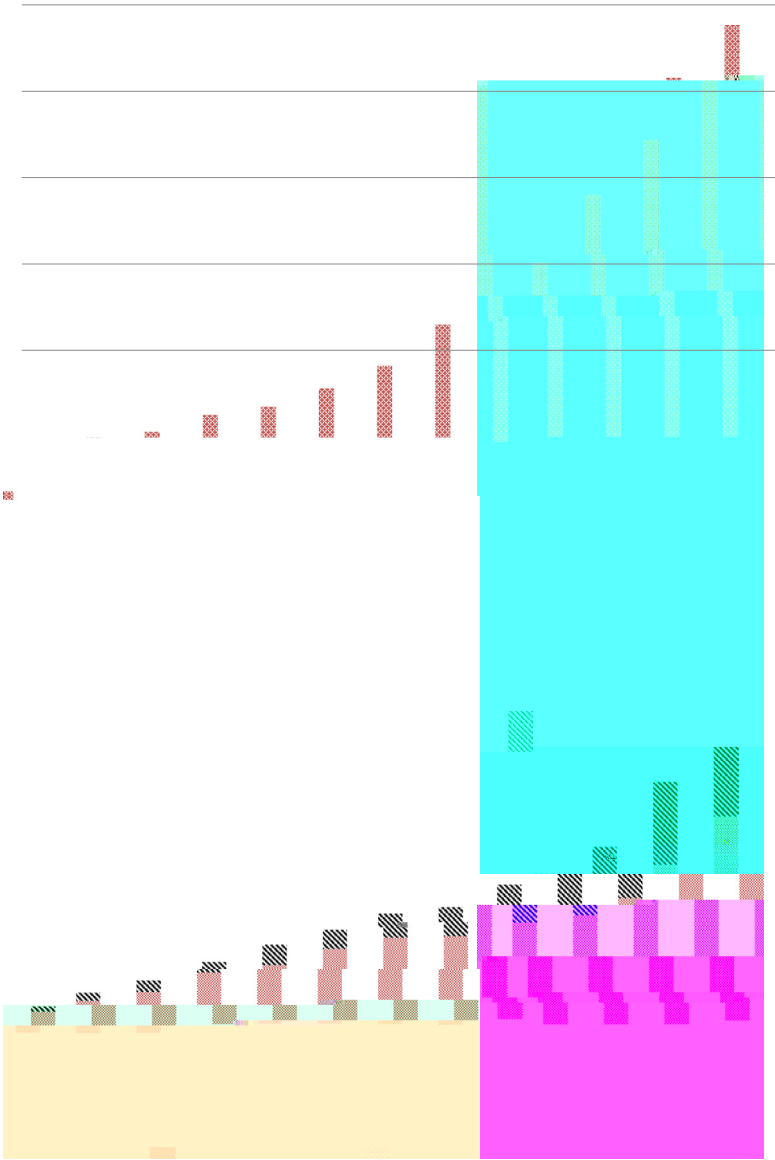
participants, either naive WMP investors who do not even know what they are buying or sophisticated fund managers studying the default risk of LGFVs extensively, all expect potential bailout by municipalities at various levels.

In 2015, the Ministry of Finance started the debt swap program, under which local governments can refinance certain portion of their maturing LGFV revenue debts by general obligation munibonds that are ultimately backed by the central government. Whether debts are qualified for swap is based on the mid-2013 NAO report, which classified the outstanding local government debts to be "fully guaranteed," "contingent obligation," or "contingent bailout obligation" depending on the extent to which LGFVs had conformed to regulations. According to the Ministry of Finance, among all these local government debts that came due in 2015, about 54% (33%) of fully guaranteed (total) obligations were qualified for swap. As a result, the uncertainty of the local governments' repayment ability lingered.

The potential default risk of local governments could be systemic, as China's local government debts are either hidden on banks' off-balance sheets (e.g., MCBs through AMPs) or by directly sitting on their on-balance sheets; Gao et al. (2018) show that LGFVs defaulted on their bank loans before 2014. We acknowledge that one needs a more structural framework to quantitatively assess the LGFV default risk and its resulting systemic effect on Chinese economy, a daunting task that is not performed by our paper. Instead, we highlight that the acceleration of development of new financial markets is an important benefit of stimulus LGFV loans.

On the other hand, what we learned from the 1907 banking panic in US is the need for a last lender of resort (the Federal Reserve System was created in 1913 as a result). From this perspective, the presence of a powerful lender of last resort in China, ultimately the central government, limits the chance for China to slide into a widespread financial crisis similar to the 1907 US banking panic triggered by runs on trust companies.

5.3.2.

China has made tremendous progress in building a market-oriented economy in the past. Although Beijing has received constant criticisms for its heavy

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