

## Research note

# Debt Risk after the Reform: China's Land-Backed Municipal Bonds

Timna Michlmayr

### Summary

Land-backed borrowing emerged as one of China's major economic risks after the accumulation of local-government debts and the implementation of the CNY 4 trillion fiscal stimulus package in 2008. Despite the introduction of far-reaching debt reform and the reorganization of local-borrowing mechanisms in 2015, the era of land-backed debt increases and the leveraging of public-land resources is not yet over. As exemplified by the recent developments in China's municipal-bond market, new mechanisms for land-backed borrowing were introduced on a trial basis in 2017 under the novel debt-management regime. By critically evaluating the introduction of land-backed municipal bonds, this paper sheds light on recent developments in local-government borrowing in China that have not been discussed in detail so far by the scholarship. My evaluation draws on an in-depth analysis of central and local policy documents issued after 2008, a dataset on municipal bonds issued after 2017, insights from preliminary field research trips, and secondary literature on the topic. I argue that the introduction of land-backed bonds reflects an attempt to strengthen the top-down control over local borrowing, with the leveraging of land necessarily being upheld due to institutional constraints and path dependency.

**Keywords:** local debt, municipal bond markets, land-based finance, financial stability, central-local relations, real-estate market

**Timna Michlmayr** is a doctoral candidate at the Department of East Asian Studies, University of Vienna. Her thesis examines the relationship between monetary stability and local land markets in China. Part of her project is devoted to land-based government debt after 2008.  
timna.michlmayr@univie.ac.at

## Introduction

The Chinese government announced the first-ever issuance of local-government bonds (*difang zhengfu zhaiquan*) for investments in land reserves in June 2017 and for shanty-town renovations in April 2018. These new bonds were categorized as “special project bonds” (*shouyi zhuanxiang zhaiquan*)<sup>1</sup> and issued on a trial basis, forming part of the ongoing attempt to diversify China's nascent municipal bond market in order to regulate the financial behavior of local governments and curb the rise of hidden debt. According to official regulations, both bonds are backed by expectations of future gains in land value.<sup>2</sup>

While the diversification of the municipal-bond market is a crucial component of the Chinese government's efforts to resolve debt risk in the national economy, the collateralization of bonds through land-transfer income perpetuates what has actually become one of the country's greatest financial threats over the past decade: the dependency of local-government debt on the land market (Lu and Sun 2013; Tsui 2011; Zhou and Tan 2017). Local governments would use income from public land sales as the primary form of debt collateral in the period following China's CNY 4 trillion fiscal stimulus package of 2008, giving rise to far-reaching economic risk, real-estate bubbles, and repayment difficulties, as the ability to service debts hinged on volatile land- and real-estate prices (Collier 2017). Given these risks, why then did the Chinese government introduce land-backed debt mechanisms by design — especially within the framework of a pilot program aimed at mitigating debt risk?

So far, not much has been said in the academic literature about these recently issued special project bonds — and about their land-backed versions in particular. Besides, the latest developments in land-backed project bonds are characterized by astonishing ambiguity. While the issuance of “land-reserve bonds” (LRBs, *tudi chubei zhuanxiang zhaiquan*) and “shanty-town-renovation bonds” (STRBs, *penghuqu gaizao zhuanxiang zhaiquan*) would considerably increase compared to other bond types after 2017, it was abruptly halted (albeit temporarily) by the State Council in September 2019 (Central Government 2019b).

What is the nature and the background of land-backed municipal bonds under China's new debt-management system? Based on insights gained during research carried out for my doctoral thesis, I will critically explore the background to and

---

1 According to the principle of special project bonds, investment projects funded through them are repaid by the corresponding project incomes; further, stable repayment funds must be clarified in advance.

2 On June 1, 2017, the Chinese Ministries of Finance (MOF) and of Land and Resources (MLR) jointly announced the “Administrative Measures for Local Government Land Reserve Special Bonds (Trial Implementation)” (*Difang zhengfu tudi chubei zhuanxiang zhaiquan guanli banfa (shixing)*) (Ministry of Finance 2017; Ministry of Finance and Ministry of Land and Resources 2017). This was followed by a declaration on the issuance of bonds for shanty-town renovations by the MOF and the Ministry of Housing and Urban-Rural Development on April 3, 2018 (Central Government 2018; Ministry of Finance 2018).

the functions of the land-backed municipal bonds that have recently appeared on the scene. In doing so, I draw on my in-depth analysis of local- and central-government documents related to local-government borrowing (2008–2020), data on municipal-bond issuance (2015–2020), on secondary literature, and on insights gained during field-research trips to various Chinese cities in October 2018 and June 2019 respectively.

After providing an overview of the risks and the evolution of land-based local-government borrowing after 2008, which was when the practice first started to flourish, I will then outline recent developments and the specific characteristics of the different land-backed project bonds based on descriptive data analysis. In the four sections of the paper that follow, I critically discuss the background to the initiative by placing it in the context of institutional settings, strategic debt-management goals, land-market regulation, and monetary considerations. In the conclusion, I briefly summarize my findings and provide a short outlook for the future. I argue that the introduction of land-backed bonds mainly results from an attempt to enhance top-down control over local-borrowing processes in China, while the reliance on land therein must be upheld due to institutional constraints and path dependency — a situation that impedes the central government’s ability to manage debts effectively.

## **Development and risks of “land-backed borrowing”**

The high reliance of local-government financing in China on the land market has its institutional roots in the mid-1990s, when municipalities became increasingly dependent on income from selling the commodity to real-estate developers to boost local economies and compensate for insufficient tax revenue (Cao et al. 2008; He et al. 2016; Zhou and Tan 2017).<sup>3</sup> As has been mentioned in numerous academic articles by now, this gave rise to rural and urban social instability, concerns over China’s food security, and to the forced expropriation of collectively owned farmland (Cartier 2001; Hsing 2010). While under China’s public-ownership system land was used as collateral for local-borrowing operations via half-public, half-private investment companies called “local government financing vehicles” (LGFVs) starting in the 1990s, its leveraging function only came extensively to the fore after China’s CNY 4 trillion fiscal stimulus package was implemented in 2008. Despite the well-known risks of land mortgaging through LGFVs, the sudden need for financing in the wake of the global financial crisis shifted land to the center of investment strategies, allowing local governments to borrow against the expected growth of its value in the future.

---

3 Through the introduction of the “tax-sharing system” (*fenshuizhi*) in 1994, taxes were reassigned between central and local governments, taxation was recentralized, and 75 percent of value-added tax was assigned to the central government (Wong 2000).

“Land-backed borrowing” (*tudi rongzi*) enabled the state to finance the economic stimulus, but produced unforeseen long-term risks to the Chinese economy and unexpectedly high local-debt levels too.<sup>4</sup> In 2013, for example, more than 37.23 percent of all local debts were dependent on future income from land sales for repayment (National Audit Office 2013). Since the ability of local governments to service their debts increasingly hinged on volatile land prices, local governments faced difficulties repaying both capital and interest in times of declining land prices (Collier 2017; Lu and Sun 2013). Furthermore, the growing entrenchment of the real-estate market in the shadow-banking sector has fueled concerns of real-estate bubbles, land-price inflation, and systemic risks to the banking sector overall, since shadow banks would help local governments artificially stimulate the land market (Collier 2017; Tsui 2011; Zhang and Barnett 2014). According to official statements, land-backed borrowing led to a great risk of “non-performing loans” (*buliang daikuan*) by local governments (National Audit Office 2012); illegal land mortgaging, meanwhile, produced “large debt risks and financial risks” (*da zhaiwu he jinrong fengxian*) in the period after 2008 (Central Government 2011).

Due to the uncontrolled rise in local debts,<sup>5</sup> the growth of the shadow-banking sector, and systemic threats to China's overall banking system, the Xi Jinping administration (under Finance Minister Lou Jiwei) announced a promising fiscal-reform package in 2013 that reorganized the local-borrowing system at its core (Wong 2018). The revision of China's “Budget Law” (*yusuan fa*) officially authorized local governments to autonomously issue debt in the form of municipal bonds as a replacement for high-risk LGFV borrowing (State Council 2014). Since 2015, they have been allowed to issue a fixed amount of “general-obligation bonds” (GOBs, *yiban zhaiquan*) and “special-revenue bonds” (SRBs, *zhuanxiang zhaiquan*) each year, as controlled by the State Council (2014).<sup>6</sup> Based on this newly established framework, experimental trial projects for project-specific SRBs have been underway since 2017, including the bond trials for land-reserve and shanty-town-renovation projects mentioned in the introduction. In comparison to GOBs, the proportion of SRBs issued has been on the increase ever since the reform's introduction.<sup>7</sup>

---

4 In 2009 alone, local governments took on land mortgage loans worth CNY 774.9 billion, twice the amount they had taken on the year before, while mortgaging 51,000 hectares of land too (Ministry of Land and Resources 2010).

5 By 2013, local-government debts had risen to CNY 17.9 trillion (National Audit Office 2013).

6 GOBs are issued for projects without a fixed income and are to be repaid from tax revenue (State Council 2014). SRBs, meanwhile, are issued to finance income-generating projects and are guaranteed solely by expected project income, such as revenue from toll roads (State Council 2014).

7 In 2015 the limit for special debts was set at CNY 6.08 trillion, rising to CNY 14.52 trillion in January 2020 (CEIC database). For general debts, the 2015 limit was already as high as CNY 9.9 trillion; similarly, it rose to CNY 14.28 trillion in 2020 (CEIC database).

## Project bonds on a land basis

Despite the far-reaching changes induced by the reorganization of local-borrowing mechanisms, the introduction of municipal bonds has not halted the use of land in local-government fundraising procedures. First and foremost, it is noteworthy that apart from the two recent land-backed trial projects for SRBs, the latter have per se become a new channel for the leveraging of land value through the reform measures. As I have shown elsewhere, the majority — more than 87 percent — of SRBs issued in the time period between the beginning of the reform in 2015 and 2017 were guaranteed by future land value, albeit under less detailed regulations than the new bond trials, with greater room for obscurity, and without predetermined rules for repayment (Michlmayr 2020).<sup>8</sup> As a tool for the restructuring of debts, they provided local governments with the opportunity to exchange old LGFV debts into cheaper bonds with lower interest rates, longer terms of maturity, and land-sale revenue as collateral (Ministry of Finance 2015b; State Council 2014).

Based on revenue bonds, LRBs and STRBs emerged as two new pilots for project-specific SRBs after 2017 (Ministry of Finance 2018; Ministry of Finance and Ministry of Land and Resources 2017).<sup>9</sup> Through the advancement of the SRB and the diversification of the municipal-bond market, different project-specific bonds have been introduced on a trial basis to standardize local-debt financing and to better manage risks (Ministry of Finance 2017).<sup>10</sup> The new trial bonds are tied to specific sources of collateral in advance, the latter determined by the expected project revenue. In the case of LRBs and STRBs, this predetermined source of collateral is the expected income from local governments' future land sales.

To what extent do these experimental bonds rely on land? Available data provided by the Wind Financial Terminal (WFT) suggest that the majority of all pilot-project bonds issued after 2018 are either LRBs or STRBs, meaning that the majority are collateralized by land.<sup>11</sup> Between 2018 and 2020, 85.31 percent of all project-specific SRBs were guaranteed by land-transfer revenue, amounting to CNY 5.6 trillion in total (see Figure 1 below). Simultaneously, the issuance of LRBs has picked up speed since 2017. Local governments issued such bonds worth

---

8 My study draws on the quantitative content analysis of bond-rating reports on 657 bond issuances categorized in 202 bond bundles (*pi*). The bonds analyzed include newly issued bonds as well as debts exchanged from LGFV-bonds.

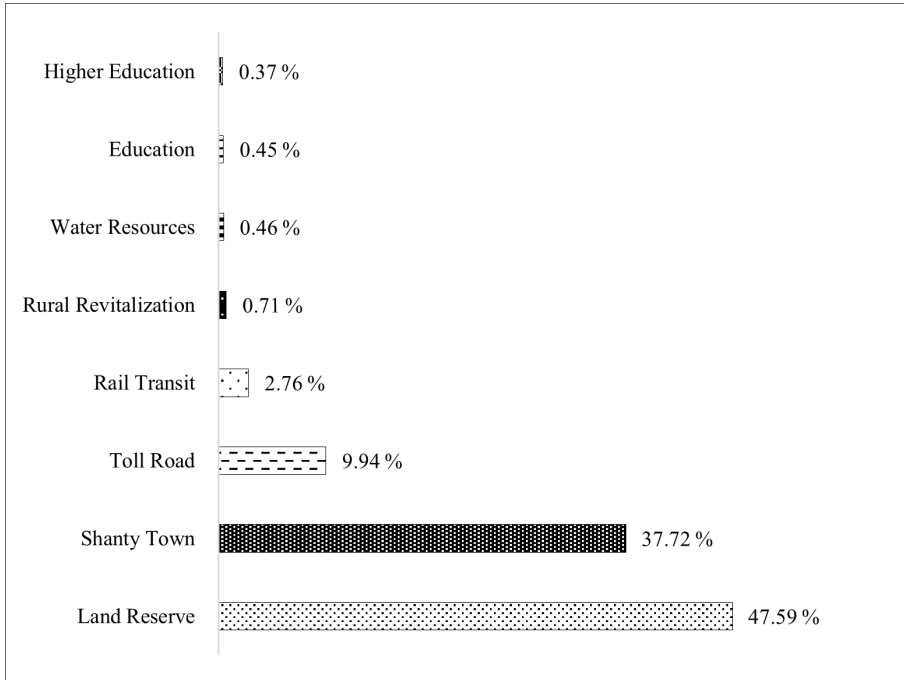
9 In the beginning, the issuance of LRBs was limited to seven provincial-level governments, including Beijing, Hebei, Tianjin, Henan, Shandong, Zhejiang, and Xiamen. Both trials were extended to local governments across the country until 2019 (Central Government 2019a, 2019c).

10 Project-specific bonds include those for investments in toll roads, land reserves, shanty-town renovations, and rural revitalization, each of them backed by expected project revenue.

11 The data on local bond issuance was downloaded from the WFT in March 2020 and include issuances for the period from July 2017 to March 2020. The data covers both newly issued bonds and debt exchanged from old LGFV bonds.

CNY 0.64 in 2017, growing in value to CNY 1.62 trillion by 2019 (see Figure 2 below).<sup>12</sup>

**Figure 1. Distribution of project-specific bonds (January 2018–March 2020), in percent**

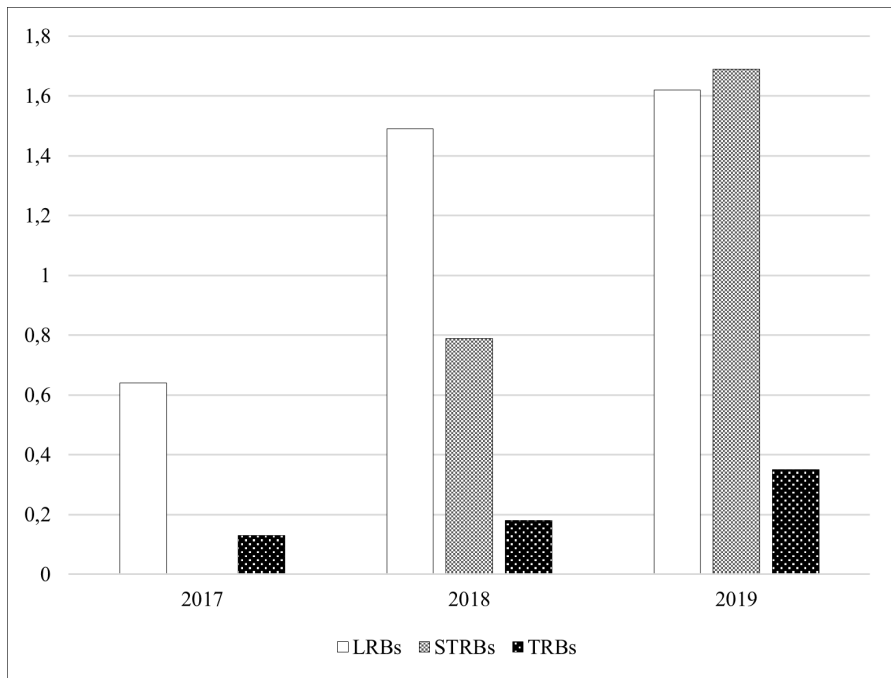


Source: Wind.

By comparison, local governments issued toll-road bonds (TRBs, *shoufei gonglu zhuanxiang zhaiquan*) worth only CNY 0.65 trillion and rural-revitalization bonds (RRBs, *xiangcun zhenxing zhuanxiang zhaiquan*) worth CNY 0.04 trillion in the period from 2018 to 2020 (Wind). With a median interest rate of 3.78 percent for LRBs and 3.56 percent for shanty-town-renovation-bonds provided in the data from Wind, the bonds do indeed provide local governments with a cheaper alternative to financing land development compared to their old high-interest LGFV peers. The maturity of these bonds is comparatively short (it may not exceed five years) in order to enable better control.

<sup>12</sup> In 2018 STRBs worth CNY 0.79 trillion were issued, an amount which had risen to CNY 1.69 trillion by the following year (Wind).

**Figure 2. Growth of land-reserve bonds and shanty-town-renovation bonds per year compared to toll-road bonds (July 2017–December 2019), in CNY trillion**



Source: Wind.

Due to the unexpected surplus of bond investments in land reserves and real estate, the State Council temporarily ceased, as noted, the issuance of LRBs and STRBs in September 2019 to encourage investment in other areas necessary to economic growth instead (Central Government 2019b). This could indicate that China's central authorities are tightening their grip on real-estate financing due to the associated financial risks, but at the same time it also shows how quickly the issuance of municipal bonds can be halted when developments are unfavorable. In any case, the available data demonstrate that despite the increasing diversification of SRBs, a significant proportion still rely on future land value. Predominantly, it can safely be assumed that the inclusion of land-backed municipal bonds in the debt-management system is by no means coincidental.

### **Path dependency and institutional constraints**

When analyzing local-government borrowing and debt management in China, the importance of path dependency and institutional constraints cannot be sufficiently

stressed.<sup>13</sup> State-led land leveraging, exemplified by the municipal-bond market, not only goes back to the developments that followed the fiscal stimulus package of 2008 but is deeply entrenched in China's local both institutional and fiscal structures too. I believe that this not only constrains the Chinese government's options for managing local borrowing but also necessitates reliance on public-land-value appreciation in a period of economic risk.

China enacted far-reaching tax reform in 1994 that recentralized fiscal resources while leaving the financial obligations for a majority of tasks with local governments (Wong 2000), leading to the latter generating nearly half of their revenue through land sales.<sup>14</sup> In order to run budgetary deficits despite the Budget Law that had effectively cut them off from borrowing in 1994, various local governments also established LGFVs that borrowed from banks on their behalf. Since land is one of the most valuable assets that local governments have at their disposal, their loans were mostly underwritten with the expected rise in related prices set to be created by increasing urbanization (Breslin 2011; Wong 2011). Due to the institutional complementarities between China's fiscal and land institutions (Rithmire 2017) and pro-growth incentives provided by the cadre-evaluation system (He et al. 2016), a virtuous cycle was unleashed that aims at stimulating local gross domestic product and generating revenue through land- and debt-based infrastructure investments: through continual investment in public infrastructure that drives the appreciation of nearby land parcels market demand is kept high, land prices rise, and local governments are able to create revenue they can then use to repay debts (Collier 2017; Zhou and Tan 2017). The higher the price of land used as collateral, the more capital it is possible to raise.

This self-reinforcing process necessitates both land sales and debt in order to keep the system running. On the premise of a beneficial relationship between infrastructure investments, borrowing, and land value, the fiscal stimulus package of 2008 — marking a critical juncture for local borrowing — released massive amounts of money into the Chinese economy and transformed the virtuous cycle into a vicious one. It has since proven difficult to break: as the solvency of local governments has started to hinge on ever-growing land prices, they have increasingly been incentivized to inflate the property market and acquire money from shadow banks. As long as the current fiscal institutions that tie local revenue to the land market persist, China's local governments are unlikely to voluntarily shift away from land-backed borrowing and excessive land sales. This reality would, to my surprise, be clearly reflected in many of the interviews I conducted with former LGFV managers and personnel at land-reserve centers (LRCs) during my preliminary field-research visits to different Chinese cities. I was frequently

---

13 For theoretical elaborations of path-dependent processes, see for example: Capoccia and Kelemen (2011); Pierson (2000).

14 On average, the proceeds from land sales amounted to 40.5 percent of local-government income between 2001 and 2008 (Collier 2017: 27).



told that as long as there is land to sell, there is no Chinese debt crisis; besides, what else should local governments in China sell if not land?

The implications of this path-dependent necessity to sell land to service debts go far beyond the local perspective. As Tsui has indicated, China's municipal governments have engaged in a "'land-infrastructure-leverage' strategy of urban development" (2011: 688) that will lock China into an investment-driven modus operandi for the foreseeable future. A collapsing property bubble and large-scale defaulting on local debt could pose systemic risks to the entire banking sector, and a fiscal crisis that causes property values to collapse would be detrimental to China's financial stability as a whole (Collier 2017: 155). Moreover, China's unmarketed land resources are one of the biggest assets on the country's balance sheet (Collier 2017: 155) — and so, despite their natural limitations, the realization of their value becomes particularly important in conjunction with rising debt levels. Consequently, land-price stability — if not land-price gains — is/are necessarily in the interest of both local and central government.

As Breslin (2011: 193) has noted, it is not impossible for China's financial managers to square this circle. Nevertheless, the transition from economic expansion to retraction may be difficult to achieve if the investment-driven pattern of growth persists. In a period of slowing growth rates and economic restructuring, outcomes that would have been suboptimal at an earlier point in time may have now become feasible in the current environment.

## **Top-down control**

Based on the institutional nexus described above, it can be reasonably assumed that debt reform and the introduction of a municipal-bond market were not targeted at terminating the state-led leveraging of land resources. Rather than constituting far-reaching institutional change, the bonds were aimed at regaining control over disguised local-borrowing practices and shadow banking, at enhancing transparency, and at cutting local-borrowing costs. There are, further, implications here regarding the strengthening of control over the extent of land mortgaging too.

According to the regulations circulated in the far-reaching "Document No. 43" on local-debt management, LGFVs have been prohibited from raising debt in the name of local governments since 2015. The only entity eligible to borrow is thus the provincial-level local government itself, namely through the issuance of municipal bonds (State Council 2014). Above all, borrowing conditions were renewed to the benefit of local governments and their financing vehicles (lower interest rates and longer maturity dates). As part of setting up a new borrowing scheme and in order to diminish risks, parts of old LGFV bonds could simply be exchanged for cheaper municipal ones (Ministry of Finance 2015a). Since LGFV debts were highly reliant on land, the new municipal-bond versions automatically hinged on that commodity too (Michlmayr 2020).

Based on the first two years of experience, the gradual diversification of the municipal-bond market further develops the established framework for local borrowing under top-down control. According to a report published by the central government, project-specific bonds shall focus on advancing supply-side structural reforms and on resolving local-debt risks, with a main goal of the pilot issuance being the strengthening of information disclosure on bonds and increasing transparency in the rating process to help investors better evaluate the risks involved (Central Government 2017). More specifically, the pilot bonds shall achieve a better balance between project revenue and financing, help better clarify the source of debt repayment, and serve to generate stable cash flow, curb illegal financing guarantees, and establish reasonable financing in key areas (Central Government 2017). In any case the specialization of bond types enables improved monitoring, while the use of land collateral has again remained untouched.

Looking at the management of land mortgaging in detail, it can be ascertained that the legal framework for land-backed debt would also be limited and increasingly tightly controlled in the years prior to the reform. In essence, the responsibility for borrowing based on public-land-reserve assets was shifted to local governments and their registered LRCs in 2012 (Central Government 2012).<sup>15</sup> LGFVs have been increasingly decoupled from the process, and local land resources can no longer officially be transferred to such companies free of charge. By issuing land-backed municipal bonds, the authority to leverage publicly owned land has largely been reallocated to local governments. It must be noted, however, that despite the introduction of municipal bonds, LGFVs have illegally continued to issue debt on behalf of local governments, while the latter have found devious ways to share their land resources with these companies at no cost (Huang and Du 2018).

Along with the introduction of various SRBs and the pilot programs, some structural changes enabling better supervision of land-transfer revenues have made their way to local budgetary environments too. Local “government-managed funds” (GMFs), which regulate all revenue and expenditure related to land transfers, have been closely integrated with the issuance of SRBs (Ministry of Finance 2015b), while the management and monitoring of GMF assets has been declared a major goal (Central Government 2017). Last but not least, the sudden halt in the issuance of LRBs and STRBs in September 2019 also had a beneficial effect for municipal bonds compared to uncontrollable LGFV debts, namely by increasing risk control.

---

<sup>15</sup> The free transfer of land use rights to LGFVs was terminated and land sale revenue from reserve land could no longer be legally used as a basis for debt repayment (Ministry of Land and Resources 2012).

## Not a recent innovation: Land-market regulation through land reserves

In addition to debt-risk control, a core significance of the two types of land-backed project bonds — LRBs and STRBs — lies in their function for the regulation of China's land market through the institutional configuration of the land-reserve system (*tudi chubei zhidu*).

Since the mid-1990s China's land-reserve system has been set up to enable efficient control over divergent local land markets and has become an integral part of the overall land-market system. LRCs were established in various localities in order to maintain sufficient supply of construction land, increase land supply when needed to regulate related prices, and to promote efficient land use (Cao 2015: 205). To safeguard financing for land-reserve work — which includes the acquisition (and expropriation), maintenance, and management of urban-construction land according to plan<sup>16</sup> — local governments have been authorized to take on land-mortgage loans (*tudi diya daikuan*) since 2007 (Central Government 2007). Due to the rise in debt and frequent misuse of land-reserve funds through LGFVs after 2008, land-reserve financing has become a central risk factor that is beyond formal control, and the streamlining of the land-reserve system became a major part of top-down debt management (Central Government 2012; Ministry of Land and Resources 2012). When the land-reserve system fails to work properly and the LRCs are unable to supply land on time due to debt or a lack of funds, efficient macroeconomic control and land-price stability are endangered.

As a result local governments were finally prohibited from issuing bank loans for land-reserve work in 2016 (Ministry of Finance 2016), but the loans were then directly replaced by land-reserve-project bonds in the following year (Ministry of Finance and Ministry of Land and Resources 2017). Rather than innovating from scratch, LRBs represent a new version of these loans and are hence part of the institutional setting relevant to China's overall land-market system. Especially under aggravating circumstances such as declining transferrable land resources and the constant dependency of debts on land sales, efficient land-reserve work is of pivotal importance. So far, according to data published by the MLR, revenue raised via LRBs is only slightly lower than what was raised by loans before.<sup>17</sup>

Although shanty-town improvements are not an official element of land-reserve work, procedures such as the acquisition and demolition of shanty towns and primary land development are closely connected to it regardless (He 2013). Furthermore, these projects are of benefit by freeing up urban land that can be added to the reserves. In the past, shanty-town-renovation projects were therefore

---

16 Registered land-reserve and land-supply plans are issued by local LRCs, being reported to higher-level governments.

17 While in 2014 local governments took on land-mortgage loans worth CNY 1.75 trillion (Ministry of Land and Resources 2015), in 2017 (starting from July) they issued LRBs worth CNY 1.63 trillion (Wind).

often funded by land-transfer revenues, additional financial appropriations from the government, and by land-mortgage loans. Since this has led to debt-repayment risks, these projects are now also financed through the bond market too (Central Government 2018).

## Monetary considerations

Apart from the narrower discussion of China's municipal-bond market, land-backed borrowing is also linked to monetary-stability considerations. So far, this research field has received very little attention. Large-scale empirical studies have not yet been carried out, and much is still in the dark.

As theoretically indicated by Wu (2019), the mortgaging of land through LGFVs can be seen as a justification for credit expansion in the Chinese economy, and various tools such as LRCs, land-mortgage loans, and bonds issued by LGFVs are financial channels enabling the expansion of credit. This perception is similar to the idea proposed by Zhou (2011), who sees China's land-financing model as being at the core of the country's macroeconomic system and as a crucial component of "money creation" (*huobi chuangzao*) through the Chinese banking apparatus. In a more extreme fashion, Zhao (2014) argues that "land finance" has enabled the overissuance of currency. Assuming only some of the existing assessments hold true, land-based financing and land-backed borrowing in China could be closely interrelated with monetary developments and the upholding of monetary value. The leveraging of public land could thus be entrenched in institutional structures that go far beyond the solvency and the indebtedness of local governments.

However, convincing empirical studies on the nexus between monetary stability and China's land-based financing operations, as well as comprehensive related theoretical explanations, are still lacking. A number of contradictions exist too. As my doctoral research deals with this relationship in detail, I will hopefully be able to shed more light on the topic in the near future. In consideration of the insights I have gained so far, it is difficult to imagine that a system-relevant institutional fabric such as land-backed borrowing could be easily nullified without far-reaching consequences for the Chinese economy.

## Conclusion, and future bond prospects

In light of this analysis, I conclude that the perpetuation of a land-centered borrowing strategy in the institutional guise of municipal bonds mainly evolved as a path-dependent necessity in an attempt to better control local-borrowing practices. The creation of specialized bonds for land-backed investments in shanty-town renovations, land-reserve work, or public-infrastructure projects is, essentially, a replacement for the formerly issued land-mortgage loans that led to high financial risks after 2008. Rather than abandoning the practice, the Chinese

government has opted for a more controlled use of land as collateral in official local-government borrowing practices.

As a result, what has emerged as a new element in the development of China's municipal-bond market is what I refer to as "state-led land leveraging under top-down control." At the same time, it has become increasingly obvious that the establishment of a sustainable municipal-bond market without reliance on land value would require far-reaching fiscal reforms. To terminate the exploitation of China's transferrable land resources for financial gain, local governments would, in the first place, need to have a higher share of tax revenue at their disposal. If my early assumptions on monetary relationships are indeed correct, any far-reaching fiscal reform would then also require changes to the banking system and the governance of monetary stability.

In the long run, municipal bonds might lead to more transparent borrowing and more controlled investments. Particularly the issuance of SRBs could be used as an incentive to invest in specific areas and to support countercyclical adjustments, something that the central government has already started to focus on under the leadership of Xi. In theory, SRBs might also enable the state to better control revenue and expenditure regarding China's land-transfer funds, as their introduction has been accompanied by the growing regulation of local GMFs.

As for now, the structure of the municipal-bond market still faces various obstacles and barriers. The debts issued officially via municipal bonds only constitute a small fraction of all debt issued by LGFVs, shadow banks, and local governments together, and are thus highly likely only the tip of the iceberg. What is more, the current volume of issued bonds has been stated as being far below what local governments would require to fully replace off-budget borrowing. Investor interest may remain limited for the time being due to artificially low interest rates; since land-development projects often do not generate stable revenue, it is likely that cash-flow problems will continue to exist too. In the future, it remains to be seen how long the Chinese government will be willing to stick to a controversial, high-risk financing model based on dwindling land resources — or, even more interesting besides, how long it will need to do so in fact.

## References

- Breslin, Shaun (2011): "China and the crisis: global power, domestic caution and local initiative", in: *Contemporary Politics*, 17: 185–200
- Cao, Guangzhong; Feng, Changchun; Tao, Ran (2008): "Local 'Land Finance' in China's Urban Expansion: Challenges and Solutions", in: *China & World Economy* 16: 19–30
- Cao, Junjian A. (2015): *The Chinese Real Estate Market. Development, Regulation and Investment*, New York, Routledge
- Capoccia, Giovanni; Kelemen, R. Daniel (2011): "The Study of Critical Junctures: Theory, Narrative and Counterfactuals in Historical Institutionalism", in: *World Politics*, 59: 341–369

- Cartier, Carolyn (2001): "'Zone Fever', the Arable Land Debate, and Real Estate Speculation: China's evolving land use regime and its geographical contradictions", in: *Journal of Contemporary China*, 10: 445–469
- Central Government (2007): "'Guotu ziyuanbu deng san bumen yinfa tudi chubei guanli banfa (The Ministry of Land and Resources and Other Three Departments Issued the Land Reserve Management Measures)", [http://www.gov.cn/gzdt/2007-12/04/content\\_824212.htm](http://www.gov.cn/gzdt/2007-12/04/content_824212.htm) (accessed 2020-11-13)
- (2011): "'Woguo yixie difang zhengfu weigui liyong tudi rongzi cunzai jiaoda fengxian (Some Local Governments in Our Country Use Land Financing in Violation of Regulations and There Are Greater Risks)", [http://www.gov.cn/jrzg/2011-01/10/content\\_1781697.htm](http://www.gov.cn/jrzg/2011-01/10/content_1781697.htm) (accessed 2020-11-14)
- (2012): "'Si bumen guanyu yinzhi difang zhengfu weifa weigui rongzi xingwei de tongzhi (Notice of the Four Departments on Stopping Local Governments' Illegal Financing Activities)", [http://www.gov.cn/gzdt/2012-12/31/content\\_2302905.htm](http://www.gov.cn/gzdt/2012-12/31/content_2302905.htm) (accessed 2020-11-13)
- (2017): "'Caizhengbu youguan fuzeren jiu shidian fazhan xiangmu shouyi yu rongzi ziqiu pingheng de difang zhengfu zhaiquan pinzhong da jizhe wen (The Relevant Person in Charge of the Ministry of Finance Answers the Reporter's Question on the Types of Local Government Special Bonds that Seek to Balance the Benefits of Pilot Development Projects and Financing)", [http://www.gov.cn/zhengce/2017-08/02/content\\_5215468.htm](http://www.gov.cn/zhengce/2017-08/02/content_5215468.htm) (accessed 2020-11-13)
- (2018): "'Penggai zhuanxiangzhai wenshi difangzhai zai kai 'qianmen' (Special Bonds for Shed Reform Come Out, Local Debt Opens the 'Front Door' Again)", [http://www.gov.cn/xinwen/2018-04/04/content\\_5279695.htm](http://www.gov.cn/xinwen/2018-04/04/content_5279695.htm) (accessed 2020-11-13)
- (2019a): "'Faxing pinzhong rijian fengfu difang zhuanxiangzhai shichang huanlai kuaisu fazhan (Issuance Varieties are Becoming More Abundant, and the Local Special Bond Market Ushered in Rapid Development)", [http://www.gov.cn/xinwen/2019-01/22/content\\_5360191.htm](http://www.gov.cn/xinwen/2019-01/22/content_5360191.htm) (accessed 2020-11-14)
- (2019b): "'Guowuyuan tiquan xiada mingnian zhuanxiangzhai edu, ke qiaodong wanyi zijin (The State Council Has Issued a Special Debt Quota for Next Year in Advance, Which Can Leverage Trillions of Funds)", [http://www.gov.cn/zhengce/2019-09/05/content\\_5427456.htm](http://www.gov.cn/zhengce/2019-09/05/content_5427456.htm) (accessed 2020-11-14)
- (2019c): "'Liang bumen guanyu yinfa 'tudi chubei xiangmu yusuan guanli banfa (shixing)' de tongzhi (Notice of the Two Departments on Distributing the 'Measures for the Budget Management of Land Reserve Projects (Trial)')", [http://www.gov.cn/xinwen/2019-06/22/content\\_5402341.htm](http://www.gov.cn/xinwen/2019-06/22/content_5402341.htm) (accessed 2020-11-14)
- Collier, Andrew (2017): *Shadow Banking and The Rise of Capitalism in China*, Singapore, Palgrave McMillan
- He, Canfei; Zhou, Yi; Huang, Zhiji (2016): "Fiscal Decentralization, Political Centralization, and Land Urbanization in China", in: *Urban Geography*, 37: 436–457
- He, Weidong (2013): "'Qiantan penghuqu gaizao zhong cunzai de wenti yu yingdui zhenglue (Talking about the Problems and Countermeasures in the Reconstruction of Shanty Towns)", <http://www.audit.gov.cn/n6/n41/c21232/content.html> (accessed 2020-11-13)
- Hsing, You-Tien (2010): *The Great Urban Transformation. Politics of Land and Property in China*, New York, Oxford University Press
- Huang, Zhonghua; Du, Xuejun (2018): "Holding the market under the stimulus plan: Local government financing vehicles' land purchasing behavior in China", in: *China Economic Review*, 50: 85–100
- Lu, Yinqiu; Sun, Tao (2013): "Local Government Financing Platforms in China: A Fortune or Misfortune?", (IMF Working Paper)
- Michlmayr, Timna (2020): "'Local Debt Management in China after the Reform: a 'Land Finance' Perspective' Asia at the Crossroads: Solidarity through Scholarship", Online from Kobe (Japan), 2020-09-01 (Conference Paper, AAS-in-Asia 2020)

- Ministry of Finance (2017): “*Guanyu shidian fazhan xiangmu shouyi yu rongzi ziqiu pingheng de difang zhengfu zhuanxiang zhaiquan pinzhong de tongzhi* (Notice on Local Government Special Bond Varieties on the Balance of Benefit and Financing of Pilot Development Project)”, [http://yss.mof.gov.cn/zhuantilanmu/dfzgl/zcfg/201707/t20170724\\_2656632.html](http://yss.mof.gov.cn/zhuantilanmu/dfzgl/zcfg/201707/t20170724_2656632.html) (accessed 2020-11-13)
- (2015a): “*Caizhengbu youguan fuzeren jiu faxing difang zhengfu zhaiquan zhiquan cunliang zhaiwu youguan wenti da jizhe wen* (Reply of the Relevant Person in Charge of the Ministry of Finance on the Issue of the Replacement of the Stockpile of Local Government Bonds)”, [http://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/201503/t20150312\\_1201705.html](http://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/201503/t20150312_1201705.html) (accessed 2020-11-13)
- (2015b): “*Guanyu yinfa 'difang zhengfu zhuanxiang zhaiquan faxing guanli zanxing banfa de tongzhi* (Notice on Issuing the Interim Measures for the Issuance and Administration of Local Government Special Bonds)”, [http://www.gov.cn/gongbao/content/2015/content\\_2883246.htm](http://www.gov.cn/gongbao/content/2015/content_2883246.htm) (accessed 2020-11-14)
- (2016): “*Caizhengbu guotu ziyuanbu Zhongguo renmin yinhang jinjianhui guanyu guifan tudi chubei he zijin guanli deng xiangguan wenti de tongzhi* [Ministry of Finance Ministry of Land and Resources Ministry of Finance People's Bank of China Notice on the Regulation of Land Reserves and Capital Management and Other Related Issues Notice]”, [http://www.mof.gov.cn/gkml/caizhengwengao/wg2016/wg201603/201607/t20160705\\_2344753.htm](http://www.mof.gov.cn/gkml/caizhengwengao/wg2016/wg201603/201607/t20160705_2344753.htm) (accessed 2020-11-13)
- (2017): “*Tudi chubei rongzi shoufa zhuanxiang zhaiquan* (Land Bank Financing First Special Bond Issuance)”, [http://www.mof.gov.cn/zhengwuxinxi/caijingshidian/renminwang/201706/t20170602\\_2613714.html](http://www.mof.gov.cn/zhengwuxinxi/caijingshidian/renminwang/201706/t20170602_2613714.html) (accessed 2020-11-13)
- (2018): “*Guanyu yinfa 'shidian faxing difang zhengfu penghuqu gaizao zhuanxiang zhaiquan guanli banfa' de tongzhi* (Notice on Implementing the ‘Measures for the Issuance of the Pilot Project for the Transformation of Local Government Shanty Towns’)”, [http://yss.mof.gov.cn/zhuantilanmu/dfzgl/zcfg/201804/t20180402\\_2858433.html](http://yss.mof.gov.cn/zhuantilanmu/dfzgl/zcfg/201804/t20180402_2858433.html) (accessed 2020-11-13)
- Ministry of Finance & Ministry of Land and Resources (2017): “*Guanyu yinfa 'difang zhengfu tudi chubei zhuanxiang zhaiquan guanli banfa (shixing)' de tongzhi* (Notice on Issuing the ‘Measures for the Administration of Special Bonds for Local Government Land Reserves (Trial Implementation)’)”, [http://yss.mof.gov.cn/zhuantilanmu/dfzgl/zcfg/201706/t20170601\\_2612924.html](http://yss.mof.gov.cn/zhuantilanmu/dfzgl/zcfg/201706/t20170601_2612924.html) (accessed 2020-11-13)
- Ministry of Land and Resources (2010): “*Guotu ziyuanbu fabu '2009 nian Zhongguo guotu ziyuan gongbao'* (Ministry of Land and Resources issued ‘2009 China Land and Resources Bulletin’)”, [http://www.gov.cn/gzdt/2010-04/09/content\\_1576986.htm](http://www.gov.cn/gzdt/2010-04/09/content_1576986.htm) (accessed 2020-11-13)
- (2012): “*Guotu ziyuanbu caizhengbu Zhongguo renmin yinhang Zhongguo yinhang jiandu guanli weiyuanhui guanyu jiaqiang tudi chubei yu rongzi guanli de tongzhi* (Notice of the Ministry of Land and Resources Ministry of Finance China People's Bank of China Banking Regulatory Commission on Strengthening the Land Reserve and Financing Management)”, [http://www.gov.cn/zw/gk/2012-11/16/content\\_2267756.htm](http://www.gov.cn/zw/gk/2012-11/16/content_2267756.htm) (accessed 2020-11-13)
- (2015): “*Zhongguo guotu ziyuan gongbao* (China Land and Resources Bulletin)”, <http://mpnr.chengdu.gov.cn/ghhzzyj/zsgq/2019-09/22/e8fa009e7adc415da75530b0c82ee1d9/files/c0554ec00f754896936c63ef1c76462b.pdf> (accessed 2021-08-26)
- National Audit Office (2012): “*Difang zhengfu rongzi pingtai daikuan fengxian de tudi jiaose fenxi* (Land Perspective Analysis of Loan Risk of Local Government Financing Platforms)”, <http://www.audit.gov.cn/n6/n1558/c111337/content.html> (accessed 2020-11-13)
- (2013): “*Quanguo zhengfuxing zhaiwu shenji jieguo* (Results from a Nationwide Audit of Local Government Debts)”, <http://www.audit.gov.cn/n5/n25/c63642/part/27403.pdf> (accessed 2020-11-13)

- Pierson, Paul (2000): "Increasing Returns, Path Dependence, and the Study of Politics", in: *American Political Science Review*, 94: 251–267
- Rithmire, Meg (2017): "Land Institutions and Chinese Political Economy: Institutional Complementarities and Macroeconomic Management", in: *Politics & Society*, 45: 123–153
- State Council (2014): "Guowuyuan guanyu jiaqiang difang zhengfuxing zhaiwu guanli de yijian (Opinion of the State Council on Strengthening Local Government Debt Management)", [http://www.gov.cn/zhengce/content/2014-10/02/content\\_9111.htm](http://www.gov.cn/zhengce/content/2014-10/02/content_9111.htm) (accessed 2020-11-13)
- Tsui, Kai Yuen (2011): "China's Infrastructure Investment Boom and Local Debt Crisis", in: *Eurasian Geography and Economics*, 52: 686–711
- Wong, Christine (2000): "'Central-Local Relations Revisited: the 1994 Tax Sharing Reform and Public Expenditure Management in China 'Central-Periphery Relations in China: Integration, Disintegration, or Reshaping of an Empire?'" , Conference Paper, International Conference, Chinese University of Hongkong, March 24–25
- (2011): "The Fiscal Stimulus Programme and Public Governance Issues in China", in: *OECD Journal on Budgeting*, 11: 1–21
- (2018): "An Update on Fiscal Reform". in: GARNAUT, R.; SONG, L. S.; FANG, C. (eds.) *China's 40 Years of Reform and Development: 1978–2018*. Canberra, Australia: ANU Press, 271–290
- Wu, Fulong (2019): "Land Financialization and the Financing of Urban Development in China", in: *Land Use Policy*, XX: 1–10
- Zhang, Yuanyan Sophia; Barnett, Steven (2014): "Fiscal Vulnerabilities and Risks from Local Government Finance in China", Conference Paper, January
- Zhao, Yanjing (2014): "'Tudi caizheng: lishi, luoji yu jueze (Land Finance in China: History, Logic and Choice)", in: *Urban Development Studies*, 21: 1–13
- Zhou, Feizhou; Tan, Mingzhi (2017): *Relationship Between the Central Government and Local Governments of Contemporary China*. Singapore, Springer Nature
- Zhou, Qiren (2011): "Jiujie de yingen yu 'tugen' (Tangled Money and 'Land Money')", in: *Xin Jingji Daokan (New Economic Guide)*: 14–15