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Risks to China's Financial System from Local Government Borrowing and Land-Based Public Finance

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Reckless lending to borrowers with sub-prime credit worthiness; excessive borrowing in a low rate environment with interest-only initial payments; making assumptions based on ever-rising property prices – sound familiar?

– Winnie Wu, Merrill Lynch¹

INTRODUCTION

On September 15, 2008, Lehman Brothers collapsed in New York setting off global panic, with credit markets seizing up and market capitalization vanishing in financial capitals worldwide.² China was largely insulated from the financial contagion due to its strict capital controls, which prevented foreign capital from entering the country except for long-term foreign direct investment. These controls, bolstered after the Asian Financial Crisis sent a wave of financial panic through China's neighbors, prevented the financial contagion from impacting Chinese markets in 2008, but no regulation could protect the country from the subsequent collapse of export demand. According to the Chinese customs agency, quarter-on-quarter growth in exports plummeted from 22 percent in the third quarter of 2008 to negative 22 percent in the third quarter of 2009.³ This was a serious problem for a country that relied on export industries for up to a quarter of GDP and employment growth, especially because low unemployment was seen by China's leaders as critical to sustaining social harmony and the continued political legitimacy of the Chinese Communist Party.

On November 9, 2008, 55 days after the Lehman bankruptcy, the Chinese government announced a 4 trillion RMB stimulus package, the majority of which would be directed to infrastructure investment. Some public funds for this stimulus package would come from Ministry of Finance (MoF) coffers and some would come from 400 billion RMB in new MoF bond issues, but the bulk was budgeted as counterpart funds. In this context, the term “counterpart funds” refers to monies raised locally by China's 22 provinces, 5 autonomous regions, 4 large municipalities, and countless prefectures, counties, and townships, and contributed to centrally mandated stimulus projects. Counterpart funds are mainly provided by the myriad local government financing vehicles (LGFVs) scattered throughout China, which in turn borrow the funds from banks.⁴ LGFVs are special purpose entities set up to get around statutory restrictions that strictly limit the extent to which local governments can run deficits or borrow money.⁵

The People's Bank of China (PBOC) and the China Banking Regulatory Commission (CBRC) endorsed the use of the LGFV channel for the raising of

¹ Quoted in Tracy Alloway, “The Chinese SIV,” *FT Alphaville* (blog), April 7, 2011, <http://ftalphaville.ft.com/2010/04/07/196651/the-chinese-siv/>.

² Yoshiaki Azuma and Jun Kurihara, “Examining China's local government fiscal dynamics with a special emphasis on local investment companies (LICs),” *Cambridge Gazette: Politico-Economic Commentaries*, January 3, 2011, 1.

³ Wong, Christine, “Paying for the harmonious society,” *China Economic Quarterly* (June 2010): 4.

⁴ Various interchangeable terms for LGFV are in use including local government investment platform (LGFP), local investment company (LIC), and urban development investment corporation (UDIC). This paper will use the “LGFV” exclusively for the sake of simplicity.

⁵ “The Chinese SIV.”

counterpart funds, in accordance with longstanding financial practices in China.⁶ This move to finance stimulus spending through borrowing has fostered a tremendous amount of debate inside and outside of China, and many observers have raised concerns about potential risks to financial stability. The debate is fueled by the huge increase in total lending in China since 2008, most of which is presumed to have gone to LGFVs. Figure 1 shows the scale of overall credit expansion in China, with new bank loans almost doubling from 2008 to 2009.

Analysts and journalists have suggested that unbridled growth in local government debt could create a financial crisis that could ripple through the banks and stifle China's economy. Lili Liu of the World Bank's Economic Policy and Debt Department conveyed her assessment of the potential risk rather gently, writing, "Off-budget debt can create implicit and contingent liabilities for subnational governments and may also implicate the central budget."⁷ Others have suggested that a rash of LGFV defaults could compromise the integrity of the entire financial system, creating a "Lehman-type" event.⁸ As Figures 2 and 3 show, Chinese banks' exposure to LGFV debt is not yet overwhelming in a quantitative sense, but the implications for bank earnings are serious. As local government debt rises over time, wider systemic risks may follow.

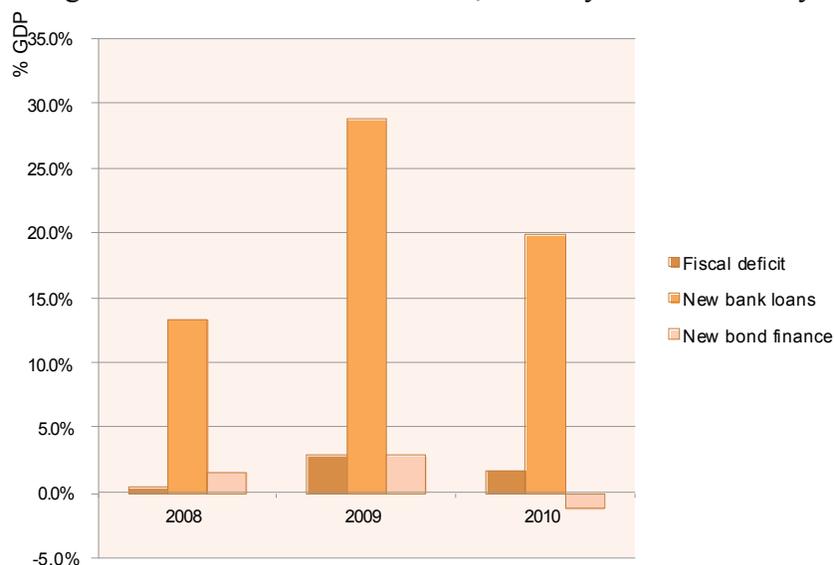


Figure 1. Credit expansion as percent of GDP, 2008-2010

All forms of financing ballooned in 2009, with new bank loans, many of which presumably went to LGFVs, approaching 10 trillion RMB in 2009. Growth of the fiscal deficit and loan financing fell in 2010, while bond financing contracted.

Sources: Wong (2010)

⁶ Wong, Christine, "Paying for the harmonious society," *China Economic Quarterly* (June 2010): 3.

⁷ Lili Liu, "Strengthening Subnational Debt Financing and Managing Risks" (report), World Bank, August 16, 2010.

⁸ Michael Forsyth, *et al.*, "China debts dwarf official data with too-big-to-finish alarm," *Bloomberg News*, December 18, 2011.

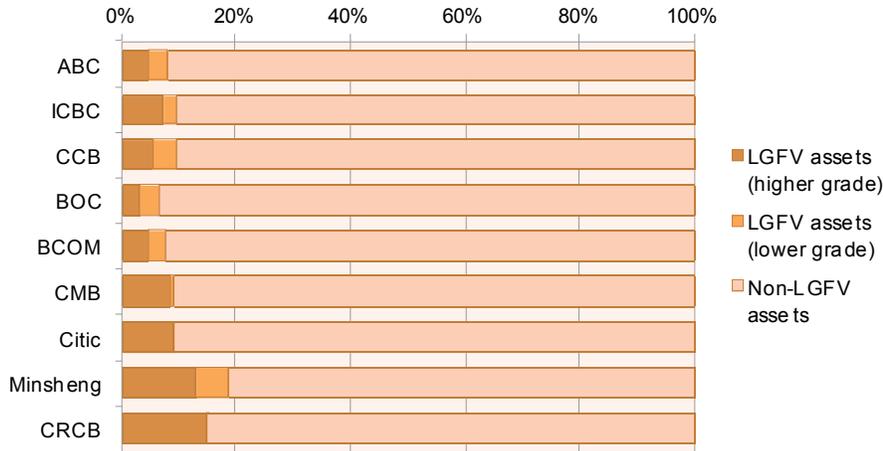


Figure 2. Major bank exposure to LGFV debt, risk-segregated (percent of assets)

All of the top nine banks have holdings in LGFV debts, but the extent of exposure varies among banks. Minsheng, the only non-state held bank in China, has the greatest overall exposure and the greatest exposure to riskier loans.

Source: Nomura Equity Research

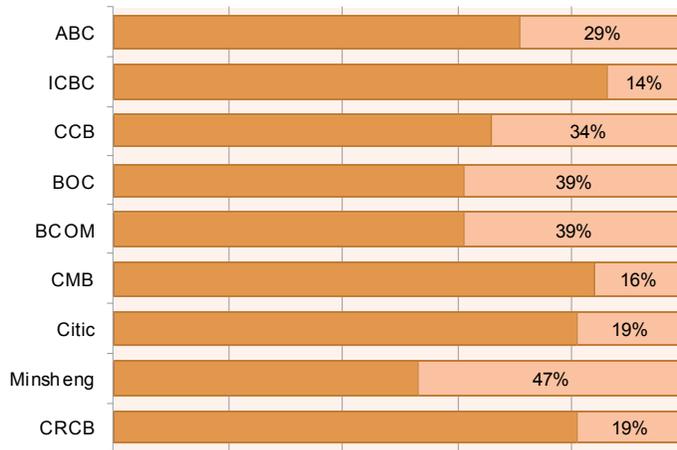


Figure 3. "Worst case" impact on earnings from an LGFV debt crisis

If Nomura Securities' "worst case" estimate of a 20 percent immediate discount and 50 percent loss provision for remaining "low grade" debt, the damage to bank earnings varies from 14-47 percent, with Minsheng the hardest hit. This scenario does not result in any bank becoming insolvent.

Source: Nomura Equity Research

This paper will examine this debate and address the question: *Does the ramp-up in LGFV debt since 2008 have the potential to destabilize China's financial system?* In the pursuit of this question, Section I seeks to quantify the increase in China's debt stock as a starting point for assessing the risk it presents. Section II examines the central-local fiscal dynamic that drives local governments to seize and sell off agricultural land to provide the revenues against which borrowing can occur. In this section, three case studies of local Chinese investment projects are compared to international best practices.

Finally, Section III considers China's ability to withstand a potential financial crisis in light of its financial situation and available policy options.

SECTION I: SIZE AND HOLDERS OF DEBT

Whether these liabilities may trigger a fiscal crisis is a subject of much debate, and the primary driver of this debate is uncertainty about the size of local government debts and the shape of the fiscal system. Although some doubts remain, the first question was addressed during the summer of 2011 amid a vigorous public discussion inside and outside China on the value of China's local government debt load. The People's Bank of China's "Regional Financial System Operation Report," issued on June 1, 2011, estimated liabilities of local governments, including LGFV debt, as 30 percent of GDP, which many analysts interpreted as meaning 14 trillion RMB.⁹ Various analysts, including Tao Wang of UBS, disagreed with this interpretation of the PBOC report, saying the calculation of 14 trillion RMB was based on a misreading of certain language in the report. In her June 7, 2011, report, Tao Wang estimated the total stock of local government liabilities to be 11-12 trillion RMB at the end of 2010. A month later, the National Audit Office (NAO) came forward with a detailed report that included an estimate of 10.7 trillion RMB.¹⁰ (See APPENDIX for a review of the commercial banks' holdings of this debt.)

Because the NAO completed a more detailed study and had the greatest access to the banks and LGFVs themselves, the 10.7 trillion RMB estimate can be considered the most definitive estimate available of local government liabilities at the end of 2010. Moody's Investors Service accepted the NAO's figures and began using them as the basis for its own assessments and commentary within days.¹¹ The NAO estimate is not without controversy, however. On December 18, 2011, Bloomberg News published a criticism of the NAO estimate based on its own investigation. After reviewing bond prospectuses of 231 LGFVs, Bloomberg found that the debts disclosed by this small sample of borrowers added up to 79.7 percent of the NAO's nationwide LGFV debt estimate, even though the sample only included 3.5 percent of LGFVs.¹² Bloomberg points to this apparent disparity as evidence that the NAO report may exclude a significant portion of local government liabilities.

Bloomberg's professional skepticism is appropriate, but its argument ultimately leaves room for disagreement. First, the Bloomberg report contains an implicit assumption that the 231 issuers could not hold the majority of LGFV debt. Because Bloomberg's methodology consisted of reviewing prospectuses for LGFVs that had issued new debt in 2011, it is possible, if not proven, that this self-selected group represented the most active and debt-laden companies, those that also most actively participated in the stimulus. Bloomberg also expressed concern that the small sample used in their analysis captured a substantial percentage of the overall LGFV loans made

⁹ Tao Wang, "Local Government Debt – How Bad and How Will It End," (UBS Investment Research, June 7, 2011): 5.

¹⁰ Moody's Investors Service, "China's State Auditor Confirms Build-Up in Local Government Debt, a Credit Negative," July 4, 2011.

¹¹ *Ibid.*

¹² Michael Forsyth, *et al*, "China debts dwarf official data with too-big-to-finish alarm," *Bloomberg News*, December 18, 2011.

by individual banks; however, this disparity might also have arisen from the sample including only recent borrowers.

Bloomberg rightly points out that there is uncertainty about the NAO estimate, and that this uncertainty should not be ignored. However, uncertainty does not constitute a lack of credibility. Bloomberg's extrapolation from its own estimates may be driven by the news media's natural skepticism, and a touch of sensationalism, rather than a cool-headed assessment of facts. The NAO's estimate is drawn from a more comprehensive data source and used a more rigorous methodology than the Bloomberg inquiry. Therefore, it appears reasonable to use the NAO's estimate of 10.7 trillion RMB in local government liabilities as a baseline for assessment of fiscal liquidity.

SECTION II: CHINA'S LOCAL, LAND-BASED PUBLIC FINANCING MODEL

Although much of the 10.7 trillion RMB in local government liabilities is nominally held by the LGFVs, those entities are either owned by the local government or backed by a perceived local government guarantee to transfer land as collateral for LGFV borrowings. The local government, in turn, is 100 percent "owned" by the central government in China's consolidated fiscal system. An exploration of the national-local fiscal dynamics of China and the land-based financing model provides a valuable basis for assessing potential risks this model may pose the financial system.

China's public finance system is peculiar in that it is simultaneously centralized and dispersed. On the one hand, the central government appears to have a great degree of control over the flow of funds, with 45 percent of local government budgetary revenues coming from Beijing in 2008.¹³ On the other hand, Beijing's direct participation in public finance is not nearly as large as this number suggests for two principal reasons. First, there is an element of smoke and mirrors: 18.6 percent of transfers from Beijing to the local level, or 8.3 percent of local revenues, is in fact locally collected revenue that has been remitted to Beijing and then returned to the local government as a refund. Second, any discussion of "budgetary revenue" leaves out another important set of financial flows: off-budget revenues and expenditures of subnational governments. Taking these two facts into account, one finds that central government expenditures were only 17.6 percent of total public spending in 2010, with the remaining 82.4 percent ultimately controlled by subnational governments.¹⁴ This adjusted fiscal picture attributes a much more active fiscal role to subnational governments than the central government. Furthermore, including off-budget flows offers greater insight into land sales and payments to and from LGFVs, which are highly relevant to China's financial stability.

The off-budget financial accounts referenced above are discussed with varying labels, including "non-budgetary," "extra-budgetary," and "funds." Regardless of what one calls these flows, they are a vital part of China's public finances. According to Ministry of Finance figures compiled by UBS, extra-budgetary revenues represented 30 percent of China's total public revenue in 2010.¹⁵ By failing to understand this

¹³ Tao Wang, "Local Government Finances and Land Revenues," (UBS Investment Research, February 24, 2010): 2.

¹⁴ *Ibid.*

¹⁵ Tao Wang, "Local Government Finances and Land Revenues," (UBS Investment Research, February 24, 2010): 3.

distinction, many observers of China's growing local liabilities have erroneously calculated that sale of land rights amounts to 70 percent of China's local government revenues. This figure is the result of dividing off-budget land revenue (2.9 trillion RMB in 2010) by local budgetary revenue (4.1 trillion RMB). This is a meaningless ratio of "apples to oranges." As Figure 4 illustrates, the total local revenues, of which the 2.9 trillion RMB forms a part, are slightly more than 10 trillion RMB. The true share of land revenue in local revenues, based on 2010 data, is 27.3 percent.¹⁶ While not insignificant, this number is not nearly as fearful as the 70 percent frequently cited in the media. Indeed, sale of land rights makes up a relatively modest portion of public revenues.



Figure 4. Combined 2010 on/off-budget local revenues and expenditures (RMB bn)

Consolidating all revenue streams and expenditure categories shows a more detailed picture of local government finances. Sale of land rights is one of several revenue streams and represents 27.3 percent of total local revenue.

Source: Tao Wang (2011)

The above observations paint a more complex and less dire picture than recent media reports would suggest. In fact, not only is fiscal authority more dispersed throughout the country, but China's fiscal revenues are more diversified than the media suggest, with land sales revenue making up only a moderate share of the country's fiscal mix.

It turns out that China's overall government debt is also less severe than imagined. Compared to other countries, China's *official* public debt level is relatively low. As shown in Figure 5, official public debt stood at 17.7 percent of GDP, or 6 trillion RMB, in 2009.¹⁷ This level is exceptionally low by international standards: the United States, Germany, and India each reported public debt around 70 percent of GDP in 2009, while heavily-indebted Greece and Japan were saddled with debt in excess of 100 percent and 200 percent of GDP, respectively. Unfortunately for China, the official figure of 17.7 percent of GDP is misleading because it does not include local government or asset management company (AMC) liabilities, all of which are ultimately liabilities of the

¹⁶ Share of land revenue in local revenues is calculated as the value of off-budget land revenue divided by total on- and off-budget local revenue: 2.9 trillion RMB divided by 10.6 trillion RMB.

¹⁷ International Monetary Fund World Economic Outlook database, <http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/index.aspx>.

consolidated national government. However, when these debts are incorporated into the gross figure, China’s estimated public indebtedness for 2009 only reaches the 50-60 percent range, as shown in Figure 6. While this is roughly three times the official measure, it is in line with the United States, Germany, and India.

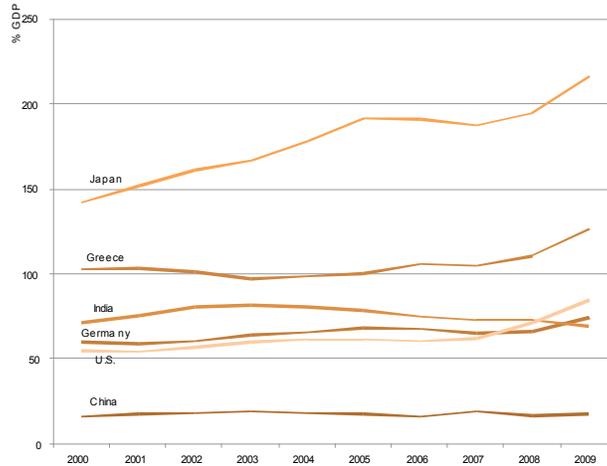


Figure 5. Official public indebtedness as percent of GDP, 2000-2009

Chinese official public debt remained consistently lower than key developed and developing countries during the period 2000-2009. This measure *excludes* local government and AMC debts.

Sources: International Monetary Fund World Economic Outlook database

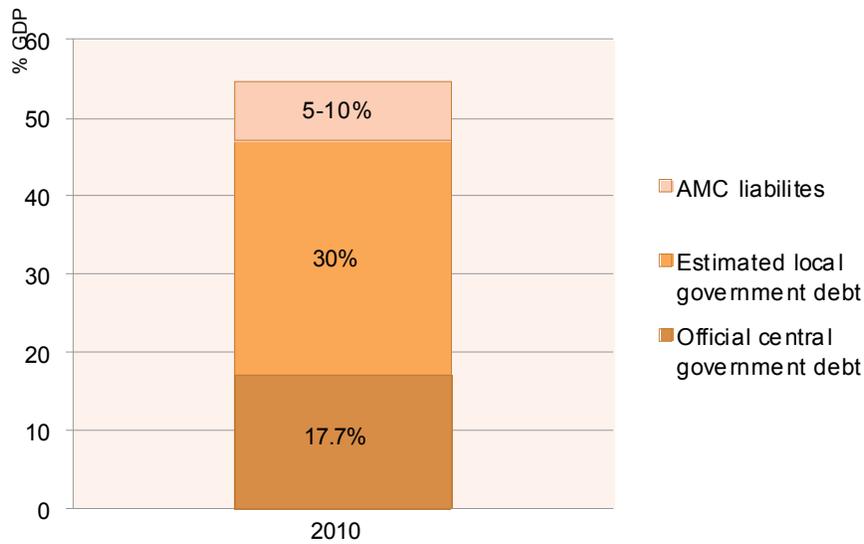


Figure 6. Estimated stock of public debt (official + other) as percent of GDP, 2010

China’s total public debt, including local government and AMC liabilities, exceeded the 17.7 percent official measure, bringing estimated total public indebtedness to the 50-60 percent level.

Sources: Tao Wang (2011)

Land-based finance in China and abroad

While the national-local fiscal relationship and the on/off-budget distinction may be peculiar to China's financial system, other aspects are quite common. In particular, government land holdings have been used to finance development in various other developing countries including Colombia, Egypt, India, Turkey, and South Africa, according to a 2009 study by the World Bank's Public-Private Infrastructure Advisory Facility (PPIAF).¹⁸ Also, this approach was historically used in countries that are developed today, for example, to finance the development of New York City's waterfront and the construction of Paris' grand avenues.¹⁹ When executed properly, land-based finance can be an efficient and equitable means of providing the benefits of infrastructure development to a society. However, misapplication of this model can bring about painful financial and economic consequences, and China appears to display some risk factors.

Convincing arguments have been made about the social utility of subnational public debt. The World Bank's Lili Liu argues that subnational debt can be a productive force for development that promotes "intergenerational equity."²⁰ She goes on:

Amortization of the liabilities should be matched by depreciation of the assets being financed. Matching asset life to maturity is a sound public policy because these infrastructure services can and should be paid for by the beneficiaries of the financed services.²¹

George Peterson, author of the PPIAF study, agrees that subnational debt can be beneficial and links it to the notion of leveraging the value of public lands to finance development at the local level. Peterson argues that land-based finance can increase social equity by synchronizing the times at which the costs of construction and the associated benefits are realized. In the case of infrastructure projects, this generally means financing projects such that repayment occurs over the useful life of the relevant assets. He also argues that such financing provides a market-based mechanism to regulate the construction of infrastructure, because market pricing of land means projects will not be built if their capitalization exceeds the present value of expected benefits.²²

Taken together, Liu and Peterson provide a sound rationale for subnational debt and land-based financing. Assuming that investment projects truly create economic value, the government should be able to capture the incremental benefits while fairly compensating landowners for the unimproved value of the land. However, Peterson cautions that this model may break down if a project does not have a defined "benefit zone" in which the incremental land value added by the investment can be captured either through outright land sales or through taxation of owners.²³ Chinese tax receipts have

¹⁸ George Peterson, *Unlocking Land Values to Finance Urban Infrastructure*, (Washington: World Bank Public-Private Infrastructure Advisory Facility, 2009): 3-4.

¹⁹ George Peterson, *Unlocking Land Values to Finance Urban Infrastructure*, (Washington: World Bank Public-Private Infrastructure Advisory Facility, 2009): 1-2.

²⁰ Lili Liu, "Strengthening Subnational Debt Financing and Managing Risks" (report), World Bank, August 16, 2010:2.

²¹ *Ibid.*

²² Peter George Peterson, *Unlocking Land Values to Finance Urban Infrastructure*, (Washington: World Bank Public-Private Infrastructure Advisory Facility, 2009): 22.

²³ *Ibid.*

risen faster than GDP since the 1994 fiscal reforms and are currently growing at three times the rate of output.²⁴ Rising fiscal capacity provides the Chinese with a mechanism to extract the value of sound investments. The key risk is whether the investments are adequately vetted to ensure they are worthwhile and actually provide a boost to GDP and fiscal revenue. The following examples illustrate the various sides of this dilemma:

The Good: Changsha Ring Road Corporation

As an example of the way LGFV financing should work in China, Peterson points to the Ring Road Corporation (RRC), a public-private joint venture company listed on the Shanghai Stock Exchange but majority controlled by the Hunan provincial government.²⁵ The RRC was created to finance a six-lane highway in the provincial capital, Changsha. Begun in 2001, the project was financed with no initial cash outlay by the government. Instead, the government transferred land use rights to the RRC, the most valuable of which were immediately sold off for cash to finance construction. In addition to the proceeds of these sales, the RRC raised 3 trillion RMB in loans.²⁶ In theory, the collateral for these loans consisted of unimproved land that would rise in value as a result of the ring road's construction. Thus, the RRC was really borrowing against the expected future value of the land rather than its current value, which was minimal.

Because the underlying assets for these loans would not gain the requisite value until the project was completed, this presented a potential risk to the RRC's creditors, especially because this newly created entity had no other assets to post as collateral. As in many instances of LGFV borrowing, the banks were willing to participate in the deal because they received a so-called "comfort letter" from the municipal government affirming that the government would ensure the RRC had sufficient assets to stay current on its borrowings. Lenders relied upon this assurance in lieu of the right to repossess assets in the event of default. Lenders were also encouraged by the knowledge that the completed ring road would include toll bridges that would generate revenue once in operation.²⁷

The Changsha RRC was a prototypical example of how LGFVs can be used successfully to finance development. As in Liu's and Peterson's frameworks, the loans allowed the beneficiaries of the project to pay for its cost over time by taxing private assets or liquidating public assets that the project improved. Unless the project fails to be completed, property prices fall due to external forces, or the RRC fails to obtain sufficient funds to service its debt, lenders and borrowers all should remain happy for the life of the road and its associated loans. Unfortunately, it appears that elsewhere in China these conditions may not all be met.

The Bad: Tianjin Yujiapu Financial District

²⁴ "Why China is Unhappy" (editorial), *Wall Street Journal Europe*, November 14, 2011, 12.

²⁵ Peter George Peterson, *Unlocking Land Values to Finance Urban Infrastructure*, (Washington: World Bank Public-Private Infrastructure Advisory Facility, 2009): 66.

²⁶ Peter George Peterson, *Unlocking Land Values to Finance Urban Infrastructure*, (Washington: World Bank Public-Private Infrastructure Advisory Facility, 2009): 67.

²⁷ Peter George Peterson, *Unlocking Land Values to Finance Urban Infrastructure*, (Washington: World Bank Public-Private Infrastructure Advisory Facility, 2009): 66.

In the same way that the RRC is an example of LGFV financing gone right, the Yujiapu Financial District currently under construction in Tianjin has been highlighted as an example of LGFV financing gone very wrong. Yujiapu was conceptualized as a “mini-Manhattan,” an inland peninsula bounded by waterways meant to emulate the Hudson and East River. Bloomberg estimates the project has already cost 500 billion RMB, or half of the region’s annual output, and as of December 2011 it was far from completion.²⁸ The local government envisions the area becoming a financial center to compete with Shanghai and Shenzhen, and plans call for office space equivalent to one third of the real Manhattan’s current capacity. Yujiapu has drawn attention from news media, analysts, and investors, all shocked by the audacity of the project and the scale of the financial risks it presents.

In 2011, the city’s LGFVs began experiencing declining loan availability, and they publicly acknowledged that the project’s timely completion may be at risk. Of course, a major delay could prevent the project’s economic benefits from materializing in time for the relevant LGFVs to service their debts. Chris Brooke, president and CEO of the real estate investment trust CBRE China, publicly questioned whether the project was properly vetted and whether it is realistic to expect sufficient occupancy in this massive new commercial development.²⁹ If Brooke’s fears are borne out, this would appear to violate the “benefit zone” and “intergenerational equity” concepts of public finance, discussed above.

The Ugly: Land sale failures and potential non-LGFV liquidity drains

The Yujiapu project may become an extraordinary example of the excesses of LGFV finance, but the project has not yet reached the point of financial collapse. The same cannot be said for all projects, however. For example, the Guangzhou city government’s land sales program has seen a significant reduction in the availability of credit, raising only 14 billion RMB of its target 50 billion RMB in the first three quarters of 2011.³⁰ The city of Wuhan also cancelled planned sales of land use right this year due to a reduction in supply of credit.³¹ In addition to slowing the pace of new projects, such a contraction in lending creates liquidity pressures for LGFV projects already underway by interrupting cash flows that may be needed to sustain debt in the short term. This reducing future economic benefits of the project and threatens to destabilize the entire system.

It is important to note that LGFV finance does not operate in a vacuum, and other strains on the Chinese financial system can influence the soundness of local government finance. Although the central government’s plan to encourage infrastructure investment sustained economic growth after the Global Financial Crisis, the severe drop in exports still affected the real economy. The commercial slowdown created a different sort of liquidity squeeze in the southern city of Wenzhou in 2011, where factory bosses began

²⁸ Tracy Alloway, “The Chinese SIV,” *FT Alphaville* (blog), April 7, 2011, <http://ftalphaville.ft.com/2010/04/07/196651/the-chinese-siv/>.

²⁹ *Ibid.*

³⁰ Rahul Jacob, “Drop in China’s Local Land Sales Poses Threat to Growth,” *Financial Times*, December 7, 2011.

³¹ Tracy Alloway, “The Chinese SIV,” *FT Alphaville* (blog), April 7, 2011, <http://ftalphaville.ft.com/2010/04/07/196651/the-chinese-siv/>.

selling personal assets such as luxury cars to pay their debts to small non-bank lenders, larger companies, and other unlicensed lenders. Some even fled China altogether or committed suicide in desperation.³² While the “shadow finance” phenomenon by definition excludes the big banks that lend to LGFVs, a large-scale spate of defaults in this sector would threaten the banks. A shadow finance crisis would likely be transmitted to the banking system via larger companies engaged in informal lending who also owe debts to the banks. Recognizing the financial and political risks, Premier Wen Jiabao paid a visit to Wenzhou in October 2011 to announce a 100 billion RMB bailout fund to be established by the central government for the city’s exporting community.³³

Securitization: a good step but not the way out

While Beijing attempts to smooth out the economic adjustment among exporters, it appears that the leadership is also beginning to understand the scale of the potential dangers brought on by the investment-led stimulus. Even before the global financial crisis, China took steps to rein in risky borrowing for local infrastructure. In 2003, Beijing started requiring that banks appraise the current value of land used as collateral rather than anticipated future value.³⁴ This conservative measure would preclude potentially worthwhile projects like the Changsha Ring Road, discussed above, which depend on future increases in land value. However, given the volatility of land prices over time, this measure provides a measure of stability to the financial system.

China’s policy focus on LGFV debt has been much more active since the 2007 crisis and 2008 stimulus. In October 2011, China rolled out a pilot program to allow local governments to borrow directly on the bond markets, selecting the Shanghai, Shenzhen, Zhejiang, and Guangdong governments as the first to participate.³⁵ Guangzhou successfully raised 6.9 billion RMB in bond financing as part of the pilot project announced in November 2011.³⁶ As private companies, LGFVs have long had the ability to borrow on the bond markets, and in some cases they did so in size. For example, Tianjin Infrastructure Construction and Investment Group Co. raised 3 billion RMB in an April 2011 bond issue.³⁷ What is new about direct bond issues by local governments is that they increase the transparency and accountability of these transactions by reflecting the costs and benefits of public projects in the local government’s official accounts.

Borrowing on the bond markets has some distinct advantages compared to bank loans. First, the securitized nature of bonds allows lenders’ risk to be distributed broadly upon issue and redistributed over time to match the local government’s risk profile with investors’ risk appetites. Second, competitive auctions for local government bonds may provide local governments with more attractive terms if the debt market is sufficiently deep. Critics point out that banks hold 67 percent of all bonds issued and outstanding in

³² Keith Richburg, “Chinese city triggers debt crisis alarm,” Bloomberg News, October 31, 2011.

³³ *Ibid.*

³⁴ George Peterson and Olga Kaganova, “Integrating Land Financing into Subnational Fiscal Management,” (Washington: World Bank Poverty Reduction and Economic Management Network, August 2010).

³⁵ Tom Orlik, “China Bonds May Shuffle Local Debt,” *The Wall Street Journal*, October 22, 2011.

³⁶ Tracy Alloway, “The Chinese SIV,” *FT Alphaville* (blog), April 7, 2011, <http://ftalphaville.ft.com/2010/04/07/196651/the-chinese-siv/>.

³⁷ *Ibid.*

China, and that the bond markets are not as liquid as in more developed countries.³⁸ It is possible that an increase in local government bonds could attract more investors to the market, especially domestic Chinese individual investors who are eager to diversify into higher-yield securities but are blocked from investing abroad due to China's strict capital controls. Bond financing will not solve the question of local government finance, but it will provide a tool to more efficiently distribute risk and broaden public scrutiny of public investment over time.

SECTION III: THE ENDGAME—ENVISIONING A CRISIS

Thus far, we have learned about the size of China's LGFV debt, the nature of the country's fiscal system, the intended function of the land-based financing model, and the ways some of China's subnational government units have diverged from the ideal implementation of that model. By exploring potential crisis scenarios we can learn how these elements may or may not combine to create a financial crisis. Bank of America-Merrill Lynch issued a report in October 2011, titled "Four systematic risks & potential for financial market turmoil," that examined four sequences of events that could lead to a financial meltdown in China: (1) an unraveling of underground lending; (2) a downturn in the property markets; (3) an LGFV liquidity crisis; and (4) "hot money" outflows due to global financial chaos such as a European sovereign debt meltdown.³⁹ All but the last scenario included a drop in Chinese land prices, which would bring about a banking crisis.

The notion that a precipitous drop in property prices would necessarily cause massive LGFV defaults is suspect. It is true that in March 2010, the Ministry of Finance nullified all explicit local government guarantees of LGFV debts.⁴⁰ Still, given the strong policy orientation of local investment projects, it is reasonable to assume that the government would intervene to prevent an LGFV liquidity crisis. Those who doubt whether the government has the capability to do so without increasing the money supply need only consider the public sector's balance sheet. Combining estimates of public sector assets and liabilities from Tao Wang of UBS and Lili Liu of the World Bank, it is clear that the market capitalization of listed state-owned enterprises (SOEs) and estimated current value of public land holdings exceed estimated government liabilities by roughly 2:1 as seen in Figure 7. Thus, the government has a roughly 50 percent "margin of safety" before it would become technically insolvent.

³⁸ Tom Orlik, "China Bonds May Shuffle Local Debt," *The Wall Street Journal*, October 22, 2011.

³⁹ Tyler Durden, "Bank of America charts the four 'crash landing' systemic endgames for China," *ZeroHedge* (blog), October 4, 2011, <http://www.zerohedge.com/news/bank-america-charts-four-crash-landing-systemic-endgames-china>.

⁴⁰ Luo Jun, "China to nullify loan guarantees by local governments," *Bloomberg News*, March 8, 2010.

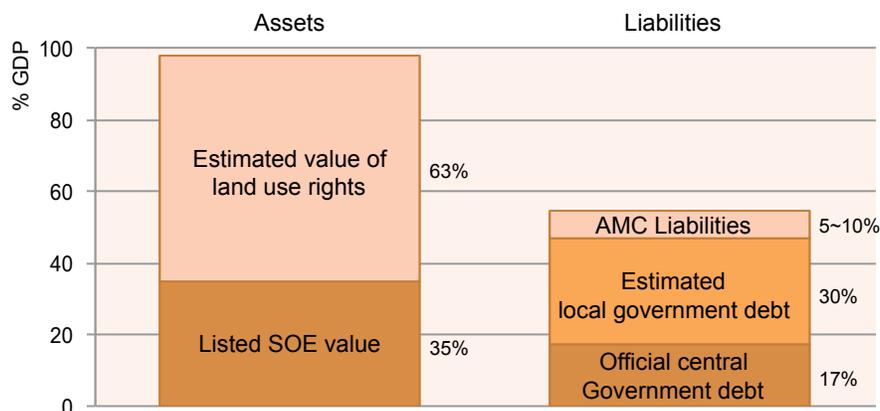


Figure 7. Estimated total government Balance Sheet as percent of GDP, 2010

An estimate of consolidated national/local government-controlled assets suggests that the Chinese public sector is ultimately solvent even after the run-up in debts. (Note: Non-listed SOE assets are unknown but would presumably increase assets further.)

Sources: Tao Wang (2011), Liu

The “total liquidation” outcome is of course a disaster scenario, and a full default of all public debt would run into huge challenges with regard to valuation and liquidity of public assets. However, this is an unrealistic situation, as many if not most LGFV-backed assets are revenue generating and have undeniable economic value. Maturity mismatch issues could be addressed through refinancing as opposed to default. Even the direst predictions call for only a 20-30 percent discount to local government debt, which is clearly manageable in the context of China’s reported public sector asset position.⁴¹ Furthermore, the government has additional policy tools beyond liquidation, such as relaxing property purchase controls, capital controls, and the required reserve ratio, all of which could relieve downward pressure on property prices if implemented in a timely fashion. These policy options involve serious tradeoffs with respect to China’s exchange rate policy; however, in the event of a crisis, these options would nonetheless be available.

CONCLUSION

Ultimately, China’s LGFV debt may be more challenging politically than financially. The policy levers available to Beijing in the event of an impending crisis all have trade-offs. For example, monetary easing or relaxed purchase controls could stimulate inflation, a source of social discontent in recent months. Retrenchment of public investment would mean China would once again rely on the world’s consumers to sustain growth and employment, but U.S. and European consumption is far from pre-crisis levels, and Chinese consumption can only grow so fast.

The Chinese leadership is well aware of the need to rebalance the economy, and their best option will likely include a gradual reduction in investment growth along with

⁴¹ Lucy Feng, “Shadow banking exposure less feared and more than priced in,” Nomura Equity Research, June 24, 2011.

measures to support domestic demand.⁴² Such maneuvers are notoriously difficult due to lags in implementation and measurement, but as discussed earlier, the government has a wealth of resources at its disposal. The leadership has thus far neutralized liquidity issues by ordering banks to extend the maturity of LGFV debt.⁴³ The new leaders named at the 18th Communist Party Congress will likely continue the maturity extension policy, but they will also have to curtail reckless borrowing to achieve a sustainable resolution to the debt build-up. What remains to be seen is whether China's leadership can successfully focus its attention on the local government debt problem in light of the array of other potential stumbling blocks to the country's continued development.

⁴² Figure 1 on Page 3 shows a contraction of overall credit from 2009 to 2010, suggesting a reduction in investment growth is already underway.

⁴³ Kenneth Rapoza, "Barclays' Take on China's Muni Debt 'Crisis'," *Forbes*, January 28, 2013, <http://www.forbes.com/sites/kenrapoza/2013/01/28/barclays-take-on-chinas-muni-debt-crisis/>.