**Second Year Policy Analysis (SYPA)**

# Enhancing responsibility of local government borrowings in China

**Client: China's Ministry of Finance**

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# EXECUTIVE SUMMARY

China's local government debt has increased quickly in recent years, especially at lower level governments. Although the total size of the local government debt remains largely controllable, it brings massive macroeconomic and financial risks.

China's local governments do not borrow in a responsible manner. They repay debt by new borrowings. They borrow to fund projects that cannot generate cash flows. Due to the access to informal borrowing channels and land sales revenue, they care less about expenditure efficiency and project productivity. This has contributed to China's overcapacity issue.

Confidence on the central governments' bailouts, GDP-focused official promotion mechanism, discretionary expenditure mandates by the central government, mismatch of the revenue and the expenditure of the local governments, and incomplete financial market have incentivized the local governments to expand spending regardless of their fiscal capacity.

Based on the international experience, China's political regime and the current economic context, the paper proposes the following policy recommendations to the Ministry of Finance (MOF):

In short term (one year), the MOF shall focus on reducing the immediate risks. This includes allowing the local governments to issue bond to replace existing bank loans and requesting the local governments to clear their illegal contingent liabilities. The MOF shall collaborate with the National Audit Office to conduct regular local government debt audit.

In medium term (three years), the MOF should set up an early warning system and a risk classification mechanism. The MOF should increase the general transfer to the local governments and define expenditure responsibilities. The MOF should work with the Ministry of Organization to pilot debt management performance related local officials' appraisal system.

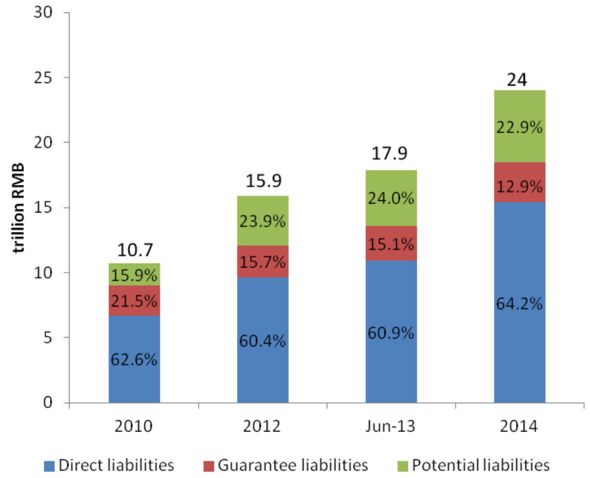
In long term (five years), the MOF should lobby the top government agencies (especially the National People's Congress) to confirm hard budget constraints by law.

## SECTION I: Introduction and Background

### *Local government debt in China increases quickly, especially at lower level governments*

China's local government debt has increased quickly in recent years. According to the National Audit Office (NAO), the total amount of the local government debt was RMB 10.7 trillion (USD 1.65 trillion[1]) by end 2010[2]. It surged to RMB 15.9 trillion (USD 2.45 trillion) and RMB 17.9 trillion (USD 2.75 trillion) in 2012 and June 2013, respectively. This suggested an average annual growth of over 20 percent[3]. As of end 2014, China's local government debt rocketed to RMB 24 trillion (USD 3.69 trillion), as the State Council (China's Cabinet) revealed[4]. Among them, over 60 percent was direct liabilities, and the rest was contingent liabilities[5]. Figure 1.

Figure 1: Local government debt increases quickly, 2010-2014




Source: author
Data source: NAO, National People's Congress (NPC)
* There was no local government auditing in 2011.

Geographically, local government debt amount is higher in the East provinces than the Middle, the Northeast and the West ones[6]. Figure 2. As of June 2013, the average debt amount in China's East provinces was over 50 percent higher than that in the West ones. The

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1 In the paper, I use this exchange rate: USD 1 = RMB 6.5.

2 Many researchers question that the official total debt amount was underestimated. For example, Moody estimated the local government debt in 2010 should have an additional RMB 3.5 trillion (USD 540 billion) (Reuters, 2011). I use data from the governments in this paper, as they are official and consistent.

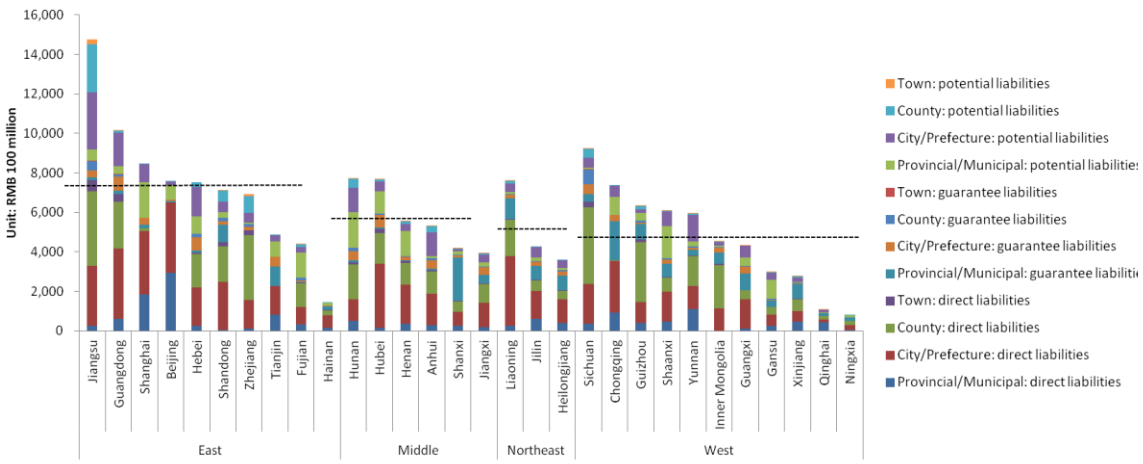
3 NAO. (2011). *Result of 2010 Government Auditing* (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n5/n25/c63566/content.html
NAO. (2013a). *Result of 2013 Government Debt Auditing* (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n5/n25/c63642/part/27403.pdf

4 Han, J., & Chen, F. (2015). *The Standing Committee of the National People's Congress Approves Debt Limit for Local Governments in 2015* (in Chinese). Retrieved from The National People's Congress of the People's Republic of China: http://www.npc.gov.cn/npc/xinwen/2015-08/31/content_1945486.htm

5 "Direct liabilities" refers to local governments' direct debt or debt that will be repaid by government fiscal revenue. "Contingent liabilities" include "guarantee liabilities" and "potential liabilities". "Guarantee liabilities" refers to debt for which local governments have issued guarantees. "Potential liabilities" refers to debt that supports public projects and will not be repaid by government fiscal revenue. If the debtor is unable to repay, local governments might shoulder some of the rescue burden. See Table 1 in Appendix for more details.

6 According to China's National Bureau of Statistics (NBS), East provinces/municipalities include: Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan; the Middle provinces include: Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan; the West provinces/municipalities include: Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Xizang, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang; and the Northeast provinces include: Liaoning, Jilin and Heilongjiang. (NBS, 2015)

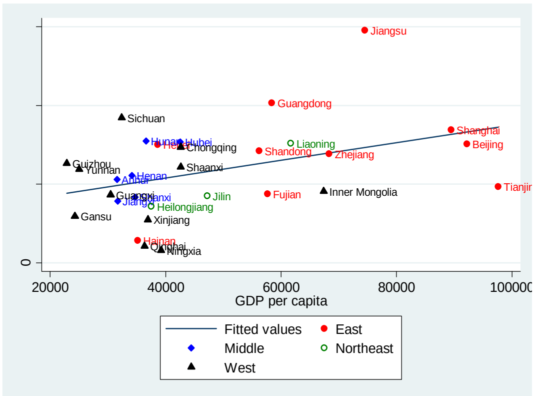
Figure 2: Breakdown of local government debt, as of June 2013



Source: author; Data source: WIND

*The dotted lines show the average local government debt (including contingent liabilities) in the region.

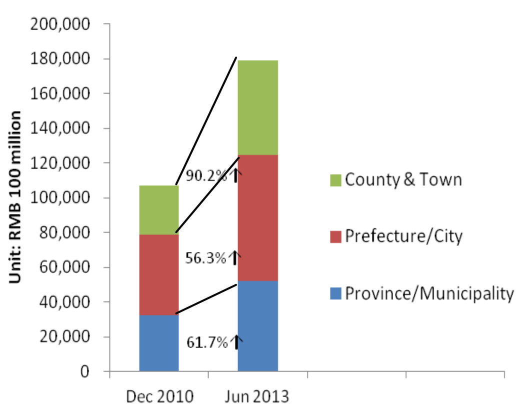
Figure 3: Association between provincial wealth and local government debt, 2013



Source: author.

Data source: National Bureau of Statistics (NBS).

Figure 4: Local government debt of different government level in 2010 and 2013



Source: author; Data source: NAO, WIND

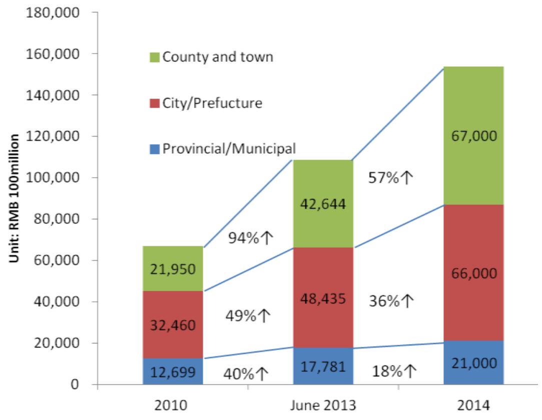
amount of local government debt is positively associated with the wealth level locally (measured by GDP per capita). Figure 3.

The debt situation at lower level governments (including prefecture/city, county and town[1]) is severer than at provincial levels, as illustrated in the NAO's audit reports of 2010 and 2013. Figure 4. Looking at local government's direct liabilities alone[2], debt of county and township governments more than tripled from 2010 to 2014; that of city/prefecture governments doubled and that of provincial governments less than doubled during the same period of time. Figure 5.

1 See China's government structure in Figure 6.

2 Only direct liabilities data are available to show a comparison.

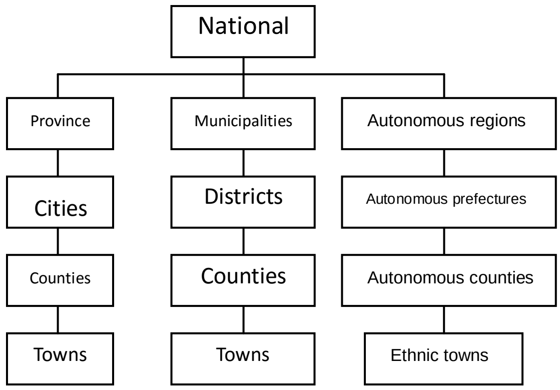
Figure 5: Direct liabilities of lower level local governments increase quicker, 2010-2014




Source: author.

Data source: WIND and NPC.

Figure 6: Government structure in China.
The Chinese government implements a five-tier administration system. Government of each level is directly managed by its next higher level.




Source: CIIC, 2016; Shen & Zou, 2006, pp.1.

## *Indicators suggest China's local government debt remains largely controllable*

Many indicators have been used to assess the risks of public debt. For example, the World Bank developed a "debt management performance assessment tool", including 15 performance indictors to assess the links between local govenmernt borrowings and governance, macroeconomic policies, and financial activies[1]. Allen et al[2] proposed a balance-sheet approach, using indicators to measure maturity mismatch, currency mismatch, capital structure mismatch, and solvency risks. Based on the international experience, the Ministry of Finance (MOF) has introduced debt to fiscal revenue ratio, debt to GDP ratio, new debt to fiscal revenue ratio, repayment to fiscal revenue ratio and overdue repayment ratio to evaluate the local government's debt growth, solvency and current repayment pressure[3]. Based on the available data[4], the indicators below are used to examine the severity of local government debt.

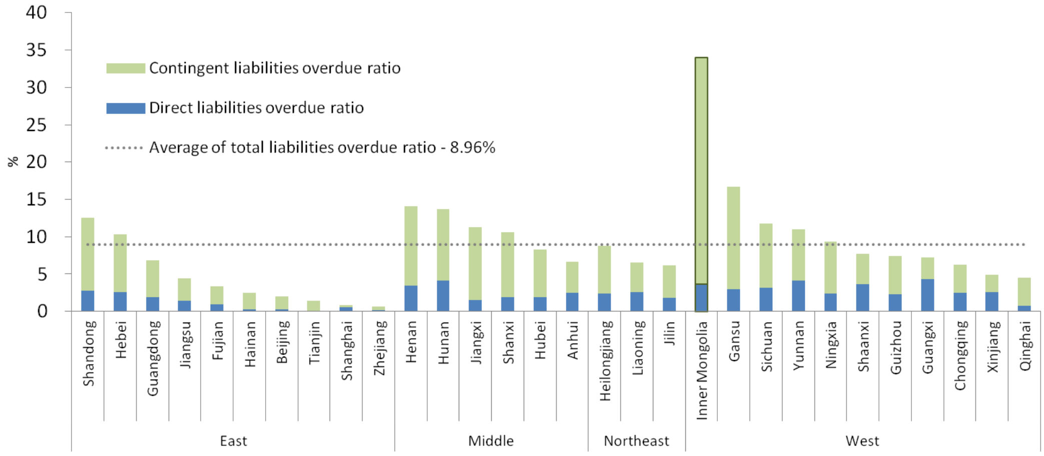
- *Debt to fiscal revenue[5] ratio:* The Chinese government set the national standard at 100

[1] World Bank. (2009). *Debt Management Performance Assessment (DeMPA) Tool.* Washington, DC: World Bank. pp. 7-8.
[2] Allen, M., Rosenberg, C., Keller, C., Setser, B., & Roubini, N. (2002). *A Balance Sheet Approach to Financial Crisis.* Washington: IMF Working Paper No. 02/210. pp.5
[3] The indicators that the MOF has introduced are not hard constraints for the local governments to follow, but rather a reference for the ministry.
NPC. (2015). *Report on Performance to Manage Local Government Debt by the Budget Committee of the NPC* (in Chinese). Retrieved from China's National People's Congress: http://www.npc.gov.cn/npc/xinwen/2015-12/22/content_1955661.htm
[4] New debt to fiscal revenue ratio and repayment to fiscal revenue ratio cannot be calculated due to lack of data of net debt and repayment.
[5] Fiscal revenue includes general revenue, central general transfer, and special transfer.

percent (c.f. international standard 90 – 150 percent)[1]. By end 2012, 3 provincial (10 percent), 99 city (35 percent), 195 county (7 percent) and 3465 town (10 percent)[2] level governments had debt with direct liabilities over 100 percent of their fiscal revenue. The highest debt to fiscal revenue ratio was 189 percent[3]. The situation in 2013 was similar - local governments below provincial level were more likely to break the 100 percent threshold. Table 2 (in Appendix).

- *Debt to GDP ratio:* There is no official threshold for debt to GDP ratio, but the international standard is 60 percent. At provincial/municipal aggregate level, all of the local governments had a debt to GDP ratio below 60 percent in 2012. One province (Guizhou) was estimated to exceed the threshold as of end 2013, when contingent liabilities were included. Table 3 (in Appendix). More detailed data suggest that the debt to GDP ratios for nearly all of the local governments met the international standard in 2013, except for the prefecture/city level government in Hebei Province. Table 2.
- *Foreign debt to GDP ratio:* This is not a major concern, as the majority of China's debt is in local currency. The overall foreign debt to GDP ratio is less than 1 percent as of end 2012, much lower than the international standard of 20 percent.
- *Overdue repayment ratio:* The overdue local government direct liabilities across the country accounted for 5.38 percent of the total debt. Adding contingent liabilities, the

Figure 7: Overdue repayment ratios of China's local government debt, as of end 2012




Source: author; Data source: WIND, Provincial Audit Offices

[1] NPC. (2015). *Report on Performance to Manage Local Government Debt by the Budget Committee of the NPC* (in Chinese). Retrieved from China's National People's Congress: http://www.npc.gov.cn/npc/xinwen/2015-12/22/content_1955661.htm

[2] 30 provincial, 396 city, 2788 county and 33091 town level governments' local debt were audited in 2013.

[3] NAO. (2013a). *Result of 2013 Government Debt Auditing* (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n5/n25/c63642/part/27403.pdf

overdue ratio was 8.96 percent, as of end 2012[1]. However, the situation across the provinces/municipalities varies. The overdue ratios in the Middle and West provinces/municipalities were much worse than those in the East region. The overdue ratio of Inner Mongolia exceeded 30 percent in 2012. Figure 7 (more detailed figures in Table 4 in Appendix).

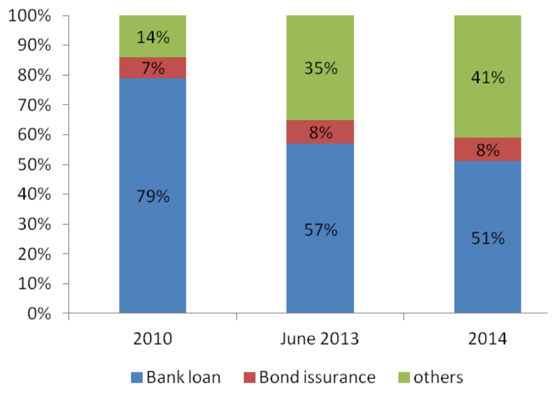
### *Local government debt problem matters to China's macroeconomic and financial stabilities*

The indicators above suggest that the local government debt issue is largely under control. However, risks exist, especially for lower level governments.

First, local governments have huge burden of debt services in the coming years. Over 50 percent of the debt will be due by the end of 2017[2]. IMF estimated local governments would need to spend over 6 percent of their fiscal revenue to repay interests alone[3]. However, the repayment ability of local governments is deteriorating due to the economic slowdown and decrease in land sales revenue (as property market cools down).

These have cast great risks to China's financial sector. Banking sector, in particular, has a substantial exposure to the local debt. According to NAO, over 50 percent of local government debt, including direct and contingent liabilities, is from banks (especially local banks). Figure 8 & 9.

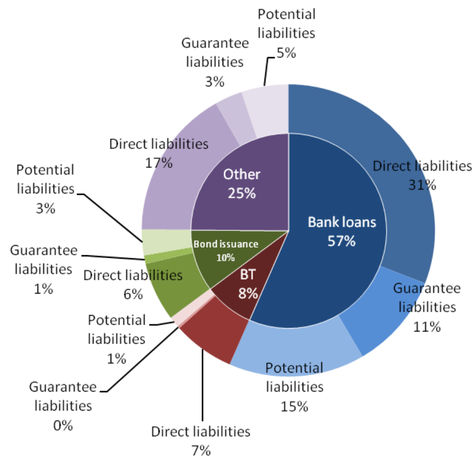
Figure 8: Sources of local government borrowings, 2010-2014




Source: author

Data source: NAO, NPC

Figure 9: Sources of local government borrowings – detailed breakdown, as of June 2013




Source: author; Data source: NAO

[1] There is no official warning line of overdue ratio. Some research organizations use 10 percent (CR Foundation, 2012, pp.3).

[2] NPC. (2015). *Report on Performance to Manage Local Government Debt by the Budget Committee of the NPC* (in Chinese). Retrieved from China's National People's Congress: http://www.npc.gov.cn/npc/xinwen/2015-12/22/content_1955661.htm

[3] Lu, Y., & Sun, T. (2013). *Local Government Financing Platforms in China: A Fortune or Misfortune?* Retrieved from International Monetary Fund: https://www.imf.org/external/pubs/ft/wp/2013/wp13243.pdf, pp.12.

The close relationship between banks and public sector may create potential contagion between the financial sector and sovereign. If any local government goes bankrupt, the central government will eventually have to bail them out to lower the risk. This could incur moral hazard problem, i.e. the local governments tend to borrow irresponsibly since they know the Central government will step in. The Central government could have sufficient resources at the moment, but it will face financial constraints in the future. These could increase China's sovereign risk[1].

More broadly, huge debt could harm China's macroeconomic structure. In short run, increasing government spending can raise aggregate demand and output. But in long run, it may crowd out private investment, change saving behaviour, and make the economy heavily rely on public spending[2].

### *Policy Questions: How to enhance local government borrowing responsibility?*

Considering the huge debt amount, quick growth rate and significant impacts on China's financial and macroeconomic system, I aim to analyze sustainability of local government debt, from the perspectives of revenue, expenditure, efficiency of public spending, maturity and etc. Based on that, I will discuss policy options to enhance the responsibility of local government borrowings.

The paper is organized as follows: Section II discusses a diagnostic framework. Section III applies it to China's scenario. Section VI proposes potential policy recommendations. Section V analyzes how to make them implementable in China's context. Section VI provides a conclusion of policy recommendations.

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[1] Lu, Y., & Sun, T. (2013). *Local Government Financing Platforms in China: A Fortune or Misfortune?* Retrieved from International Monetary Fund: https://www.imf.org/external/pubs/ft/wp/2013/wp13243.pdf, pp. 14-16.
[2] Ibid, pp. 16.
Elmendorf, D. W., & Mankiw, G. N. (1998). *Government Debt.* Retrieved from Board of Governors of Federal Reserve System: http://www.federalreserve.gov/pubs/feds/1998/199809/199809pap.pdf, pp.10-13.

## SECTION II: Diagnostic Framework

There is rich literature measuring whether local governments borrow responsively. Below is a quick summary of the key elements:

- *Purpose of borrowing*: Borrowing is not always an appropriate financing strategy. A guideline for responsible local borrowing is: increases in longer-term debt should be used to finance increases in capital investment[1].
- *Debt maturity*: The period of debt repayment should approximate the useful life of the capital project, so as to match the time profile of costs and benefits[2].
- *Amount to borrow projection*: An estimation or projection of local government borrowing needs for investment spending is needed. The amount of debt should be within the locality's ability to repay. It should not crowd out private investment[3].
- *Revenue*[4]
  - A municipality's capacity to take on new "general obligation" debt – debt secured by the municipality's general budget, depends largely on its present and anticipated future operating saving. Extraordinary sources of capital income for a time may be used to repay debt, but over the long run operating savings must be sufficient to cover debt services with a margin of safety.
  - Fund financing involves dedicating the revenue stream from an investment project to debt repayment. It is only feasible when it is administratively possible to charge customers for service usage.
  - Local government budgets in most developing nations are highly dependent on shared taxes and intergovernmental transfers. Need to have rules to determine the total amount of transfer. Local governments should be involved in the design and management of the intergovernmental transfer system.

[1] The World Bank defines capital investment as "investment in the acquisition or building of new assets; or major repair and replacement of existing assets that have an economic life longer than one year and a value above a specified threshold" (Olga, 2011, pp.3).
Peterson, G.E. (2000). *Building local credit systems.* The World Bank. pp.6.
[2] Ibid. pp.7.
[3] Ibid. pp. 16.
Alisjahbana, A. S., Soemitro, S., & Ramayandi, A. (2002). *Local Government Borrowing: Regional University Research on Decentralization in Indonesia.* IRIS Center of the URCI, University of Maryland at College Park. pp. 12-13.
[4] Local governments' revenue includes general revenue, project budget (special fund), and central government transfer.

- A measure of autonomy for sub national governments on the revenue. This requires sub national governments have the authority to own-finance locally provided services at the margin.
- Local credit systems: an assessment of existing sources and mechanism for local government borrowings from foreign and domestic sources, from financial and non-financial sector institutions sources.[1]

- <u>*Expenditure*</u>
    - Clarity of roles and responsibilities between different levels of government. Define the role of local government in service delivery.
    - A measure of autonomy for sub national governments on the expenditure (within limits)[2].
- <u>*Efficiency and productivity of local government borrowing*</u>
    - Use of market determined interest rates in lending has been found generally to be positively correlated with average investment returns
    - Whether governments provides guarantee influences on the efficiency and productivity of local government borrowings[3].
- <u>*Institution building*</u>: A prerequisite for successful decentralization is that sub national governments possess the administrative and technical capacity required to effectively carry out their assigned responsibility. Supporting institutions include democratic representation, sound budget processes, local government revenue collection capacity, and mechanisms to ensure coordination and cooperation between different levels of government[4].

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[1] Peterson, G. E. (2000). *Building local credit systems.* The World Bank. pp. 7, 12-14.
Yilmaz, S., Beris, Y., & Serrano-Berthet, R. (2008). *Local Government Discretion and Accountability: A Diagnostic Framework for Local Governance.* The World Bank. pp. 21-23.
Alisjahbana, A. S., Soemitro, S., & Ramayandi, A. (2002). *Local Government Borrowing: Regional University Research on Decentralization in Indonesia.* IRIS Center of the URCI, University of Maryland at College Park. pp. 12-13.
[2] Dabla-Norris, E., & Wade, P. (2002). *The Challenge of Fiscal Decentralization in Transition Countries.* International Monetary Fund. pp. 14-15.
Kee, J. E. (2003). *Fiscal Decentralization: Theory as Reform.* The George Washington University. pp. 4.
Yilmaz, S., Beris, Y., & Serrano-Berthet, R. (2008). *Local Government Discretion and Accountability: A Diagnostic Framework for Local Governance.* The World Bank. pp. 21.
[3] Peterson, G. E. (2000). *Building local credit systems.* The World Bank. pp. 13.
[4] Dabla-Norris, E., & Wade, P. (2002). *The Challenge of Fiscal Decentralization in Transition Countries.* International Monetary Fund. pp. 15.

## SECTION III: Analysis of China's Local Government Debt within the Diagnostic Framework

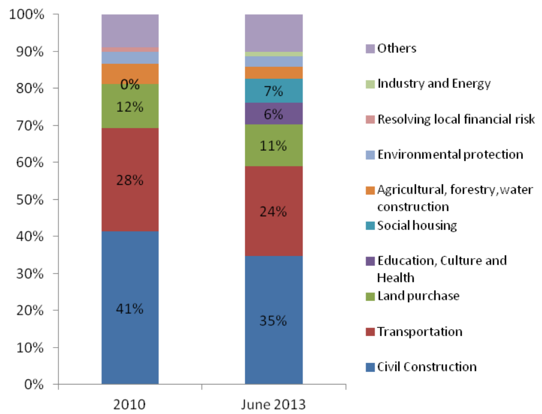
### *China's local governments are not borrowing in a responsible way*

Applying the diagnostic framework to China's local government debt situation:

- *Purpose of borrowing*

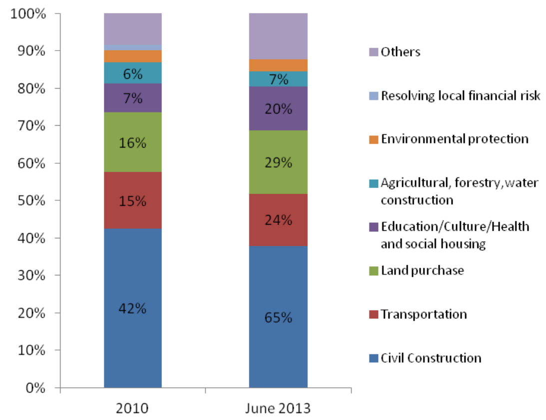
The majority of local government borrowings are for the purpose of capital investment. Data shows that over 50 percent of total debt (including direct and contingent liabilities) was used in civil construction and transport projects. Among direct liabilities alone, the situation is similar. See Figure 10 & 11.

Figure 10: Purpose of local government borrowings (direct and contingent liabilities), 2010 and 2013




Source: author. Data source: WIND

Figure 11: Purpose of local government borrowings (direct liabilities), 2010 and 2013




Source: author

Data source: WIND

However, China's local governments did not distinguish "general obligation" and "revenue" debt. The majority of the projects funded by local government borrowings could not generate revenue. 86.77 percent of them were for public welfare in 2013[1]. This means the local governments will need to rely on their fiscal revenue to repay debt in theory.

- *Debt maturity*

There is a severe maturity mismatch for the local debt. Official data show that the most of the local government borrowings are of short- or mid-term. However, the payback periods

[1] NAO. (2013a). *Result of 2013 Government Debt Auditing* (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n5/n25/c63642/part/27403.pdf

Figure 12: Sources of local government borrowings and their maturity, as of June 2013

| Type of debt | Bank loans | Local government bond* | Bond issuance by local government investment vehicle | Trusted fund | BT* |
|---|---|---|---|---|---|
| Proportion (%) | 56.6 | 3.7 | 6.2 | 8.0 | 8.3 |
| Average maturity (years) | 5 | 3-5 | 5-7 | 1-3 | 3 |

Source: Chen, Hui, & Zhang, 2015, pp. 14; NAO; WIND
*BT refers to "build and transfer".

Figure 13: Payback period of selected types of projects

| Industry | Average payback period (years) | Average return (%) |
|---|---|---|
| Utility (electricity, heating, gas & water) | 19 | 5.3 |
| Transport, Storage and Post | 21 | 4.7 |
| Water, Environmental and other public infrastructure | 26 | 3.8 |

Source: Chen, Hui, & Zhang, 2015, pp.15; NBS; WIND

of the projects funded are often very long. Figure 12 &13.

The debt maturity mismatch issue has caused many local governments to repay debt by new borrowings. According to the NAO, 66.92 percent debt to finance second-class highway were refinanced by new debt as of 2012[1]. One provincial and three prefecture/city level governments defaulted due to liquidity shortage (but the amount was not substantial). In 2013 and 2014, the National Development and Reform Committee (NDRC, China's central economic planning authority) and the State Council issued policy circulars to officially allow debt restructuring to reduce default risks[2].

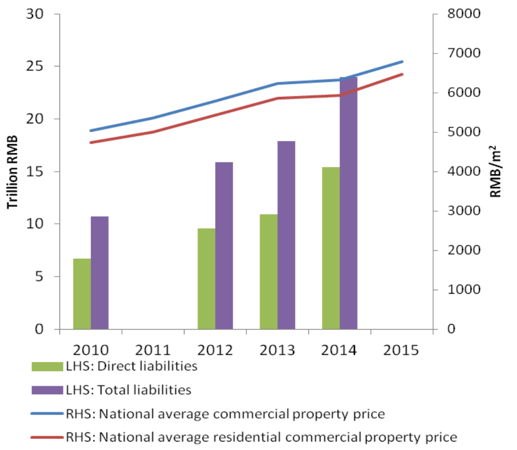
- *Amount to borrow projection*

The local governments rarely conduct formal estimation about the amount that they need to borrow, because they have limited formal borrowing channels. China's *General Rules for Loans* forbids governments to borrow from banks[3]. Also, the local governments were not allowed to issue bonds until May 2014 when the State Council approved 10 provinces and municipalities[4] to issue municipal bond as a pilot[5].

[1] NAO. (2013b). *Result of Audit on 36 Local Governments*, NAO Notice 2013/24 (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n1992130/n1992150/n1992500/3291665.html
[2] Chen, Z., Hui, M., & Zhang, J. (2015). Local Government Debt Maturity Mismatch: The Characteristics of Risk and Formation Mechanism. *Economic Management Journal,* Vol. 5, pp. 12-21.
[3] PBoC. (1996). *General Rules for Loans* (in Chinese). Retrieved from People's Bank of China: http://www.pbc.gov.cn/rhwg/19961202f.htm
[4] The 10 provinces and municipalities in the pilot project include: Shanghai, Zhejiang, Guangdong, Shenzhen, Jiangsu, Shandong, Beijing, Jiangxi, Ningxia and Qingdao.
[5] Since 2009 the local governments have been allowed to issue bonds, but they would need the MOF to do so on behalf of

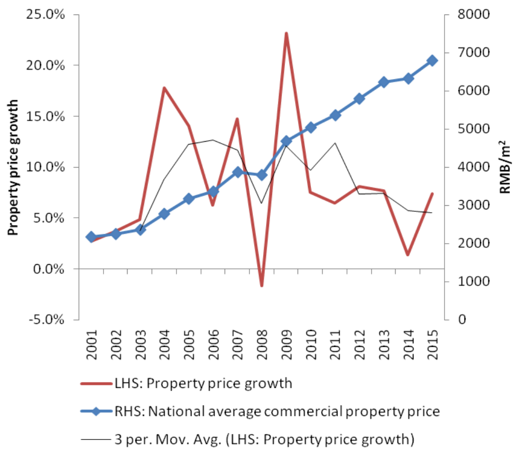
Therefore, the local governments creatively established arms-length investment vehicles, or so called "local government financing vehicles (LGFVs)", to borrow from banks and the capital market. For example, when a local government needed to finance a public infrastructure project, they could ask the developer or the constructor to collaborate with an existing or a new LGFV to finance. The LGFVs could borrow from banks or issue bonds or use other tools to finance the project. Local governments tended to use their extra-budgetary and off-budget revenue[1] to repay the debt, which largely came from land sales. This was workable when China was experiencing property market booming. Figure 14 & 15. (Table 5 in Appendix explains how LGFVs function.)

Figure 14: Association between local government debt and property prices, 2010-2015




Source: author. Data source: CEIC, WIND.

Figure 15: China's Property prices in 2001-2015: a downward trajectory




Source: author. Data source: CEIC, WIND.

In addition, research found that Chinese government's spending in private goods has crowded out private investment[2].

them. This indicated that the Central government would bear the final responsibility if the local government defaulted. The new pilot allows the local governments to issue debt themselves, suggesting that it will be the local governments that are responsible for the repayments. That said, the Central government will not simply take off their hands – the debt that the local governments will issue requires the State Council's approval.

[1] Extra-budgetary revenue refers to resources managed directly or indirectly by administrative branches of the government outside the normal budgetary process. They can be special accounts, segregated from the budget, and intended for carrying out a specific activity, or to benefit a specific agency. These are often organized as a fund, or as a self-balancing accounting entity; or they can be revenues raised outside the budget framework by administrative units. Land sales revenue is included as extra-budgetary revenue. (Wong, 1999, pp.2)

Off-budget revenue refers to resources not included in on-budget or extra-budget revenue. The local governments or other government agencies can manage off-budget revenue directly. They are largely illegal. The local governments raise off-budget revenue in two main methods. First, they use local government creditworthy to borrow from the market – this creates local government debt de facto. Second, they use their authority to acquire financial resources. Off-budget revenue is often a grey area and lack of transparency.

On-budget revenue includes tax, additional tax, special revenue, administrative fees and etc. In China, tax accounts for the majority of on-budget revenue, over 90 percent. (Jia & Bai, 1998, pp. 46-48)

[2] Xu, X., & Yan, Y. (2014). Does government investment crowd out private investment in China? *Journal of Economic Policy Reform*, pp. 1-12

- *Revenue*

As examined above, a large number of local governments below provincial/municipal level are having a debt to fiscal revenue ratio exceeding the national warning line (100 percent). On-budget fiscal revenue, including general revenue, central general transfer and special transfer, is not sufficient to repay the debt.

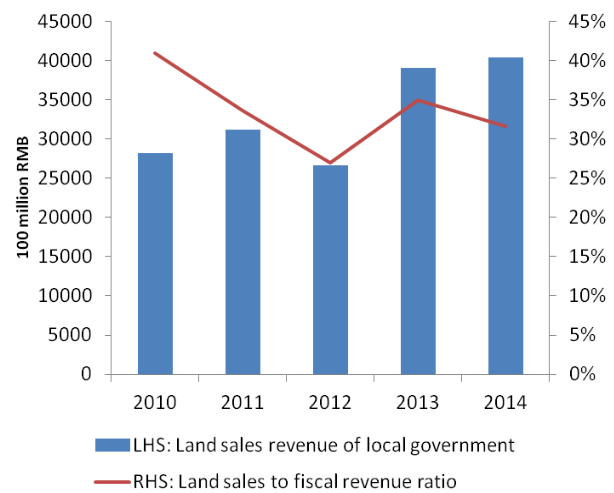
Many local governments have heavily relied on land sales to repay their debt. As Figure 16 shows, land sales of all the provinces/municipalities (with available data) accounted for over 20 percent of debt repayment resources. Over 50 percent of debt repayment in Zhejiang, Tianjin，Beijing, Fujian, Hainan and Chongqing would be covered by land sales revenue. However, this is no longer a sustainable resource. Due to the property market cooling policies and recent economic slowdown, land sales as a proportion of local government revenue have been on a downward trajectory. Figure 17.

Figure 16: Local government debt's reliance on land sales: land sales that the local governments promised to repay debt, as of 2012

| | Land sales to total debt ratio (%) | Land sales to direct liabilities ratio (%) |
|---|---|---|
| Zhejiang | 46.31 | 66.27 |
| Tianjin | n. a. | 64.56 |
| Beijing | 51.66 | 60.30 |
| Fujian | 29.80 | 57.13 |
| Hainan | 42.21 | 57.13 |
| Chongqing | 23.30 | 50.89 |
| Jiangxi | 28.78 | 46.72 |
| Shanghai | 26.90 | 44.06 |
| Hubei | 27.02 | 42.99 |
| Sichuan | 26.56 | 40.00 |
| Liaoning | 28.54 | 38.91 |
| Guangxi | 18.85 | 38.09 |
| Shandong | 22.47 | 37.84 |
| Jiangsu | 7.46 | 37.48 |
| Anhui | 20.10 | 36.21 |
| Heilongjiang | 20.00 | 36.10 |
| Hunan | 13.51 | 30.87 |
| Guangdong | 17.50 | 26.99 |
| Shaanxi | 11.57 | 26.73 |
| Jilin | 14.55 | 22.99 |
| Gansu | 8.39 | 22.40 |
| Hebei | 11.65 | 22.13 |
| Shanxi | n. a. | 20.67 |
| Henan | n. a. | n. a. |
| Guizhou | n. a. | n. a. |
| Yunnan | n. a. | n. a. |
| Qinghai | n. a. | n. a. |
| Ningxia | n. a. | n. a. |
| Xinjiang | n. a. | n. a. |
| Inner Mongolia | n. a. | n. a. |

Source: author; Data source: WIND

Figure 17: Trend of land sales revenue for local governments, 2010-2014




Source: author; Data source: CEIC

The local governments' financing in formal ways is expected to be enhanced since they are now allowed to issue municipal bonds for themselves. In addition, the MOF aims to clarify general obligation and revenue bonds[1]. This potentially can offset their increasing revenue pressure due to land sales slowdown.

Regarding local credit rating, the MOF[2] has requested local governments to hire credible companies[3] to provide credit rating before they issue municipal bonds. Due to the sensitivity of the issue, the Chinese government inclined to rely on Chinese credit rating companies[4]. So far all the local governments in the pilot have gain a credit rating of AAA. This might be reasonable, because the local governments in the pilot are well selected by the MOF. They are all of provincial and municipal level. And they have relatively sound fiscal performance. Moreover, the market still believes that the Central government will back the local governments if defaults happen[5]. The MOF has urged the credit rating companies to improve their services[6].

- *Expenditure*

According to China's Constitution, roles and responsibilities among different level governments should follow the Central government's mandates. The State Council defines detailed responsibilities for governments of different levels. However, in reality there is no clear spending responsibilities separation (except for foreign affairs and national defence expenditures). If some issues could be managed by the Central and local governments simultaneously, no agency would claim responsibility. Sometimes the Central government is not taking the responsibility of the expenditure items that fall in its realm, e.g. cross-regional pollution or cross-regional justice management. Thus, the local governments have to

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[1] MOF. (2014a). *Method to Include Existing Local Government Debt into Budgetary Management* (in Chinese). Retrieved from China's Ministry of Finance: http://yss.mof.gov.cn/zhengwuxinxi/zhengceguizhang/201410/t20141028_1154561.html

[2] MOF. (2014b). *Guidance on Credit Rating for Local Government Bond Issuance Pilot in 2014* (in Chinese). Retrieved from China's Ministry of Finance: http://gks.mof.gov.cn/redianzhuanti/guozaiguanli/gzglzcfg/201406/t20140611_1097736.html

[3] There are over hundreds of credit rating companies in China. Among them, there are five major ones: China Chengxin Credit Rating Group, Dagong Global Credit Rating Corporate, China Lianhe Credit Rating Corporate, Pengyuan Credit Rating Corporate, and Shanghai Brilliance Credit Rating & Investors Service Corporate.

[4] Wang, C. (2015). *Urgent to Establish China's Credit Rating System* (in Chinese). Retrieved from China Academy of Social Sciences: http://www.china.com.cn/opinion/think/2015-05/06/content_35499448.htm

[5] Chen, Y. (2015). *Why All Local Governments Receive AAA Credit Rating?* (in Chinese). Retrieved from China Business Network: www.yicai.com/news/2015/06/4631886.html

[6] MOF. (2015). *Notice on Local Government General Obligation Bond Issuance in 2015* (in Chinese). Retrieved from China's Ministry of Finance:
http://gks.mof.gov.cn/redianzhuanti/guozaiguanli/difangzhengfuzhaiquan/201503/t20150320_1205024.html

financially cover these activities, but with very low incentives. Sometimes the Central government is in charge of the issues that could be decentralized, e.g. rural toilet projects. Due to the vague separation of expenditure responsibilities, there is a huge negotiation room among different levels of governments. This has further enhanced the uncertainty of service delivery[1].

- *Efficiency and productivity of projects funded by local government borrowings*

Low efficiency and productivity of local government investment has been a major concern. Shen & Zhang[2] revealed a decreasing efficiency (measured by marginal capital production) trend from 1990 to 2011. Zhang & Sun[3] had very similar findings based on regression analysis and attributed the reasons to the neglect of project feasibility studies and project implementation monitoring. Wang & Zhang[4] interestingly revealed a positive assocition between fiscal decentralization and government investment efficiency, and a negative relation between extrabudgetary revenues and effiency in China. The NAO also acknowledged the low efficiency of investment financed by the local government debt, and the local government officials' corruption activitied linked with debt financing[5].

Overcapacity, as a result of low investment efficiency, has received the Chinese top leaders' attention. Since the beginning of 2016, Premier Li Keqiang has reiterated to cut excessive capacity, especially in steal and coal industries. However, as those industries are usually big local tax contributors, local officials are reluctant to reduce the production.

Regarding collaterals, RMB 46.5 billion (USD 7.1 billion) of local government debt was raised with illegal local government guarantees[6] in 2010, involving 7 provinces/municipalities (23 percent), 40 prefectures/cities (10 percent), and 107 counties (4 percent). This number increased to RMB 335.9 billion (USD 51.8 billion) in 2012. The

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[1] Lou, J. (2014). *Promoting Institutionalization and Legalization of Administrative Powers between Governments of Different Levels* (in Chinese). Retrieved from China's Ministry of Finance: http://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/201412/t20141202_1162071.html

[2] Shen, L., & Zhang, H. (2013). Study on Motives and Necessity of Local Government Investment: Evidence from the 4 Trillion Stimulus Package (in Chinese). *Journal of Dongbei University of Finance and Economics*, Vol. 2, pp. 70-74.

[3] Zhang, R., & Sun, L. (2012). Evidence on Fiscal Decentralization's Impact on the Efficiency of Local Government Investment (in Chinese). *Informationization of Management in China.* Vol. 15, pp. 25-27.

[4] Wang,L., & Zhang,H. (2013). Fiscal Decentralization, Transfer and Local Governments' Investment Efficiency (in Chinese). *Contemporary Finance and Economics,* Vol.6, pp.30-31.

[5] Zou, X. (2013). *Study on Allowing Local Government's Debt Financing in China* (in Chinese). Retrieved from China's National Audit Office: http://www.audit.gov.cn/n6/n39/n61/c1381/content.html

[6] "Illegal local government guarantees" including improper collaterals (e.g. fiscal revenue or public assets) and no tangible collaterals.

Chinese government has emphasised regulating local governments' guarantees[1].

- *Institution building*

China's local governments have technical capacity to carry out expenditure responsibilities. The local governments have been invested to improve government budgeting in recent years. However, they do not have real control of their budget and they do not process the administrative capacity to carry out their responsibilities[2]. Instead of coordination and cooperation, governments of different levels often compete for financial resources.

### *Hypotheses of the causes of the problems*

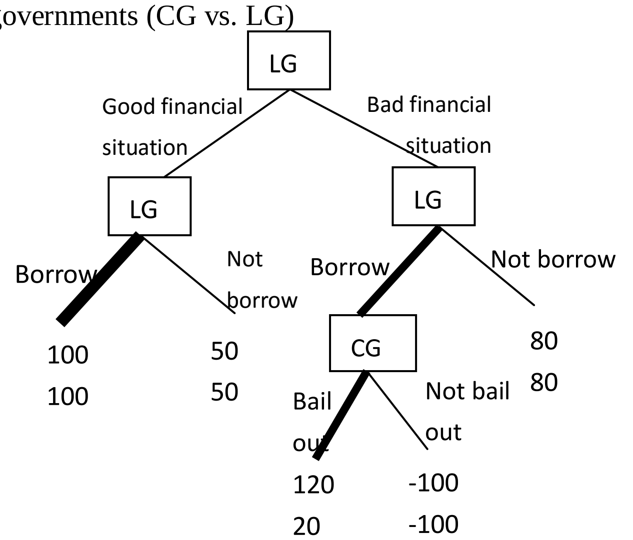
As analyzed above, it can hardly say that the Chinese local governments are borrowing in a responsible manner. The key issues include: lack of on-budget fiscal revenue, no clear boundary of fiscal expenditure, massive expenditure responsibilities, lack of formal financing channels, using debt financing to fund non-profit projects, no well-prepared borrowing plan in advance, low investment efficiency and lack of a sound institutional environment.

Below provides five hypotheses of the causes of the local governments' irresponsible borrowing behavior:

- **Adverse selection and moral hazard**

Local governments' irresponsible borrowings reflected a game between them and the central government. As Figure 18 shows, if a local government is in a good financial situation, local government borrowings will be beneficial for both the central and local governments – because the local governments can use debt financing to boost economic

Figure 18: Game between the central and the local governments (CG vs. LG)




The illustrative payoff above is for the local governments, and the below is for the central government.

[1] State Council. (2014a). *The State Council's Announcement to Enhancing Local Government Debt Management* (in Chinese). Retrieved from The Chinese National Government: http://www.gov.cn/zhengce/content/2014-10/02/content_9111.htm

[2] Wu, A. M. (2013). How Does Decentralized Governance Work? Evidence from China. *Journal of Contemporary China*, Vol.22, pp. 386.

growth and they will be able to repay the debt. If a local government is in a bad financial situation, it will also choose to borrow, because the local government officials know that the central government will choose to bail them out to reduce financial and macroeconomic risks. Compared with not borrowing, the local officials will gain more if they borrow, because they can support local economic performance via debt financing (if they use the borrowing to finance economic activities) or they can gain personal benefit (if they corrupt). Thus, no matter the local governments are in good or bad financial status, they will choose to borrow. The ones in bad situation will be more inclined to borrow (adverse selection). And the local governments do not have a strong incentive to repay principal or interests, because the local debt is essentially backed by the central government (moral hazard).

- **Promotion mechanism of the local government officials**

The local leaders' promotion is highly linked to the economic growth. This is an effective way to incentivize the officials to boost local economic development. However, this resulted that the local leaders only care about the short-term growth figures during their terms, neglecting long-term impacts, e.g. environmental degradation[1]. The officials are incentivized to borrow beyond the local fiscal capacity and to achieve vanity projects in short-term. Since the officials only claim political credits and they can leave the debt obligations to their successors, they are more than happy to expand investment by borrowing[2].

The fierce economic growth competition between different regions further stimulates the local leaders' over-spending decisions. Cao, Ma, & Shen[3] find that over-investment phenomenon is more common among the local officials who are from the localities, compared with the officials appointed and transferred by the central government, because the latter usually do not bear massive promotion pressure – they are transferred to a local government for special purposes (e.g. managing coal mining security) or gain "grass-root" working experience for promised promotion.

[1] Zhou, L. (2007). Study on the Promotion Model of Local Government Officials in China (in Chinese). *Economic Research*, Vol. 7, pp. 46-48.

[2] Shao, J., Zhou, S., & Xu, M. (2014). *Study on the Audit Report of the Local Government Debt* (in Chinese). Retrieved from The Audit Office of Zhoushan City: www.zssj.gov.cn/uploadfile/20143/2014314135059.doc, pp. 16.

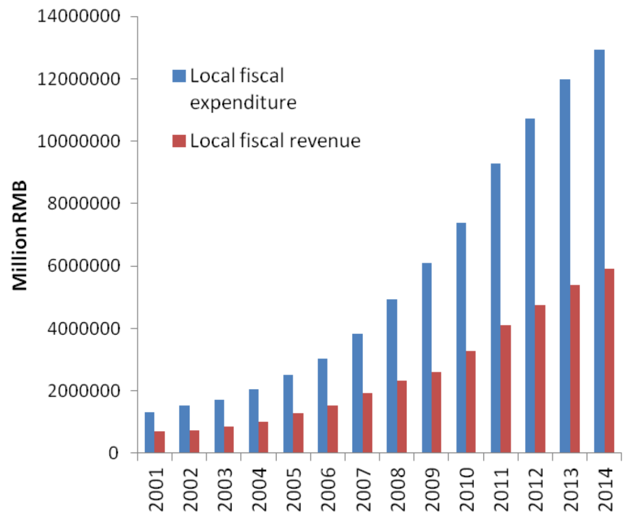
[3] Cao, C., Ma, L., & Shen, X. (2014). Fiscal Pressure, Promotion Pressure, Tenure of Office and Local State-owned Companies' Overinvestment (in Chinese). *China Economic Quarterly*, Vol.13, pp. 1432-1433.

- **Political mandates**

Sometimes the local governments borrow and invest to fulfill the Central government's mandates. For example, the Chinese government issued a "4 trillion stimulus package" in late 2008 to combat the global financial crisis. This was widely welcomed by the developed world at that time[1]. However, among the RMB 4 trillion (USD 615 billion) stimulus, only 30 percent (RMB 1.18 trillion (USD182 billion)) was from the Central government's fiscal budget[2]. The rest became fiscal pressure for the local governments. They turned to banks for loans. Locally-owned enterprises were also "forced" to borrow and expand production.

In addition, the Chinese government announced to achieve urbanization ratio[3] to 60 percent by 2020[4]. This requires huge fiscal contribution of the local governments to provide public services (including education, healthcare, senior care and etc) and public infrastructure (including social housing, urban renovation, public transport and etc). But in the past decade, local fiscal revenue never covered fiscal expenditure. Figure 19. The local governments will need to find more financial resources to fill the increasing fiscal gap in the coming years.

Figure 19: Local fiscal revenue vs. expenditure




Source: author; Data source: CEIC

- **Insufficient financing tools and incomplete marketization of the capital market**

These two reasons have led to local governments' irresponsible behavior simultaneously. On one hand, the local governments were not allowed to issue bonds or run fiscal deficit, as

[1] People's Daily. (2008). *China's 4 Trillion Stimulus Package Stimulates the World* (in Chinese). Retrieved from People's Daily Online: http://finance.people.com.cn/GB/1045/8320796.html
[2] Qiu, G. (2009). *Premier Wen's Explanation of the 4 Trillion Stimulus Package: New Economic Stimulating Policy at Any Time* (in Chinese). Retrieved from China News Net: www.chinanews.com/gn/news/2009/03-13/1600578.shtml
[3] Here "urbanization ratio" refers to the proportion of urban population who live in the cities for more than 6 months in the total population. They don't need to have urban household registration (hukou).
[4] State Council. (2014b). *National Modern Urbanization Plan (2014-2020)* (in Chinese). Retrieved from The State Council: http://www.gov.cn/zhengce/2014-03/16/content_2640075.htm

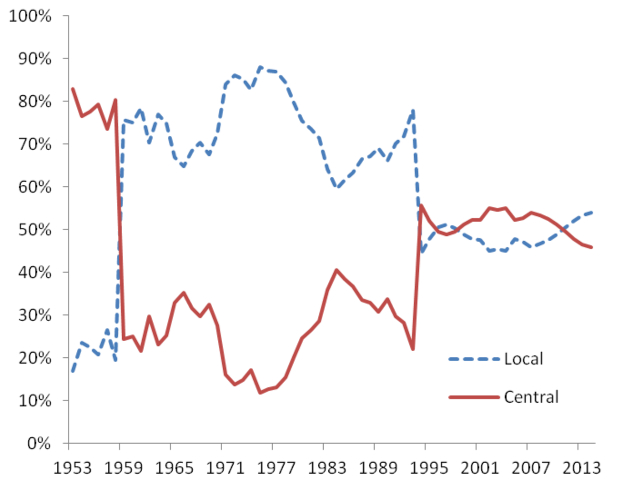
the *Budget Law* (1994 version) regulated. On the other hand, the governments manage the financial system, so they can gain below-market interest rates from banks to finance projects. Thus, the local governments tend to strengthen their control of the locally-owned banks and use LGFVs to finance, in order to fulfill their fiscal needs. Since the local governments could easily "ask" the local financial institutes for loans, they have cared less about project planning, efficiency or productivity.

Imperfect crediting rating services also reflect China's incomplete financial market. Credit rating companies only have started to provide credit rating services for local governments since 2013, following the Central government's request.

- **Incomplete fiscal decentralization, mismatch between local governments' spending and revenue**

China started its major fiscal reform in 1994. Before that, the Finance Ministry was in a rather weak position for a long time, in part because the planned economy did not need a system to optimize the allocation of fiscal resources[1]. Figure 20. However, in late 1980s and early 1990s, the central government was facing severe fiscal pressure – it did not have funding to support even national defense [2]. Meanwhile, inequalities between rich and poor areas, between rich and poor government organizations widened. The central government had to "playing to the provinces" to manage the country's fiscal policy and macroeconomic stabilities[3].

Figure 20: Fiscal revenue of the Central and local governments (as a proportion of the total revenue), 1953-2014



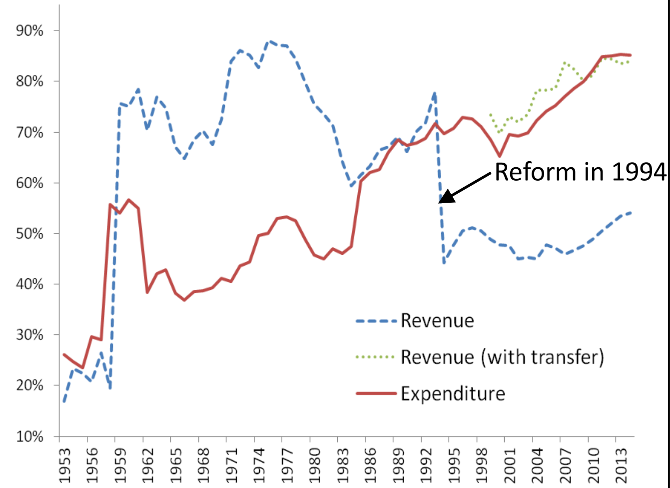

Source: author; Data source: CEIC

As a result, the central government

[1] Wu, A. M. (2013). How Does Decentralized Governance Work? Evidence from China. *Journal of Contemporary China*, Vol.22, pp. 385.
[2] Zhao, Y. (2014). *Background Review: China's Fiscal Decentralization History* (in Chinese). Retrieved from Zhejiang University: person.zju.edu.cn/attachments/2014-05/07-1401349109-675288.pdf, pp.1-5.
[3] Wu, A. M. (2013). How Does Decentralized Governance Work? Evidence from China. *Journal of Contemporary China*, Vol.22, pp. 390.

started fiscal reform in 1994. Although the reform was called “fiscal decentralization” or “tax sharing system establishment (fen shui zhi)”, the Central government aimed to use it for stronger fiscal power (see a more detailed explanation of China’s fiscal system evolution in Table 6). From 1993 to 1994, the Central fiscal revenue as a share of total jumped from 22 to 56 percent. Figure 20.

Figure 21: Local government revenue, expenditure and expenditure with central transfer (in percent of general government revenue and expenditure), 1953-2014




*Data for local government expenditure (with transfer) are only available for 1998-2014.

Source: author; Data source: CEIC

However, there was no parallel reform on the expenditure side. With the economic development targets, the local governments have increasing expenditure pressure. As Figure 21 shows, since the fiscal decentralization reform in 1994, the fiscal gap widened sharply for the local governments. In order to ensure sufficient local expenditure, the central government increased tax rebates and transfers. After adjusted with central transfers, the local governments’ revenue can almost meet the expenditure needs. (See more detailed revenue and expenditure assignments among the central and local governments in Table 7 & 8).

However, gaining the transfers from the Central government involve massive negotiation. The local governments are inclined to resort to extra-budgetary and off-budget funds. They are incentivized to engage in illicit borrowings, which has potentially contributed to the growth of contingent liabilities[1]. As a result, the accountability and transparency of the fiscal system as a whole have been weakened. The Central government is difficult to oversee the total spending and borrowing of the local governments[2].

Table 9 (in Appendix) uses Ishikawa diagram to summarize the hypotheses of the causes.

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[1] OECD. (2006). *Challenges for China's Public Spending: Toward Greater Effectiveness and Equity.* OECD Publishing. pp. 12.

[2] Ibid. pp. 31.

### *Actions to address local government borrowings behaviour are needed now*

Although the overall local government debt situation remains manageable at the moment, it would become a severe problem in five years if without policies to address the irresponsible borrowing manner. Assume the local government debt will grow at the same speed as in the past five years. Half of the provinces[1] will see a direct liabilities to GDP ratio exceeding the international standard of 60 percent if the provincial GDP growth rates slow to 6.5 percent in 2020 (the new national GDP growth target). If contingent liabilities happen, more provinces will have a debt to GDP ratio exceeding 60 percent in 2020. Likewise, nearly two thirds of the provinces will see a direct liabilities to fiscal revenue ratio over 100 percent (the national threshold) in 2020, even if the provinces can keep their fiscal revenue growth as quick as in the past five years – which is unlikely to happen due to the economic slowdown. Figure 22 & 23 provide of a summary of different scenarios. See Table 10 & 11 (in Appendix) for more details of predicted local government debt situation in 2020.

Figure 22: Lists of provinces predicted to have a debt to GDP ratio exceeding 60 percent in 2020

| GDP scenarios | Provinces/municipalities that have a direct liabilities to GDP ratio exceeding 60 percent in 2020 | Provinces/Municipalities that have a total liabilities* to GDP ratio exceeding 60 percent in 2020 |
|---|---|---|
| GDP grows at the average rate of the past 15 years | 10 provinces/municipalities: Fujian, Liaoning, Sichuan, Anhui, Chongqing, Guizhou, Xinjiang, Shanxi, Hainan, Gansu | 17 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, Xinjiang |
| GDP grows at the same rate as in 2015 | 15 provinces/municipalities: Liaoning, Fujian, Sichuan, Anhui, Shanxi, Chongqing, Guizhou, Xinjiang, Hainan, Gansu, Beijing, Inner Mongolia, Yunnan, Jiangsu, Shaanxi | 24 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Heilongjiang, Hubei, Inner Mongolia, Jiangxi, Jilin, Chongqing, Sichuan, Guizhou, Guangxi, Yunnan, Shaanxi, Tianjin, Gansu, Qinghai, Xinjiang |
| GDP grows at 6.5 percent (national target) | 15 provinces/municipalities: Liaoning, Fujian, Sichuan, Anhui, Shanxi, Chongqing, Guizhou, Xinjiang, Hainan, Gansu, Beijing, Inner Mongolia, Yunnan, Jiangsu, Shaanxi | 24 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Heilongjiang, Hubei, Inner Mongolia, Jiangxi, Jilin, Chongqing, Sichuan, Guizhou, Guangxi, Yunnan, Shaanxi, Tianjin, Gansu, Qinghai, Xinjiang |
| GDP grows at 5 percent (hard landing) | 16 provinces/municipalities: Liaoning, Fujian, Sichuan, Anhui, Shanxi, Chongqing, Guizhou, Xinjiang, Hainan, Gansu, Beijing, Inner Mongolia, Yunnan, Jiangsu, Shaanxi, Qinghai | 24 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Heilongjiang, Hubei, Inner Mongolia, Jiangxi, Jilin, Chongqing, Sichuan, Guizhou, Guangxi, Yunnan, Shaanxi, Tianjin, Gansu, Qinghai, Xinjiang |

Source: author.

* Total liabilities include direct and contingent liabilities.

[1] China has 31 provinces in total. The Chinese authority publishes data for 30 of them. Tibet is excluded.

Figure 23: Lists of provinces predicted to have a debt to fiscal revenue ratio exceeding 100 percent in 2020

| **Fiscal revenue growth scenarios** | **Provinces/municipalities that have a direct liabilities to fiscal revenue ratio exceeding 100 percent in 2020** | **Provinces/Municipalities that have a total liabilities to fiscal revenue ratio exceeding 100 percent in 2020** |
|---|---|---|
| Fiscal revenue grows at the average rate of the past 5 years | 19 provinces/municipalities: Beijing, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Inner Mongolia, Jilin, Shandong, Henan, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, Tianjin, Xinjiang | 27 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Heilongjiang, Hubei, Inner Mongolia, Shanghai, Jiangxi, Jilin, Shandong, Henan, Chongqing, Sichuan, Guizhou, Guangxi, Yunnan, Shaanxi, Tianjin, Gansu, Qinghai, Xinjiang |
| Fiscal revenue growth rates all slow to 10% | 23 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Heilongjiang, Hubei, Inner Mongolia,Jilin, Shandong, Henan, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, Tianjin, Gansu, Xinjiang | 28 provinces/municipalities: Beijing, Hebei, Shanxi, Liaoning, Jiangsu, Anhui, Fujian, Hunan, Hainan, Heilongjiang, Hubei, Inner Mongolia, Shanghai, Jiangxi, Jilin, Shandong, Henan, Chongqing, Sichuan, Guizhou, Guangdong, Guangxi, Yunnan, Shaanxi, Tianjin, Gansu, Qinghai, Xinjiang |

Source: author.

### *International experience in managing local government debt and comparison with China*

The majority of major countries allow their governments to issue debt products[1]. Debt financing is increasingly popular among developing countries, as it can support their local governments to increase investment, provide public goods and services, and improve people's livelihood. Many counties have experienced exploding local government debt. Their experience has profound implications for China. I analyze their experience in the following six areas:

- **Debt raising entity**

Most counties allow the central and the local governments to issue debt products. For example, in the US municipal bonds can be issued by towns, cities, and regional and local agencies[2]. In Japan, governments of prefectures and municipalities (including cities, towns and villages) can also issue bonds, but the issuers are mainly mega cities[3].

Currently, the variety of the local government debt issuers in China is not as much as in the developed countries. Only 10 provinces/municipalities are allowed to issue bond on their

[1] MOF. (2008a). *International Lesson and Comparison of Local Government Debt Management* (in Chinese). Retrieved from China's Ministry of Finance: www.mof.gov.cn/zhengwuxinxi/guojijiejian/200808/t20080815_63360.html

[2] Lee, J. (1999). *US Municipal Bonds*. Retrieved from Mount Holyoke College: https://www.mtholyoke.edu/courses/sgabriel/securities1/bond/usgovt.htm

[3] Zhang, S., Shan, B., & Li, Y. (2012). International Experience and Implications of Local Government Debt Management (in Chinese). *Jilin Finance Research*, Vol.7, pp. 29-33.
MIC. (2010). *Presentation: Local Government Bond System and Market in Japan.* Retrieved from www.ilgc.org.uk/en/pdfs/MIC%20LGB.pdf, pp.5

own, as a pilot.

In addition, usually only the central or federal government can borrow internationally. The local governments can only borrow domestically[1]. This fits with China's situation. Data from the MOF show that none of China's local governments has foreign debt. All of the local government debt is RMB-denominated.

- **Type of debt instruments**

There are mainly three types of local government debt instruments – issuing local government bonds, borrowing from financial institutes (local governments are usually not allowed to borrow from the financial institutes attached to them), or borrowing from the central governments.

Japan only allows local government bond issuance[2]. The US allows municipal bond with supplement of bank loans and financial lease[3]. Brazilian local governments can borrow from banks, but with stringent requirement – local government debt cannot exceed 45 percent of banks' net assets[4]. Western European countries have relied on bank lending to finance municipal investment throughout most of the 20th century and continue to use it as the primary source[5]. In India, local government deficits are largely (over 80 percent) financed by loans from the Central government and bond issuance through the central bank[6].

Apart from bank loans, the debt instruments that the Chinese local governments have "innovated" include BT (build and transfer), trust funds, securities, insurance and etc (Table 12). The MOF has announced that the local governments can only use bond issuance, which is under the State Council and the MOF's approval[7].

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1 MOF. (2008b). *Introduction of Local Government Debt Size Management and Risk Monitoring in Foreign Countries* (in Chinese). Retrieved from China's Ministry of Finance: http://yss.mof.gov.cn/zhengwuxinxi/guojijiejian/200809/t20080918_76134.html

2 MOF. (2008a). *International Lesson and Comparison of Local Government Debt Management* (in Chinese). Retrieved from China's Ministry of Finance: www.mof.gov.cn/zhengwuxinxi/guojijiejian/200808/t20080815_63360.html
MIC. (2010). *Presentation: Local Government Bond System and Market in Japan.* Retrieved from www.ilgc.org.uk/en/pdfs/MIC%20LGB.pdf, pp.7.

3 US Bank. (2013). *Newsletter: Today Government Banking.* Retrieved from US Bank: https://www.usbank.com/cgi_w/cfm/inst_govt/products_and_services/pdf/6533_GNP_TODAY_Newsletter_2013.pdf, pp.1.

4 Zhang, S., Shan, B., & Li, Y. (2012). *International Experience and Implications of Local Government Debt Management* (in Chinese). Jilin Finance Research, Vol.7, pp. 29-33.

5 Peterson, G. E. (2003). *Banks or Bonds? Building a Municipal Credit Market.* Washington DC: OECD. pp.3.

6 Vera, R. D., & Yun-Hwan, K. (2003). *Local Government Finance, Private Resources, and Local Credit Markets in Asia.* Manila: Asian Development Bank. pp.3

7 MOF. (2014a). *Method to Include Existing Local Government Debt into Budgetary Management* (in Chinese). Retrieved from China's Ministry of Finance: http://yss.mof.gov.cn/zhengwuxinxi/zhengceguizhang/201410/t20141028_1154561.html

- **Debt management models**

Ter-Minassian and Craig from IMF defines four debt management models[1].

i) Market discipline (including France, Canada, Sweden, Finland, and Portugal). The local governments will borrow based on market mechanism, without intervention by the central government. This has a high requirement of market development, including free and open market, adequate information about the borrowers' outstanding debt and repayment capacity, no perceived chance of bailout, and institutional framework when a borrower reaches the point of exclusion from new borrowing. The stringent conditions make this model unlikely to be realized in the majority of countries.

ii) Direct control of the central government (including the UK, Japan, Australia, Norway, Ireland, Greece and Spain). The central government executes its administrative power to control the overall and individual size of debt issued by the local governments. The central government is responsible for approving debt issuance and monitoring debt repayment activities. It is more common in unitary countries. However, the fiscal demand of the local governments may not be well reflected.

iii) A cooperative approach (including Belgium and Denmark). This model allows the local governments join the central government to set macro economic targets and to agree fiscal submission or transfer jointly. However, the local governments are usually less powerful, and thus cannot succeed in negotiating with the central government.

iv) A rule-based approach (including Germany, Italy, US, Holland, and Swiss). Law and regulations will be made to set detailed rules for local government borrowings, including the conditions, procedures, information disclosure, risk management, and violation punishment mechanisms. This model has the virtues of high transparency and high acceptance of the market. However, usually it is the central government that made the rules, which would make the model very close to the central-government direct control approach.

There is no best model that a country should follow. Countries may change their models from time to time, considering their changing policy targets and political, economic and

[1] Ter-Minassian, T., & Craig, J. (1997). Chapter 7: Control of Subnational Government Borrowing. In T. Ter-Minassian, *Fiscal Federalism in Theory and Practice.* Washington DC: International Monetary Fund. pp. 157-167.
Doi,T., Hayashi,T., & Suzuki,N. (2005). *Local Government Debt and Local Fiscal Discipline* (in Japanese). Tokyo: Japan's Cabinet Office. pp. 3-10.

social environment. For China, it is quite difficult to adopt the market discipline approach, at least for now, due to the lack of a well-developed financial market, the lack of transparent data of local governments' fiscal situation, and the government's intervention in the market.

Pure direct control by the Central government might get the Central government involved in micro management and hard for it to punish the local governments if they default. A pure rule-based approach may also have drawbacks, as rules will not be exhaustive. Since China is not famous for rule of law, the local governments will be very "innovative" to circumvent the rules. Thus, a model involving the Central and the local governments, market, and well-defined rules[1] might be a long-term direction for China.

- **Local government debt control and monitoring agencies**

Control and monitoring mechanism can largely reduce the risk of insolvency. The Finance Ministries often play a major role in it, including setting up an early risk warning system, controlling the debt size and ensuring the local governments' compliance with the law and regulations. Some countries (e.g. France, Germany and Bulgaria) set up a separate debt management office and some uses existing departments to take this responsibility (e.g. Canada)[2].

The Audit Office (or an independent agency) is usually responsible for ex post monitoring. In Japan, the Local Audit Offices audit local governments and report to the higher level audit offices and the cabinet office directly[3]. In the US, the Offices of Auditor of State also adopt in-progress monitoring[4].

In China, the Budget Department of the MOF serves the function to manage local government debt[5]. It sends special inspectors to provinces, municipalities and selected areas. The original tasks of the inspectors included monitoring local budgeting process, financial management of central transfers and implementation of fiscal policies. In 2014, monitoring local government borrowings was added to their responsibility list, including issuers, size,

1 China has a budget law. It was first passed in 1994. In 2014, the Budget Law was reviewed.

2 MOF. (2008a). *International Lesson and Comparison of Local Government Debt Management* (in Chinese). Retrieved from China's Ministry of Finance: www.mof.gov.cn/zhengwuxinxi/guojijiejian/200808/t20080815_63360.html

3 Zhang, S., Shan, B., & Li, Y. (2012). International Experience and Implications of Local Government Debt Management (in Chinese). *Jilin Finance Research*, Vol.7, pp. 29-33.

4 Liu, L. (2010). *Strengthening Subnational Debt Financing and Managing Risks.* Washington DC: The World Bank & China's Ministry of Finance. pp. 14.

5 MOF. (2016). *Key Roles of the Budget Department of the Ministry of Finance* (in Chinese). Retrieved from China's Ministry of Finance: http://yss.mof.gov.cn/zhengwuxinxi/guanyuwomen/zhongyaozhineng/200805/t20080522_33393.html

instruments, and purposes[1]. The local audit offices are responsible for auditing the local government debt. They find difficulties to discover illicit debt or off-budget activities[2].

- **Risk control mechanisms of local government debt**
    - **Hard budget constraints**

The inability of a central government to commit dynamically to a budget constraint (i.e. soft budget constraints) may induce the local governments to misbehave, distorting ex ante financial and productive choices, in expectation of a rescue by the central government in the case of trouble[3]. Empirical analysis of OECD countries suggests that soft budget constraints partly contributed to the rapid increase of public local governments' public spending[4]. Thus, many countries believe that government debt, as a source of government revenue, should be included in budget management (i.e. hard budget constraints). A hard budget constraint could be imposed either by the market (e.g. the US) or the central government's administrative power (e.g. Norway)[5].

For example, in Japan, the Central government makes bond issuance plans for local governments, which will be submitted to the cabinet office. Banks loans are not allowed[6]. Brazil's Fiscal Responsibility Law, introduced in 2000, prohibits local governments to finance their debt through the Central government. If they have to do so, they will not be able to issue debt again before the old debt is cleared[7].

However, it should be noted that hard budget constraint is not always optimal because it may discourage investment that is socially efficient[8]. Also, the institutional structure matters to the efficiency of hard budget constraints[1].

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[1] MOF. (2014c). *Notice to Enhance Budget Inspection of the Offices of Fiscal Inspectors.* Retrieved from China's Ministry of Finance: http://cq.mof.gov.cn/lanmudaohang/tongzhitonggao/201503/W020150303393179105382.pdf, pp. 3-4.
Du, T. (2015). *Tighter Monitoring on Local Fiscal Funding* (in Chinese). Retrieved from Economic Observer: www.eeo.com.cn/2015/0206/272245.shtml

[2] NAO. (2013b). *Result of Audit on 36 Local Governments*, NAO Notice 2013/24 (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n1992130/n1992150/n1992500/3291665.html

[3] Bordignon, M. (2004). *Fiscal Decentralization: How to Achieve a Hard Budget Constraint.* Retrieved from European Commission: ec.europa.eu/economy_finance/events/2004/bxl1104/papers/bordignon_en.pdf, pp.4.

[4] Crivelli, E., Leive, A., & Stratmann, T. (2010). *Subnational Health Spending and Soft Budget Constraints in OECD Countries.* Retrieved from The International Monetary Fund: https://www.imf.org/external/pubs/ft/wp/2010/wp10147.pdf. pp.3-5.

[5] Huang, R., & Huang, Z. (2015). Hard Budget Constraints-based Local Government Debt Management (in Chinese). *Journal of Jiangsu Administration Institute*, Vol.1, pp. 39-44.

[6] Zhang, S., Shan, B., & Li, Y. (2012). International Experience and Implications of Local Government Debt Management (in Chinese). *Jilin Finance Research*, Vol. 7, pp. 29-33.

[7] MOF. (2008). *International Lesson and Comparison of Local Government Debt Management.* Retrieved from China's Ministry of Finance: www.mof.gov.cn/zhengwuxinxi/guojijiejian/200808/t20080815_63360.html

[8] Besfamille, M., & Lockwood, B. (2007). *Bailouts in Federations: Is a Hard Budget Constraint Always Best?* Warwich:

China's subsidy, taxation, credit and administrative pricing systems are all subject to soft budget constraints. The 1994 Fiscal Reform aiming to have a uniformed and transparent budgetary system were compromised at the outset when the central government set the transfer rule based on the assurance of the status quo distribution in 1993. Although a formula-based intergovernmental transfer scheme[2] has been established (general transfer), negotiations between the central and the local authorities on the allocation of grants (special transfer) happen from time to time[3].

- **Transparency**

In order to effectively control risks, it is fundamentally important to have a transparent local government debt information system. Evidence from OECD countries suggests that a higher degree of fiscal transparency is associated with lower public debt and deficit[4]. In South Africa, for example, everyone who is involved in local government borrowing will need to disclose their influence in the debt products[5]. In Brazil, every local government needs to publish their debt reports every four months. All the information is publically available. Fiscal transparency code of the IMF[6] and best practices of the OECD[7] provides detailed standards and cases of fiscal data disclosure.

In comparison, in China local government debt information is not fully available to the MOF. The debt audited by the NAO may not fully capture the real situation.

To control the overall size of the local debt is a key measure to reduce the risks. The policy makers can manage either the demand for debt by controlling e.g. debt to GDP ratio or

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Warwick Economics Research Paper 717. pp.1.

[1] Webb, S. B. (2001). Argentina: Hardening the Provincial Budget Constraint. Retrieved from The World Bank: www1.worldbank.org/publicsector/decentralization/hardbudget.htm

[2] The fiscal transfer in China follows the following formula:

$$T_{i,t} = T_{i,t-1} *(1+0.3*(0.75*\text{added value of } VAT_{i,t}+\text{added value of } CT_{i,t}))$$

Current formula (base-year model):

$T_{i,t}$, Tax return to province i at year t

CT, consumption tax

[3] Jin, J., & Zou, H. (2001). *Soft-budget Constraint on Local Governments in China.* Retrieved from The World Bank: www1.worldbank.org/publicsector/decentralization/hardbudget.htm

[4] Alt, J. E., & Lassen, D. D. (2006). Fiscal Transparency, political parties, and debt in OECD countries. *European Economic Review,* Vol. 50, pp. 1403.

[5] MOF. (2008). *International Lesson and Comparison of Local Government Debt Management* (in Chinese). Retrieved from China's Ministry of Finance: www.mof.gov.cn/zhengwuxinxi/guojijiejian/200808/t20080815_63360.html

[6] IMF. (2014). *Fiscal Transparency Code*. Retrieved from International Monetary Fund: blog-pfm.imf.org/files/ft-code.pdf

[7] OECD. (2002). *OECD Best Practices for Budget Transparency.* Paris: OECD Publication Service. pp. 8-14.

debt to fiscal revenue ratio, or the supply side by e.g. forbidding banks to provide loans or restraining local governments from borrowing from local banks.

- **Early warning system**

Many countries adopt an early warning system that monitors the fiscal health of local governments and predicts potential fiscal crises. They believe that local fiscal emergencies do not arise without causes. Thus an early warning system is possible. The Fiscal Watch Program in US (Ohio), sets out detailed conditions that constitute a fiscal emergency, including defaults, wage and payments arrears, request for transfers, deficits, and cash shortage. Brazil uses net borrowing to revenue ratio and debt to revenue ratio. The country requires all borrowing governments to have a primary surplus. Columbia adopts a “Traffic Light System”. If local governments’ debt interest to operational savings ratio (liquidity indicator) and the debt stock to current revenue ratio (solvency indicator) is blow 40 and 80 percent, respectively, then they are in the Green Light Zone, i.e. these local governments can issue new debt. If these indicators are above 60 and 80 percent, respectively, they are in the Red Light Zone, i.e. these local governments’ access to new debt is limited[1].

The indicators that the Chinese governments have used are limited, mainly debt to revenue and debt to GDP ratios. They are static and backward looking.

- **Fiscal contingency fund**

Setting a fiscal contingency reserve requirement can help local governments’ repayment when they fail to pay back matured debt. This can reduce risks to the local fiscal stability. Also, since a fiscal contingency fund is generated from fiscal surpluses during economic booms, it can encourage countercyclical actions. Argentina, Chile, Ecuador, Estonia, and Peru adopt fiscal reserve fund[2]. Estonia, for example, established the Stabilization Reserve Fund in late 1990s, providing resources for emergency situations and unforeseen revenue shortfalls[3].

After the local government debt audit in 2011, the MOF has suggested the local

[1] Ma, J. (2002). Chapter 18. Monitoring Fiscal Risks of Subnational Governments: Selected Country Experiences. In H. P. Brixi, & A. Schick, *Government at Risk: Contingent Liabilities and Fiscal Risk*. Washington DC: The World Bank. Retrieved from the World Bank: http://info.worldbank.org/etools/docs/library/128810/Jun%20Ma%201999.pdf. pp. 11-14.

[2] Kopits, G. (2007). *Fiscal Responsibility Framework: International Experience and Implications for Hungary.* Magayar Nemzeti Bank. pp.9.

[3] OECD. (2011). *OECD Economic Surveys: Estonia 2011.* OECD Publishing. pp. 52.

governments to establish fiscal contingency funds. 28 provincial/municipal (93 percent), 254 city/prefecture (64 percent), 755 county (27%) level governments followed the advice, according to the audit result in 2013[1]. However, the State Council has called it to pause, and has required the local governments to use the fiscal contingent funds to expand investment, due to the economic slowdown[2].

- **Punishment on misbehavior of debt management**

Some countries have established accountability mechanism to punish fiscally irresponsible officials, aiming to reduce the risk of their future misbehavior. In Brazil, if public officials violate the provision of the Fiscal Responsibility Law, they will face strict penalties, including prison terms[3].

In December 2015, the National People's Congress (NPC, China's legislator) proposed to link local government officials' evaluation with their borrowing behavior[4]. So far, there is no further detail about the punishment mechanism.

## SECTION IV: Potential Policy Recommendations

Based on the comparison with the international experience, China's local government borrowings management has a significant gap in controlling and monitoring local government debt, preventing risks, and addressing misbehavior of local officials.

Reforms or policy recommendations should be within China's existing political and institutional framework. China is a unitary country. Policies mainly follow a "top-down" manner. Thus in the short- to medium-term, the Central government will still be in charge of approving the local governments' debt issuance eligibility and the size of the issuance.

Focusing on the weakness of China's local government debt management and considering the institutional regime, I propose policy recommendations in the following areas

[1] NAO. (2013a). *Result of 2013 Government Debt Auditing* (in Chinese). Retrieved from National Audit Office: http://www.audit.gov.cn/n5/n25/c63642/part/27403.pdf

[2] State Council. (2015). *The State Council's Notice to Activate Stock Fiscal Resources* (in Chinese). Retrieved from China's State Council: www.gov.cn/zhengce/content/2015-01/21/content_9408.htm

[3] EslavaMarcela. (2007). Chapter 9: The Political Economy of Debt. in BorenszteinEduardo, Levy YeyatiEduardo, & PanizzaUgo, *Living with Debt: How to Limit the Risks of Sovereign Finance.* Washington DC: Inter-American Development Bank. pp. 182

[4] NPC. (2015). *Report on Performance to Manage Local Government Debt by the Budget Committee of the NPC* (in Chinese). Retrieved from China's National People's Congress: http://www.npc.gov.cn/npc/xinwen/2015-12/22/content_1955661.htm

(a summary is provided in Table 13 in Appendix).

***Reduce the immediate default risks brought by excessive local government debt.***

(Policy aim: grasp a clearer picture of local government debt issue, address maturity mismatch, improve soundness of local governments' fiscal performance and reduce moral hazard.)

This firstly includes allowing local governments to issue bonds to replace current bank loans within the next year, with the MOF's approval. The local governments can take the advantage to extend their borrowing period and lower costs.The Central government can have a chance to understand the scale of total debt and consider methods to mitigate hiding risks.

Secondly, the MOF should examine the illegal contingent liabilities and illegal collaterals that the local governments have provided, in the next year or two. This could help the local governments to clarify the liabilities they should bear.

Thirdly, the MOF should allow the local fiscal authorities to cover contingent liabilities if happens, to reduce financial risk contagion. Meanwhile, the MOF should force the local government agencies to clarify who bear what repayment responsibilities. Once clarified, these agencies should recover debt payments to the local fiscal bureaus. This work should be started in the following year.

***Enhance risk management and emergency reaction mechanisms of local government debt.***

(Policy aim: improve transparency, control and monitor local government debt, and reduce moral hazard.)

Data insufficiency has been a major challenge for the central government to manage local debt. The MOF could collaborate and support the NAO to audit local government borrowings annually. The local fiscal special inspectors sent by the MOF could build the link for the NAO to get more relevant data and information. The audit results should be open to the public. This can also help the credit rating agencies to evaluate the risk levels for the local governments.

With more local government debt data, the MOF could consider establishing an early warning system and a "traffic light" system to categorize the risk level of local governments, in the next two to three years. This can help the MOF to control the overall size of the local government debt; and to deal with the local governments with trends towards excessive borrowings.

In addition, the MOF could help the local fiscal authorities to restore fiscal contingency funds in the coming years. When the local fiscal revenue or its growth exceeds certain level, the local fiscal bureaus can allocate a certain proportion of fiscal revenue to the funds. This could help the local governments to smoothen fiscal revenues across times. Alternatively, the local governments could transfer a certain proportion of each debt raised or of the total debt at the end of each year to the contingency fund[1]. With the local governments' own resources, the central government can reduce their reliance on bailouts.

***Improve the mechanics of local government budgeting.***

(Policy aim: constrain local government borrowings, improve transparency, and reduce moral hazard.)

In order to reduce the local governments' moral hazard behavior, it is necessary to apply hard budget constraints on the local governments and to include all extra-budgetary and off-budget revenue into the budget, including all the revenue from bond issuance. A more accurate budget can better reflect the local governments' fiscal capacity and define their expenditure activities. However, this is likely out of the MOF's control. High-level authority, including the NPC, will need to legislate to create budget requirements. Thus, the process would take a much longer time.

***Address the mismatch between local government revenue and expenditure.***

(Policy aim: reduce local governments' incentives to borrow.)

Considering the current "low revenue, high expenditure" situation for the local governments, the Central government could increase the local governments' revenue by redesigning the revenue-sharing formula, and meanwhile clarify the spending responsibilities between the Central and local governments. With more revenue, the local governments' incentives to self-finance could be reduced. However, this is also out of the MOF's control. Line Ministries and the local corresponding agencies should be involved in negotiating their revenue and expenditure. Thus, this will require a long time to implement.

[1] NAO. (2013c). *Study on Debt Financing of Local Governments* (in Chinese). Retrieved from China's National Audit Office: http://www.audit.gov.cn/n1992130/n1992210/n1994456/n3352101.files/n3352100.doc

***Link local government borrowings with the evaluation of local officials. Establish a punishment mechanism of irresponsible debt raising behavior.***

(Policy aim: reduce moral hazard.)

Local government borrowing can be adopted as a key performance indicator in local government officials', especially local leaders', appraisals. The early warning system or the "traffic light" system can support their performance evaluation. This policy aims to change the GDP-focused appraisal system and thus to change the officials' incentives. Again, this is not in the MOF's policy arena. The Ministry of Organization (MOO, in charge of government human resources) or higher level authority, e.g. the State Council, will need to be aligned for the policy change.

In addition, each debt issuance should be linked to a local official. If the debt is raised illegally or irresponsibly, the official will take the responsibility and may be punished, including imprisonment. Officials' responsibility roles and punishment (if happens) should be open to the public. One step ahead, the officials who are responsible for local government borrowings will bear the responsibility throughout the payback period of the debt product. Even after the official has left the position, he/she will still be tracked for accountability. Any official that has misbehavior in raising debt and has not properly resolved the issue cannot receive promotion. This policy aims to clarify the debt responsibility entities at the local government level, and to force the local officials to carefully consider the debt activities.

## SECTION V: Policy Feasibility and Stakeholder Mobilization: How to Make the Policy Recommendations Work in China's Context

Managing local government debt has received support from the Central government and the top leaders in the recent years (see Table 14 for a summary of local policy announcement). However, considering the current economic slowdown, the Central government would still rely on the local governments to expand public spending to boost the economic growth. Therefore the current aim of the top leaders is to control the potential risks, slow the growth of debt accumulation but allow the debt amount to increase but to a manageable level.

As a result, the policy recommendations above mainly tackle the causes including local governments' moral hazard and adverse selection, local officials' promotion scheme, market mechanism and the mismatch between their revenue and expenditure. None of the potential policies will tackle the Central government's countercyclical spending mandate to the local governments. See Table 13 in Appendix for more details.

The policy recommendations proposed are largely technically correct, based on international experience. That said, they may still encounter various administrative and political difficulties in China's context. The MOF will need to creatively mobilize the key stakeholders to support the policies.

### *Policy 1: Reduce the immediate financial risks brought by excessive debt*

Figure 24: Analysis of policy recommendation 1

| Policy recommendation | Detailed actions | Techically correct | Administratively feasible | Politically acceptable |
|---|---|---|---|---|
| Reduce the immediate financial risks brought by excessive debt | Allow the local governments to issue bonds to replace bank loans with the MOF's approval | √ | ? | √ |
| | Examine illegal contingent liabilities and illegal collaterals that the local governments have provided; allow local governments to renegotiate debt contracts and discharge the illegal guarantee responsibilities | √ | ? | √ ? |
| | Allow local fiscal authority to repay contingent liabilities if they should, clarify what local government agencies should bear the repayment responsibility and ask them to recover debt payments | √ | √ ? | √ ? |

Source: author

Both the Central and the local governments would welcome to replace bank loans with bond issuance. However, banks are unlikely happy about the policy, because they will receive lower interest payments (assuming the banks will have underwriting or exclusive selling rights) with the risk levels largely unchanged (because the local governments or even the Central government will still explicit or implicit back the debt products).

In order to align with the banks, the MOF might consider direct placement by bringing in institutional investors like the Social Security Fund, that do not look for high but stable returns.

When the MOF mandates the local governments to examine illegal contingent liabilities, the ministry can expect massive resistance, as the local government would rarely admit their illegal behavior. Thus, the MOF would need to assure the local governments of no punishment. Due to the large amount of existing debt, it may not be easy for the local governments to clear illegal contingent liabilities. Thus, the MOF could provide several deadlines. If the local governments could meet the earlier deadline, the MOF could provide a little bonus within its policy area, e.g. cash bonus or a higher limit of bond issuance.

If contingent liabilities do occur and require the local governments to repay, the MOF should first allow the local fiscal bureaus to rescue, to downgrade the immediate fiscal shock. However, it may be difficult to find the local government agency or official that should take the responsibility later. This may set a precedent that the local governments can use fiscal revenue to cover contingent liability, without any entity to take the responsibility. Thus, other mechanisms are needed to reduce the chance to have contingent liabilities – the MOF could require the local government to clear contingent liabilities and to set contingency reserve funds.

### *Policy 2: Enhance risk management and emergency reaction mechanisms of local government debt*

Data about local government borrowing or understanding the severity of the issue is the fundamental base for risk management. To conduct annual debt audit report can support the risk management and emergency reaction mechanisms.

Figure 25: Analysis of policy recommendation 2

| Policy recommendation | Detailed actions | Techically correct | Administratively feasible | Politically acceptable |
|---|---|---|---|---|
| Enhance risk management and emergency reaction mechanisms of local government debt | Conduct audit on local government annually. Task the local fiscal special inspector to help the NAO to get relevant data and information. Disclose the audit results. | √ | √ | √ ? |
| | Establish an early warning system. | √ | √ ? | √ |
| | Set up a "traffic light system" to allow or forbid the local governments to borrow. | √ | √ ? | √ |
| | Establish a fiscal contingency fund | √ | ? | √ ? |

Source: author

Local governments do have access to their own revenue and expenditure data. However, some of them, especially those with excessive borrowings, do not want to reveal the real situation, as they still need further funding to support future spending. Meanwhile, even the Central government may not want to disclose the results to the public, as it could create unintended market reactions. But internal disclosure will be needed in the first several years of implementation.

To establish an early warning system or to set up a risk classification ("traffic light") scheme may not be feasible at the moment. First, data are not fully available. Second, the risk indicators, e.g. debt to GDP ratio or debt to fiscal revenue ratio, are only for the central government's reference. They are not hard constraints to stop the local governments from issuing debt. Third, the local governments that are allowed to issue bonds are well-chosen. Their fiscal capacity is expected to be within the safe zone of the mechanisms. However, in the longer term when the MOF allows more local governments (especially lower level governments) to issue bonds, it will be harder to manage the local governments at the same time. Moreover, an early warning or a risk classification system can direct risk management into a forward-looking manner. Thus, starting establishing these mechanisms now can prepare for the management in the future. The MOF can continue to use them as reference for the time being. However, with more data and more local government bond issuance entities, these mechanisms can start to play a more important role.

Both the Central and the local governments do have consensus that establishing contingent reserve funds could reduce the risk of local government debt. Since 2010 the MOF has suggested the local governments to set up such funds. Provincial/Municipal governments, including Yunnan, Sichuan and Shanghai have piloted it with positive effects[1]. However, the MOF will be difficult to win political support to implement or expand the policy now. Due to the economic slowdown, the State Council[2] has announced to activate the fiscal resources in stock to expand investment and to support economic growth. Thus, for now, the MOF could focus more on improving the design of the contingent reserve funds. The pilots revealed various problems, including low coverage and undefined sources of the funds.

### *Policy 3: Improve mechanics of local government budgeting*

Figure 26: Analysis of policy recommendation 3

| Policy recommendation | Detailed actions | Techically correct | Administratively feasible | Politically acceptable |
|---|---|---|---|---|
| Improve mechanics of local government budgeting | Apply hard budget constraints on local governments | √ | √ ? | √ |
| | Include all extrabudgetary and off-budget revenue into the budget. Include all bond issuance revenue into the budget. | √ | √ ? | √ |

Source: author

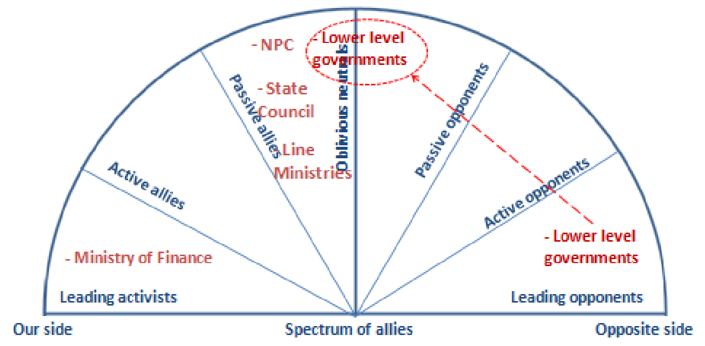
To apply hard budget constraints on the local governments or to require them to include all extra-budgetary or off-budget revenue into their budget will receive massive outcries of the local governments, if without incentives, e.g. linking debt management with local officials' performance evaluation or providing alternative fiscal resources. Since the local governments

[1] Yang, H. (2013). *Debt Repaymanet Reserve Fund: Cure the Symptoms, Not the Disease* (in Chinese). Retrieved from China Economic Herald: www.ceh.com.cn/jryw/2013/174858.shtml

[2] State Council. (2015). *The State Council's Notice to Activate Stock Fiscal Resources* (in Chinese). Retrieved from China's State Council: www.gov.cn/zhengce/content/2015-01/21/content_9408.htm

may still bear significant spending responsibilities with limited fiscal autonomy, the local leaders could fail their growth targets and have slim hope for career achievements. In the spectrum of allies graph (Figure 27), the local governments will become leading opponents of the policy.

Figure 27: Policy recommendation 3: Spectrum of allies




Source: author.

In order to assure the local officials, the MOF could play a coordination role to lobby the higher authority to legalize hard budget constraints and to include parallel policies. For example, the NPC (China's legislator) could revise the *Budget Law* to confirm the hard budget requirement. The local governments would need to propose their bond issuance plan to the NPC for approval. Since the NPC represents the Chinese citizens, its approval of local government debt size could potentially enhance the transparency. Meanwhile, the MOF could lobby the State Council to urge the MOO to issue details to link debt management with local officials' appraisals.

By doing these, the local governments would have more assurance about the consequence brought by hard budget constraints. Thus they are likely to move from opponents to a more neutral position.

### *Policy 4: Address the mismatch between revenue and expenditure of the local governments*

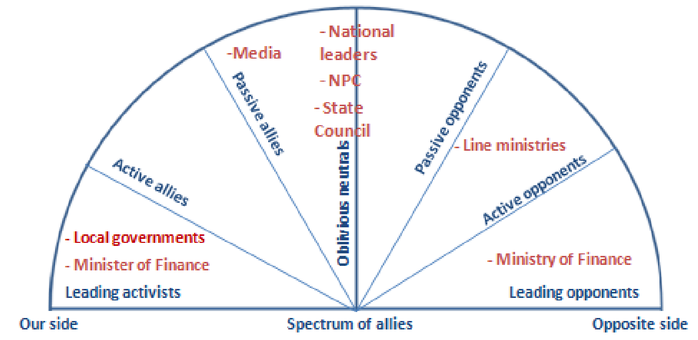
The mismatch between revenue and expenditure of the local governments is a problem left by the 1994 Fiscal Reform. The tension between the central and the local governments regarding separating fiscal income and spending responsibilities remains today.

Figure 28: Analysis of policy recommendation 4

| Policy recommendation | Detailed actions | Techically correct | Administratively feasible | Politically acceptable |
|---|---|---|---|---|
| Address the mismatch between revenue and expenditure of the local governments | Increase the local governments' revenue by redesign the revenue-sharing formula. | √ | √ | ? |
| | Clarify expenditure responsibilities between the central and the local governments. | √ | √ ? | √ ? |

Source: author

Figure 29: Policy recommendation 4: Spectrum of allies




Source: author.

Finance Minister Lou Jiwei supports to continue the incomplete 1994 Fiscal Reform. As a member of the then reform team, Minister Lou has been very concerned about the negative impacts, i.e. the local governments' reliance on extra-budgetary revenue (land sales) and huge debt[1]. However, whether the MOF will support to address the mismatch is ambiguous, as it could threat the MOF's power. Likewise, if the local governments will gain more financial resources or bear less expenditure responsibilities, they will be at an activist position. The line ministries will play a big role as well, because the change of the fiscal spending responsibilities sharing will have a direct impact on their budgets. Figure 29.

To address the mismatch of local governments' revenue and expenditures is a "zero-sum" game among the relevant stakeholders. What the MOF or the Finance Minister could do is not deciding who are the losers or the winners from the policy change, but rather help clarify the theoretical relationships among them.

To increase the local governments' revenue by redesigning the revenue-sharing formula may not increase the overall local government revenue. The MOF could increase general revenue transfers and decrease special transfers. With more general revenue secured, the local governments will not negotiate with the central government about special transfers as much as needed in the past. Their incentives to seek for extra-budgetary revenue could be lowered. Combining the policy to allow the local governments to issue bonds, the local governments can use more transparent and legal methods to obtain revenues.

How to redesign the revenue-sharing formula depends on a clear clarification of expenditure responsibilities between the Central and local governments. The MOF would

[1] Lou, J. (2014). *Promoting Institutionalization and Legalization of Administrative Powers between Governments of Different Levels* (in Chinese). Retrieved from China's Ministry of Finance: http://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/201412/t20141202_1162071.html

need to make the proposal to the State Council to get the line ministries aligned and to the NPC to legalize the content.

Since China is a unitary country, in principle, the Central government should be responsible for the expenditures regarding national sovereignty, balancing economic growth across regions, securing free mobility of economic inputs, and protect ecological and environmental security. The local governments should cover the services or projects that have strong local benefits and no obvious externalities out of the locality. Some expenditure, e.g. infrastructure construction or maintenance cross several regions, could be shared by the Central and the local governments. These classifications need to be confirmed by law[1].

This is a very long process. The MOF might want to form a special team and send it to selected local governments to understand their general expenditure needs and the spending they are covering which should be the Central government's responsibility. Meanwhile, the MOF could organize a series of seminars, having representatives of the NPC, the State Council, the line ministries and the local governments to discuss their contradictions and find common grounds. Those meetings will be close-door due to the sensitivity. But media could be used when appropriate, e.g., when discussions reach deadlocks or when common grounds are reached. A tension on the topic should be maintained to keep the top leaders or top government agencies interested.

***Policy 5: Link local government borrowings with the evaluation of local officials. Establish a punishment mechanism of irresponsible debt raising behavior.***

To include local governments borrowing as a key performance indicator in local officials' appraisals will need further support from the top leaders and the top government agencies, i.e. the NPC and the State Council. The Ministry of Finance has advocated for such a policy for a while. In NPC's conference in December 2015, Finance Minister Lou reiterated his suggestion to reform the evaluation system of the local officials[2].

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[1] Lou, J. (2014). *Promoting Institutionalization and Legalization of Administrative Powers between Governments of Different Levels* (in Chinese). Retrieved from China's Ministry of Finance: http://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/201412/t20141202_1162071.html

[2] NPC. (2015). *Report on Performance to Manage Local Government Debt by the Budget Committee of the NPC* (in Chinese). Retrieved from China's National People's Congress: http://www.npc.gov.cn/npc/xinwen/2015-12/22/content_1955661.htm

However, the massive vested interest groups, the official appointment mechanism, the local officials' GDP-driven mentality and the current needs to boost the economy have blocked the reform.

In order to push the reform forward, the MOF could consider allying with the line ministries. Many other performance indicators that meet with the line ministries' policy goals could be added to the appraisals, e.g. environment degradation or social security coverage. The alliance could make the policy recommendation more powerful to the State Council. However, coordinating with other line ministries will require longer time to design a comprehensive official performance evaluation system.

Figure 30: Analysis of policy recommendation 5

| Policy recommendation | Detailed actions | Techically correct | Administratively feasible | Politically acceptable |
|---|---|---|---|---|
| Link local government borrowings with the evaluation of local officials. | Include local government borrowing as a key performance indicator in local officials' appraisals | √ | √ ? | √ ? |
| Establish a punishment mechanism of irresponsible debt raising behavior | Link each debt issuance to a local leader, who will be responsible for the repayment activities. If the debt is raised illegally or irresponsibly, the official will be punished, including imprisonment. This inlcudes public disclosure. | √ | √ | √ ? |
| | Link each debt issuance to a local leader lifelong. Even the official has left the position, he will still take the responsibility. Any official that has misbehavior in raising debt cannot receive promotion to the next level. | √ | √ ? | √ ? |

Source: author

Figure 31: Policy recommendation 5: Spectrum of allies


Source: author

Meanwhile, the MOF could cooperate with the MOO to pilot debt-related performance evaluation for the local officials whose governments are selected to pilot local government bond issuance (i.e. the local governments with good debt management). The local people's congresses (i.e. representatives of the local residents) should be invited to conduct the evaluation or monitor the evaluation process conduct by the local bureaus of organization. Successful stories could be publicized by the local media. Experience gained in the pilot scheme could help the MOO to design the details about how to revise the officials' appraisal system to reflect their debt management performance. That said, both the MOF and the MOO should be cautious that the policy design is based on successful experience. If the proposal can gain political support, a wider pilot will be needed to include the poor debt management localities to further fine-tune the policy design.

A step further, each local government bond issuance in the future could be linked with a local official to make them accountable. The linkage with the official could even be extended to the whole payback period of a bond, which might be longer than 10 years (the tenure of a local leader is likely to be 3-5 years). This will receive massive resistance of the local leaders, or even some top leaders due to their nepotistic relation with some local officials.

## SECTION VI: Summary of Policy Recommendations

To enhance the responsibility of local government borrowing requires a wide coordination across the top leaders, the central government agencies, local government agencies, financial institutes, media and the general public. The various vested interest groups and the political and economic context in China constrain policy options. The MOF will need to be creative in putting forward a package of policies. Synergies exist among the policies.

Key policy recommendations to the MOF (see Table 13 in Appendix for more details):

In short term (one year), the MOF shall focus on reducing the immediate financial risks due to excessive debt. This includes allowing the local governments to issue bond to replace bank loans. Institutional investors who look for relatively low but stable returns, like the Social Security Fund, can be introduced to reduce the banks' obligation to purchase the bonds. In addition, the MOF will request the local governments to clear their illegal contingent liabilities. Fiscal bonus could be provided to incentivize the local governments.

The MOF shall collaborate with the NAO to gain updated data about the size of the local government borrowings and lay a foundation for an early warning system and a risk classification mechanism. Internal disclosure among government agencies should be made as a first stage.

In medium term (three years), the MOF should set up an early warning system and a risk classification mechanism to control local government debt risks.

The MOF should continue addressing the mismatch between the fiscal revenue and the expenditure responsibilities of the local governments. A redesigned revenue-sharing formula will secure the local governments with more general transfer, to reduce their incentives to search for extra-budgetary budget. The MOF will continue close communication with the NPC, the State Council, the line ministries and the local governments to discuss the contradictions and find common grounds regarding expenditure sharing between the Central and the local governments.

The MOF should work with the MOO to pilot a debt management performance related local officials' appraisal system. The pilot can first be conducted within the good-debt-management local governments, then expand to the poor ones.

In long term (five years), the MOF should lobby the top government agencies (especially the NPC) to confirm hard budget constraints by law.

If the macroeconomic context allows (i.e. a better performing economy with increasing fiscal revenue growth), the MOF should require the local governments to restore fiscal contingency reserve funds to reduce the local governments' reliance on the central governments' bailouts.

## APPENDIX: Tables

**Table 1: China's local governemnt debt matrix**

| **Source of debt** | **Direct liabilities** (Local governments' responsibilities to repay; current liabilities) | **Contingent liabilities** (Local governments' repayment responsibilites to repay under certain conditions; future liabilities) |
|---|---|---|
| **Explicit debt** (Local governments' debt comfirmed by law) | • Local governments' bonds issued by the central government<br>• Local governments' bonds issued by themselves<br>• Borrowings from foreign governments and international organizations<br>• National debt transferred to local governments<br>• Agricultural development debt<br>• Payments overdue of local government-owned food production, supply and sales enterprieses<br>• Account payable<br>• Salaries and pension of civil servants<br>• Legally defined debt from local government financing vehicles, public institutions and utilitiy companies, which should be repaied by fiscal revenue. | • Debt from local government financing vehicles, public institutions and utilitiy companies, which should not be repaid by fiscal revenue but guaranteed directly or indirectly by the local governments.<br>• The borrowings of the lcoal governments which will not be repaied by fiscal revenue.<br>• Debt guaranteed by local government agencies, public institutions and local government financing vehicles. |
| **Implicit debt** (Local governments' debt defined by their roles) | ---- | • Debt raised for public welfare projects by local government financing vehicles, public institutions and utitility companies, which will not be repaied by fiscal revenue and is not guaranteed by the local governments. |

Source: Liu, et al., 2012, pp. 9.

**Table 2: Key indicators to measure local government debt risks in China, as of 2013**[1]

| | Local governments' direct liabilities | | Local governments' total liability (direct and contingent liabilities) | |
|---|---|---|---|---|
| | Direct Debt to Fiscal Revenue ratio[2] | Direct Debt to GDP ratio[3] | Total Debt to Fiscal Revenue ratio[2] | Total Debt to GDP ratio[3] |
| Beijing: Provincial/Municipal | 60.47% | 15.14% | 77.34% | 19.36% |
| Beijing: Prefecture/City | 96.82% | 19.20% | 102.93% | 20.41% |
| Beijing: County[4] | 7.04% | 0.90% | 7.83% | 1.00% |
| Tianjin: Provincial/Municipal | 29.55% | 5.82% | 92.56% | 18.24% |
| Tianjin: Prefecture/City | 68.61% | 8.82% | 106.38% | 13.68% |
| Tianjin: County | 0.19% | 0.03% | 0.35% | 0.05% |
| Hebei: Provincial/Municipal | 5.29% | 0.92% | 25.91% | 4.53% |
| Hebei: Prefecture/City | 104.07% | 68.05% | 218.81% | 143.08% |
| Hebei: County | 189.44% | 8.44% | 225.20% | 10.03% |
| Shanxi: Provincial/Municipal | 6.78% | 1.91% | 73.36% | 20.70% |
| Shanxi: Prefecture/City | 58.19% | 5.72% | 76.64% | 7.53% |
| Shanxi: County | 85.68% | 7.40% | 89.76% | 7.75% |
| Inner Mongolia: Provincial/Municipal | 0.10% | 0.02% | 15.79% | 3.78% |
| Inner Mongolia: Prefecture/City | 79.84% | 6.00% | 107.71% | 8.10% |
| Inner Mongolia: County | 281.36% | 17.88% | 286.26% | 18.19% |
| Liaoning: Provincial/Municipal | 4.26% | 0.95% | 23.27% | 5.20% |
| Liaoning: Prefecture/City | 108.60% | 11.84% | 127.75% | 13.92% |
| Liaoning: County | 192.13% | 14.92% | 202.22% | 15.70% |
| Jilin: Provincial/Municipal | 19.87% | 4.66% | 47.87% | 11.22% |
| Jilin: Prefecture/City | 156.09% | 9.81% | 239.44% | 15.04% |
| Jilin: County | 159.12% | 7.24% | 169.57% | 7.71% |
| Heilongjiang: Provincial/Municipal | 9.92% | 2.77% | 31.18% | 8.69% |
| Heilongjiang: Prefecture/City | 125.84% | 6.93% | 186.69% | 10.28% |
| Heilongjiang: County | 150.47% | 6.19% | 178.37% | 7.34% |
| Shanghai: Provincial/Municipal | 37.10% | 8.55% | 77.12% | 17.77% |
| Shanghai: Prefecture/City | 78.30% | 40.85% | 108.95% | 56.85% |
| Shanghai: County | 101.11% | 14.50% | 109.33% | 15.68% |
| Jiangsu: Provincial/Municipal | 2.93% | 0.44% | 10.91% | 1.65% |
| Jiangsu: Prefecture/City | 50.10% | 4.92% | 104.17% | 10.23% |
| Jiangsu: County | 315.14% | 12.21% | 482.48% | 18.69% |
| Zhejiang: Provincial/Municipal | 1.73% | 0.28% | 2.94% | 0.48% |
| Zhejiang: Prefecture/City | 41.66% | 3.91% | 59.95% | 5.63% |
| Zhejiang: County | 186.34% | 14.95% | 228.83% | 18.36% |
| Anhui: Provincial/Municipal | 6.11% | 1.47% | 10.00% | 2.41% |
| Anhui: Prefecture/City | 86.77% | 8.31% | 175.87% | 16.83% |

| | | | | |
|---|---|---|---|---|
| Anhui: County | 292.99% | 13.17% | 367.35% | 16.51% |
| Fujian: Provincial/Municipal | 8.91% | 1.56% | 43.57% | 7.64% |
| Fujian: Prefecture/City | 45.26% | 3.98% | 62.20% | 5.47% |
| Fujian: County | 359.78% | 10.08% | 362.94% | 11.86% |
| Jiangxi: Provincial/Municipal | 4.49% | 1.32% | 19.21% | 5.64% |
| Jiangxi: Prefecture/City | 81.66% | 8.59% | 131.56% | 13.83% |
| Jiangxi: County | 108.68% | 11.64% | 315.24% | 12.62% |
| Shandong: Provincial/Municipal | 0.82% | 0.11% | 16.41% | 2.23% |
| Shandong: Prefecture/City | 55.98% | 4.36% | 72.63% | 5.66% |
| Shandong: County | 105.45% | 6.38% | 132.85% | 8.04% |
| Henan: Provincial/Municipal | 6.04% | 1.12% | 27.95% | 5.16% |
| Henan: Prefecture/City | 87.88% | 6.15% | 111.03% | 7.77% |
| Henan: County | 121.09% | 5.18% | 130.53% | 5.59% |
| Hubei: Provincial/Municipal | 2.88% | 0.65% | 24.78% | 5.62% |
| Hubei: Prefecture/City | 160.37% | 13.02% | 215.93% | 17.53% |
| Hubei: County | 269.51% | 15.09% | 268.14% | 15.01% |
| Hunan: Provincial/Municipal | 9.06% | 1.99% | 44.63% | 9.82% |
| Hunan: Prefecture/City | 65.79% | 4.39% | 162.53% | 10.84% |
| Hunan: County | 176.27% | 12.74% | 229.13% | 16.56% |
| Guangdong: Provincial/Municipal | 5.62% | 0.97% | 10.90% | 1.88% |
| Guangdong: Prefecture/City | 64.60% | 5.30% | 107.69% | 8.84% |
| Guangdong: County | 221.28% | 12.30% | 208.94% | 11.62% |
| Guangxi: Provincial/Municipal | 3.11% | 0.77% | 38.01% | 9.45% |
| Guangxi: Prefecture/City | 148.37% | 10.51% | 241.52% | 17.11% |
| Guangxi: County | 114.95% | 5.70% | 130.73% | 6.49% |
| Hainan: Provincial/Municipal | 13.04% | 4.59% | 43.69% | 15.39% |
| Hainan: Prefecture/City | 423.34% | 51.10% | 431.18% | 52.04% |
| Hainan: County | 107.64% | 15.84% | 110.80% | 16.30% |
| Chongqing: Provincial/Municipal | 26.26% | 7.32% | 107.50% | 29.96% |
| Chongqing: Prefecture/City | 154.25% | 27.81% | 208.53% | 37.60% |
| Chongqing: County | 8.43% | 0.68% | 8.46% | 0.69% |
| Sichuan: Provincial/Municipal | 4.94% | 1.34% | 11.73% | 3.19% |
| Sichuan: Prefecture/City | 99.64% | 7.37% | 146.88% | 10.86% |
| Sichuan: County | 495.98% | 27.39% | 612.58% | 33.82% |
| Guizhou: Provincial/Municipal | 12.18% | 5.16% | 46.62% | 19.74% |
| Guizhou: Prefecture/City | 103.37% | 12.33% | 129.05% | 15.39% |
| Guizhou: County | 523.67% | 55.47% | 549.58% | 58.21% |
| Yunnan: Provincial/Municipal | 25.26% | 9.43% | 37.46% | 13.98% |
| Yunnan: Prefecture/City | 92.93% | 9.70% | 209.00% | 21.82% |
| Yunnan: County | 243.85% | 19.06% | 259.79% | 20.31% |
| Shaanxi: Provincial/Municipal | 12.07% | 3.00% | 69.82% | 17.34% |
| Shaanxi: Prefecture/City | 121.66% | 9.37% | 195.79% | 15.09% |
| Shaanxi: County | 154.58% | 7.69% | 172.04% | 8.56% |

| | | | | |
|---|---|---|---|---|
| Gansu: Provincial/Municipal | 10.97% | 4.29% | 61.28% | 23.99% |
| Gansu: Prefecture/City | 131.35% | 8.71% | 227.79% | 15.11% |
| Gansu: County | 212.40% | 10.93% | 254.85% | 13.11% |
| Qinghai: Provincial/Municipal | 30.46% | 19.96% | 43.94% | 28.78% |
| Qinghai: Prefecture/City | 113.46% | 7.30% | 193.56% | 12.45% |
| Qinghai: County | 194.16% | 10.55% | 204.29% | 11.10% |
| Ningxia: Provincial/Municipal | 3.32% | 1.34% | 27.46% | 11.03% |
| Ningxia: Prefecture/City | 107.87% | 9.62% | 121.75% | 10.86% |
| Ningxia: County | 274.77% | 20.22% | 272.05% | 20.02% |
| Xinjiang: Provincial/Municipal | 14.73% | 5.62% | 39.57% | 15.10% |
| Xinjiang: Prefecture/City | 56.02% | 4.79% | 78.30% | 6.69% |
| Xinjiang: County | 117.62% | 11.17% | 129.92% | 12.34% |

Source: author
Data source: NAO, CEIC

Note:
1. These indicators are estimated based on the following figures: debt as of June 2013, fiscal revenue in 2013, and GDP in 2013.
2. Debt to fiscal revenue exceeding 100 percent is highlighted in yellow; if exceeding 200%, highlighted in red.
3. Debt to GDP ratio exceeding 60 percent is highlighted in red. Debt to GDP ratios for prefectures of the municipalities (i.e. Beijing, Tianjin, Shanghai and Chongqing) are overestimated due to missing data.
4. Debt for county includes liabilities of both county and town governments. Since GDP and fiscal revenue data are only disaggregated to county level, I combine the debt of county and town government.

**Table 3: Local government debt: Debt to GDP ratio at provincial/municipal aggregate level, 2012 and 2013**

| | Direct liabilities | | Total liabilities (including direct and contingent liabilities) | |
|---|---|---|---|---|
| | 2012 | 2013 | 2012 | 2013 |
| Beijing | 33% | 33% | 39% | 38% |
| Tianjin | n.a. | 16% | n.a. | 33% |
| Hebei | 14% | 14% | 26% | 26% |
| Shanxi | 11% | 12% | 56% | 33% |
| Inner Mongolia | 19% | 20% | 26% | 27% |
| Liaoning | 21% | 21% | 28% | 28% |
| Jilin | 22% | 20% | 34% | 33% |
| Heilongjiang | 13% | 14% | 24% | 25% |
| Shanghai | 26% | 24% | 41% | 39% |
| Jiangsu | 12% | 13% | 24% | 25% |
| Zhejiang | 12% | 13% | 17% | 18% |
| Anhui | 15% | 16% | 26% | 28% |
| Fujian | 10% | 11% | 18% | 20% |
| Jiangxi | 17% | 17% | 27% | 27% |
| Shandong | 8% | 8% | 13% | 13% |
| Henan | 10% | 11% | 16% | 17% |
| Hubei | 19% | 21% | 29% | 31% |
| Hunan | 14% | 14% | 31% | 31% |
| Guangdong | 11% | 11% | 17% | 16% |
| Guangxi | 15% | 14% | 30% | 30% |
| Hainan | 32% | 33% | 43% | 44% |
| Chongqing | 29% | 28% | 59% | 58% |
| Sichuan | 23% | 25% | 34% | 35% |
| Guizhou | n.a. | 57% | n.a. | 78% |
| Yunnan | 34% | 32% | 52% | 50% |
| Shaanxi | 17% | 17% | 38% | 38% |
| Gansu | 17% | 19% | 44% | 47% |
| Qinghai | 37% | 35% | 50% | 50% |
| Ningxia | 19% | 19% | 31% | 31% |
| Xinjiang | 19% | 19% | 32% | 33% |

Source: author, WIND

*Debt for GDP ratio for 2013 is estimated based on local government debt as of June 2013 and GDP in 2013.

**Table 4: Overdue repayment ratio, as of end 2012**

| Province/Municipality | Type of liability | Overdue ratio | Total overdue ratio* |
|---|---|---|---|
| Beijing | Direct liability | 0.25 | 1.95 |
| | Guarantee liability | 1.67 | |
| | Potential liability | 0.03 | |
| Tianjin | Direct liability | 0.00 | 1.46 |
| | Guarantee liability | 0.04 | |
| | Potential liability | 1.42 | |
| Hebei | Direct liability | 2.56 | 10.35 |
| | Guarantee liability | 3.08 | |
| | Potential liability | 4.71 | |
| Shanxi | Direct liability | 1.94 | 10.60 |
| | Guarantee liability | 0.47 | |
| | Potential liability | 8.19 | |
| Inner Mongolia | Direct liability | 3.66 | 33.95 |
| | Guarantee liability | 1.98 | |
| | Potential liability | 28.31 | |
| Liaoning | Direct liability | 2.56 | 6.55 |
| | Guarantee liability | 0.84 | |
| | Potential liability | 3.15 | |
| Jilin | Direct liability | 1.79 | 6.20 |
| | Guarantee liability | 1.29 | |
| | Potential liability | 3.12 | |
| Heilongjiang | Direct liability | 2.36 | 8.77 |
| | Guarantee liability | 1.10 | |
| | Potential liability | 5.31 | |
| Shanghai | Direct liability | 0.56 | 0.85 |
| | Guarantee liability | 0.01 | |
| | Potential liability | 0.28 | |
| Jiangsu | Direct liability | 1.38 | 4.39 |
| | Guarantee liability | 0.87 | |
| | Potential liability | 2.14 | |
| Zhejiang | Direct liability | 0.15 | 0.61 |
| | Guarantee liability | 0.14 | |
| | Potential liability | 0.32 | |
| Anhui | Direct liability | 2.44 | 6.61 |
| | Guarantee liability | 1.00 | |
| | Potential liability | 3.17 | |
| Fujian | Direct liability | 0.94 | 3.33 |
| | Guarantee liability | 1.83 | |
| | Potential liability | 0.56 | |
| Jiangxi | Direct liability | 1.55 | 11.27 |

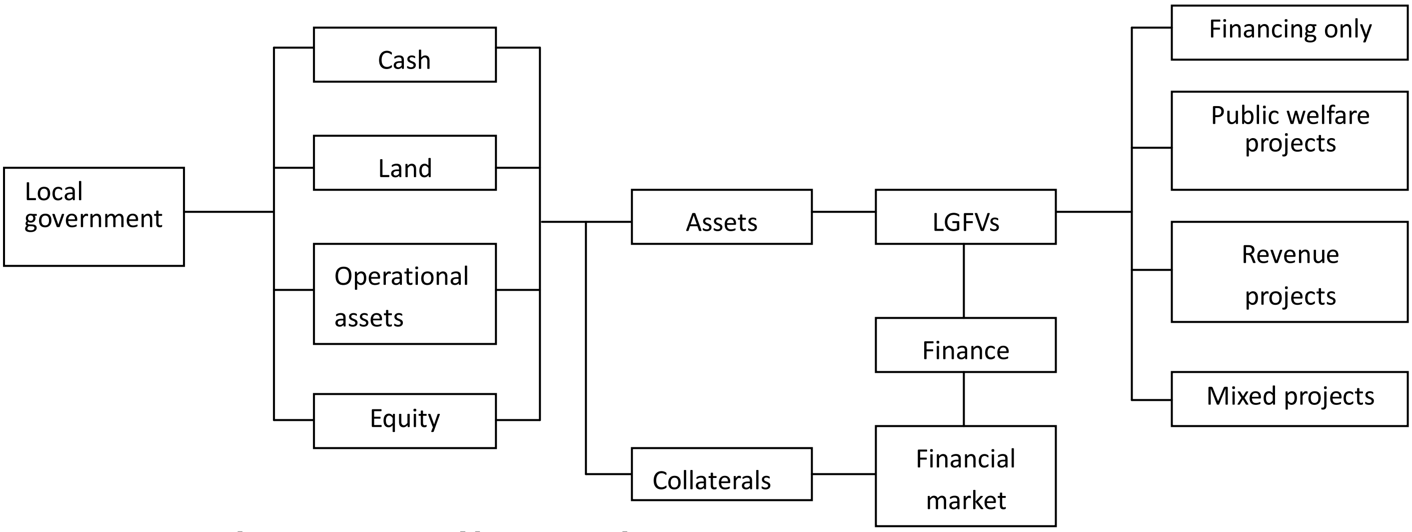
| | | | |
|---|---|---|---|
| | Guarantee liability | 1.13 | |
| | Potential liability | 8.59 | |
| Shandong | Direct liability | 2.76 | 12.49 |
| | Guarantee liability | 0.91 | |
| | Potential liability | 8.82 | |
| Henan | Direct liability | 3.4 | 14.06 |
| | Guarantee liability | 7.04 | |
| | Potential liability | 3.62 | |
| Hubei | Direct liability | 1.91 | 8.32 |
| | Guarantee liability | 2.92 | |
| | Potential liability | 3.49 | |
| Hunan | Direct liability | 4.1 | 13.72 |
| | Guarantee liability | 5.58 | |
| | Potential liability | 4.04 | |
| Guangdong | Direct liability | 1.9 | 6.84 |
| | Guarantee liability | 3.39 | |
| | Potential liability | 1.55 | |
| Guangxi | Direct liability | 4.33 | 7.26 |
| | Guarantee liability | 0.99 | |
| | Potential liability | 1.94 | |
| Hainan | Direct liability | 0.24 | 2.46 |
| | Guarantee liability | 0.45 | |
| | Potential liability | 1.77 | |
| Chongqing | Direct liability | 2.46 | 6.28 |
| | Guarantee liability | 0.45 | |
| | Potential liability | 3.37 | |
| Sichuan | Direct liability | 3.19 | 11.78 |
| | Guarantee liability | 3.39 | |
| | Potential liability | 5.2 | |
| Guizhou | Direct liability | 2.28 | 7.42 |
| | Guarantee liability | 2.03 | |
| | Potential liability | 3.11 | |
| Yunnan | Direct liability | 4.09 | 11.02 |
| | Guarantee liability | 5.44 | |
| | Potential liability | 1.49 | |
| Shaanxi | Direct liability | 3.65 | 7.67 |
| | Guarantee liability | 3.11 | |
| | Potential liability | 0.91 | |
| Gansu | Direct liability | 2.98 | 16.69 |
| | Guarantee liability | 10.27 | |
| | Potential liability | 3.44 | |
| Qinghai | Direct liability | 0.78 | 4.49 |
| | Guarantee liability | 1.25 | |

| | | | |
|---|---|---|---|
| | Potential liability | 2.46 | |
| Ningxia | Direct liability | 2.41 | 9.37 |
| | Guarantee liability | 0.16 | |
| | Potential liability | 6.8 | |
| Xinjiang | Direct liability | 2.55 | 4.94 |
| | Guarantee liability | 0.81 | |
| | Potential liability | 1.58 | |

Source: author
Data source: WIND, Provincial Audit Bureaus

*Total overdue repayment ratio over 30 percent is highlighted in red.

**Table 5: Operation model of LGFVs**




Source: Zhou, 2011, quoted by Liu & Chen, 2014, pp.3

**Table 6: China's fiscal regimes since 1950**

| Time | | Fiscal model |
|---|---|---|
| **Stage I: Unified state control** | 1950 | Highly concentrated, unified state control |
| | 1951-1957 | Fiscal revenue and expenditure sharing, management by different levels of governments |
| | 1958 | Revenue-based expenditure. Fixed fiscal plan for the following 5 years. |
| | 1959-1970 | Decentralize revenue and expenditure. Contracted revenue and expenditure. Regional rebalance. Yearly plan. |
| | 1971-1973 | Fixed revenue and expenditure. Contracted revenue and expenditure. Fixed fiscal turn-in. Yearly plan. |
| | 1974-1975 | Revenue sharing. Contracted expenditure. |
| | 1976-1979 | Fixed revenue and expenditure. Link revenue with expenditure. Fiscal sharing based on total fiscal income. Yearly plan. |

| | | |
|---|---|---|
| **Stage II: Local responsibility** | 1980-1985 | Apportion revenues and expenditures between the central and local authorities, while holding the latter responsible for their own profit and loss. |
| | 1985-1988 | Apportion tax items between the central and local authorities.<br>Confirm revenue and expenditure.<br>The local governments are responsible for their own profit and loss. |
| | 1988-1993 | Fixed revenue and expenditure system. The local governments are responsible for their own profit and loss. |
| **Stage III: Decentralization** | 1994-now | Retain expenditure responsibilities for the central government from the previous system.<br>Spilt tax items into central tax, local tax and shared tax.<br>Confirm the base of tax turn-in for the local governments.<br>Establish a fiscal transfer system. |

Source: Liu Z. , 2010, pp. 2.

**Table 7: Revenue sharing between China's Central and local governments**

| **Central** | **Sub-national** | **Shared responsibility** |
|---|---|---|
| Tariffs | Business tax (except banks, nonbank financial institutions, insurance companies and railroads) | VAT (75% central, 25% local) |
| Consumption taxes | Profits from locally controlled SOEs | Stamp tax (97% central, 3% local) |
| Income taxes of centrally owned SOEs | Urban land use tax | Corporate and individual income taxes (60% central, 40% local) |
| Import-related consumption taxes and value-added taxes (VATs) | Urban maintenance and development tax (except banks, nonbank financial institutions, insurance companies and railroads) | Resource taxes (offshore oil belongs to central, the rest to sub-national government) |
| Taxes on banks, nonbank financial institutions and insurance companies (business taxes, income taxes and urban maintenance and development tax) | Fixed asset investment adjustment tax | |
| Taxes on railroads | Housing property tax | |
| Profits from centrally controlled SOEs | Agriculture-related taxes | |
| | Contract tax | |
| | Tax on use of arable land | |
| | Tax on land value increase | |

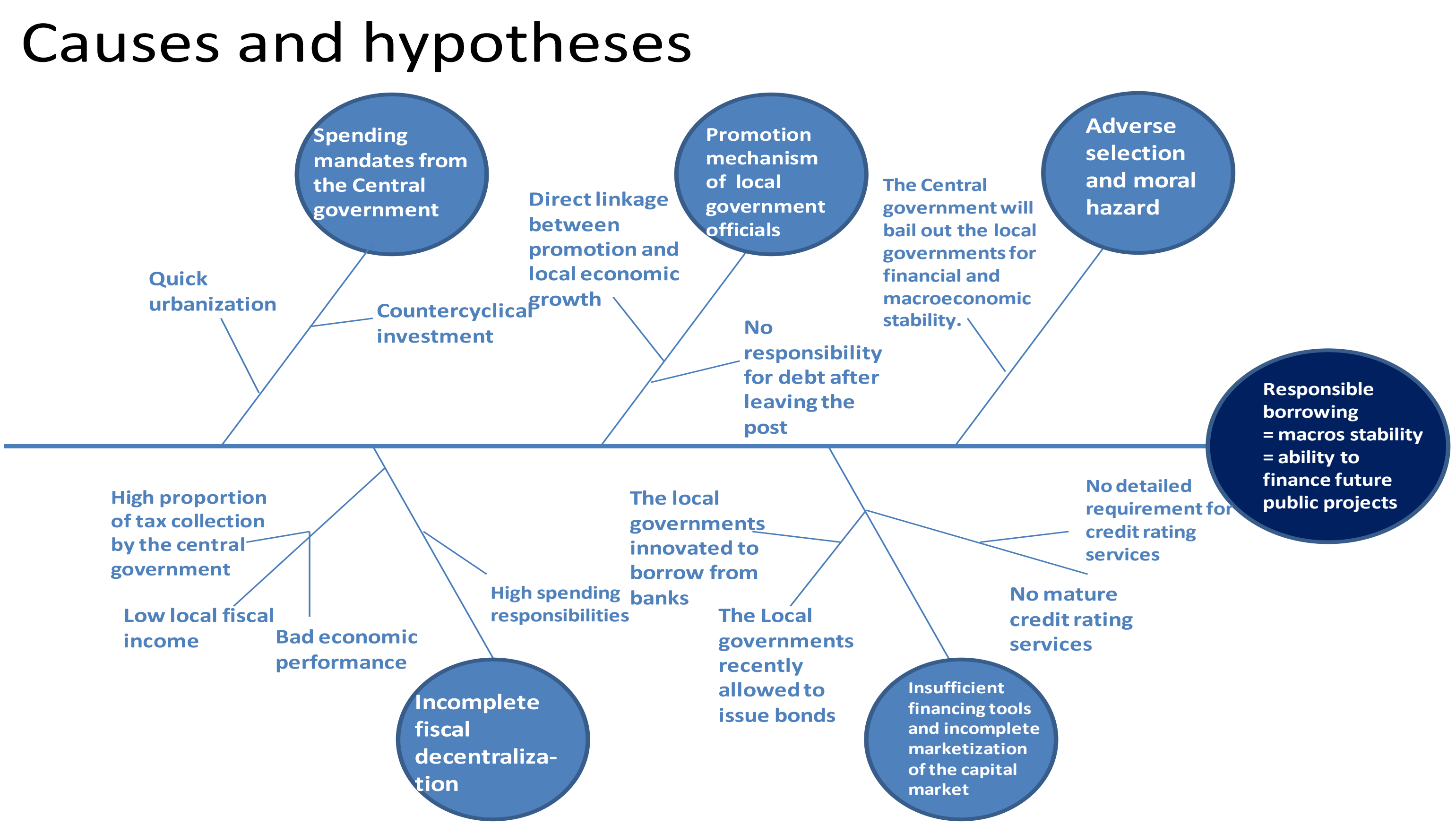
Source: OECD, 2006, pp.29

**Table 8: Expenditure assignment between China's Central and local governments**

| Central | Sub-national | Shared responsibility |
|---|---|---|
| National defence | Sub-national government administration | Capital construction (infrastructure projects of national and international nature are undertaken by the central government, local projects by sub-national governments) |
| Armed police troops | Innovative and science and technology promotion funds of locally controlled SOEs | Operation of agriculture and production support |
| Diplomacy and external assistance | Urban maintenance and construction | Culture, education, science and public health (the central government is responsible for items of national importance and higher education in general while the location principle applies for the rest) |
| Central government administration | Price subsidies | Social security funds (the central government makes up partly for shortfall of PAYGO components of locally managed social security funds) |
| Innovation and science and technology promotion funds of centrally controlled SOEs | Public security agency, procuratorial agency and court of justice at the sub-national level | |
| Geological prospecting | Social security related expenditure | |
| Principal and interest payment on domestic and foreign government debt | | |
| Public security agency, procuratorial agency and court of justice at the national level | | |

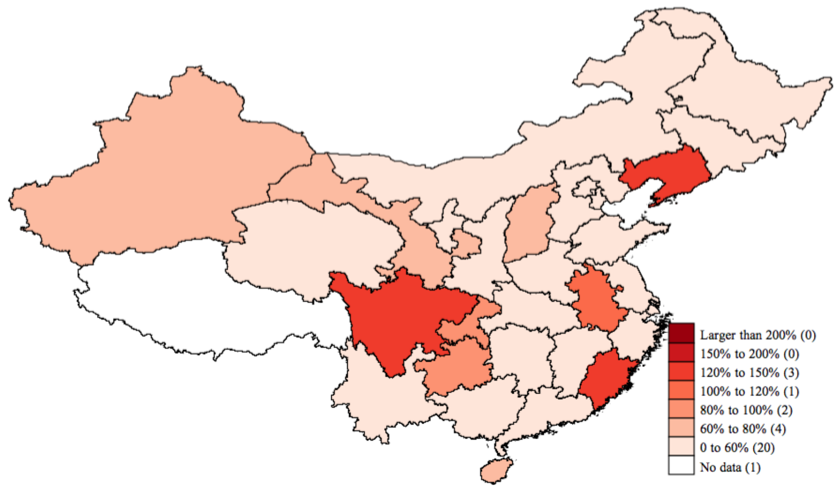
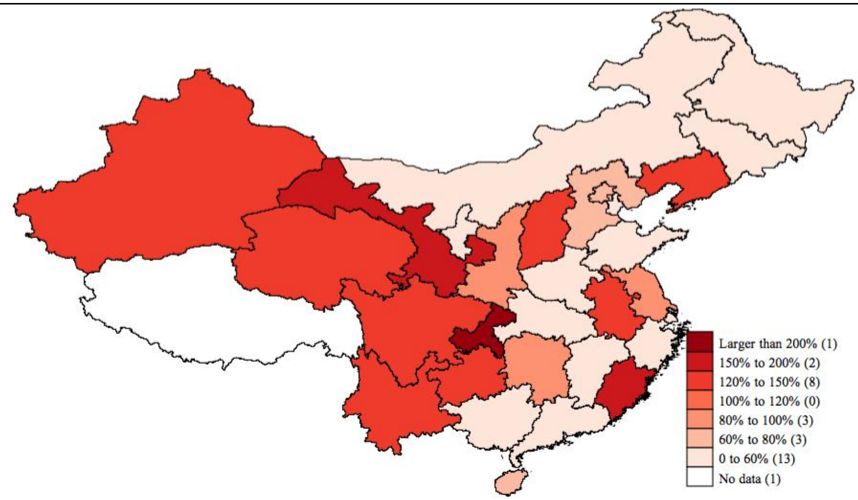
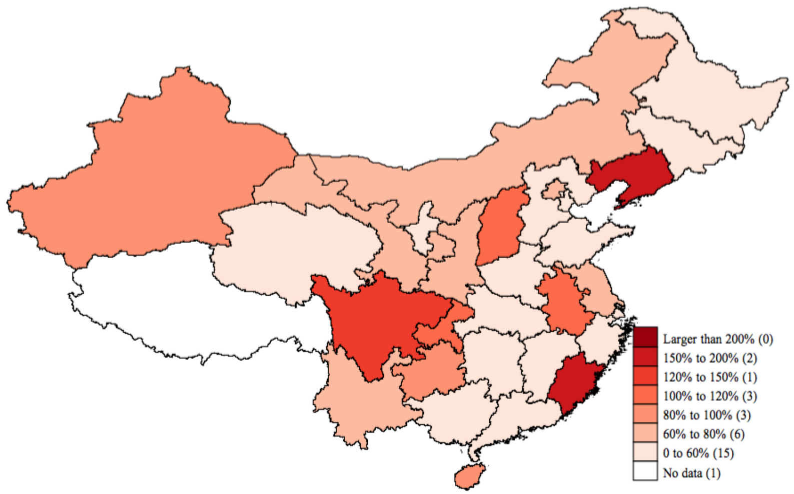
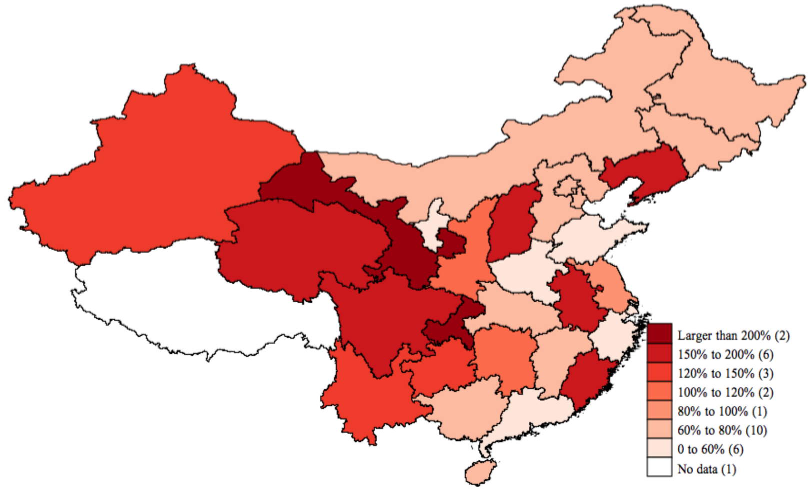
Source: OECD, 2006, pp.26.

**Table 9: Ishikawa diagram: hypotheses of causes of local governments' excessive borrowings**




Source: author

**Table 10: Predicted debt to GDP ratio in 2020, at provincial aggregate level**

<table>
<tr><th></th><th>Direct debt to GDP ratios</th><th>Total debt[1] to GDP ratio</th></tr>
<tr><td>GDP grows at the average rate of the past 15 years</td><td></td><td></td></tr>
<tr><td>GDP grows at the same rate as in 2015</td><td></td><td></td></tr>
</table>

[1] Total debt includes direct and contingent liabilities.

**Table 10 (continued)**

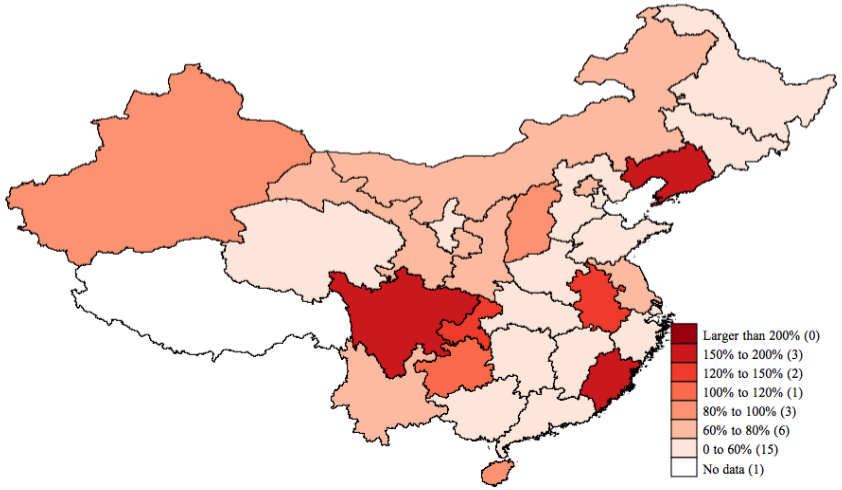
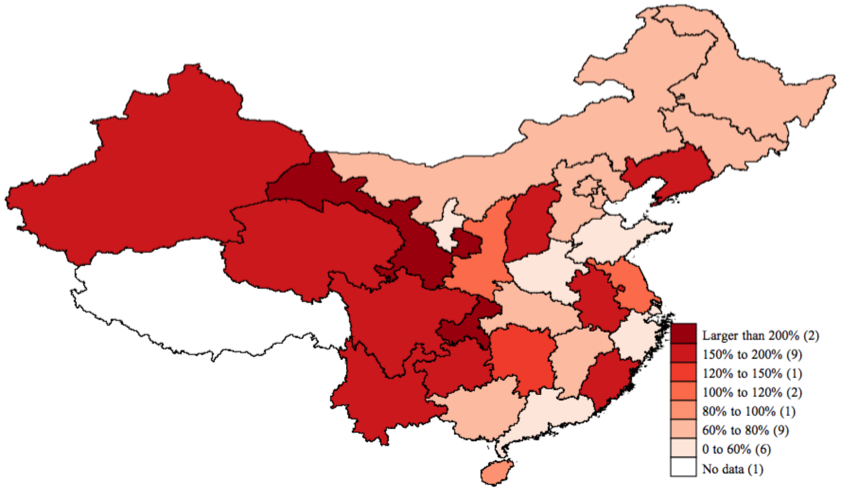
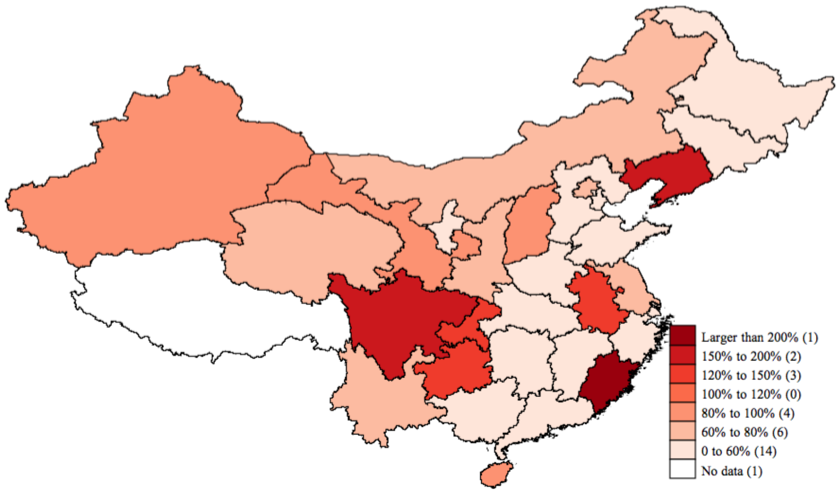
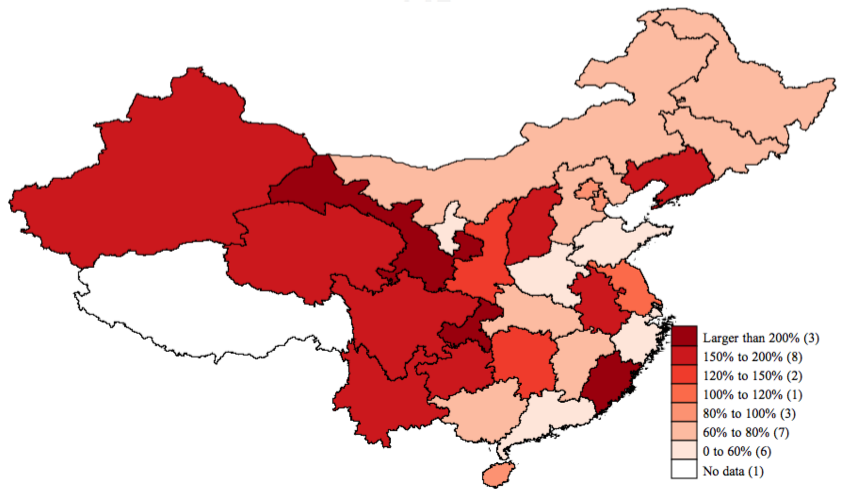
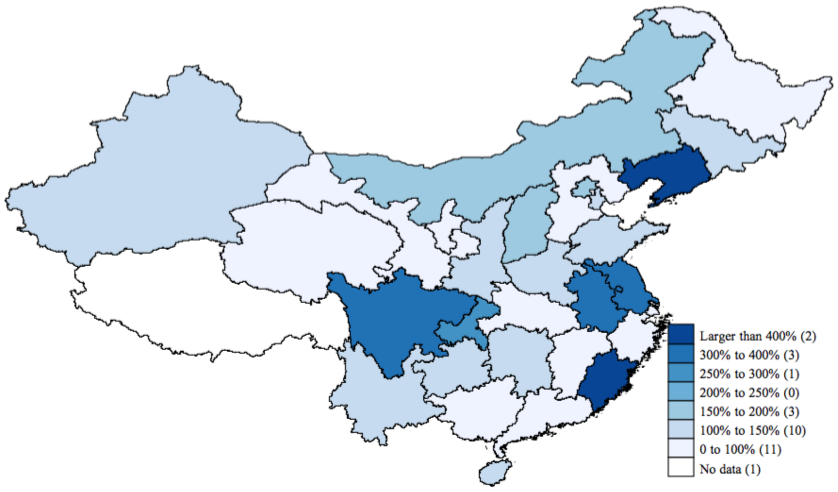
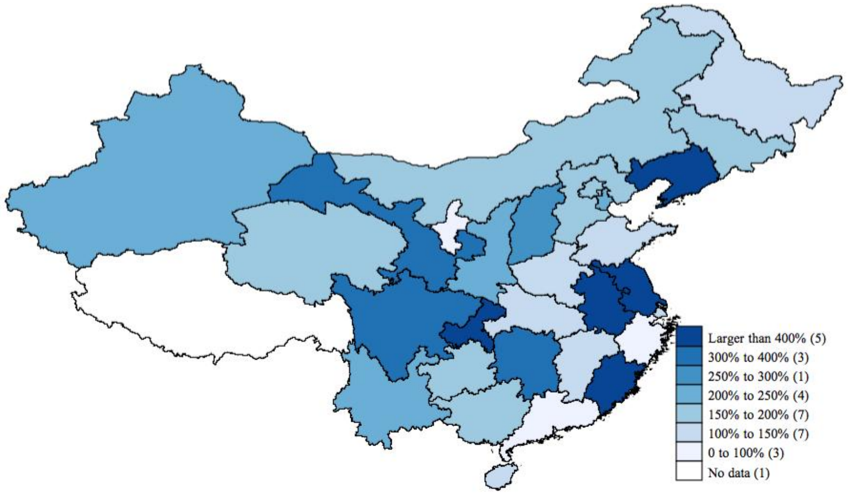
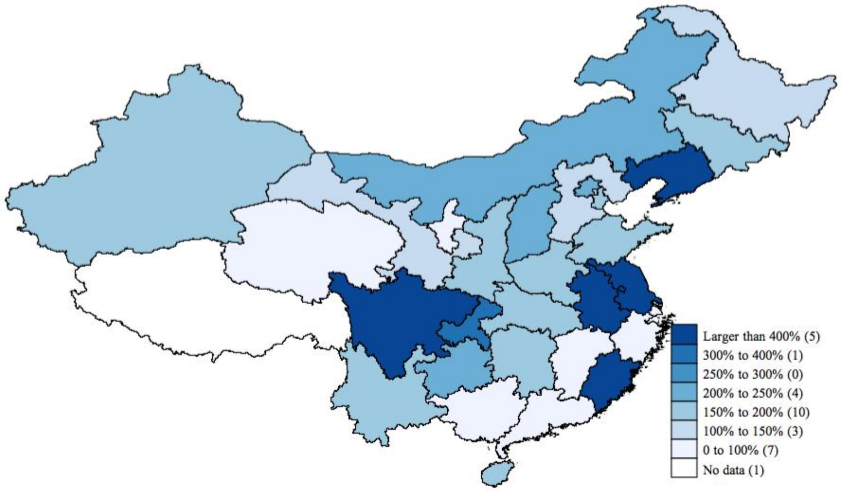
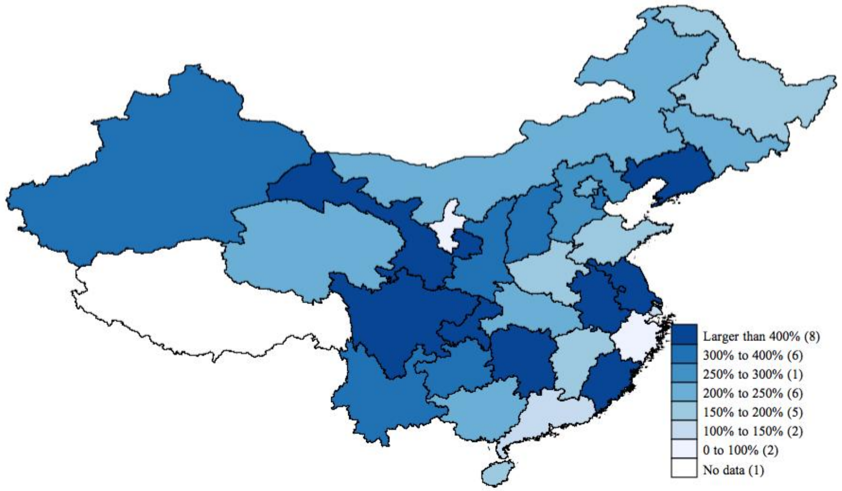
<table>
<tr><th></th><th>Direct debt to GDP ratios</th><th>Total debt to GDP ratio</th></tr>
<tr><td>GDP grows at 6.5 percent (national target)</td><td>
</td><td>
</td></tr>
<tr><td>GDP grows at 5 percent (hard landing)</td><td>
</td><td>
</td></tr>
</table>

**Table 11: Predicted debt to fiscal revenue ratio in 2020, at provincial aggregate level**

<table>
<tr><th></th><th>Direct debt to fiscal revenue ratios</th><th>Total debt to fiscal revenue ratio</th></tr>
<tr><td>Fiscal revenue grows at the average rate of the past 5 years</td><td>
</td><td>
</td></tr>
<tr><td>Fiscal revenue growth rates all slow to 10%</td><td>
</td><td>
</td></tr>
</table>

**Methodology to produce Table 10 &11:**

1. I use each province/municipality's debt growth rate from 2012 to June 2013 to estimate their debt amount in 2020.
2. I use geometric mean to estimate each province/municipality's average GDP growth in the past 15 years, and their average fiscal revenue growth in the past 5 years.
   The average fiscal revenue growth rates in the past 15 years are largely similar to the average rates in the past 5 years. Thus, I use the average rates of the past 5 years to reflect recent fiscal growth trends.
3. I predict debt to GDP and debt to fiscal revenue ratios for each province/municipality in 2020, based on estimated average provincial GDP growth rates, other GDP growth scenarios, estimated average provincial fiscal revenue growth rates and other fiscal revenue growth scenarios.
4. I use data from CEIC and WIND to do the prediction.

**Table 12: Sources of local government debt, as of June 2013**

Unit: RMB 10 million

| Source | Government with direct liabilities | Government with guarantor liabilities | Government with potential liabilities |
|---|---|---|---|
| Bank loans | 55252.45 | 19085.18 | 26849.76 |
| BT | 12146.30 | 465.05 | 2152.16 |
| Bond issuance | 11658.67 | 1673.58 | 5124.66 |
| inc: local government bond | 6146.28 | 489.74 | 0.00 |
| Corporate bond | 4590.09 | 808.62 | 3428.66 |
| Mid-term note (MTN) | 575.44 | 344.82 | 1019.88 |
| Commercial paper | 123.53 | 9.13 | 222.64 |
| Account payable | 7781.90 | 90.98 | 701.89 |
| Trust financing | 7620.33 | 2527.33 | 4104.67 |
| Other company or individual's borrowing | 6679.41 | 552.79 | 1159.39 |
| Deferred payment | 3269.21 | 12.71 | 476.67 |
| Other financial institute financing (securities, insurance and others) | 2000.29 | 309.93 | 1055.91 |
| Sub-loan of Treasury bill and other foreign debt | 1326.21 | 1707.52 | 0.00 |
| Lease financing | 751.17 | 193.05 | 1374.72 |
| Fund raising | 373.23 | 37.65 | 393.89 |
| **Total** | **108859.17** | **26655.77** | **43393.72** |

Source: National Audit Office, 2013

## Table 13: Summary of policy recommendations

| | Policy recommendation | Detailed actions | Policy aim | Leading stakeholder | Time frame (years): Short-term 1 | Mid-term 2 | Mid-term 3 | Long-term 4 | Long-term 5 | Causes to tackle: Adverse selection and moral hazard | Pomotion mechanism of local officials | Political mandates | Imcomplete capital market | mismatch between local spending and revenue |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Reduce the immediate financial risks brought by excessive debt | Allow the local governments to issue bonds to replace bank loans with the MOF's approval | - Allow local governments to extend the maturity duration to match project payback period.<br>- Allow local governments to lower borrowing costs<br>- Reveal implicit debt | MOF | | | | | | | | | √ | |
| | | Examine illegal contingent liabilities and illegal collaterals that the local governments have provided; allow local governments to renegotiate debt contracts and discharge the illegal guarantee responsibilities | - Clearify the liabilities that the local governments should bear | MOF | | | | | | | | | √ | |
| | | Allow local fiscal authority to repay contingent liabilities if they should, clarify what local government agencies should bear the repayment responsibility and ask them to recover debt payments | - Reduce financial risk contagion<br>- Ensure the party who should take the responsibility will repay debts. | MOF | | | | | | √ | | | | |
| 2 | Enhance risk management and emergency reaction mechanisms of local government debt | Conduct audit on local government annually. Task the local fiscal special inspector to help the NAO to get relevant data and information. Disclose the audit results. | - Improve transparency<br>- Build the foundation for risk management mechanisms. | MOF and NAO | | | | | | | | | √ | |
| | | Establish an early warning system. | - Monitor and control the overall size of the local governments' debt (demand side management)<br>- Create an opportunity to deal with local governments that tend to have excessive borrowing in early time. | MOF | | | | | | | | | √ | |
| | | Set up a "traffic light system" to allow or forbid the local governments to borrow. | | MOF | | | | | | | | | √ | |
| | | Establish a fiscal contingency fund | - Reduce local governments' fiscal risks<br>- Clear the liabilities that the local governments should bear | MOF and local fiscal bureaus | | | | | | √ | | | | |

Aim to finish implementation in the first year(s), continue to implement in the coming years.

Implement throughout the year(s).

Prepare implementation in the first year(s), and implement in the coming years.

Unlikely to be implemented.

**Table 13: (Continued)**

| | Policy recommendation | Detailed actions | Policy aim | Leading stakeholder | Time frame (years) | | | | | Causes to tackle | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Short-term | Mid-term | | Long-term | | Adverse selection and moral hazard | Pomotion mechanism of local officials | Political mandates | Imcomplete capital market | mismatch between local spending and revenue |
| | | | | | 1 | 2 | 3 | 4 | 5 | | | | | |
| 3 | Improve the mechanics of local government budgeting | Apply hard budget constraints on local governments | - Reduce local governments' reliance on outside revenue<br>- Ensure the budget reflect the real local government fiscal capacity. | NPC, theState Council, MOF and local governments | | | | | | √ | | | | |
| | | Include all extra-budgetary and off-budget revenue into the budget. Include all bond issuance revenue into the budget. | | NPC, theState Council, MOF and local governments | | | | | | √ | | | | |
| 4 | Address the mismatch between revenue and expenditure of the local governments | Increase the local governments' revenue by redesigning the revenue-sharing formula. | - Reduce local governments' incentive to finance on their own.<br>- Ensure quality of local governments' service provision within the budget. | The State Council, MOF, line Ministries, and local governments. | | | | | | | | | | √ |
| | | Clarify expenditure responsibilities between the central and the local governments. | | The State Council, MOF, line Ministries, and local governments. | | | | | | | | | | √ |
| 5 | Link local government borrowings with the evaluation of local officials.<br>Establish a punishment mechanism of irresponsible debt raising behavior | - Include local government borrowing as a key performance indicator in local officials' appraisals | - Change local officials' GDP-driven performance incentive | NPC, the State Council, Ministry of Organization | | | | | | | √ | | | |
| | | Link each debt issuance to a local leader. If the debt is raised illegally or responsibly, the official will take the responsibility and may be punished, including imprisonment. All the information should be open to the public. | - Make local officials care about the debt raising activities and reduce misbehavior.<br>- Clarify the debt repayment responsibility entity at the local government side.<br>- Increase local governments' accountability. | NPC, the State Council, MOF, Ministry of Organization and local governments. | | | | | | √ | √ | | | |
| | | Link each debt issuance to a local leader lifelong. Even if the official has left the position, he will still take the responsibility. Any official that has misbehavior in raising debt and has not properly resolved the issue cannot receive promotion to the next level. | | NPC, the State Council, MOF, Ministry of Organization and local governments. | | | | | | √ | √ | | | |

Source: author

**Table 14: Summary of key policies on local government debt management, 2010-2015**

| Time | Organization | Title of the policy document | Main content |
|---|---|---|---|
| June 2010 | The State Council | Notice to enhance management of local government financing vehicles | - Clarify the debt size of the LGFVs<br>- Require Banks to enhance risk management of loans to LGFVs<br>- Forbid local government to provide collaterals for LGFVs |
| July 2010 | NDRC<br>People's Bank of China (PBoC, central bank)<br>MOF<br>China Banking Regulatory Commission (CBRC, banking regulator) | Notice to implement the State Council's notice to enhance management of local government financing vehicles | Provide detailed policies to implement the State Council's requirement. |
| Apr 2011 | CBRC | Supervision on risks of LGFVs in 2011 | Control the amount of new banks loans to LGFVs. |
| June 2011 | NAO | Result of audit on local government debt | By end 2010, the total local government debt reached RMB 10.7 trillion (USD 1.65 trillion) |
| June 2013 | NAO | Result of audit on local government debt among 36 selected governments | In the 36 selected localities, the total local government was RMB 3.85 trillion (USD 0.59 trillion). |
| Dec 2013 | NAO | Result of audit on local government debt | By end 2012 and June 2013, the local government debt totaled RMB 15.9 trillion (USD 2.45 trillion) and RMB 17.9 trillion (USD 2.75 trillion), respectively. |
| May 2014 | MOF | Pilot to allow local governments to issue bonds | Shanghai, Zhejiang, Guangdong, Shenzhen, Jiangsu, Shandong, Beijing, Jiangxi, Ningxia, and Qingdao are selected as the pilot provinces or municipalities. |
| June 2014 | MOF | Guidance on credit rating for local government bond issuance in 2014 | - The local governments to select credible credit rating company within the country<br>- Public disclosure |
| July 2014 | MOF | Methods to clear local government debt in stock | - All local government debt in stock should be included in the local governments' budget<br>- Prioritize debt repayment |

| | | | |
|---|---|---|---|
| | | | - The local governments can only issue bond as debt financing since January 2016. |
| Mar 2015 | MOF | Notice on local government bond issuance in 2015 | - Allow the selected local governments to issue local government bond in 2015<br>- Use market mechanism to select underwriter(s)<br>- Provide credit rating before bond issuance<br>- Public information disclosure. |
| Dec 2015 | The State Council (prepared by the Finance Minister) | The State Council's Report on managing local government debt | Set the local government debt ceiling (with direct liabilities) at RMB 16 trillion (USD 2.5 trillion) in 2015. |

Source: author's research and summary

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