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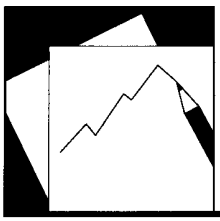

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Fiscal Vulnerabilities and Risks from Local Government Finance in China

Yuanyan Sophia Zhang and Steven Barnett

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Fiscal Vulnerabilities and Risks from Local Government Finance in China

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Abstract

China weathered the global financial crisis better than most, thanks to a large and timely stimulus. This stimulus, however, was mainly in the form of off-budget infrastructure spending and thus not visible in the headline fiscal data. We construct a time series for the augmented fiscal deficit and debt—augmented to include off-budget activity—that better illustrates the counter-cyclical role of fiscal policy. The results also show that the augmented fiscal deficit and debt are both considerably higher than the headline government data suggest. Nonetheless, at around 45 percent of GDP, the augmented debt is still at a manageable level.

JEL Classification Numbers: H5, H6, H7

Keywords: Fiscal Vulnerabilities, Fiscal Risks, Local Government Finance, China, Land Finance, Gross Financing Needs, Debt sustainability

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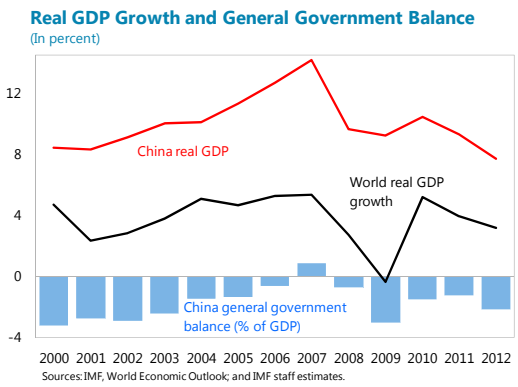
I. INTRODUCTION

China weathered the global financial crisis better than most, mainly because the government quickly implemented a large stimulus package. This package succeeded in offsetting, at least partly, the negative effects on China from the sharp contraction in advanced economy growth. The magnitude of the stimulus, however, is not apparent in the headline fiscal statistics, which show only a modest increase in the 2009 deficit. Instead, much of the stimulus took place through an expansion in credit, including financing for off-budget spending by local governments.[1] This paper estimates the size of such off-budget activity since the early 2000s by constructing a time series of "augmented" fiscal data. The fiscal data are "augmented" in the sense that we add off-budget fiscal activity to the general government statistics to create a new and expanded measure of fiscal activity. Box 1 provides an overview.[2]



Some caveats are worth highlighting from the outset. First, the augmented fiscal data are intended as a complement and not a replacement for the standard general government fiscal data. The label "augmented" highlights that an expanded definition of the general government is being analyzed. Second, the calculation of the estimates requires numerous assumptions and judgments. The estimates, therefore, are subject to a degree of uncertainty and should be interpreted accordingly. Finally, these estimates are not intended to be comprehensive. Some quasi-fiscal activity is excluded, such as that carried out by state owned enterprises and policy banks (which are still virtually all state owned). At the same time, by focusing on deficits and debt, the "augmented" fiscal data also ignores the substantial net worth of state owned enterprises as well as their operating profits. Ultimately, a more accurate picture depends on the authorities publishing more data. The forthcoming audit of local government debt is a welcome step, as is the authorities' plan to improve the data.[3] Eventually, it would be helpful to have complete data in line with *Government Finance Statistics*, which would include a government balance sheet and estimate of net worth.

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[1] Off-budget financing was not a new phenomenon. In the late 1980s, the first local government financing vehicle was established in Shanghai to support local infrastructure development. Such off-budget financing continued to grow, supporting the urbanization process by funding needed infrastructure.

[2] This paper elaborates on the analysis presented in Box 1 and Appendix III in the People's Republic of China 2013 Article IV consultation staff report (IMF, 2013a).

[3] The IMF's Dissemination Standards Bulletin Board http://dsbb.imf.org/Pages/GDDS/CtyCtgList.aspx?ctycode=CHN has a description of the authorities' plans.

Box 1. China: Explaining "Augmented" Government Debt and Deficit[1]

Rationale. Infrastructure investment has become local governments' main strategy to foster growth and a preferred countercyclical tool, especially during the global crisis. However, local infrastructure spending has mainly been financed off-budget, either through land sales or Local Government Financing Vehicle (LGFV) borrowings. This raises the questions of (1) the actual level of fiscal vulnerabilities (in particular the government debt stock), and (2) the actual size of fiscal stimulus that has contributed to supporting growth in recent years.

Approach. Therefore, IMF staff have developed a new 'augmented' concept in an attempt to capture these off-budget fiscal activities, which expands the perimeter of the government to include off-budget and LGFV activity. LGFV are different from other state-owned enterprise (SOEs) as LGFVs are largely set up, owned, and operated by the local governments; they engage in economic activities that are fiscal in nature; and the government directly or indirectly shares the debt servicing responsibilities, and sometimes subsidizes their losses. LGFVs may also generate revenue and some may be operated on a commercial basis, which underscores that the augmented fiscal data should be viewed as a complement, not a substitute, to the traditional government data.[2] As data on LGFV activities are incomplete, estimates were calculated by IMF staff on the basis of the available information.

- *The augmented debt* captures borrowing by LGFVs through market financing channels. As in other countries, it excludes liabilities of regular SOEs and other state entities as well as contingent liabilities, such as NPLs in the banking sector, policy bank loans, and pension liabilities. At the same time, it measures gross debt only, and so excludes government assets.
- *Augmented net borrowing* adds to government net lending/borrowing the market financing of LGFVs (through banks, bonds, and trusts). This measure captures transactions in financial liabilities—that is, debt creating flows, and thus closely corresponds to the change in augmented debt.
- *Augmented fiscal deficit* adds both market financing of LGFVs and financing from selling land usage rights (net of costs such as resettlement and compensation). Land sales are treated as a financing item akin to privatization, but do not contribute to debt accumulation. This is an analytical concept in line with the IMF's Government Financial Statistics (GFS), and well-suited to capturing the overall impact of fiscal policy on aggregate demand.

Bottom-line

On this basis, IMF staff estimate the *augmented government debt* has risen to around 45 percent of GDP in 2012, having increased sharply through the global crisis. Nonetheless, that level still falls within sustainability thresholds. For 2012, staff estimate that the *augmented net borrowing* was around 8 percent of GDP and the *augmented fiscal deficit* was on the order of 10 percent of GDP.

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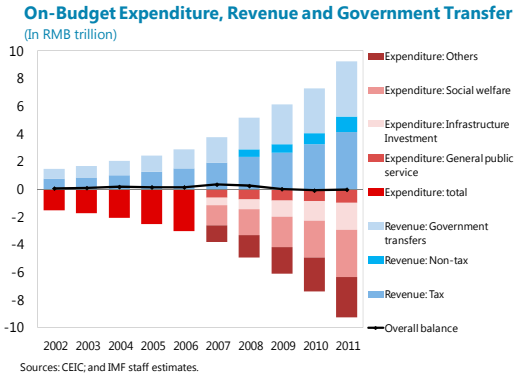
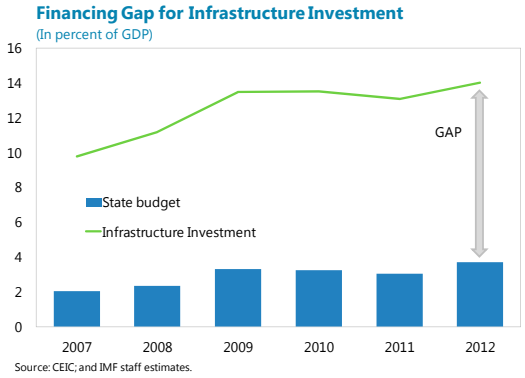
[1] Prepared by Murtaza Syed. See IMF, 2013b for an earlier version of this box.
[2] Government is defined as general government, which is the consolidated central and local government.



Local government's recourse to off-budget spending is best viewed in the context of China's fiscal system. Following the 1994 intergovernmental fiscal reform, the central government's share of total fiscal revenue increased from less than 30 percent to around 50 percent in 2012.[4] Yet no significant change in expenditure assignments was made. Without a rule to guide the distribution of intergovernmental expenditure responsibilities, higher level governments have more flexibility to offload obligations to lower levels. Local governments are now responsible for much of infrastructure investment, service delivery, and social spending, which together account for about 85 percent of total expenditure. Local governments also have few own revenue resources and little discretion over tax rates and policy, which makes them increasingly reliant on central government transfers. However, these transfers mainly cover current spending, leaving a smaller margin to finance infrastructure spending.

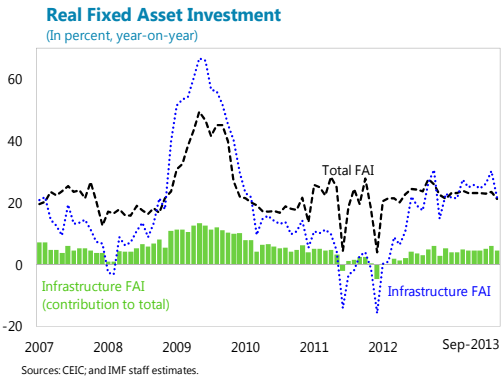


Local governments, meanwhile, are for the most part prohibited from borrowing, at least through the budget. As a result, they have relied extensively on off-budget mechanisms to finance priority spending, and in particular infrastructure investment. In simple terms, the local government would create a company that would then borrow from banks, trust companies, or the bond market. These companies, referred to as Local Government Financing Vehicles (LGFVs)—or, urban development investment corporations or local government financing platforms—are generally created explicitly for the purpose of financing infrastructure. Financed projects may have some source of revenue, such as road tolls or usage fees for a water treatment facility, but quite often not enough to meet future debt servicing needs. And, important for our purposes, LGFVs are established for the sole purpose of infrastructure spending and are distinguishable from local state-owned enterprises (SOEs) in Chinese statistics. This allows the LGFVs to be identified as distinct—at least for statistical purposes—from other SOEs.

As part of the 2009 stimulus, investment spending accelerated significantly. This included infrastructure spending, which was consistent with both the government's goal to support growth and advance urbanization. Indeed, urbanization has been an important source of

[4] See Fedelino (2004) for a discussion of China's fiscal reform.

growth, and with urbanization comes the need for infrastructure. With the local governments unable to borrow on-budget, it was natural to turn to off-budget financing, especially given the widening imbalances between local expenditure needs and local revenue.



In this context, many local government financing vehicles (LGFVs) were established as intermediaries to channel funding from the financial market, mostly banks. They are in some respects similar to public private partnerships (PPPs) in other countries, though the 'private' in China refers to the LGFV. PPPs are widely used in many emerging market economies and some advanced economies to promote infrastructure development. However, cross-country experiences suggest that off-budget finances could entail substantial fiscal risks because potential government liabilities are in many cases not as transparently reported, closely monitored, or systematically managed (Schwartz, Corbacho, and Funke, 2013).

The paper proceeds as follows. The background section explains the concept of augmented government and discusses other estimates of what we call augmented fiscal debt. The next section describes how we construct the augmented fiscal deficit and augmented net borrowing series. In the subsequent section, we detail the construction of the augmented fiscal debt series and assess risks related to sustainability, interest costs, and debt servicing. We then discuss some additional considerations relevant for assessing fiscal risks that are not included in our augmented estimates. The final section summarizes the main findings.

II. Background

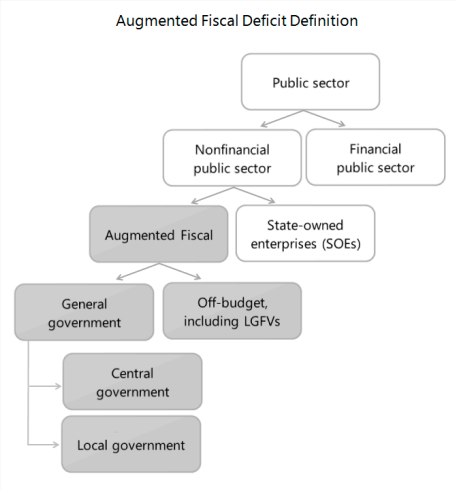
A. Definition of Government

Our focus is on a measurement of fiscal activity useful for analytical purposes. This is not the same as the statistical definition of general government.[5] Moreover, the definition of general government used by staff for surveillance differs slightly from that published by the authorities. Appendix III in IMF (2013a) explains and documents the differences between the

[5] See http://www.imf.org/external/pubs/ft/gfs/manual/gfs.htm for comprehensive information on Government Financial Statistics. The *Government Finance Statistics Manual 2001* (*GFSM2001*), http://www.imf.org/external/pubs/ft/gfs/manual/index.htm provides a statistical definition of government. The latest *Government Finance Statistics Yearbook* discussed specifically China's coverage for purposes of inclusion in the yearbook.

official and staff estimates of general government. The main ones relate to the accounting of the budget stabilization fund, external debt, and some local government ("on-budget") debt.[6]

The augmented fiscal data consolidates some off-budget fiscal activity, mainly LGFVs, into the official general government data. The text figure shows this graphically. General government is consolidated local (subnational) and central government. The augmented government concept then adds government-managed funds and LGFVs. Adding currently omitted fiscal activity to the official general government data leads to a larger reported deficit, but the increase is not as big as implied by the augmented fiscal deficit. The reason is that the augmented fiscal deficit includes all LGFV activity, some of which is commercial in nature and thus would not be included based on the definition of general government. However, quantifying the share of commercial LGFV activities requires further information which is not easily accessible. Hence, the "augmented" concept is introduced accounting for this constraint.



The nonfinancial public sector is yet another wider definition of government, which would include all nonfinancial state owned enterprise (SOEs). The widest concept that would also include state owned financial entities, such as state-owned banks, asset management companies, and the central bank. Deriving consolidated debt of the wider (financial and nonfinancial) public sector is tricky, as it involves netting out public debt held by other parts of the public sector. That is, state-owned bank credit to an SOE would be netted out in consolidation. Or, put differently, consolidated debt is *not* equal to the sum of the debt of the general government, nonfinancial public sector, and financial public sector. Consolidated augmented fiscal debt, however, can be more readily constructed as the sum of central, local, and LGFV debt since there is little to no cross holdings of debt.

We draw the boundary on augmented government to include LGFVs and exclude SOEs. LGFVs, while in principle similar to a conventional SOE, differ in that they are largely set up, owned, and operated by the local government to engage in economic activities that are fiscal in nature; and the government directly or indirectly shares the debt servicing responsibilities, and sometimes subsidizes their losses. Box 2 describes some examples of LGFVs. LGFVs

[6] The external debt stock is calculated from the flows of external financing, with an adjustment for estimated amortization. The local government debt is based on the NAO (2011) estimate for the stock at end-2010, and the NAO (2013) report and assumptions about amortization are used to estimate 2011–12 data. Bonds issued by the central government on behalf of local governments are already included in the official general government debt stock.

Box 2. Examples of LGFVs

The following provides two examples of LGFVs (Ma, 2012).

Fushun Development Investment Corporation (FSDIC)

Fushun is a city in Jiangxi province located in Central China. The Fushun city government established FSDIC on June 8, 2002 by injecting Y 150 million to the company as initial capital. Four years after its establishment, the city government approved the transfer of a land usage right as additional paid-in capital. Upon approval by the city level State-owned Assets Supervision and Administration Commission (SASAC) in 2009, three solely state-owned companies—Fushun City Water Supply Company; Economic Development Zone Investment and Development Co., Ltd.; and Fushun City, State-owned Guarantee Center—transferred all their equity to FSDIC in the form of additional paid-in capital, amounting to Y 720 million, and became FSDIC's subsidiaries.

FSDIC is responsible for a vast majority of the Fushun's city-wide infrastructure investment. This includes the funding, operation, and construction of infrastructure. Some examples of FSDIC projects include: Fushun City sewage collection pipe network project, City-west flood protection project, the Core District road network construction project, infrastructure development projects in the Economic Development Zone, and social housing projects.

FSDIC's income consists mainly of subsidies from the city government and revenue generated through its subsidiaries (largely from Fushun City Water Supply Company). The rapid growth in construction and real estate helped push up land prices, and land sales have been an important source of funds for FSDIC in more recent years.

FSDIC also issues corporate bonds using land usage rights as collateral to support its credit ratings and reduce borrowing costs. Relatively more liquid assets account for a majority of FSDIC's total assets, this includes land, public buildings, roads, and other infrastructures. However, much of the land is pledged as collateral and other assets, such as buildings and roads, may have limited liquidity and weak potential to generate profit.

Haicheng Urban Development Investment Corporation (HUDIC)

Haicheng is a city in Liaoning province in northern China. HUDIC was established in May 2001 with initial capital of Y 105 million injected by the city government. In 2009, the government transferred land usage rights, buildings, and other fixed assets to the company, amounting to Y 2.8 billion. HUDIC also owns three subsidiaries, which are all state-owned companies: HaiCheng Heating Company, Urban Infrastructure Company, and a water company.

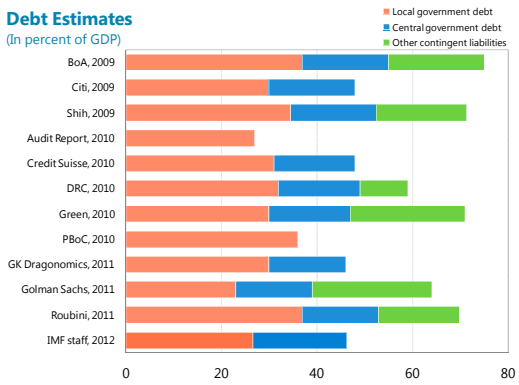
HUDIC is responsible for investing, constructing, and managing various urban infrastructure projects. It also develops land, usually by cleaning and then selling land that it received from the local government. HUDIC has also led projects such as road and bridge construction.

HUDIC's main income sources are revenue generated from subsidiaries, agency fees from infrastructure projects initiated by the local government, and government subsidies. Its operating income flow has been weak, which makes HUDIC highly reliant on government subsidies.

may also generate revenue and some may be operated on a commercial basis, which underscores that the augmented fiscal data should be viewed as a complement, not a substitute, to the traditional government data.

B. Other Estimates of Augmented Fiscal Debt

We are not the first to estimate fiscal debt using an expanded definition of China's government. Most prominently, the China's National Audit Office (NAO, 2011) published a report on local government debt that took stock of the situation as of 2010. In addition, investment banks, academics, and research institutes had been estimating similar concepts. The estimates are generally similar, with much of the variation explained by differences in coverage or timing.



Our estimate, of around 45 percent of GDP in 2012, is broadly in line with other estimates after adjusting for these differences. Focusing just on the overall figure, estimates tend to vary from just below 30 percent to above 70 percent of GDP. Though our estimate, labeled "Staff, 2012" in the text chart above, appears to be on the low side, this is largely due to our exclusion of some items others include. For example, some include contingent liabilities (such as financial sector liabilities related to asset management companies or development banks) and debt of the Ministry of Railways, which was corporatized in 2013 and we treat as SOE debt (Table 1). Regarding local government debt, the pink bars in the figure, most estimates range between 25 and 35 percent of GDP. Again, the varying estimates of local government debt reflect some differences in coverage. For example, Yu and Wei (2012)—who are scholars at the Development Research Center (DRC), the research and advisory body of China's State

Table 1. Official and Market Estimates of Debt to GDP Ratio

	GS[1]	GK[2]	Audit Report[3]	Citi[4]	Credit Suisse[5]	DRC[6]	Shih[7]	PBC[8]	Green[9]	Roubini[10]	BoA[11]
Central government	✓	✓			✓	✓	✓		✓	✓	✓
Local government											
Provinces, cities, and counties	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Townships				✓	✓	✓	✓			✓	✓
Non-LGFV SOEs[11]		✓					✓				✓
Others contingent liabilities											
Policy bank debt	✓						✓		✓	✓	✓
AMCs	✓					✓	✓		✓	✓	✓
Pension funds						✓					
Ministry of Railway	✓					✓	✓		✓	✓	

[1]Cui, Tang, and Zhang (2012), "Asia in Focus," Goldman Sachs.
[2]Yao (2012), "A Halfway House For Infrastructure," GK Dragonomics.
[3]National Audit Office (2011).
[4]Shen, Peng, and Wei (2010). "No Quick Exit for UDIVs," Citi Economics.
[5]Tuntono (2010), "Emerging Market Economics Daily," Credit Suisse
[6]Yu and Wei (2012), "A Study on China's Fiscal and Financial Risks," DRC Research Series.
[7]Shih (2009), "The Three and Halg Trillion Problem: Economic and Political Implications of Mounting Local Debt in China," Northwestern University.
[8]PBC (2010), "A Report on China's Regional Financial Development."
[9]Green, Fan, and Chen (2012), "China - We're Re-leveraging Up," Standard Chartered.
[10]Wolfe (2012), "China's Local Government Debt Crisis: A Solutions Manual," Roubini Glocal Economics.
[11]Wu, Scarff, and Li (2010), "LGFV: The Sub-prime Trap for China?" Bank of America.

Council—include townships in addition to provinces, cities, and counties in their estimate. As a result, their estimate of local government debt is Y 2 trillion (5 percent of 2012 GDP higher than the NAO (2011) estimate, which excluded townships. The market estimates are taken from various analysts' reports. For example, Bank of America's 2009 estimate, which includes LGFVs' noninfrastructure loans, is higher than Citi's estimate, which only captures infrastructure loans. In addition to local government debt, many estimates also include estimates of contingent liabilities such as NPLs held by asset management companies, policy bank loans, and pension fund liabilities.

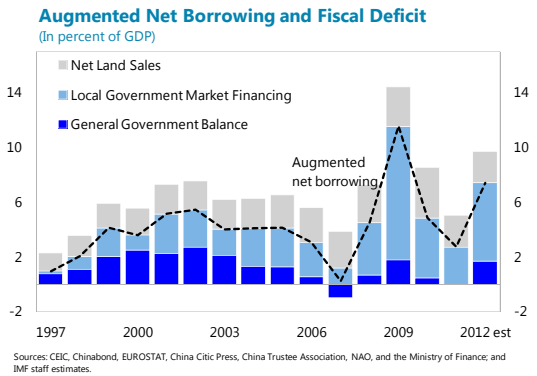
Clearly, since the augmented fiscal debt is higher than general government debt, it follows that augmented deficits must also be higher. Perhaps surprisingly, given the large number of augmented fiscal debt estimates, we are not aware of other time series estimates of an augmented deficit. We turn to this task next.

III. Augmented Fiscal Deficit and Net Borrowing

At the risk of some confusion, we introduce two concepts of the augmented fiscal balance. Augmented net borrowing is closer in concept to the *GFSM2001* definition of net lending/borrowing. It corresponds to the financing needs of the augmented government, and thus closely matches changes in the augmented fiscal debt. The second concept is the augmented fiscal deficit. This treats the net proceeds from land sales as a financing item, and thus makes the augmented fiscal deficit larger than the change in augmented net lending. Box 3 explains how the financing model for infrastructure investment based on land is used in China. The augmented fiscal deficit better measures the impact of fiscal policy on demand, by in effect treating the net proceeds from land sales as privatization proceeds (a financing item). The augmented net borrowing and fiscal deficit concepts are similar, and calculated identically, except for the treatment of net proceeds from land sales.

A. Augmented Net Borrowing

Augmented net borrowing adds off-budget quasi-fiscal activity, mainly infrastructure, to the general government data. The estimates are constructed based on financing (below-the-line) data. The calculation requires numerous assumptions to fill in data gaps, highlighting the uncertainty surrounding the estimates.



To calculate augmented net borrowing, we add off-budget financing by LGFVs to the general government deficit. Since off-budget financing is from the financial markets, we can construct estimates using market data. In particular, we add LGFV borrowing from commercial banks, trust companies, and the corporate bond market.

Box 3. Land Financing Model[1]

Local governments have a strong incentive to sell land. Following the 1994 fiscal reform, the local governments' share of land sales proceeds increased from 40 to 95 percent (Peterson, 2007). Land sales, thus, became a major source of revenue for local governments as urbanization advanced, with the proceeds usually accruing to government-managed funds.[2] The land sales proceeds were then used to finance infrastructure investment to further support the urbanization process. Moreover, higher infrastructure spending also supported growth directly as well as indirectly by catalyzing other investment. With strong growth perceived as an important metric for promotion, local government officials had an incentive to continue selling land to keep the land sales-investment-growth cycle going (Figure 1).

Land sales also provide a considerable boost to on-budget fiscal revenue. Direct taxes from land include urban usage, agriculture occupancy, and deed, which account for about 10 percent of total fiscal revenue. Indirect taxes such as sales and corporate income taxes generated from construction and real estate companies amount to over 50 percent of total fiscal revenues in some cities.

China's recourse to land sales is not unusual. Land is often a local government's most valuable assets, making land sales a natural way to support urbanization. For example, Cairo, Istanbul, and Mumbai have raised significant revenue from land auctions. Some advanced economies such as the United States, Japan, and Korea also went through a similar process during their transition period. With only about 50 percent of households living in urban areas, China's urbanization process is likely to continue for some time.

Lands sales are a major source of risk for local government finances. First, local government's reliance on land sales for financing could result in an over-supply of real estate that, in turn, may result in a market correction. A correction, moreover, could trigger a negative feedback loop. Local governments would have to cut spending as proceeds from land sales fell, at the same time that a decline in construction activity would already be hurting local fiscal revenue. As result, local government spending would likely have to contract further, exacerbating the slowdown. Local governments often injected land or property to provide capital to LGFVs, which is used as collateral for borrowing. A correction, therefore, would make it more difficult for LGFVs to borrow. It could also undermine asset quality, by both reducing the value of collateral and making it more difficult to sell land to service maturing debt.

The relative importance of land sales has varied across regions. It played a more important role in relatively developed and fast emerging middle-income provinces. Lower income regions were generally not as attractive to developers and thus had less income from land sales. While this could make their finances less vulnerable to a market correction, it may have also contributed to widening regional inequality.

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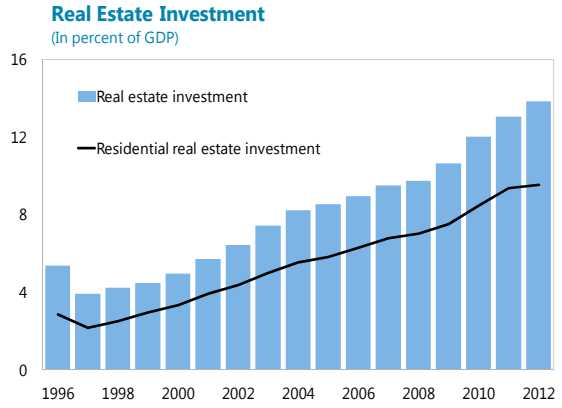
[1] Liu, Zhou, and Shao (2012) look at sample of cities with a comprehensive mix of industry and services and suggest, therefore, that the results are representative of a typical city in China.

[2] These funds are managed outside of the regular budget and earmarked for specific expenditures. Land sales proceeds account for about two-thirds of the funds in value terms.

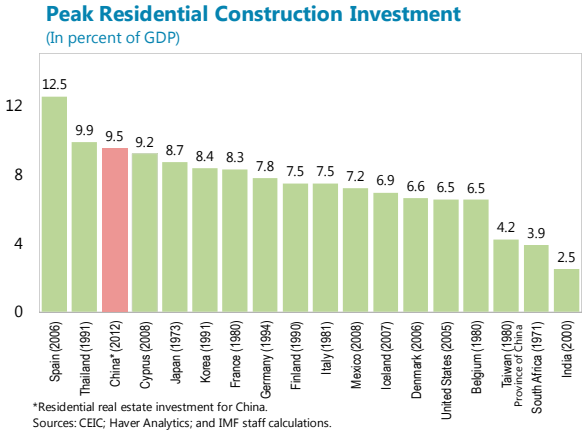
Figure 1. Real Estate Investment in Local Finances

Real estate investment has been steadily rising as a share of GDP…



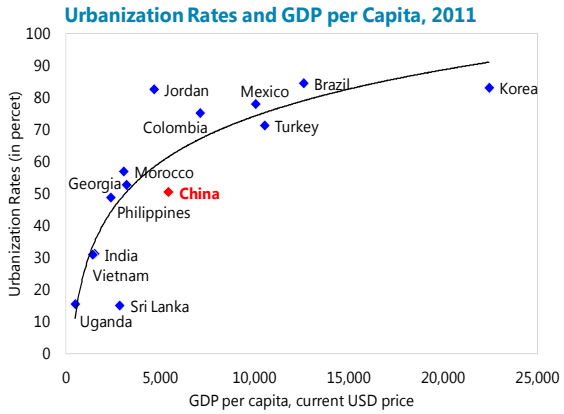
Sources: CEIC; and IMF staff calcualtions.

…and is above the ratio that preceded market corrections in many other economies.



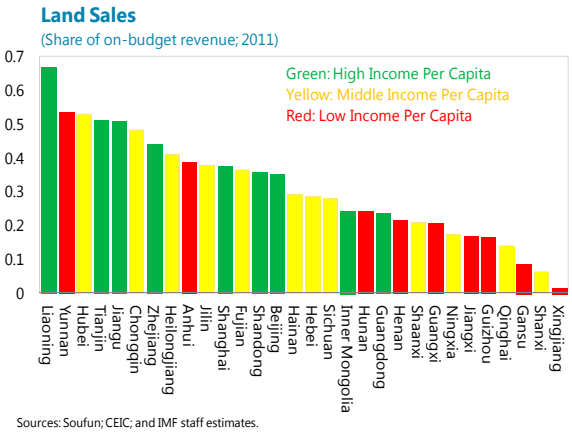
*Residential real estate investment for China.
Sources: CEIC; Haver Analytics; and IMF staff calculations.

Though China has still considerable room for urbanization, which could support real estate going forward.



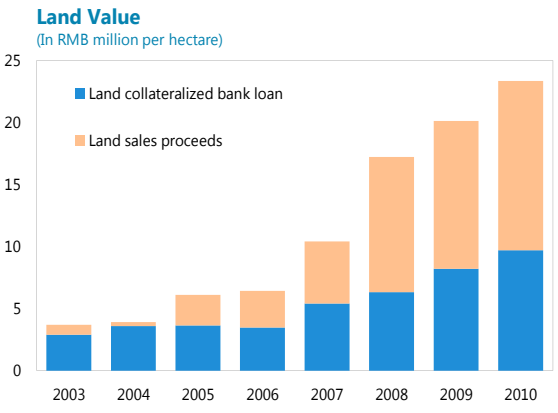
Sources: Liu and Waibel (2010); World Bank, World Development Indicators; and IMF staff estimates.

Land sales have been relatively more important for higher income provinces, which may have exacerbated regional inequality.



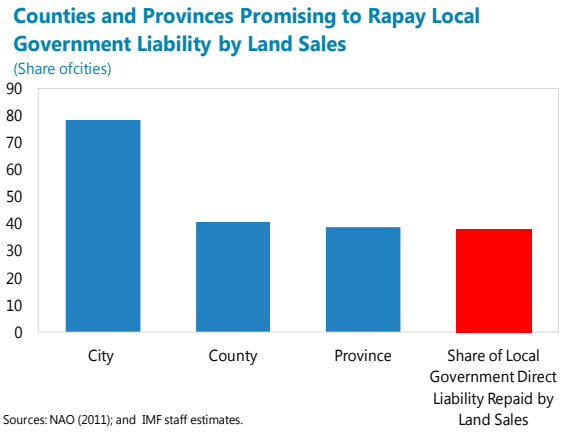
Sources: Soufun; CEIC; and IMF staff estimates.

Land values have risen considerably over time…



Sources: Liu, Shao and Zhou (2012); and IMF staff estimates.

…and land sales are an important source of revenue for servicing debt for many local governments.



Sources: NAO (2011); and IMF staff estimates.

Market financing

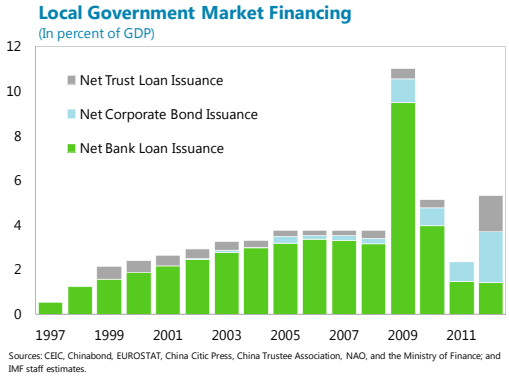
Borrowing by LGFVs increased sharply in 2009–10, in line with the government's stimulus policy. Local governments are in general forbidden to borrow directly unless approved by the State Council. This was relaxed somewhat in response to the global financial crisis, as the central government issued bonds on behalf of local governments. However, the amounts were fairly limited and too small to finance the expected contribution by local governments to the 2009–10 stimulus. Therefore, local governments made recourse to LGFVs and other government-related entities to borrow from policy banks, commercial banks, and more recently from trust companies and the corporate bond market.

LGFVs are legally distinct entities, often receiving public credit enhancement, that engage in long-term infrastructure projects. Despite legal prohibitions, some LGFV debts were implicitly, if not explicitly, guaranteed by local governments. The perception of a guarantee helps explain why banks found it attractive to lend to LGFVs. In addition, LGFVs could collateralize their borrowing with land or other assets, either owned by the LGFV itself, pledged by the local government, or provided by another entity. Such guarantees or collateral are important for infrastructure LGFVs, which, especially in the short term, may not generate sufficient cash flow to service their debt.

As highlighted above, we only include borrowing by LGFVs. Some local government SOEs may also carry out quasi-fiscal activity, while some LGFVs may operate on a primarily commercial basis. It is not feasible, however, to go through the borrowing of every SOE and LGFV to distinguish, project by project, the extent that a given loan was used to finance a quasi-fiscal as opposed to a commercial activity. However, given that LGFVs are a distinct type of entity with a more explicit fiscal objective, we chose to include LGFVs and exclude SOEs. Thus, we make the simplifying assumption that all LGFV debt warrants inclusion in the augmented net borrowing, while SOE debt does not.

On-budget borrowing

On-budget borrowing by local governments is quite limited and tightly regulated by the central government. The central government has issued some bonds to finance local government deficits; and the state council has also approved some direct borrowing by local governments. The aggregate amounts were Y 200 billion a year in 2009–11 and Y 250 billion in 2012. These bonds, however, are already included in general government debt, so we do not make any adjustments for them. As of end-2010, NAO (2011) reported that the amount of state-council approved direct borrowing was around 7 percent of GDP.

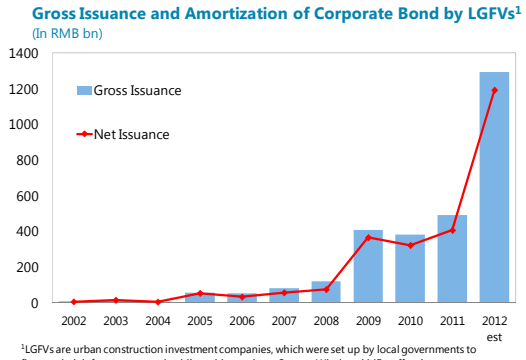


Off-budget financing

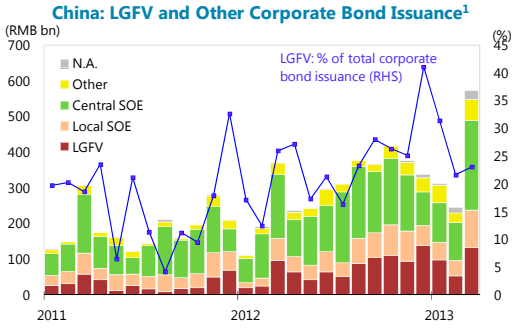
The other major components of market financing are bank loans, corporate bonds, and trust loans:

- **Bank loans** accounted for around 80 percent of total local government debt by 2010, equivalent to Y 12.7 trillion, of which Y 10.7 trillion was borrowed by provincial, city, and county governments (NAO, 2011); Y 0.8 trillion by township governments (Yu and Wei, 2012); and Y 1.2 trillion for roads and highways that are not captured by the NAO (2011). Using the growth rate of local government debt provided by the NAO (2011), staff back out the net local government debt issuance and the proportion financed through bank loans for earlier years. Information gaps prevent decomposition of net bank loan issuance into the gross amount, repayment through land sales proceeds, and debt rollover. The NAO (2013) report is used to estimate the debt stock at the end of 2012 based on the survey result suggesting that debt has risen by 13 percent since 2010.

- **Corporate bonds** are derived from the WIND database, which provides data on gross amount and maturity dates of corporate bond issuance by LGFVs. The corporate bond market has grown significantly in recent years (Zhou, 2010), though issuance is still predominantly by SOEs (including LGFVs). LGFVs accounted for over one-quarter of issuance in 2012.

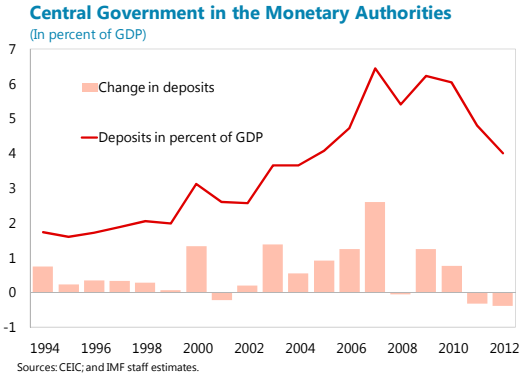


[1]LGFVs are urban construction investment companies, which were set up by local governments to finance their infrastructure and public entities projects. Source: Wind; and MF staff estimates.



1/ Includes bonds, medium-term notes, short-term commercial paper, and convertible bonds issued by enterprises and listed companies.
Sources: Wind; and IMF staff calculations.

- **Trust loans** to infrastructure projects amounted to Y 1.39 trillion by September 2012, based on data from the China Trustee Association.[7] This fell to just below Y 0.9 trillion by the first quarter of 2010. There is no data before 2010, so we use the growth rate of bank loans to estimate flows for earlier years.



Sources: CEIC; and IMF staff estimates.

[7] http://www.xtxh.net/english/

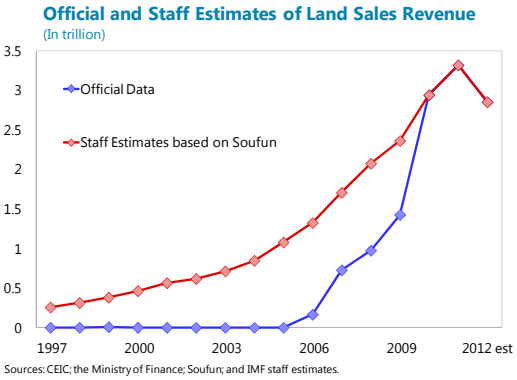
- **Changes in cash deposits** of the government are included as financing. Deposits totaled around 4 percent of GDP at end-2012; these had been growing steadily, but started falling as a share of GDP after the peak of the crisis. Deposits of LGFVs, however, are not included due to lack of data.

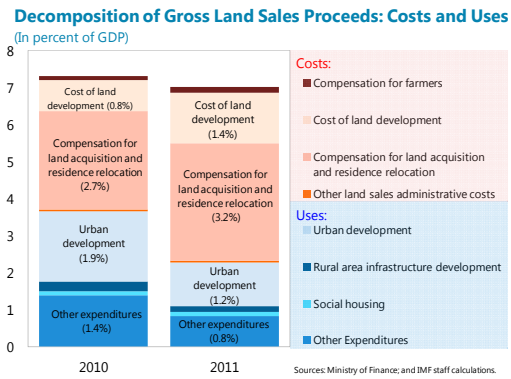
B. Augmented Fiscal Deficit

The augmented deficit calculation adds to augmented net borrowing the net proceeds from land sales—that is, the portion that is actually used to finance infrastructure and other spending. The net proceeds from these asset sales are treated as financing, not revenue, since they are analogous to privatization proceeds.

Estimate of Land Sales

Data on net proceeds from land sales are only available for some years. Gross land sales data in recent years are from CEIC. Most land sales are channeled through government managed funds (GMFs), with the gross proceeds recorded off-budget. For example, in 2011 gross land sales explained Y 3.3 trillion (7 percent of GDP) of the Y 3.8 trillion in GMFs' revenue. Net land sales for 2010 and 2011 are derived from Ministry of Finance data that show how the gross proceeds were used. The cost of acquisition, compensation to farmers, and land development costs are subtracted to obtain net proceeds. In 2010, the net proceeds were 50 percent of the gross, whereas they were only 33 percent in 2011. Data necessary to calculate net proceeds are only available for 2010-11. To construct a time series, we assume the net proceeds in all other years are 42 percent (the average of 2010 and 2011). Land sales data for 2005–09 appear incomplete and for 2005 and earlier are discontinuous, so a series is extrapolated using data on land sales growth from Soufun (a Chinese real estate services firm) up to 2009and official data for 2010–12.

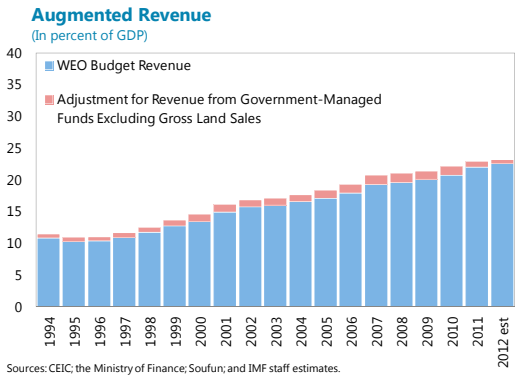




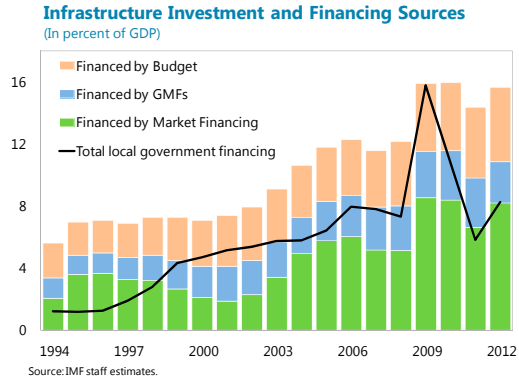
C. Robustness Check: Above-the-Line Estimates

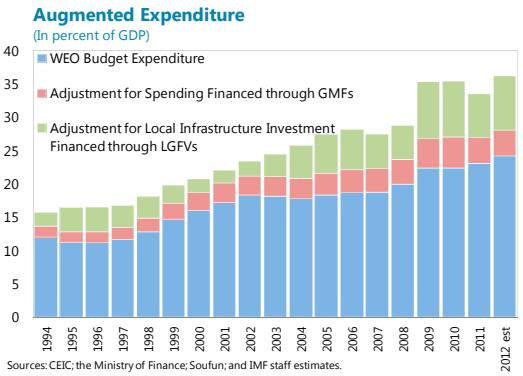
As a robustness check, we also calculate an above-the-line estimate of the augmented fiscal deficit. This requires constructing an estimate of augmented fiscal revenue and augmented fiscal expenditure.

Augmented fiscal revenue is in practice almost the same as general government revenue. The difference is that we add revenue, excluding land sales, from central and local GMFs. This turns out to be a small amount, as most of GMF revenue is from land sales. Land sales are excluded to avoid double-counting, since we treat this as a financing item. In 2011, reported GMF revenue was Y 4.1 trillion, but only Y 0.8 trillion after subtracting land sales. Of this, Y 0.3 trillion is from the central government and Y 0.5 million from local governments (Y 3.8 trillion less Y 3.3 million in land sales). Data on central government GMFs come from the Ministry of Finance and CEIC. For local governments, staff assumes that GMF revenue is a constant share of land sales.



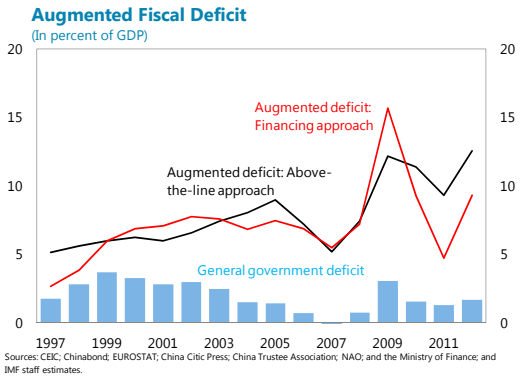
Augmented fiscal expenditure is adjusted for spending by GMFs and LGFVs. Data on LGFV spending are not available, so we use instead an estimate of infrastructure investment. The assumption is that all infrastructure spending is carried out either by the budget, GMFs, or LGFVs. As such, this may overstate infrastructure spending as some is likely carried out by SOEs or other companies. We calculate infrastructure investment from the fixed asset investment data.[8] Infrastructure spending, along with GMF spending, is then added to general government expenditure. We then adjust expenditure to avoid double counting, as some infrastructure investment is executed by the budget and GMFs. Specifically, based on 2011 data, we assume that infrastructure spending accounts for 21 percent of local government budget spending, 14 percent of central government budget spending, 36 percent





[8] Infrastructure investment is calculated as the sum of fixed asset investment in primary industry; electricity and heating; gas; water; railway transport; highway transport; waterway transport; air transport; water conservancy and environment management. Since the breakdown is only available since 2004, staff assumes that infrastructure investment and total fixed asset investment grew at the same rate in previous years.

of local GMF spending, and 47 percent of central GMF spending. The residual (total infrastructure investment minus the amount financed by the budget and GMF) is used as the estimate of LGFV infrastructure spending.



The above-the-line estimates of the augmented fiscal deficit are broadly consistent with the financing approach. The series are quite similar prior to 2008. Both approaches also show a sharp pickup in 2009 in line with the government's stimulus. The main difference, however, is that the financing approach shows a faster unwinding of the stimulus than suggested by the above-the-line data. The fact that the above-the-line approach points to a larger augmented fiscal deficit in recent years is not surprising. The above-the-line data include all infrastructure spending, while clearly some has been executed by entities outside the augmented government, such as SOEs or even private companies. Moreover, any LGFV own revenue is also excluded, due to lack of information, which could understate augmented fiscal revenue in recent years. On balance, the above-the-line estimates provide some comfort on the broad orders of magnitude of the augmented fiscal deficit. At the same time, it reinforces the point that the estimates are subject to considerable amount of uncertainty.

D. Interpreting the Estimates

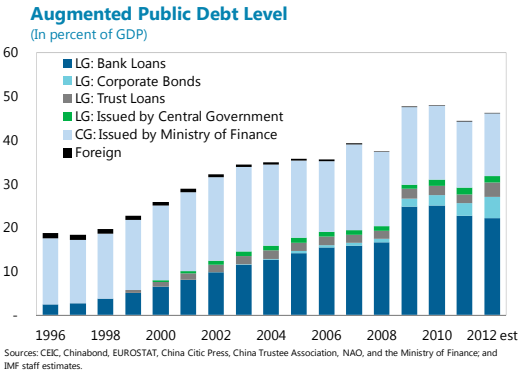
The augmented fiscal deficit is by construction consistently larger than augmented net borrowing. The difference is solely from the treatment of net proceeds from land sales, which in recent years have amounted to around 2 percent of GDP. However, the two series tell a qualitatively similar story about the path of the augmented fiscal deficit.

Using the augmented data, fiscal policy has been considerably more countercyclical than suggested by the general government data. From 2007 to 2009, the augmented fiscal deficit increased by around 10 percent of GDP. This helps explain why, despite the significant global headwinds, China was still able to grow by around 9 percent in 2009. Augmented fiscal policy, moreover, has been highly countercyclical. In particular, the augmented fiscal deficit was unwound rapidly and by 2011 had been reduced by around 8 percent of GDP from its peak. In 2012, in response to sluggish activity in the first part of the year, the augmented fiscal deficit increased by around 4 percent of GDP relative to 2011, which helped support activity in 2012.

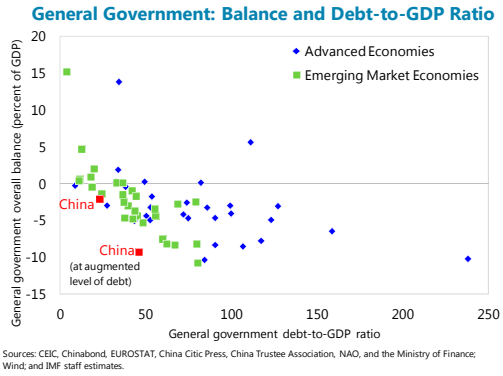
IV. Augmented Fiscal Debt

Estimates of augmented fiscal debt are calculated from a mixture of published data and our estimates of the augmented net borrowing. Central government debt data are readily available from public sources. For local government off-budget borrowing, NAO (2011) provides the starting point with their estimate of Y 12.7 trillion of debt in 2010. Data for previous and

subsequent years are then calculated based on the financing assumptions described above.



The augmented fiscal debt rises to around 45 percent of GDP in 2012. At first glance, this is perhaps lower than would be expected given that the augmented fiscal deficit has averaged about 10 percent of GDP since 2009. However, for calculating the debt, augmented net borrowing is the right concept since financing from land sales is not debt creating. However, even this has averaged about 7 percent of GDP since 2009. The other fact at play is the favorable interest growth differential (also see below). In our case, the high growth rates of nominal GDP are particularly relevant. Basically, the fast growth in the denominator, nominal GDP, is reducing the debt ratio. The impact is sizable. For example, nominal GDP grew by around 18 percent in 2011, which by itself would have reduced the augmented fiscal debt ratio by around 6 percent of GDP. Thus, even though augmented net borrowing was around 3 percent of GDP, the augmented fiscal debt to GDP ratio actually declined in 2011.



From a cross-country perspective, China's debt position is still comfortable. The augmented fiscal debt to GDP ratio is comparable to other emerging markets and well below that of most advanced economies. However, based on the augmented fiscal data, China has considerably less fiscal space than suggested by the general government data. Moreover, in 2012 China's augmented fiscal deficit is larger than the general government deficit in most other emerging and advanced economies. However, China's augmented fiscal deficit has also tended to normalize quickly and, if it returns to around 4 percent of GDP—roughly the average of 2000–07, then China would be right about the middle of the sample of emerging and advanced economies. However, more important than the snapshot comparison, is the relative sustainability of the fiscal position.

A. Debt Sustainability

In our baseline scenario, China's augmented fiscal position is sustainable. We assume a normalization of the augmented fiscal deficit over the medium term, consistent with past experience. Specifically, the augmented deficit gradually declines by 3 percent of GDP through 2018. Combined with the still favorable interest-growth differential (though less favorable than recent history), this is sufficient to put the augmented fiscal debt on a downward trajectory. A 3 percent of GDP adjustment may seem like an ambitious amount, but is actually less than would be expected based on the rapid unwinding that took place after the 2009–10 stimulus. Moreover, it

would still leave the augmented fiscal deficit larger than it was in 2011 and, thus, on balance is a realistic if not conservative assumption.

Is the augmented debt path still sustainable if economic growth slows, interest rates spike, or some other shocks occur? To examine this, we repeat the sustainability analysis under various stress tests. The results are summarized in Figure 2. The top row shows scenarios where, respectively, the interest rate rises by 4 percent of GDP and growth slows by 4 percent of GDP. In both cases, the change is assumed to be permanent. A shock of this magnitude is sufficient to put the augmented debt on an upward trajectory for much of the projection period. Nonetheless, by 2018, the augmented debt would be on a slightly declining path and still at a manageable level. The two scenarios are virtually identical, which underscores that it is the difference between interest rates and growth that is critical for driving the debt dynamics.

What if the augmented fiscal deficit is larger than assumed in the baseline? The next scenario, we assume that the augmented primary deficit is around 2 percent of GDP higher than the baseline. In this case, the augmented fiscal debt would again be higher, but, by 2018, still would not be on a firmly rising path. Combining this scenario with either of the previous ones—a 4 percentage point worsening in the interest-growth differential—the augmented fiscal debt could hit 55 percent of GDP by 2018. While this is an extreme case, this type of combined shock has some logic to it. Slower growth—especially if deemed temporary as growth shocks usually are, at least initially—would likely generate a counter-cyclical fiscal response (that is a rise in the augmented fiscal deficit). Thus, while such a stress scenario is not likely, it illustrates the risk from using counter-cyclical fiscal policy to combat what turns out to be a permanent shock. China still has adequate fiscal buffers to weather a fairly sizable debt shock. A debt shock is modeled as a sudden increase in the debt ratio, for example, as would occur with the realization of contingent liabilities (see below). Even with a sudden 10 percent of GDP increase in the debt ratio, the debt dynamics would still be sustainable in the baseline. Of course, a large enough shock, the path would become unsustainable. It would take a sudden rise in debt of around 50 percent of GDP, using the baseline assumptions, to put debt on a rising path in absence of additional fiscal adjustment. This is due in large part to the favorable interest-growth differential.

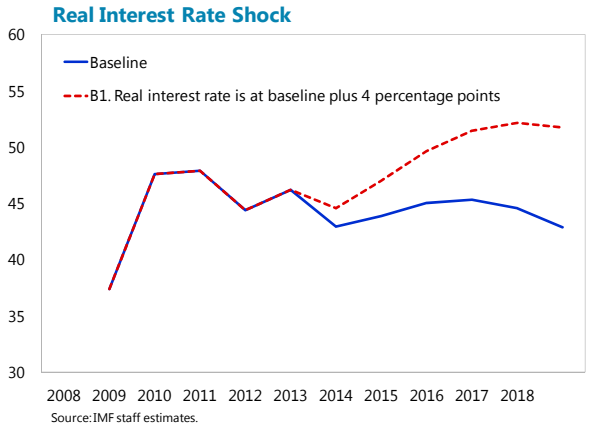
Finally, we look at what would happen if the net proceeds from land sales fall. This could happen, for example, if the property market cools, and the volume and price of land sales decline. We assume that the net proceeds from land sales fall by 50 percent, but that borrowing rises by the same amount so that government spending does not fall. In this case, debt rises moderately and stabilizes at around 50 percent of GDP by 2018.

B. Interest Rate Growth Differential

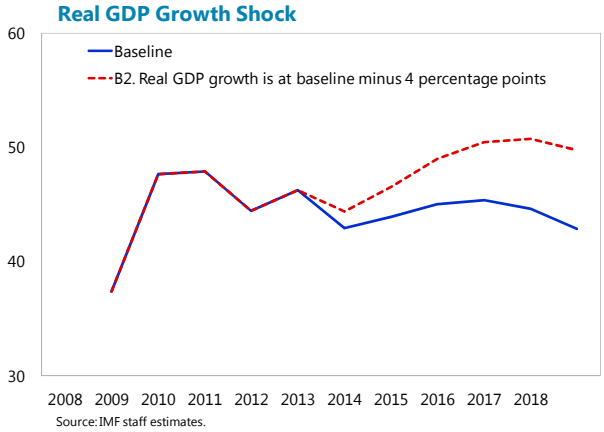
As highlighted above, the favorable interest-growth differential has been a key factor helping keep China's augmented debt ratio in check. As such, a reversal is one of the main risk factors for the debt outlook. Indeed, Easterly (2001) highlights how growth slowdowns—or, in our terms, a worsening of the interest-growth differential—have often been behind debt crises. Moreover, it is

Figure 2. China: Debt Sustainability, 2008–2018

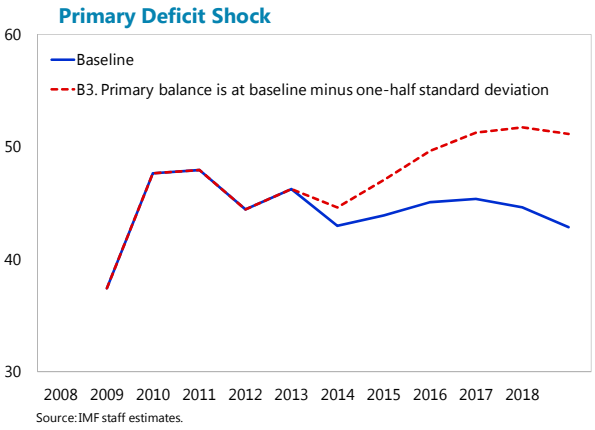
The augmented fiscal debt dynamics are sustainable in the baseline and even if interest rates increased…



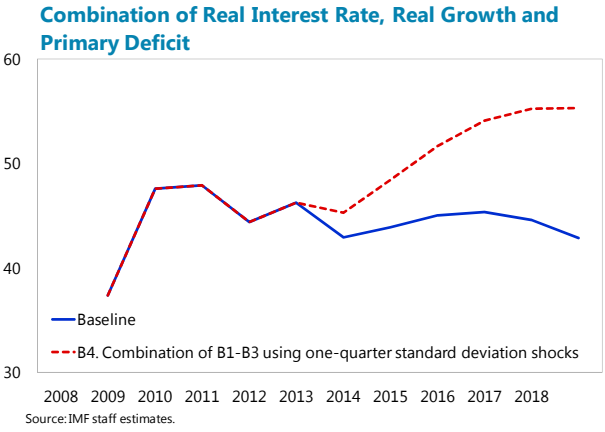
…or GDP growth slowed, the debt would remain at a manageable level.



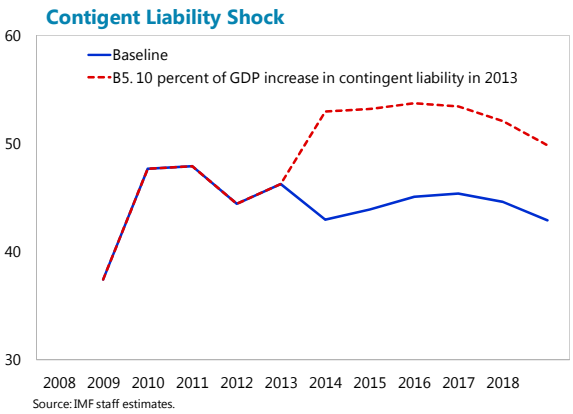
If the augmented fiscal deficit is larger than assumed, the debt stock would rise but still remain manageable…



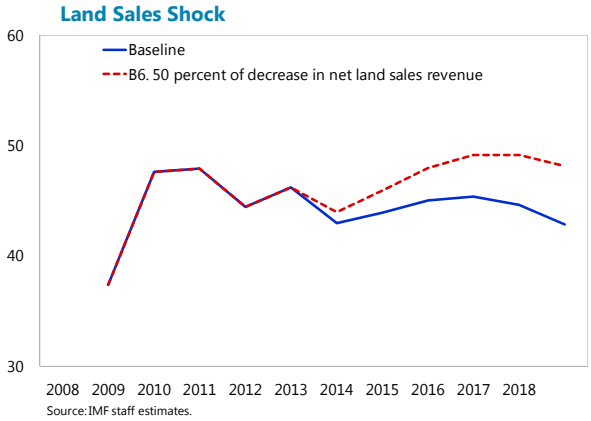
…though a combination of the previous shocks would be more challenging.



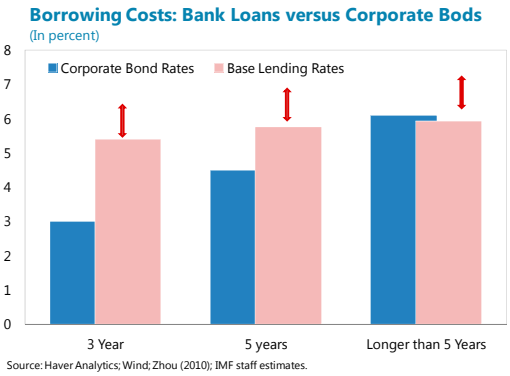
If contingent liabilities were realized, then the debt ratio would rise, but still be declining in the outer years.



Lower land sales revenue would also raise the ratio in the outer years, but the ratio would still be on a declining path.



precisely when growth is slowing that it is most difficult to tighten fiscal policy. Doing so makes fiscal policy procyclical, with budget tightening providing a further drag to the economy at just the wrong time. In addition, it is difficult to assess in real time whether slowing activity is cyclical (that is temporary) or more structural. Indeed, we expect a trend slowdown in China's growth as the economy shifts to a more balanced and sustainable growth model (IMF, 2013a). Though this slowdown is to a large extent already factored into our baseline projections, it underscores the point that the interest-growth differential is likely to become less favorable over time.

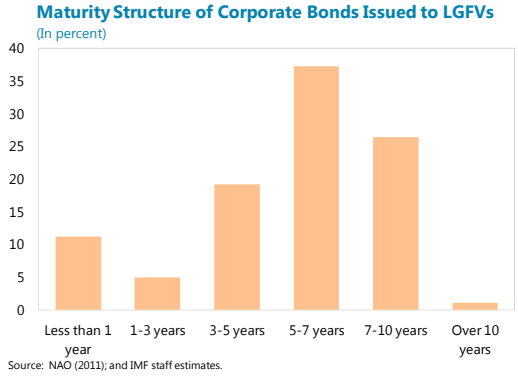


Augmented debt has also been migrating to more expensive sources of financing, raising the effective interest cost. This is because LGFVs pay higher interest rates than the central government does. So as the share of LGFV debt has gone up, so too has the effective interest cost. Relative, that is, to what it would cost if all government debt were issued by the central government. LGFVs are subject to higher borrowing costs because they borrow from the market—banks, corporate bond market, and trust companies—on largely commercial terms and generally without an explicit government guarantee.

LGFV borrowing costs are generally around double that of the central government. Government bond yields average around 3 percent in nominal terms, while bank lending rates to LGFVs have tended to be at slightly above the benchmark lending rate (by around 1–2 percentage points). Typical LGFV debt, therefore, would be paying around 6–8 percent interest rate, or more than double that of the central government. LGFVs may find it slightly cheaper to issue corporate bonds than to borrow from banks as corporate bond rates range from 3 percent to 6 percent depending on the maturities and credit ratings. Credit ratings in many cases are improved by land collateral and possibly a de facto local government guarantee. Trust loans on the other hand tend to be more expensive. But loans to infrastructure investments are considered as relatively safe assets; hence they are charged at lower rates than other trust products. The rates can range from as low as 6½ percent to above 10 percent. Overall, the shift to market borrowing by LGFVs has likely increased their relative interest costs.

Financial sector reform, moreover, could raise average borrowing costs (IMF, 2013a). The interest-growth differential, therefore, is likely to become considerably less favorable over time, as (real) interest rates rise and trend growth slows (as the economy moves to a more balanced and sustainable growth). In the long run, therefore, the fiscal position would have to gradually strengthen to offset the expected deterioration in the interest-growth differential.

C. Gross Financing Needs



Debt servicing is another potential source of vulnerability. LGFVs will need some combination of cash or financing to repay maturing debt. If refinancing, LGFVs could, depending on market conditions, have to pay higher interest rates. Over 50 percent of subnational government debt was expected to mature by the end of 2012 based on NAO (2011). However, most infrastructure projects were not expected to generate significant cash flow for 10 years or even longer. Land sales, operating profits (such as highway fees), local fiscal revenues, or inter-governmental transfers could help repay part of the maturing debt. However, it is likely that a majority of the maturing debt was either rolled over or repaid by new borrowing. The recent update from NAO (2013) confirms that much of this debt was serviced with new borrowing (gross issuance was much higher than the increase in the stock of debt). Specifically, gross debt issuance was equivalent to more than 50 percent of 2010 local government debt stock in the past two years, but the net debt stock increased only by 13 percent. According to NAO (2013), about 40 percent of 2010 debt stock was either repaid or reclassified as private debt.[9] It is not clear how much LGFV borrowing contributed to debt repayment, but given tightened credit restrictions on new LGFV loans in 2011–12, a fairly big share of LGFV borrowing likely went to servicing maturing debt.

Ma (2012) presents data that illustrate the challenge for LGFVs to service their debt without financial support (Table 2). Overall, operating profits accounted for only about 4 percent of total LGFV profits. Township and city LGFVs were, in aggregate, making operating losses. Meanwhile, government subsidies account for about 90 percent of total profits. The maturity mismatch between investment and financing, together with poor profitability of these LGFVs further suggests that a majority of the maturing debt will most likely be serviced from debt roll-over or new borrowings.

Table 2. Profitability of LGVs by Levels of Government

Level of government	Operating Profit/Total Profit (A)	Government Subsidy/total Profit (B)	Share of LGFVs with A>B
Township	-2.57	100.17	21.15
City	-0.77	97.33	14.89
Capital city	3.76	84.9	30.56
Provinces	66.92	21.29	60
Municipalities	24.14	47.11	42.86
Total	4.12	89.19	22.31

Source: Ma (2012).

V. Other Considerations

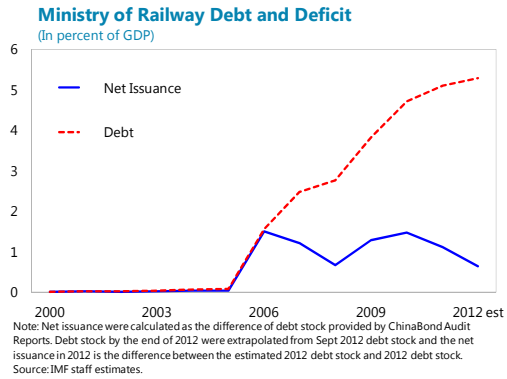
These augmented fiscal data are intended to provide a clearer picture of the fiscal policy stance and gross government liabilities. They do not provide a comprehensive picture of government net

[9] See website on the initiative to reclassify local government debt and NAO (2013).

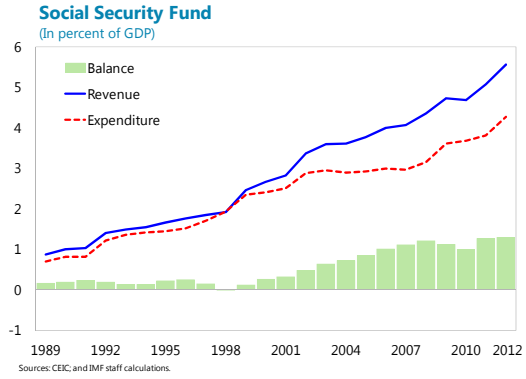
worth in a balance sheet sense. The following discusses some items that are excluded from the analysis of the augmented fiscal position.

A. Coverage of Augmented Data

We exclude debt of the Ministry of Railways from the augmented debt stock. Their debt amounted to about 5 percent of GDP in 2012. The Ministry of Railways was corporatized in 2013 and its debt moved to a newly created SOE. Since we exclude SOEs, Ministry of Railway debt would be excluded from 2013 onward. However, in order to have a consistent time series, we excluded Ministry of Railway borrowing from the augmented fiscal data for the entire time series.



China does not consolidate social security into general government accounts, and we also exclude it from our augmented data. Inclusion would increase augmented revenue and spending, and somewhat reduce the deficit. The social security funds have also built up financial assets: the National Pension Fund held assets of 4.3 percent of GDP at end-2012. However, the pension system faces significant challenges. China 2030 (2013) notes that legacy costs in the pension system were 80–132percent of GDP in 2008 and that the system had a potentially large actuarial deficit (estimates, albeit dated, suggest that the actuarial deficit was around 95 percent of 2001 GDP).



B. Contingent Liabilities

Contingent liabilities are also excluded. Once the perimeter of government is expanded to include LGFVs, their debt becomes explicit liabilities of the augmented government. Contingent liabilities, in contrast, are not currently an explicit liability and may never be. However, as in many countries, contingent liabilities are an important source of risk and worth monitoring. In China, contingent liabilities include potential costs associated with nonfinancial SOE debt (excluding LGFVs); policy banks' liabilities; fiscal costs of recapitalizing banks, for example that could stem from

losses related to nonperforming loans (NPLs) (such as NPLs from LGFVs from Table 3);[10] and liabilities of state-owned asset management companies.

Yang and others (2012) from The Chinese Academy of Social Science (CASS) estimated total 2010 contingent liabilities at just above 100 percent of GDP. Their estimate includes debt of nonfinancial SOEs but excludes LGFVs (Y 35.6 trillion), policy banks' outstanding financial debt (Y 5.2 trillion), old NPLs assumed by the asset management companies (Y 4.2 trillion), nonperforming loans (NPLs) in the current banking sector (Y 0.4 trillion), and liabilities from social security funds (Y 3.5 trillion). Market and academic estimates are of the similar order of magnitude, with the largest source of differences related to estimate of potential NPLs and contingent liabilities from social security funds. Moreover, in less favorable market conditions, NPLs could rise significantly with a concomitant rise in contingent liabilities. In calculating contingent liabilities of the augmented government, potential costs related to NPLs from LGFVs should be excluded. This is to avoid double counting, since LGFV borrowing is already explicitly included as augmented fiscal debt.

Table 3. Commercial Banks' Holding of LGFV Loans

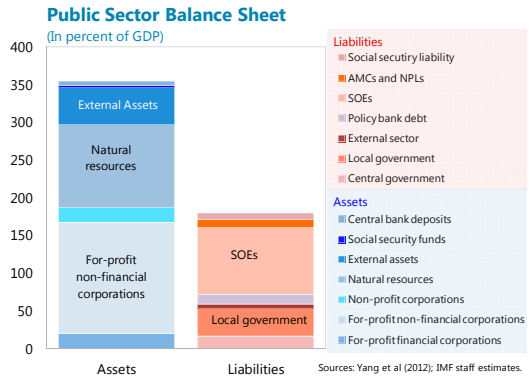
	LGFV Loans (CYN billion)	LGFV/Total Loans (In percent)	NPL (In percent)
China Development Bank	5,500	66.7	0.25
Industrial Commercial Bank of China	931	8.7	1.09
Agriculture Bank of China	530.1	10.23	0.17
Bank of China	531.5	8.55	1.1
China Construction Bank	580	9.44	0.19
Bank of Communications	308.3	12.67	0
China Minsheng Banking Group	172.1	15.06	
Shenzhen Development Bank	66	14.72	0.57
China Everbright Bank	94.9	11.5	0
Shanghai Pudong Development Bank	105	8.84	
China Citic Bank	170		
China Merchants Bank	124.6	8.6	

Source: Ma (2012).
Note: Amount by the second quarter of 2011.

C. Government Assets

China's government also holds considerable assets. By focusing on augmented fiscal debt, the asset side of the balance sheet has been ignored. China, like many countries, does not publish a government balance sheet in line with *GFSM2001*. However, it is clear that the government holds considerable wealth, for example, in the form of its equity stake in nonfinancial SOEs, government physical assets, LGFV physical assets, land, and the value of government owned financial enterprises (virtually all of the banking system is majority state owned). Estimating the value of such holdings is complicated, especially as some of the assets are not regularly traded to establish a market price.

[10] Since augmented debt includes LGFV borrowings from commercial banks, fiscal costs to resolve losses from LGFV NPLs might involve double counting.



Yang and others from CASS (2012) estimates that government assets amount to nearly 200 percent of GDP. Specifically, the government owns Y 60 trillion (147 percent of GDP) worth of equity of state-owned, for-profit nonfinancial enterprises, Y 8 trillion (20 percent of GDP) of worth of equity of state-owned for-profit financial enterprises, and another close to Y 8 trillion worth of equity of state-owned nonprofit enterprises. In addition, land reserve held by land banks would add another Y 5 trillion or more. Yang and others (2012) arrives at an even larger estimate of around 350 percent of GDP in government assets by also including the value of natural resources (40 percent of agricultural products' net present value over the next 25 years, based on World Bank (2006)), international reserves held by the central bank, and social security fund assets. Yang and others (2012) caution, however, that the estimates are subject to uncertainty In addition, assets can be less liquid than anticipated, especially when being sold in an economic downturn.

VI. Conclusion

China's fiscal policy was considerably more counter-cyclical than suggested by headline general government data. We construct an augmented fiscal deficit series by including off-budget fiscal activity, which is mainly local government infrastructure spending. The sharp increase in the augmented fiscal deficit in 2009–10 provided a considerable lift to economic activity, helping to partly offset the impact of the global financial crisis. The increase in the augmented fiscal deficit was also unwound quickly as the economy recovered, before loosening again to support activity in 2012. Meanwhile, the augmented fiscal deficit is also considerably larger than the headline government deficit.

With larger deficits come larger debt, and we estimate that the augmented fiscal debt had risen to around 45 percent of GDP in 2012. This is around double general government debt, but is broadly in line with other estimates that use an expanded definition of government. Nonetheless, debt sustainability analysis and stress tests illustrate that the augmented fiscal debt is still at a manageable level (assuming modest consolidation in the augmented fiscal deficit over the medium term). This estimate, moreover, provides a picture of only half of the government's balance sheet, since it excludes the government's considerable holdings of financial and nonfinancial assets. At the same time, it also excludes contingent liabilities as well as liabilities of the SOEs and public financial sector. The rise in augmented fiscal debt, however, is indicative of underlying challenges in local government finances. The first is a mismatch between local government expenditure responsibilities and revenue sources. A mismatch that combined with tight restrictions on direct borrowing has led local governments to search for creative means to finance their operations. This is most apparent in recourse to off-budget entities (LGFVs) to finance infrastructure and support the ongoing urbanization in China. The second challenge is to

put in place a better framework to manage and monitor local government borrowing. Doing so would prevent the further build-up of risks, while at the same time ensuring adequate financing for priority social and infrastructure spending. Other challenges include the risks related to the reliance of local governments on land sales, which distorts the real estate market and could exacerbate a cyclical downturn; rollover risk from the maturity structure of existing borrowing; and the potential for the interest-growth differential to become less favorable, due in part to local governments facing higher interest costs than the central government.

The authorities have taken various initiatives to contain local government fiscal risks. LGFVs were reclassified into categories based on their revenue-generating capacity and level of dependence on government subsidies. Those that do not generate income can no longer serve as financing vehicles, and local governments will need to finance their spending on-budget. Many LGFVs of this category normally cannot pay off their existing debt, hence in most cases need to roll over the debt and pledge more collateral. LGFVs of other categories are considered commercially operated, hence are eligible to continue to borrow from the market. At the same time, the China Bank Regulatory Commission (CBRC) has also been scrutinizing loans to LGFVs more closely. Fiscal reforms to intergovernmental relations, selective relaxation of borrowing constraints, quantity and quality control on investment, and fiscal risk management system are crucial to address the fundamental weaknesses in the current fiscal institutions.

On balance, the augmented fiscal data suggest that China fiscal position is weaker than suggested by headline data but still within sustainability thresholds. At the same time, the higher augmented debt and deficits underscore that China has somewhat less fiscal space than government data suggest and is also more vulnerable to a macroeconomic shock. However, there is still room to use fiscal policy to support demand as needed while following a path of gradual adjustment of its augmented fiscal deficit. Moreover, China has already started the reforms to strengthen fiscal management, especially over local government finances.

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