China's Evolving Financial System and Its Global Importance

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Abstract

China's economic policy response to the COVID-19 pandemic has been less stimulatory than the response after the global financial crisis because Chinese authorities have sought to avoid fuelling risks in the financial system. Indeed, the authorities have continued with reforms to make the financial system more market-based so that it can better support China's economy, although the state continues to play a central role in the financial system. At the same time, China has become increasingly important for international financial markets, mainly due to its weight in international trade but also because certain cross-border capital flows are rising.

Introduction

In the years following the global financial crisis (GFC), Chinese policymakers supported a period of rapid economic growth despite the weak global environment. This stimulus resulted in strong credit growth and was accompanied by a rise in financial vulnerabilities.[1] The stock of debt rose substantially, concentrated in state-owned enterprises (SOEs) that were burdened by over-capacity (Graph 1). An opaque and largely unregulated 'shadow' financial system emerged. This was accompanied by a widespread belief that a range of financial assets would be guaranteed by the state. In addition, an easing in the economy's trend rate of growth has meant that it has become harder to 'outgrow' any problems in the financial system (Roberts and Russell 2019).

Some years ago, the Chinese authorities began to focus more attention on reducing financial risks, along with a number of other long-term goals (such as environmental sustainability), accepting slower growth in the process. These efforts were successful in a number of ways. Economy-wide leverage stabilised, albeit at a high level relative to other economies at a similar stage of development. The stock of shadow financing declined from

60 per cent to 45 per cent of GDP as regulatory scrutiny was tightened and the bond and equity markets were developed as more transparent alternatives (Sutton and Taylor 2020). In addition, the authorities demonstrated a willingness to allow some investors to incur losses on a range of assets previously assumed to be guaranteed by the government.

The rise in vulnerabilities over the past decade or so has shaped the policy responses to the pandemic, as is discussed in the first part of this article. The article then turns to the long-running efforts to reconfigure the way that the Chinese financial system supports the economy, which has gained renewed focus since the onset of the pandemic. Finally, the article puts these developments into an international context, by examining how the global importance of the Chinese financial system is changing.

How has the pandemic response been affected by risks in China's financial system?

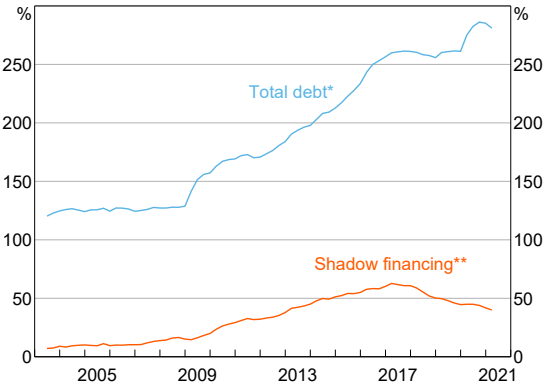
With work still to be done to address these financial system vulnerabilities at the outset of the COVID-19 pandemic, the authorities have been alert to avoiding a further rise in systemic risks where possible. In particular, the *scale* of monetary stimulus in response to the pandemic has been modest, particularly compared with the large-scale easing during the GFC. Credit growth rose but by far less than in earlier episodes (Graph 2). Interest rates on bank loans declined by around 50 basis points compared with around 200 basis points during the GFC.

Monetary stimulus has also been quite *targeted*, favouring specific borrowers to avoid fuelling a further rise in systemic risks. There has been renewed emphasis on banks orienting credit towards small and medium-sized businesses rather than SOEs. These firms tend to have more sustainable debt loads and have faced more difficulties obtaining finance (particularly during the earlier campaign to reduce financial risks) (Graph 3). At the same time, various steps have been taken to avoid unnecessary stimulus of the property market, including limits on lending for mortgages and to higher-risk property developers.

Graph 1

China – Non-financial Sector Debt

Per cent of nominal GDP



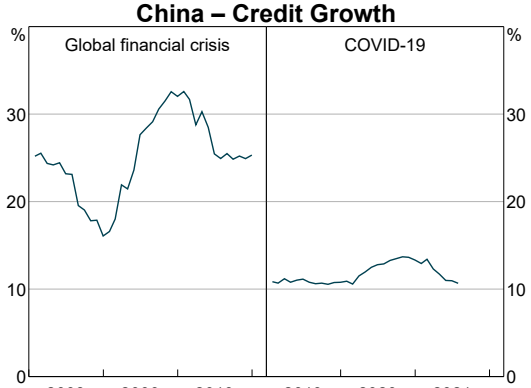
* Total debt is the sum of bank credit, shadow financing and bond financing (both corporate and public)

** RBA estimate

Sources: CEIC Data; RBA; WIND Information

Graph 2

China – Credit Growth

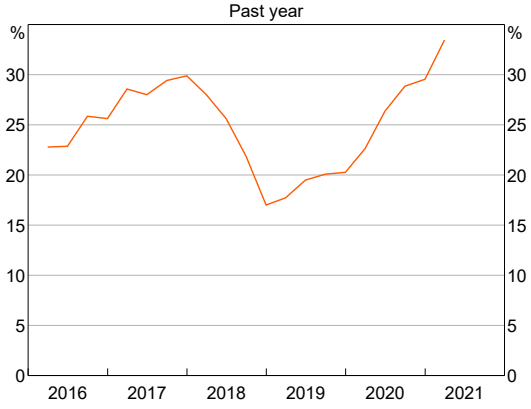


Sources: CEIC Data; RBA

Graph 3

Medium and Small Enterprises' Share of New Business Financing

Past year



Sources: CEIC Data; RBA

This approach has been aided by the successful containment of the virus and the strong recovery in demand for China's exports, which has seen the economy quickly return to its pre-pandemic trajectory.

The more modest expansion of credit in this episode also reflected a smaller degree of fiscal stimulus (Graph 4). Unlike most economies, a degree of fiscal stimulus in China is often funded by borrowing from the banking system or from shadow finance via local government financing vehicles (LGFVs). That is because fiscal stimulus is delivered largely by local governments and SOEs, in contrast to other economies where fiscal stimulus is reflected mainly in the central government budget balance. To reduce the use of shadow finance and impose a degree of market discipline, in recent years local governments have been encouraged to access the bond market by issuing 'special' bonds linked to specific projects (Holmes and Lancaster 2019).

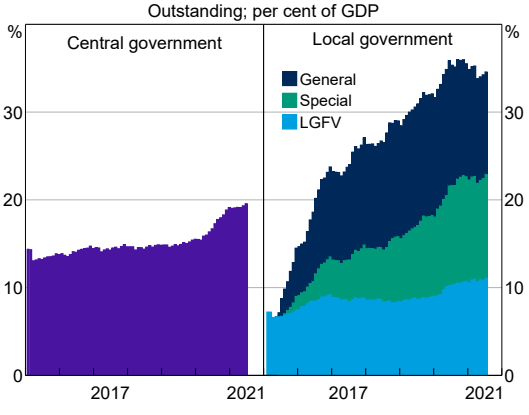
Despite the modest and targeted policy responses to the pandemic, the authorities tolerated an increase in debt relative to GDP (Yi 2020). Further reforms to address the still-large stock of shadow financing were also delayed.

Accordingly, as economic activity continued to recover this year, the authorities proceeded with a tapering of stimulus. At the meeting of the National People's Congress early in 2021, authorities approved a plan to ensure that the growth of credit slows this year, such that it stabilises relative to nominal GDP, and announced a modest tightening of fiscal policy (National Development and Reform Commission 2021). Authorities also chose a GDP growth target for 2021 that could be met provided the economy did not subsequently contract, limiting the potential for conflict between that target and measures to reduce financial risk. As intended, credit growth has slowed to a rate that has been in line with the growth of nominal GDP.

Graph 4

Chinese Government Bonds

Outstanding; per cent of GDP



Sources: CEIC Data; RBA; WIND Information

How is China's financial system being reformed?

The pandemic has also underscored the authorities' long-running efforts to pursue deeper reforms that improve the stability and efficiency of the financial system so that it can better support economic growth. Historically, the state intervened heavily to ensure that the financial sector supported an investment- and export-led model of economic growth. This included:

1. a heavy bias in the allocation of credit to SOEs over private and/or small enterprises, especially by the dominant state-owned banking sector – even as banks became more commercial, implicit state guarantees meant that SOEs continued to enjoy preferential access to credit
2. controls on interest rates, which were set at artificially low and stable levels – low borrowing rates for SOEs assisted in channelling high rates of private savings into state-led investment at subsidised cost
3. a managed exchange rate and restrictions on capital flows, which prevented domestic savers from moving into higher-yielding assets abroad and insulated the economy from volatility in foreign capital flows (an exception was direct investment in China by foreign corporations, which was typically longer-term and involved the transfer of foreign technologies).

That model was acknowledged as having several drawbacks. First, it contributed to the build-up of financial vulnerabilities. Inefficient investment in the state sector was encouraged, and many investors and borrowers sought better deals in the shadow financial system. As investors progressively sought new ways to earn higher returns, excessive risk-

taking arose in different parts of the financial system. Second, the system lacked key macroeconomic shock absorbers, in the form of a more flexible exchange rate and countercyclical interest rate tools. Third, it tended to deprive fast-growing private-sector industries of finance.

As a result, the authorities have pursued several reforms over the past decade, including: reducing implicit guarantees of SOEs; increasingly using changes in interest rates to influence financial conditions; and gradually opening the capital account and allowing for a more flexible exchange rate. The past year or so has seen some important developments in these areas and posed questions about the future direction of the reform process.[2]

Reducing implicit guarantees

In recent years, the authorities have allowed a series of defaults by entities that were previously assumed to have been guaranteed. That has included SOEs and some large private firms (mainly property developers) (Graph 5). Several small banks have experienced capital shortfalls, resulting in the first bank failures in China in 20 years (RBA 2019). While such defaults remain much less common than in other economies, they are a marked shift from China's past.

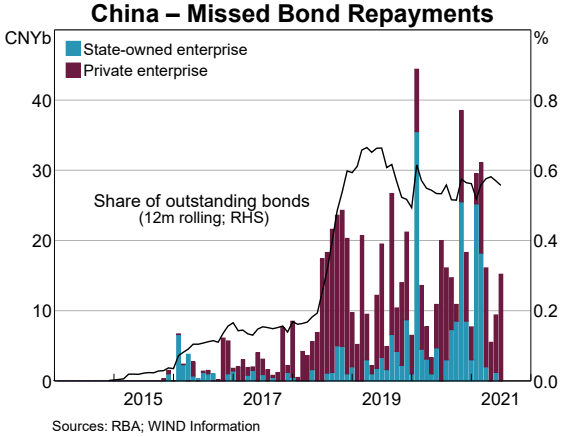
These events mean that investors now face more credit risk than before, and as a result some higher-risk borrowers now find it more expensive and more difficult to obtain credit.[3] In particular, financing conditions have diverged for borrowers in different provinces, because of the important role that has been played by local government backing (Graph 6). Indeed, the central authorities have emphasised that local (rather than central) authorities are responsible for resolving the risks of certain borrowers, notably troubled banks in their provinces. However, the consequences of defaults for local governments can be significant, and some have temporarily extended additional support to local SOEs while they restructure their finances (He 2021).

As a result of the weakening of guarantees, and transfer of credit risk to investors, credit is now starting to be allocated more towards regions that can deploy it more efficiently and sustainably. Regions with industries burdened by over-capacity and shrinking populations tend to have local governments with higher debt burdens, which reduces their capacity to support local firms, both state-owned and private (Feng and Wright 2020; Wright and Feng 2021). That has been the case especially for the provinces in north-eastern China (notably Liaoning) that have been struggling economically. For such provinces, funding costs in the bond market for local SOEs have risen over the past year or so, and credit growth has been slower than in other provinces (Graph 7).

While some state-backed borrowers now face greater scrutiny, improvements in the availability of finance for small and private enterprises have lagged (Bowman 2019; Bunny 2020). The bond market remains heavily dominated by SOEs, while

Graph 5

China – Missed Bond Repayments

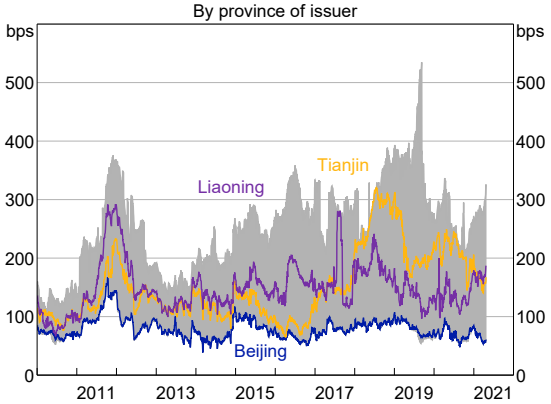


Sources: RBA; WIND Information

Graph 6

China – Corporate Bond Spreads*

By province of issuer



* Average spread to central government bonds across all maturities longer than six months; shaded area shows minimum and maximum spread on each date

Sources: RBA; WIND Information

private firms still face elevated funding costs. To address this, a range of other policies have been used to encourage banks to provide more credit to small businesses and improve private firms' access to equity capital (IMF 2021b).

While helpful for ensuring investments are made efficiently, allowing investors to incur losses has posed a risk of triggering wider financial stress. Each credit event has prompted a reassessment of assets that were previously considered safe. For example, the first small bank failure in 2019 saw interbank funding markets freeze up. Also, the default of a major SOE in late 2020 saw a widening of spreads and corporations found that it was very difficult to raise funds in the bond market for a time. In each case, the People's Bank of China (PBC) has injected substantial liquidity into interbank markets, which has been effective in avoiding wider spillovers to other parts of the system.

Looking ahead, while GDP has recovered quickly and this has alleviated some risks, banks also remain exposed to a rise in non-performing loans. That is especially true of smaller banks, and PBC stress tests at the end of 2020 also indicated that some medium and large banks could fall short of minimum capital requirements even under 'mild' scenarios (PBC 2020) (Graph 8). In some cases, those exposures have risen because of loans extended to smaller firms (which lack a state backstop) or to SOEs whose government backing has weakened. Capital shortfalls among small banks are likely to be resolved slowly with a mix of recapitalisation and acquisitions, but there may also be further bankruptcies (Wu, Zhu and Shen 2020).

Interest rate reform

The authorities have gradually deregulated interest rates over the past couple of decades. Artificially low interest rates encouraged investors to seek higher returns, including in the (less regulated) shadow financial system and by speculating in property. Interest rate controls also made lending to the private sector unattractive because banks could not charge higher rates to compensate for the risks involved.[4]

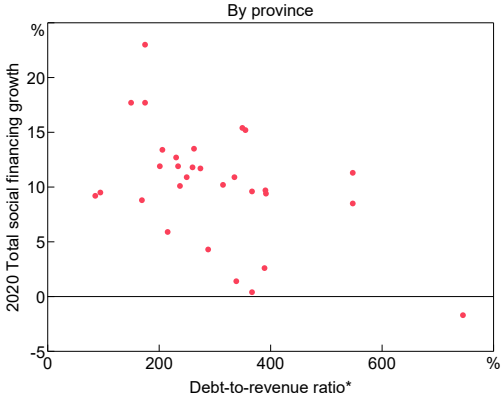
Interest rate controls also meant that short-term interest rates in money markets had little bearing on the rates faced by end borrowers (though those rates were adjusted directly at times). So instead of adjusting short-term interest rates, monetary policy was adjusted by directly guiding banks to expand credit and facilitating this by lowering reserve requirements and extending central bank funding ('quantity-based' tools) (Jones and Bowman 2019).

As interest rates were liberalised, it became more effective to use short-term interest rates as a countercyclical ('price-based') tool. Several other steps were taken that have helped to bolster the effectiveness of this tool further. A deep interbank money market was developed and the PBC improved its control over interbank interest rates (Jones and Bowman 2019). A more liquid yield curve for government bonds was developed, which

Graph 7

Growth in Total Social Financing versus Debt-to-Revenue Ratio

By province



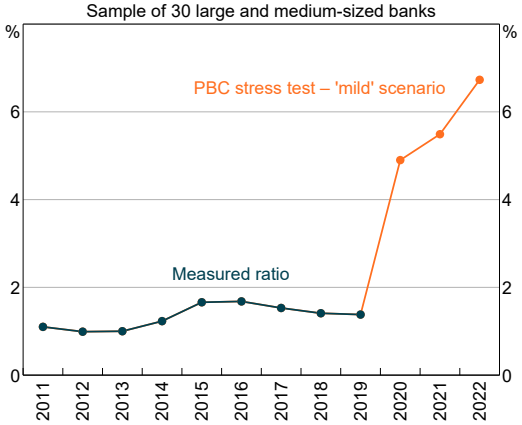
* 2019 debt-to-revenue ratio only includes bond debt

Sources: RBA; Rhodium Group; WIND Information

Graph 8

China – Non-Performing Loans

Sample of 30 large and medium-sized banks



Sources: CEIC Data; People's Bank of China; RBA

embodies expected future short-term interest rates and provides a benchmark for other issuers in the bond market. Finally, interest rates on bank loans were linked to a new benchmark (the Loan Prime Rate, LPR), which tracks rates on the PBC's facilities for lending to banks (specifically, the Medium-term Lending Facility, MLF).

During the pandemic, these new price-based tools were employed as part of the PBC's modest and targeted easing. Money market interest rates were lowered, which transmitted to lower borrowing costs for governments and corporations in the bond market (Graph 9). A small decline in the MLF rate was passed through to the LPR and business lending rates.[5]

Nevertheless, monetary policy still relies on an array of quantitative tools and direct guidance, including as part of the pandemic response (IMF 2021b). Moreover, the incomplete nature of interest rate reform has constrained the use of price-based tools. For example, more of the easing passed through to bank lending rates than to deposit rates (which remain subject to more controls), thereby putting pressure on bank profits (Zhang 2021).

Capital account reform

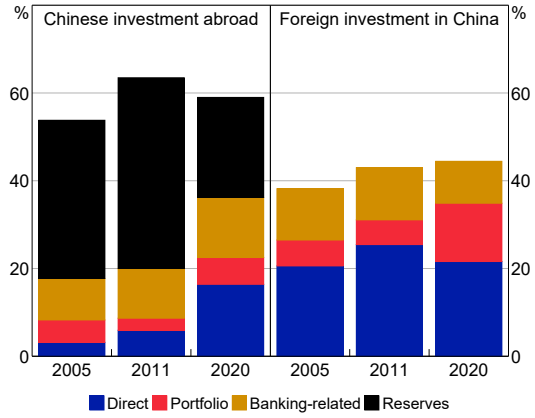
Following the GFC, the authorities opened up further to cross-border capital flows. The overall strategy was to liberalise inflows before outflows, given the potential for sizeable outflows of domestic savings into foreign assets. As well as permitting inflows of 'direct investment' by foreign corporations, cross-border banking inflows were favoured because they were expected to support use of the renminbi internationally and expose the domestic banks to helpful competition (Graph 10). 'Portfolio flows' into bond and equity markets were not liberalised initially, because they tend to be relatively volatile.

With greater openness to capital flows, it was necessary for the renminbi to become more flexible and market-based (Lien and Sunner 2019). But in 2015, a slowing of the economy and an easing in monetary policy prompted more capital outflows and pressure for depreciation, and the authorities intervened to support the currency and halted the process of opening up (McCowage 2018) (Graph 11).

Graph 10

China – External Position

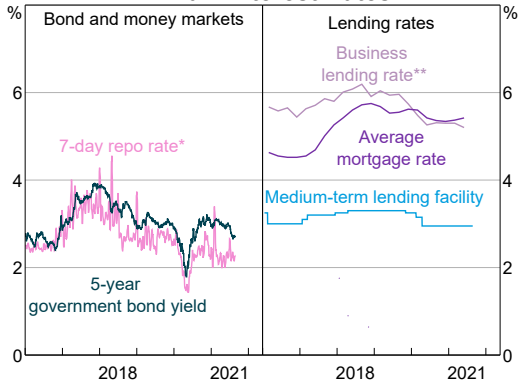
Per cent of GDP



Source: IMF

Graph 9

China – Interest Rates



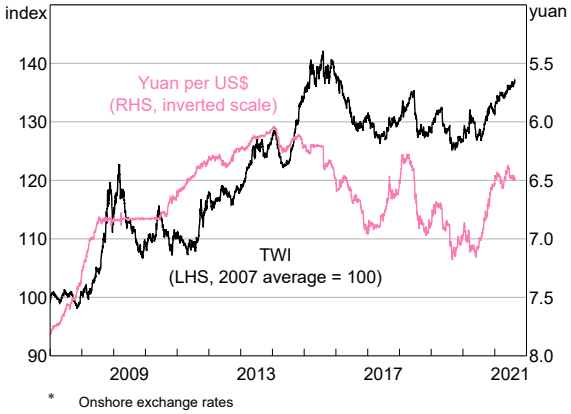
* 14-day rolling average

** Proxy based on the average general bank lending rate

Sources: Bloomberg; CEIC data; RBA

Graph 11

Chinese Renminbi*



* Onshore exchange rates

Source: BIS

Since then, there have been several steps towards liberalising capital flows. Most importantly, foreign portfolio investors have been given much greater access to Chinese bond and equity markets. That is seen as helpful for developing these markets, as well as supporting the use of the renminbi in international finance and trade. Specific steps include: the opening of 'connect' schemes between exchanges in China, Hong Kong and London (with more under development); the inclusion of Chinese onshore bonds and equities in international indices that form a benchmark for around US$8 trillion of investments; and giving foreign investors more access to derivatives markets to manage the risks of their investments.[6]

As a result, portfolio inflows have, for the first time, been among the largest sources of foreign capital inflows to China, even exceeding direct investment in recent quarters (Graph 12). Moreover, recent inflows have been mainly from private investors, rather than reserve managers and sovereign wealth funds as seen in the past. These private inflows reflect a 'latent' demand by investors to hold Chinese assets, motivated by the diversification benefits and the relatively high returns of Chinese assets. To date, investments in the bond market have been almost exclusively in sovereign (or quasi-sovereign) bonds because investors have been reluctant to take credit exposure to Chinese local governments or SOEs (Graph 13). These inflows could have much further to run if investors eventually match new benchmark weights (Lien and Sunner 2019).

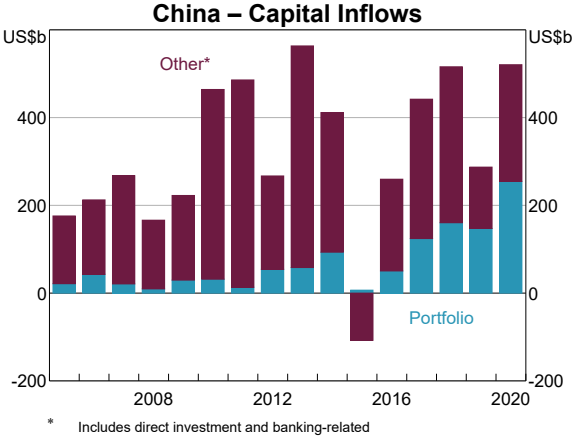
More freedom in the movement of private capital has been associated with more exchange rate flexibility. That has most recently been reflected in an appreciation, given the stronger recovery of the Chinese economy and the fact that controls on capital inflows have been eased more than those on outflows.

A key issue remains how far China will ultimately pursue an opening of its capital account. The size of foreign holdings of Chinese securities remains small compared with other economies. Indeed, the fact that debt in China continues to be owned mainly 'internally' (and in domestic currency) rather than by foreign investors gives the authorities considerable scope to control the pace of any deleveraging (Graph 14).

As well as gradually allowing more capital flows, the authorities have promoted the use of renminbi more widely outside China in both trade and finance. Greater international use of the renminbi would allow Chinese entities to conduct international trade and access foreign capital with less exchange rate risk and less exposure to potential stresses in the US dollar funding system (Windsor and Halperin 2018).[7] Those efforts have included setting up offshore centres for settling renminbi transactions, developing a pool of offshore renminbi deposits and providing liquidity backstops abroad with bilateral currency swap agreements.

Graph 12

China – Capital Inflows



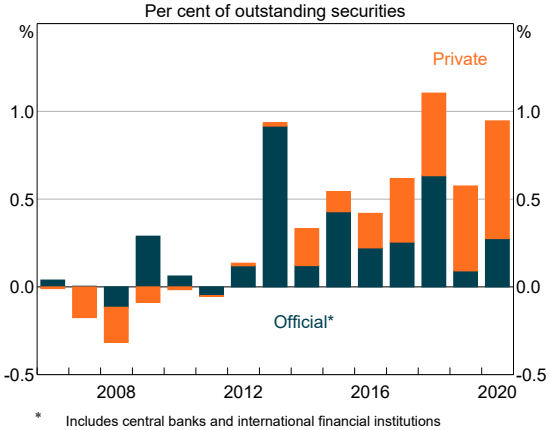
* Includes direct investment and banking-related

Source: CEIC Data

Graph 13

Foreign Purchases of Chinese Government Debt Securities

Per cent of outstanding securities



* Includes central banks and international financial institutions

Source: Sovereign investor base estimates by Arslanalp and Tsuda (2014)

How is China's influence on the global financial system changing?

China has become increasingly important for the global financial system. There are three key aspects of this: China's excess of savings over investment (or relatedly, trade surpluses); China's increased integration with global trade; and China's increased integration with global capital markets and, relatedly, the international use of the renminbi. All three aspects have the potential to influence risk-free interest rates, exchange rates and risk premiums globally.

Historically, China's influence on the global financial system was via sizeable capital outflows

China has long had domestic savings in excess of its domestic investment (Graph 15). China's remarkably high rate of savings is partly a result of its under-developed social safety net (IMF 2021a). This was exacerbated by financial restrictions, especially through the 2000s, which promoted export-led growth. To manage the exchange rate, savings were channelled abroad via the accumulation of foreign exchange reserves, which are invested in the debt of foreign governments. Some observers saw this 'savings glut' as contributing to a persistent decline in long-term, risk-free interest rates globally prior to the GFC (Bernanke 2005).

Since the mid 2000s, the difference between China's savings and investment has declined from 10 per cent of its GDP to about 1 per cent. The rate of saving has declined from very high levels as the economy has begun a transition towards higher levels of consumption. After the GFC there was also an increase in investment, which was associated with rapid growth in credit and related financial vulnerabilities.[8] In that regard, the decline in the extent of the 'external imbalance' has been associated with a rise in 'internal imbalance'.

How far China exports net savings to the rest of the world in the coming years (if at all) will depend partly on how these internal imbalances are resolved. A return to reducing financial system risks could weigh on investment, which by itself would see external surpluses rise. But the authorities are also looking to continue to encourage other sources of domestic demand (i.e. consumption), which would lower the rate of savings, reducing the external surplus. Over a longer period, the ageing of the population and building out of the social safety net could also see the savings rate decline, which might even see China import savings from the rest of the world.

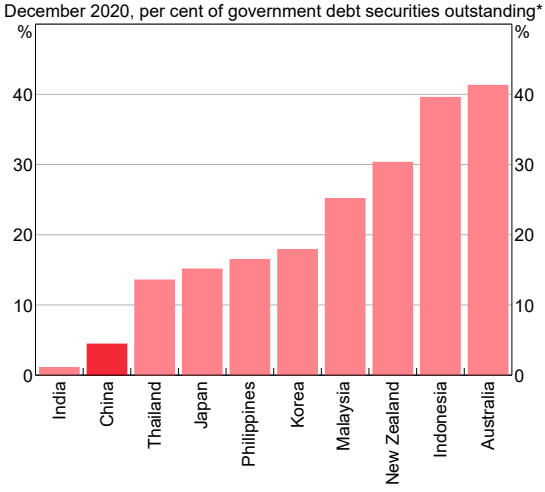
China's large trade flows have given rise to indirect effects on global markets

China now plays a critical role in global trade, as both its imports and exports have grown as a share of the world economy (i.e. in *gross* rather than *net* terms). As a result, China's business cycle has become more important for other economies, affecting interest rates, profits and asset returns globally. In turn, it has had a growing *indirect* effect

Graph 14

Asian Sovereign Debt – Foreign Ownership

December 2020, per cent of government debt securities outstanding*



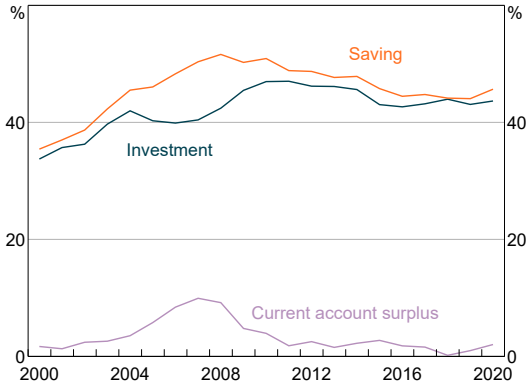
* Includes central, state and local government debt

Source: Sovereign investor base estimates by Arslanalp and Tsuda (2014)

Graph 15

China – Saving and Investment

Per cent of GDP



Source: IMF

on global markets, even while it has remained relatively closed financially.

That growing influence helps to explain the rising co-movements between Chinese and international markets. That is especially marked for equity prices, while co-movements with government bond yields remain lower (Graph 16). For example, the more positive outlook for China's economy over the past year has not only helped to lift equity prices in China but also abroad.

The renminbi now also moves more closely with a range of other currencies (not only the US dollar). This reflects the greater flexibility of the exchange rate to respond to developments in the Chinese and global economies. An improved outlook in China tends to place upward pressure not only on the renminbi, but also on the currencies of commodity exporters (e.g. Australia) and some other economies in Asia that are closely integrated with Chinese supply chains or seek to maintain their export competitiveness with China (Graph 17).[9]

China's direct links to the global financial system have begun to deepen

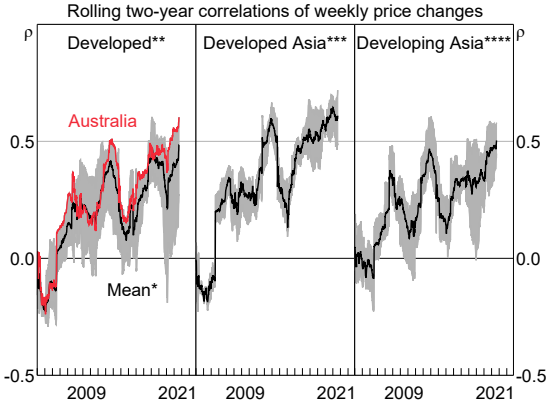
As capital flows have been gradually liberalised, *direct* exposures to Chinese assets in the international financial system have risen. China's share of international portfolios has doubled over the past decade, while international banks' lending into China has also risen. However, the size of these links remains modest, at around 2 per cent of international portfolios and 4 per cent of international banks' cross-border loans (Graph 18).

Meanwhile, China's investment abroad has widened in scope. In the past, this mainly took the form of investments by the state via its foreign exchange reserves. In recent years, direct investments abroad by private Chinese companies expanded significantly. However, from 2016 these slowed substantially, after authorities curtailed a wave of debt-funded acquisitions by Chinese corporations expanding outside of their core areas of business (McCowage 2018). There has also been some easing of restrictions on portfolio outflows, while bank-related outflows continue to play a significant role.

Graph 17

Exchange Rate Correlations with Renminbi

Rolling two-year correlations of weekly price changes

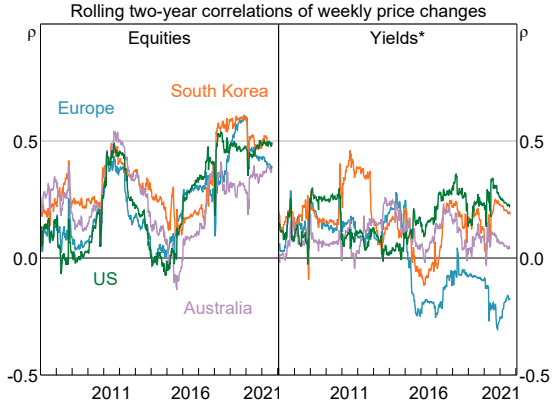


* Shaded area around mean indicates minimum and maximum; all exchange rates against US dollar
** Canada, Japan, UK, Australia, euro area
*** South Korea, Taiwan, Singapore
**** Philippines, Malaysia, Indonesia, Thailand
Sources: Bloomberg; RBA

Graph 16

Correlations with Chinese Financial Markets

Rolling two-year correlations of weekly price changes

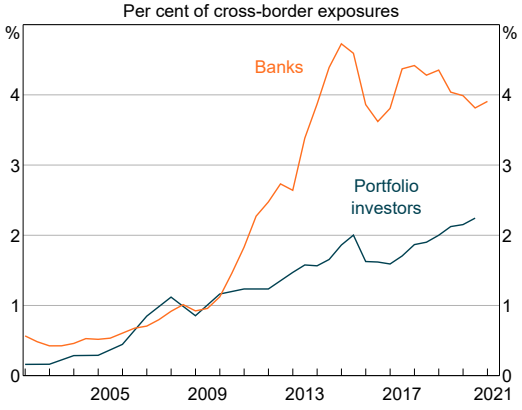


* Five-year government bond yields
Sources: Bloomberg; ECB; RBA

Graph 18

Non-Chinese Entities' Exposures to China

Per cent of cross-border exposures



Sources: BIS; IMF

China affects Australian financial conditions mainly because of its importance for trade

China's effect on Australian financial markets has risen, as it has for many other economies. That reflects deep trade linkages, particularly in relation to Australia's resource exports. The Australian dollar moves more closely with the renminbi than do the currencies of many other advanced economies. That said, many Australian asset prices continue to move much more closely with those in the United States than those in China (Graph 19).

With capital flowing more freely across its borders, China has at times been a source of investment flows into Australia. China is a substantial investor in Australian government debt through its foreign exchange reserves. Chinese corporations have also made direct investments in Australia over the past decade or so, initially in the mining sector but more recently in a broader range of industries (Graph 20). Chinese direct investment in Australia declined in 2020, amid similar declines across other economies; however, it continues to account for a steady share of the stock of total foreign investment in Australia.

Australian investments in China were mainly banking-related in the past, while direct investment has been relatively small. However, Australian portfolio investments in China have become much more important in recent years as market access has improved.

Overall, the size of these investments remains modest. China accounts for only 2 per cent of both foreign investment in Australia and of Australian investment abroad (compared with around one-third of Australia's exports), and Australian investment in China has declined recently. More generally, advanced economies continue to account for over 80 per cent of foreign investment in Australia (Graph 21).

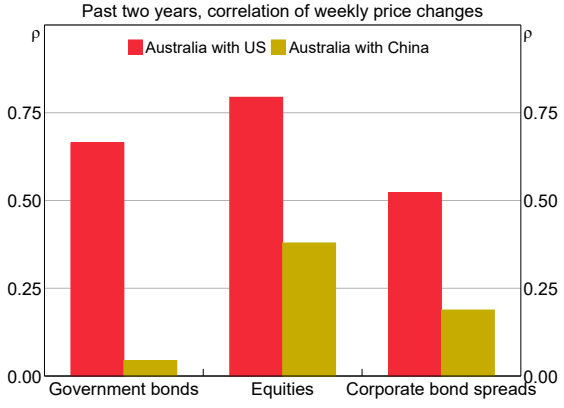
The renminbi's role in the international financial system remains modest

China's efforts to promote the wider international use of the renminbi have seen some limited progress. Most notably, a rising share of payments involving Chinese entities are in renminbi, recently as much as 40 per cent (Graph 22). That reflects increased foreign activity in Chinese securities markets (which are transacted in renminbi) and also

Graph 19

Financial Market Correlations

Past two years, correlation of weekly price changes

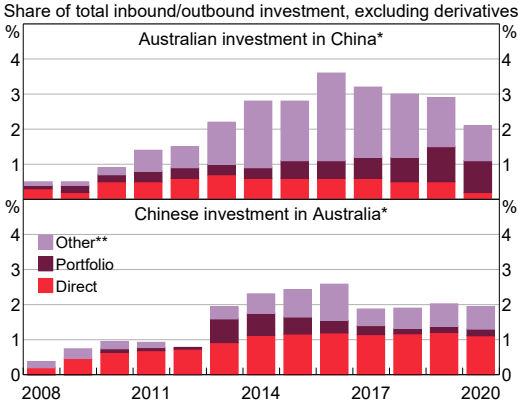


Sources: Bloomberg; ICE; RBA

Graph 20

Stock of Investment

Share of total inbound/outbound investment, excluding derivatives



* Includes mainland China only

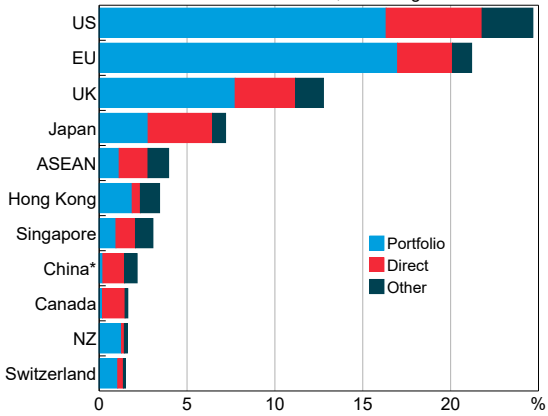
** Loans, currency and deposits, trade finance and other assets

Sources: ABS; RBA

Graph 21

Stock of Foreign Investment in Australia

Share of total stock in 2020; excluding derivatives



* Includes mainland China only

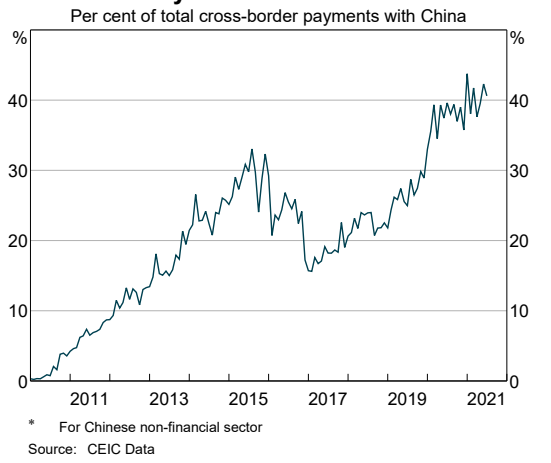
Sources: ABS; RBA

more of China's trade being invoiced in yuan (Windsor and Halperin 2018). But the wider international use of the renminbi (including between non-Chinese entities) remains small for both trade and investment, and well below use of the US dollar, euro and even the Japanese yen and UK pound sterling (Graph 23).

It remains to be seen how widely the renminbi will be adopted internationally. Some observers have suggested that a Chinese central bank digital currency ('an eCNY') might gain greater use internationally (BIS 2021; Feng 2021; Prasad 2020). This is currently a domestically focused project, with objectives similar to those highlighted by some other emerging market economy central banks (such as improving domestic payments and widening financial inclusion). The Chinese authorities have played down the extent to which they expect the existence of an eCNY to drive international use of the renminbi. More generally, to the extent that the renminbi gains increased international use, this is most likely to occur within Asia given the region's integration into Chinese trade and production.

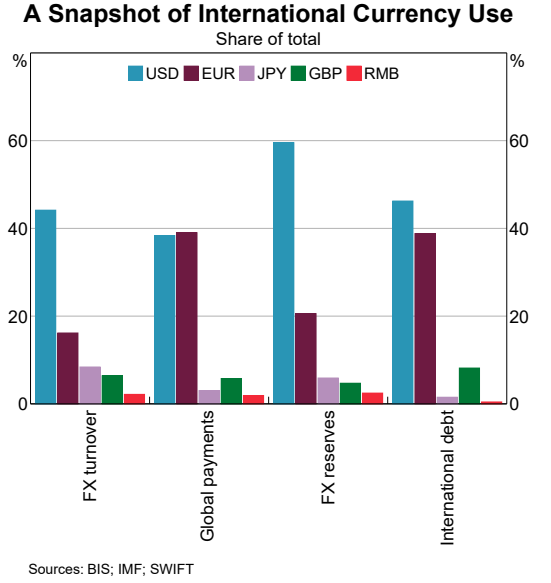
Graph 22

International Payments with China in Renminbi*



Graph 23

A Snapshot of International Currency Use



Conclusion and outlook

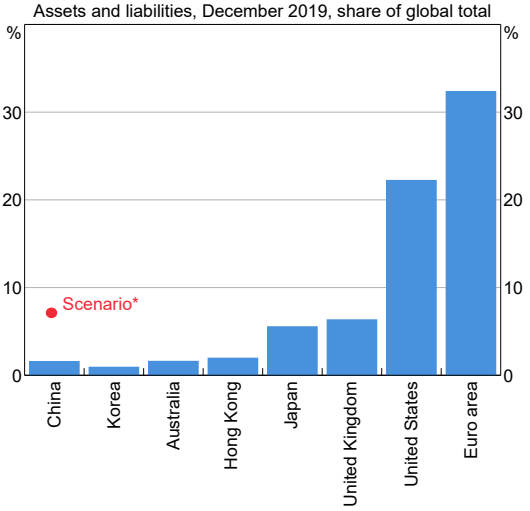
Risks in China's financial system remain elevated despite its economy's strong recovery from the COVID-19 pandemic and the modest and targeted use of monetary stimulus. These risks will continue to shape its economic management in the years ahead, with implications for growth and, in turn, financial conditions in the global economy.

While China has become heavily integrated with the global trading system, its integration with global capital markets is still at a formative stage. It is unclear just how far and how quickly China will open further to international capital flows. The history of other economies suggests that there is merit in proceeding carefully. But China's large size means that any progress will make it much more important for the global financial system. While the scale and nature of this shift is difficult to predict, its importance can be illustrated by looking at what would happen if China's stock of portfolio positions (both inward and outward investments) were to reach 70 per cent of GDP – half that of the United States or Australia, but similar to South Korea. In that case, China would account for around 8 per cent of global portfolio investment, third behind the euro area and the United States (and compared with 1 per cent currently) (Graph 24).[10]

Graph 24

Gross Portfolio Position

Assets and liabilities, December 2019, share of global total



* Chinese portfolio positions if 70 per cent of GDP

Sources: IMF; RBA

More generally, further opening would mean increased holdings of foreign assets by Chinese residents and increased holdings of Chinese assets by the rest of the world. That large rebalancing could affect asset prices and financial conditions differently across regions and markets. If this is a gradual process, it may prove relatively manageable. The renminbi could become a more widely used international currency, especially within Asia. Over time, financial conditions in Australia are likely to be increasingly influenced by the news in Shanghai and Shenzhen alongside New York and London.

Footnotes

[*] The authors completed this work in International Department. The authors would like to thank Morgan Spearritt and Ewan Rankin for their extensive help in preparing this article. Serena Alim, Tim Atkin, John Boulter, Iris Day, Eden Hatzvi, Jarkko Jaaskela, Diego May and Ivan Roberts also provided valuable input and feedback.

[1] See, for example, Bowman, Hack and Waring (2018).

[2] In its recent 'Article IV Report for China', the International Monetary Fund (IMF) considers the challenges to China's reform process, as well as opportunities for further development. See IMF (2021a) for more details.

[3] This has been reinforced by a range of other policies that restrict the availability of credit for riskier borrowers.

[4] One earlier reason for interest rate controls also diminished over time – namely, to help recapitalise the banking system (by artificially lifting net interest margins) after a severe rise in non-performing loans in the late 1990s.

[5] Policy interest rates have remained well above zero, and so the PBC has not purchased government securities to lower long-term interest rates further.

[6] The 'connect' schemes enable cross-border portfolio investment, between exchanges in Hong Kong and China as well as London and China. While no launch dates have been specified, additional schemes enabling mainland investment in the Hong Kong bond market and two-way investment in wealth management products are expected in the near future.

[7] For a recent analysis of the international role of the US dollar, see Prasad (2019).

[8] From a trade perspective, the decline in the current account surplus reflected a substantial appreciation of the exchange rate, a natural slowing in China's penetration of export markets and a rise in tourism imports.

[9] Statistical methods that identify co-movement with the renminbi more precisely (by abstracting from the common effect of US dollar movements on all exchange rates) also show a rising relationship with exchange rates of other Asian economies (Windsor and Halperin 2018).

[10] See Cunningham, Hatzvi and Mo (2018) for an alternative counterfactual analysis of the removal of restrictions on China's portfolio outflows.

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UNCOVERING CHINA'S HIDDEN LOCAL GOVERNMENT DEBTS[1]

The large scale of government debt in China poses key risks to China's economy and financial system. However, official measures of Chinese government debt do not account for funds raised by China's large local government financing vehicle (LGFV) industry. We construct a new unit-record dataset of roughly 2300 LGFVs and estimate China's 'hidden' government interest-bearing debt in 2019 to be CNY38 trillion (38 per cent of GDP), roughly equal in size to official government debt. Official data therefore greatly underestimate the fiscal sustainability pressures faced by many local governments. Our estimates also suggest that despite stronger restrictions on LGFV debt issuance over the past decade, authorities have had limited success in containing debt growth in the sector. It is unlikely that recent efforts by authorities will curb hidden government debts significantly unless there is more concrete action. The evolution of LGFV debt has implications for financial stability, as well as for steel-intensive sectors of economic activity in China.

Official measures of Chinese government debt do not account for local government financing vehicles

It is hard to pin down the true level of Chinese government debt. Despite repeated efforts by China's central authorities to 'close the back door, open the front door' for local government financing over the past decade, local governments in China still rely heavily on opaque off-balance sheet financing channels such as LGFVs.

LGFVs are off-balance sheet entities that are set up to circumvent regulatory constraints on local governments' ability to raise debt. Unlike local governments, these state-owned firms can access bank finance and capital markets without direct oversight by the Ministry of Finance, and their main (and often only) functions are to raise funds and carry out government projects and services. As a result, LGFV debt is frequently referred to as 'hidden' local government debt.[2]

Given their magnitude, hidden local government debts pose significant risks to fiscal sustainability and financial stability in China.[3] Many local governments in China have seen widening revenue-to-expenditure gaps in recent years, often exacerbated by long-run demographic issues such as an ageing population. Given the strict official debt limits set by central authorities, local governments have used LGFVs to help fill these gaps. LGFVs receive strong implicit state guarantees, but it is yet to be seen if or how said guarantees will be honoured in the case of a significant rise in defaults alongside a deterioration in a local government's finances.

The evolution of LGFV debt also matters for infrastructure investment. LGFVs are one of China's most important public expenditure instruments: in 2019, net debt issuance by LGFVs in the infrastructure and construction sectors accounted for CNY2.6 trillion, which was six times higher than government bond issuance for infrastructure projects at the time. A sharp contraction in infrastructure investment would have significant implications for the demand for Australia's commodities exports.

Our new unit-record dataset suggests LGFV debt is as large as China's official government debt

We have built a novel unit-record dataset based on LGFV balance sheets in the WIND database. Our method is similar to that used by the IMF in their 2020 China Article IV assessment (Table 6, p60).[4] Our data source is slightly more detailed than the IMF's, with bond-level data for the province, industry, and the administrative level of government under which each LGFV operates (city, regional, or provincial).

Based on these data, we estimate total LGFV interest-bearing debt at CNY38 trillion in 2019 (Graph 1), equivalent to 38 per cent of GDP and broadly in line with IMF estimates (CNY35 trillion; Graph 2). This

1 We would like to thank IMF staff, including names redacted (x4), who helped steer our method. We also thank Names redacted (x7) for their helpful comments and feedback.

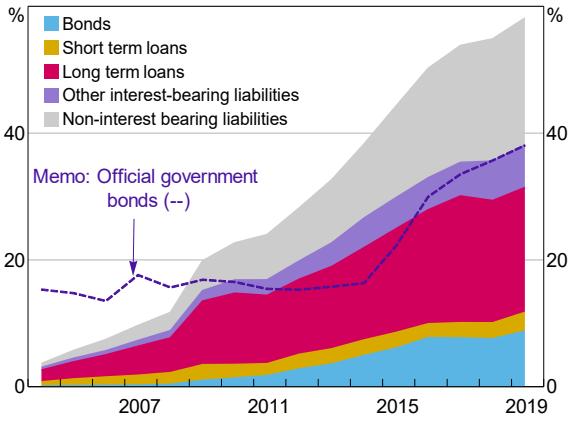
2 For more background on LGFVs and how they are financed, see name redacted (2015).

3 External estimates of LGFV debt tend to vary considerably. The most recent official estimate was released in 2013, placing total debt at only around CNY7 trillion, or 11 per cent of GDP. However, this was considerably lower than other estimates around the same time, with the IMF placing it at 30 per cent of GDP and Rhodium Group at around 55 per cent. LGFV debt has risen further as a share of GDP according to IMF estimates.

4 While there is no official database of LGFVs, bonds issued by LGFVs are classified as 'Chengtou' bonds by regulators (literally translated to 'Urban Construction Bonds'), which has helped us identify a large sample of around 2300 bond-issuing LGFVs. We have matched these to published balance sheet data to build a large dataset of the LGFV sector. The Bloomberg dataset used by the IMF captures around 1900 LGFVs (although the additional 500 LGFVs we capture in WIND are relatively small).

suggests that hidden local government debt is as large as total official government debt, and around a fifth of total business financing in China.[5] Total outstanding bonds issued by LGFVs account for around a quarter of their interest-bearing debt, at around CNY9 trillion (30 per cent of corporate bonds outstanding in China).[6] The bulk of LGFV borrowing is sourced through loans from banks and trust companies, although our data does not allow us to identify the relative shares of these funding sources.

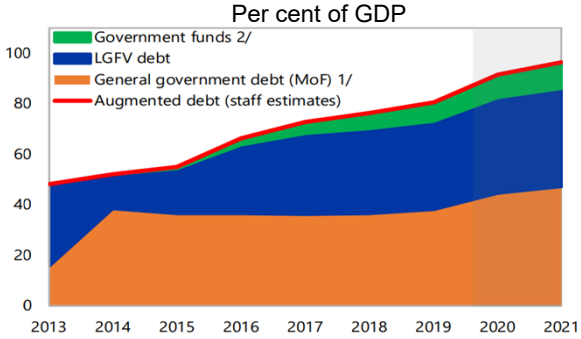
Graph 1
China – Hidden Local Government Debts*
As a share of GDP



* Based on the total liabilities of 2300+ bond issuing LGFVs (Chinabond classification). Does not adjust for changes in the number of reporting institutions

Sources: RBA; WIND Data

Graph 2
China – IMF Estimates of Augmented Debt
Per cent of GDP



Source: Ministry of Finance; and IMF staff calculations.
1/ Data through 2019, 2020 estimated, 2021 projection. Large jump in 2014 reflects official recognition of 22 percent of GDP in LGFV debt. 2/ Government guided funds (GGF) and special construction funds (SCF). Social capital portion only.

Although this is the most comprehensive data on LGFVs that we have been able to access, our estimates may be downwardly biased. Our dataset only captures LGFVs that issue bonds, and some LGFVs may choose not to issue bonds or release their balance sheet data publicly. Market analysts in 2013 suggested that China had over 10,000 LGFVs at the time, while our dataset only covered 1,700 (Standard Chartered 2013; Forbes 2014). However, it is plausible that bond issuance is correlated with size, and that the entities that have issued bonds (and are captured in our dataset) account for the bulk of LGFV liabilities. Indeed, LGFVs vary drastically in size, and the top 30 per cent of LGFVs in our sample account for 80 per cent of total interest-bearing liabilities, while the smallest 20 per cent of LGFVs account for less than 2 per cent.

However, there may also be some upward biases in our estimates that balance this out. Some LGFVs may issue debt for non-government-related activities or function as broader financial holding companies for SOEs, which might lead us to overestimate government-related debts. In addition, some LGFVs that have previously issued LGFV bonds might have later been reclassified as ordinary SOEs by regulators, which we cannot identify with public data.

We cannot ascertain the relative sizes of the upward and downward biases, so we have not made any top-down adjustments to the data. These data allow us to put a number on the level and growth of hidden debts in China, but (as with many data sources in China) there is considerable uncertainty around the central estimate.

Our new time-series estimates of LGFV debt suggest that the authorities' push to reduce hidden local government debt has had limited success thus far

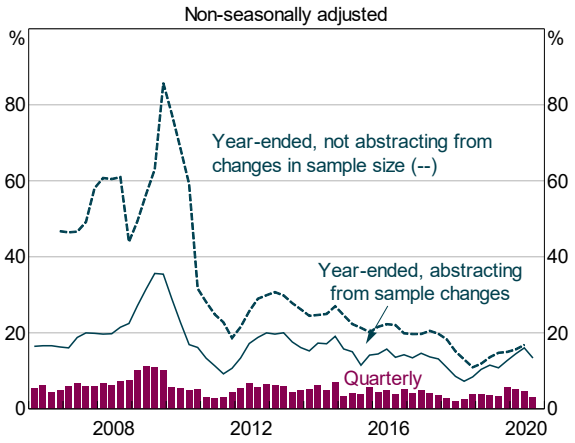
Prior to 2014, LGFVs were a conventional source of funding for local governments. This was because a number of regulations prohibited them from borrowing directly from financial markets and constrained their access to bank financing. The use of LGFVs grew very quickly during the recovery from the global financial crisis, when local governments used LGFVs to fund approximately 70 per cent of China's CNY4 trillion stimulus

[5] Like the IMF, we have focused on interest-bearing debt so as to keep the figures more comparable to government debt. A broader measure of total liabilities, which includes non-interest-bearing liabilities such as accounts payable, unearned revenue and accrued expenses, is equivalent to around 58 per cent of GDP according to our estimates.

[6] This value broadly aligns with our previous estimates of Chengtou bonds (which were our main proxy for hidden government debt prior to this new dataset). This is a useful crosscheck for the robustness of our sample, and it suggests that these firms issue very little bond debt for non-government-related activities.

package (Graph 3). A majority of these funds were directed towards infrastructure spending, with a large proportion sourced from outside the regular banking system (Graph 4).

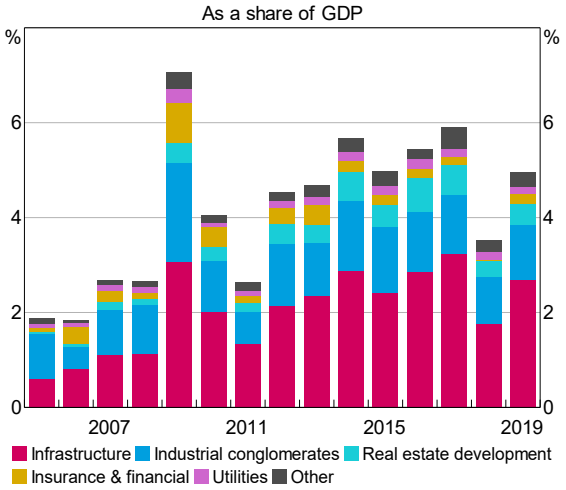
Graph 3
China – Hidden Government Debt Growth*



* Based on the interest-bearing liabilities of 2300+ bond issuing LGFVs. Quarterly data are interpolated for LGFVs that report on less frequent basis. To abstract away from the impact of sample changes, aggregate growth rates are computed from the weighted average growth of repeat-sampled LGFVs

Sources: RBA; WIND Data

Graph 4
China – Hidden Government Debt Issuance*



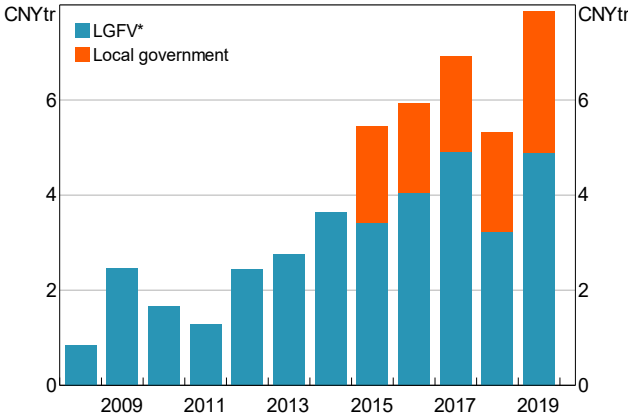
* Total change in annual interest-bearing liabilities of Local Government Financing Vehicles; does not adjust for changes in the number of reporting institutions

Sources: CEIC Data; RBA; WIND Information

More recently, the authorities have placed a greater focus on moving debt onto local governments' balance sheets to improve the transparency and sustainability of local government debt. In 2015, authorities introduced a three year 'debt swap' program. Under this program, local governments were able to convert the debt of LGFVs (including bank debt, debt owed to non-bank entities, and LGFV bonds) into local government bonds. A total of CNY12.2 trillion debt swap bonds were issued. The authorities also began allowing local governments to issue their own bonds under a quota system, under the premise that it would help lessen their reliance on LGFVs to fund projects.

However, growth in LGFV debt has only declined marginally since the implementation of these policies (Graph 5). Local governments have used the ability to issue their own bonds to expand their total debt rather than as a substitute for LGFV borrowing (Graph 6). As such, LGFVs remain an important source of funding for local governments.

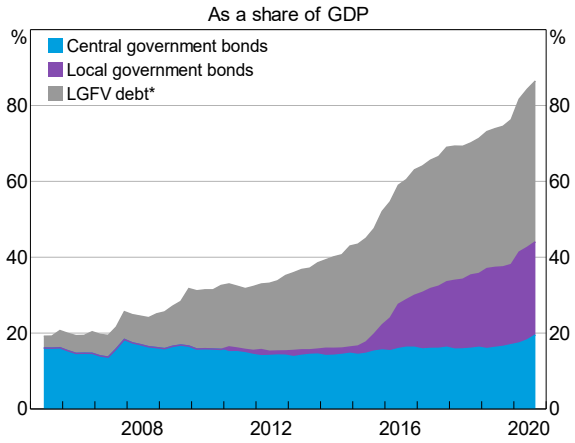
Graph 5
Net Local Government Debt Issuance



* Local government financing vehicles. Includes both loan and bond debt based on a sample of approximately 2000 bond-issuing LGFVs. 2020 figure not available.

Sources: RBA; WIND Information

Graph 6
China – Official and Hidden Government Debts



* Based on the interest-bearing liabilities of 2300+ bond-issuing LGFVs. Quarterly data are interpolated for LGFVs that report on less frequent basis

Sources: RBA; WIND Data

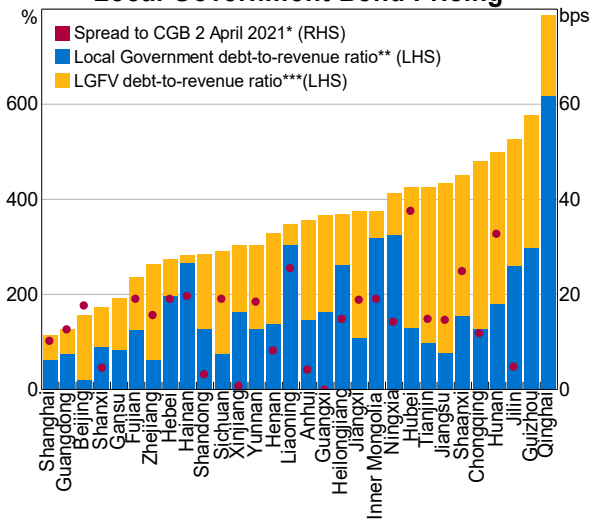
Official debt figures understate regional fiscal sustainability issues and financial stability risks

The official data understate the fiscal sustainability pressures faced by most local governments (Graph 7). In particular, the current pace of debt growth may not be sustainable for some local governments without support from the central government. This is especially concerning for local governments with high debt burdens in regions facing prolonged economic slowdowns, such as Jilin. It also suggests that in times of stress, these local governments may be in a worse position to meet their financial and social welfare obligations.

Defaults by LGFVs could pose a significant financial stability risk. While there have been no 'official' defaults by an LGFV since the first corporate bond default in China in 2014, the authorities' drive to reduce implicit guarantees in China indicate that there may be a pick-up in LGFV defaults going forward (name redactec 2021). This process will be slow, and local governments are likely to provide some support for larger or more systemically important LGFVs in time of stress. However, in regions with high levels of hidden debt, banks and investors may be overestimating the extent of the support local governments could provide if an LGFV is unable to meet its financial obligations. In particular, there is a risk of negative spillover effects if a large number of firms default in a region with a weakened fiscal position.

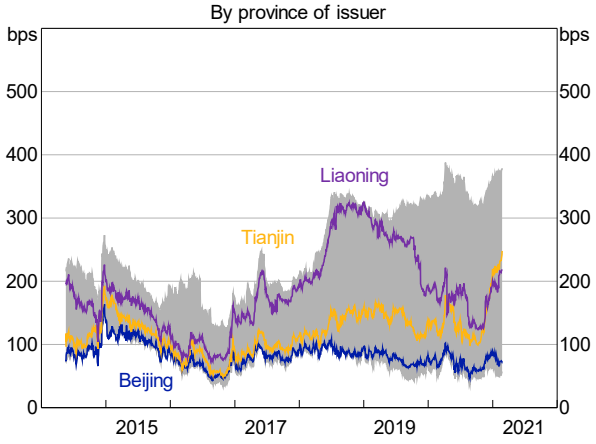
The relative pricing of LGFV credit risk has improved somewhat in recent years, but it remains poor. Spreads on bonds issued by LGFVs in different regions have diverged, suggesting that the pricing of credit for LGFVs now reflects some regional differences in default risk (Graph 8). The variation in credit pricing picked up notably during 2018 when the authorities stepped up efforts to wind back implicit guarantees for state-owned firms. That said, there is still little differentiation in the price of credit between local governments themselves. This suggests that investors are not concerned about the high debt levels for some local governments because they expect support from the central government in times of stress.

Graph 7
Local Government Bond Pricing



* Based on a 5-year new local government bond
** 2019; Only includes local government bond debt.
*** 2019; Includes long and short-term loans and bond debt.
Sources: Bloomberg; RBA; WIND Information

Graph 8
LGFV Bond Spreads*
By province of issuer



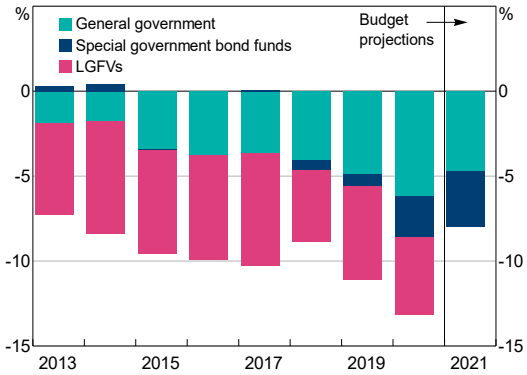
* Average spread to central government bonds across all maturities longer than 6 months. Shaded area shows minimum and maximum spread on each date.
Sources: RBA; WIND Information

The evolution of LGFV debt is a key variable in China's economy and may be shaped by authorities' attempts to reduce risks

The outlook for LGFVs will have an important bearing on China's overall fiscal impulse. Debt issuance by LGFVs has accounted for a major share of China's augmented fiscal deficit over the past five years (Graph 9). Our data suggest LGFV debt grew strongly in the first half of 2020 alongside policy support for the economic recovery.

Chinese authorities have announced new measures to reduce the risks associated with LGFVs. For instance, authorities have asked local governments to stop the issuance of hidden debt for new projects in 2021, and have released new regulations to reduce implicit guarantees for LGFVs. But restrictions have largely failed to limit debt growth in the past, and we will need to see more concrete action by authorities before shifting our expectations for LGFV debt issuance, China's fiscal impulse and infrastructure investment.

Graph 9
China – Augmented Fiscal Deficit*
As a share of GDP



* Financial accounts measure; does not include projections for LGFV debt in 2021

Sources: CEIC Data; RBA; WIND Information

names redacted (x2)

Financial Markets Group & Economic Group

14 May 2021

OUTLOOK FOR CHINESE LOCAL GOVERNMENT DEBT[1]

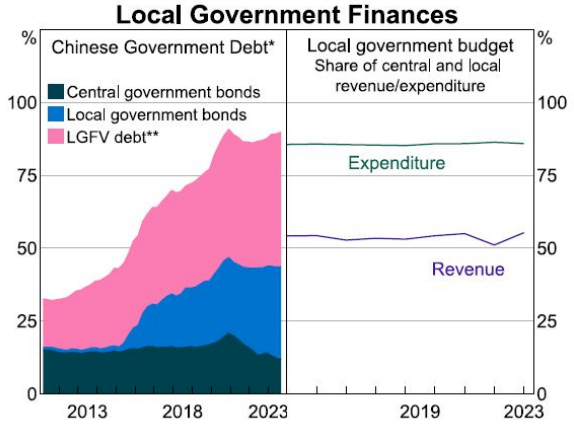
Local government finances are a major vulnerability in the Chinese financial system, with potentially wide-ranging ramifications for long-term economic growth and social cohesion. Over the second half of 2023, authorities have increased their efforts to manage the risks posed by high levels of local government debt. This has primarily been done using refinancing tools and measures to assist banks in their ability to absorb losses from LGFVs. Authorities have also signalled a greater willingness to rebalance the debt burden between the central and local governments, but they remain hesitant in resolving some of the more fundamental challenges that have contributed to high levels of LGFV debt, such vertical fiscal imbalances and the existence of implicit guarantees. Taken together, these developments suggest that while a more comprehensive debt resolution plan appears possible, it is likely to play out gradually over several years.

Addressing the scale and sustainability of local government debt are crucial to policymakers' long-term efforts to de-risk the financial system

Since tax-sharing reform in the 1990s, the central government has received the majority of government revenue. This is despite local governments being increasingly relied on for expenditure responsibilities, such that their share has steadily increased to around 85 per cent of total government expenditure (as of October 2023). Local governments make up for this funding shortfall by issuing bonds and raising funds off-balance sheet through local government financing vehicles (LGFVs) (Graph 1).[2]

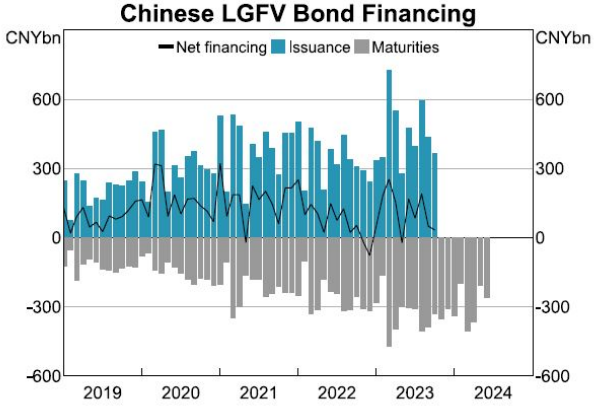
A key challenge for policymakers is that all local government debt, including debt raised by LGFVs is presumed to be backed by the central government. In practice, the large scale of local government debt (estimated to be around 80 per cent of GDP) means that the central government is unlikely to be able to guarantee all of it without reducing fiscal capacity in the future.[3] Adding to the policy challenge, if authorities were to allow any LGFV defaults it could be very costly. For example, LGFV defaults could disrupt the operation of strategically important infrastructure assets, lead to a sharp repricing of risk in Chinese credit markets, and could spill-over to small regional banks through a deterioration in bank asset quality and profitability.[4]

Graph 1
Local Government Finances



* Per cent of GDP.
** Q3 2023 is an estimate based on partial data
Sources: CEIC; RBA; Wind.

Graph 2
Chinese LGFV Bond Financing



Source: Wind.

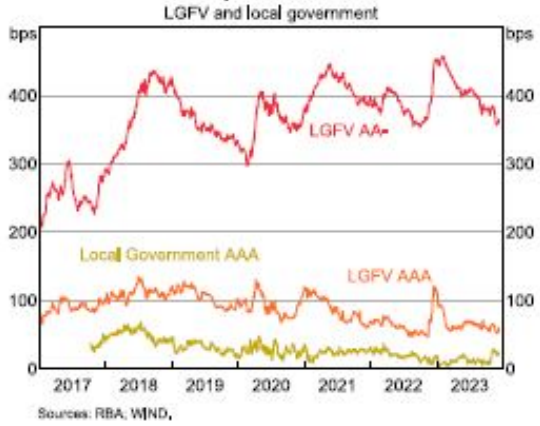
LGFV debt, particularly in highly indebted and lower-income regions, remains the largest and most problematic aspect of local government debt. The likelihood of the risks posed by the large and opaque stock of LGFV debt materialising has increased given the structural slowdown in Chinese economic growth. LGFV bond issuance increased in 2023, which partly reflects the significant refinancing needs and bond maturities, while projected maturities for the first half of 2024 are also sizable (Graph 2). Additionally, as investors' concerns over LGFV debt risks have risen, they have been less willing to engage in longer-term commitments, meaning LGFVs have had to increasingly refinance with short-term debt (the proportion of short-term debt

1 Thank you to names redacted (x2) for providing some of the data used in this note.
2 For a more detailed background on local government finances and LGFVs see name redacted 2023 and name redacted 2022.
3 Authors redacted (2023), Title redacted - Rhodium Group.
4 For a deeper discussion of the trade-offs authorities face when managing potential LGFV de faults, see name redacted 2023.

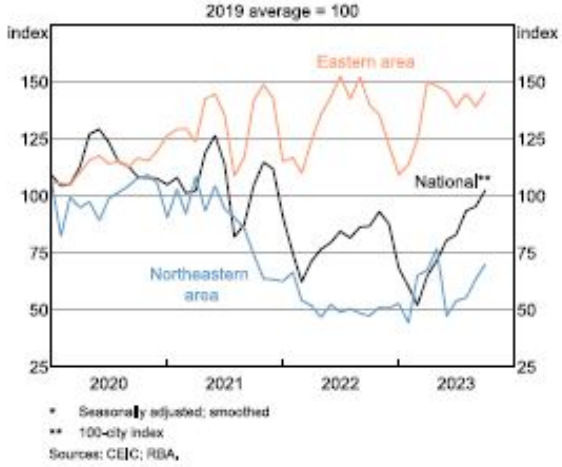
increased to 26 per cent in 2022, from around 21 per cent in 2018) (Feng and Wright 2023). Refinancing pressures could be mitigated somewhat by the recently announced issuance of local government debt-swap bonds (see below for more details).

Markets continue to price in an implicit guarantee on LGFV debt, with LGFV spreads (to local government bonds) generally narrowing over the past few years (Graph 3). Following the promise of a package of measures to address local debt risks at the July Politburo meeting, LGFV spreads narrowed sharply as investors interpreted this as a renewed commitment from central authorities to guarantee local debt. This reflects the 'perverse logic' described by a China Office Liaison contact, whereby increased concerns about an LGFV's capacity to generate its own revenue can be viewed as an increase in creditworthiness because it is assumed to have a stronger implicit guarantee. Indeed, LGFV AA- spreads have narrowed more than LGFV AAA spreads since July, although the level of the spread remains much higher for the less creditworthy LGFVs.

Graph 3
Bond Spreads in China
LGFV and local government



Graph 4
China – Residential Land Price*
2019 average = 100



Ongoing stress in the Chinese property sector has exacerbated local government debt risks

The property market is crucial to local government finances. Land sales revenue is a key source of income for local governments, while local governments also transfer land to LGFVs to use as collateral to secure finance (name redacted 2023). This financing model has been undermined by falling land values over 2021 and 2022 (although residential land prices have recovered over 2023) (Graph 4). Residential land prices remain below the levels of early 2020 in the economically weaker northeastern provinces, which suggests that this continues to be a factor weighing on the financial health of LGFVs in that region.

Authorities have promised a further comprehensive package of measures to address local debt issues

At the July politburo meeting, policymakers pledged a package of measures to resolve local government debt issues (Xinhua 2023). Analysts expect that this could range from SOE and LGFV reforms and fine-tuning of central-local fiscal relationships to large-scale debt-swaps to shift off-balance sheet debts into local government bonds (names redacted 2023). Policymakers have already started to implement policies in this area, but so far, they appear to be focused on refinancing rather than addressing the underlying structural issues with local government finances. One fundamental challenge for policymakers is that the central government does not have perfect visibility over local government debt risks. This is because local governments are unlikely to reveal the extent of hidden debt to the central government or even to know the true extent themselves. [5]

Authorities have reportedly approved another round of special refinancing (debt-swap) bonds to bring hidden LGFV debt onto local government balance sheets

Local governments have been allowed to issue two types of refinancing bonds: general-purpose refinancing bonds, which are used to roll-over maturing bonds; and special-purpose refinancing bonds, which are used

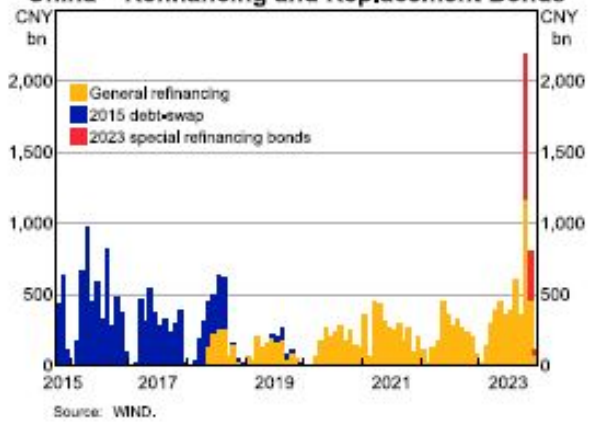
5 Authors redacted (2023), Title redacted, Rhodium Group, Date redacted.

to swap LGFV debt for on-balance sheet debt. General-purpose refinancing bonds are issued routinely, whereas special-purpose refinancing bonds are issued as part of special one-time debt-swap programs.

This is not the first time the authorities initiated a debt-swap program, between 2015 and 2019, they issued CNY14 trillion of swap bonds. It has been reported that authorities have approved another CNY1.5 trillion of special refinancing bonds in 2023. Local governments have issued CNY1.4 trillion of special refinancing bonds over October and November, which is around 90 per cent of the reported 2023 quota (**Error! Reference source not found.**). Although the refinancing bond quota is a small share of LGFV debt (around 2½ per cent), it has signalled that authorities are unlikely to allow LGFV defaults. The issuance of refinancing bonds appears to be a preferred tool by authorities to address LGFV debt issues and it is possible that similar quotas will continue to be issued over coming years.

Graph 5

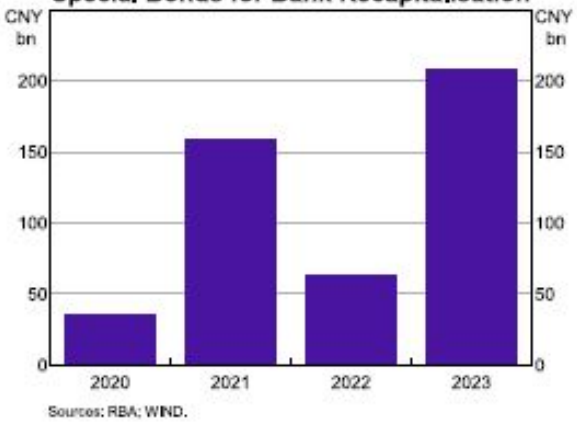
China – Refinancing and Replacement Bonds



Source: WIND.

Graph 6

Special Bonds for Bank Recapitalisation



Sources: RBA; WIND.

Other recent policy announcements suggest that authorities are trying to rebalance the debt burden between the central and local governments

Policy announcements in October, including an additional CNY1 trillion of central government bond issuance and further controls on local government expenditure, suggest that the central government is assuming an increasingly important role in financing fiscal expenditure (for more, see China Matters and messaging from the 5-yearly Central Financial Work Conference). China Office liaison contacts have suggested that authorities will stand behind major LGFVs and banks, but may allow bankruptcy and consolidation of less important local LGFVs. There are some signs that as the central government takes on a larger share of the total government debt burden, it might also seek to exert greater control over local government expenditure decisions. For example, in October the central government placed additional restrictions on the types of projects that 12 high risks provinces can take on and, in November, the MOF updated the rules for the county-level government support fund to ensure localities prioritise spending on social services.

Local banks are expected to absorb a large share of the losses on local government borrowing at a time when they have limited capacity to do so

From the perspective of the central government, banks are expected to reduce the financial stress LGFVs face given that repaying funds owed to banks is a key source of LGFV stress. However, banks face a trade-off between profitability and asset quality when absorbing losses on local government borrowing. Many LGFVs have had loan terms extended by banks and/or have renegotiated interest rates on their loans. Banks have so far been able to roll over and extend LGFV loans without reporting these as non-performing, but a lack of interest payments on these loans is contributing to lower bank NIMs (China Office Liaison).

Local banks are being asked to absorb losses from local governments in this way at a time when many local banks are already under stress. Small local banks have weaker capital positions relative to larger Chinese banks and have recorded a decline in profitability over the past few years (RBA 2023). In light of these challenges, local governments have increased issuance of special purpose local government bonds to fund capital injections to small banks this year by drawing down on previous unused bond quotas (Graph 6).

Authorities appear committed to ensuring that local government debt risks do not pose a systemic risk to the financial system

Policy tools such as refinancing programs, loan forbearance for local banks and increased debt issuance by the central government are expected to continue being utilised to avoid local government debt vulnerabilities spilling over to the broader financial system. However, a key concern is that authorities seem to be shifting risk from local governments to local banks at a time when many small banks are already in poor financial health. Authorities also appear less willing to address the fundamental causes of large local government debt balances, which include implicit guarantees and vertical fiscal imbalances. Some measures to address these underlying issues could involve the sale of state-owned assets, hard budget constraints for local governments and LGFVs, and new sources of fiscal revenue, such as a capital gains tax, that could be directed to local governments. Indeed, limiting shorter-term spillovers may come at the cost of increased longer-term vulnerabilities if structural drivers of debt risks are not resolved.

Emerging Financial Markets
International Department
19 December 2023

CHINA'S EVOLVING FINANCIAL SYSTEM AND ITS GLOBAL IMPORTANCE[1]

For some time, the Chinese authorities have faced a trade-off between supporting near-term economic growth and mitigating risks to financial stability. Compared with the global financial crisis, China's macroeconomic policy response to the pandemic has placed more emphasis on avoiding a further rise in risks in the financial system. Monetary policy has engineered a less sizable expansion of credit than in that episode and has been relatively targeted. With the economy having recovered to its pre-pandemic trajectory, a key uncertainty now is the extent to which the authorities will refocus their efforts to reduce risks in the years ahead, potentially accepting slower near-term growth in the process.

The crisis has also placed renewed focus on the authorities' long-running efforts to reconfigure the way that the Chinese financial system supports the economy. Although the state continues to play a central role, many aspects of the system have gradually become more market-based in recent years. That has included efforts to wind back implicit guarantees of the debts of some state-owned enterprises (SOEs). In addition, monetary policy has begun to operate more through market-based interest rates, which should allow policy to be less reliant on direct intervention in the allocation and pricing of credit. The authorities have also allowed more flexibility in capital flows and the exchange rate. That was a slow process initially, given the risks of opening up too quickly, but reforms have picked up in recent years resulting in larger foreign inflows to China's bond and equity markets.

The policy responses to the pandemic and the longer-run reform process are discussed in the first part of the paper, before examining China's changing role in the global financial system. This has several dimensions. First, the economy has long produced an excess of domestic savings over investment, contributing to downward pressure on global risk-free interest rates. Second, its integration with global trade means that investor confidence in the global outlook is increasingly shaped by the outlook for China. That results in an indirect influence on global markets. Third, increased openness to capital flows means that China's direct links with the global financial system have deepened, though these have scope to increase much further. That could include increased use of the renminbi in international trade and finance.

Finally, the paper considers China's influence on financial conditions in Australia. Primarily, this occurs via indirect channels, reflecting the large size of Australia's trade with China. Cross-border investment between the two economies has grown, but remains small compared with Australia's investment links with major advanced economies.

THE POLICY RESPONSE TO COVID-19

The authorities have long recognised the trade-off between growth and financial risks

In the years following the global financial crisis, Chinese policymakers supported a period of rapid economic growth despite the weak global environment. This stimulus resulted in strong credit growth and was accompanied by a rapid rise in financial vulnerabilities, as outlined in earlier work[2]. The key features were: a substantial rise in the stock of debt, which was concentrated in SOEs that were burdened by over-capacity; the emergence of an opaque and largely unregulated 'shadow' financial system; and a widespread belief that a range of financial assets would be guaranteed by the state. A slowing in the economy's natural rate of growth also meant that it was becoming harder to 'outgrow' such problems than before (RBA Bulletin December 2019).

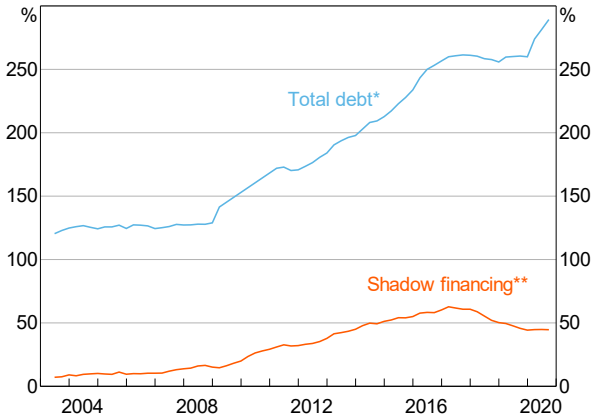
1 The authors would like to thank name redacted and name redacted for their extensive help in preparing this note. Names redacted (x9) provided valuable input and feedback.

2 See for example Bowman, Hack and Waring (2018)

In time, the authorities began to focus attention on reducing financial risks and other long-term goals (such as environmental sustainability), accepting slower growth in the process. They achieved some success. Economy-wide leverage stabilised, albeit at a high level relative to economies at a similar stage of development. The stock of shadow financing declined from 60 per cent to 45 per cent of GDP as regulatory scrutiny was tightened and the bond and equity markets were developed as a more transparent alternative (Sutton and Taylor 2020). In addition, the authorities demonstrated a willingness to allow some investors to incur losses on a range of assets previously assumed to be guaranteed by the government.

China – Non-financial Sector Debt

Per cent of nominal GDP



* Total debt is the sum of bank credit, shadow financing and bond financing (both corporate and public)

** RBA estimate

Sources: CEIC Data; RBA; WIND Information

Financial stability concerns have shaped the policy response to COVID-19

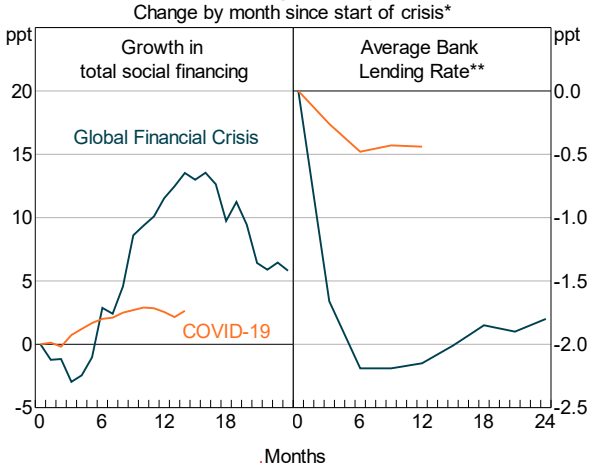
With vulnerabilities in the financial system addressed only partially at the outset of the pandemic, the authorities have been alert to avoiding a further rise in systemic risks where possible. This approach has been aided by the successful containment of the virus and the strong recovery in demand for China's exports, which has seen the economy quickly return to its pre-pandemic trajectory.

The *scale* of monetary stimulus has been modest, particularly compared with the large-scale easing during the GFC. Credit growth has risen but by far less than in earlier episodes. Interest rates on bank loans have declined by around 50 basis points compared with around 200 basis points during the global financial crisis.

Monetary stimulus has also been highly *targeted*, favouring specific borrowers to avoid fuelling a further rise in systemic risks. There has been renewed emphasis on banks orienting credit towards small and medium-sized businesses rather than SOEs, partly because they have more sustainable debt loads and have faced more difficulty obtaining finance (particularly during the earlier campaign to reduce financial risks). At the same time, various steps have been taken to avoid unnecessary stimulus of the property market, including limits on lending for mortgages and to higher-risk property developers.

China – Monetary Policy Response

Change by month since start of crisis*



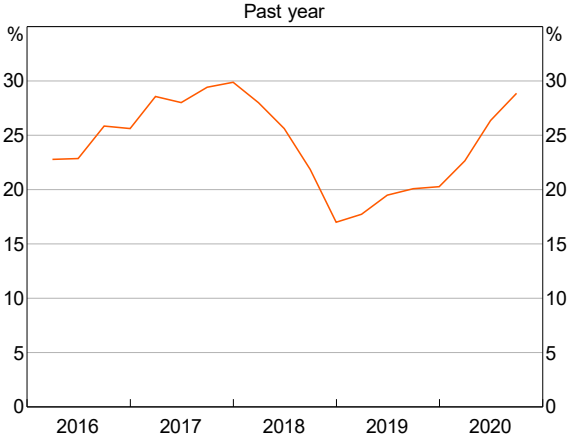
* GFC starts September 2008; COVID-19 starts December 2019

** Business rate proxy. Quarterly data, except September 2008 observation which is interpolated between annual observations.

Sources: CEIC data; RBA

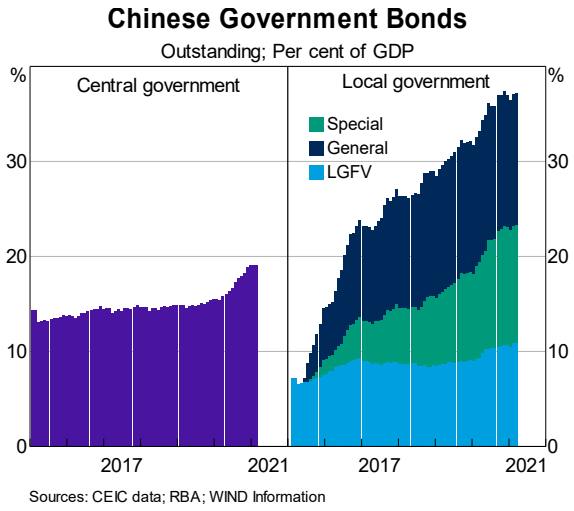
Medium and Small Enterprises' Share of New Business Financing

Past year



Sources: CEIC data; RBA

The modest rise in credit growth has partly reflected the smaller degree of fiscal stimulus than in previous episodes[3]. In contrast to other economies, fiscal stimulus in China is not reflected in the central government budget balance, but is delivered largely by local governments and SOEs. In the past, this was funded largely by their borrowing from the banking system or from shadow finance via 'local government financing vehicles' (LGFVs). But to reduce the use of shadow finance and impose a degree of market discipline, in recent years local governments have been encouraged to access the bond market by issuing 'special' bonds linked to specific projects (names (x2) redacted 2019).



Despite the modest and targeted policy responses to the pandemic, the authorities have tolerated an increase in debt relative to GDP[4]. Further reforms to address the still-large stock of shadow financing have also been delayed.

As a result, an important issue in the near term is the extent to which policymakers will prioritise reducing risk in the financial system and accept slower growth as a result. A tapering of stimulus has come quickly into view as the economy has recovered. At the 2021 meeting of the National People's Congress, authorities approved a plan to ensure that the growth of credit slows this year (such that it stabilises relative to GDP) and announced a modest tightening of fiscal policy (name redacted 2021; May 2021). Authorities also chose a GDP growth target for 2021 that appears relatively easy to achieve, which limits the potential for conflict between that target and measures to reduce financial risk.

Over the longer term, it remains to be seen how forcefully the authorities will pursue deeper reforms to improve the stability and efficiency of the financial system so that it can better support economic growth.

REFORM OF THE FINANCIAL SYSTEM

The Chinese financial system has long been characterised by 'financial repression', whereby the state intervened heavily to ensure that the financial sector supported an investment- and export-led model of economic growth. This included:

1. A heavy bias in the allocation of credit to SOEs over private and/or small enterprises, especially by the dominant state-owned banking sector. Even as banks became more commercial, implicit state guarantees meant that SOEs continued to enjoy preferential access to credit.
2. Controls on interest rates, which were set at artificially low and stable levels. Low borrowing rates for SOEs assisted in channelling high rates of private savings into state-led investment at subsidised cost.
3. A heavily managed exchange rate, which was stabilised at relatively low levels to assist the competitiveness of exporters. Capital flows were tightly restricted, preventing domestic savers from moving into higher-yielding assets abroad and insulating the economy from volatility in foreign capital flows. An exception was direct investment in China by foreign corporations, which was typically longer-term and involved the transfer of foreign technologies.

This system suffered several drawbacks. First, it contributed to the build-up of financial vulnerabilities. Inefficient investment in the state sector was encouraged, and many investors and borrowers sought better deals in the shadow financial system. As investors progressively sought new ways to earn higher returns,

3 See name redacted (2020) for more information on China's broad policy response to COVID-19, including fiscal policy.

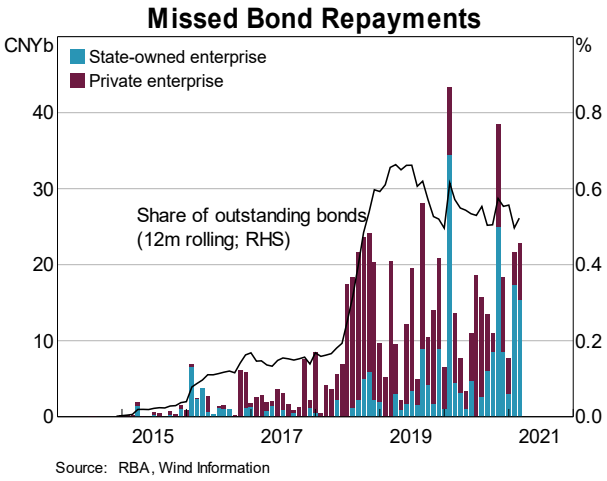
4 See name redacted (2020a) for more information on the financial stability implications of China's policy response to COVID-19

excesses would arise in different parts of the financial system, giving rise to a 'whack-a-mole' response from regulators. Second, the system lacked key macroeconomic shock absorbers, in the form of a flexible exchange rate and countercyclical interest rate tools. Third, it was not well suited to a more mature model of economic growth, which prioritises innovation.

As a result, the authorities have pursued several reforms over the past decade, including: (1) reducing implicit guarantees of SOEs; (2) greater use of changes in interest rates to influence financial conditions; and (3) opening the capital account and allowing for a more flexible exchange rate. The past year has seen some important developments and posed questions about the future direction of the reform process[5].

(1) Reducing implicit guarantees

In recent years, the authorities have allowed a series of defaults by entities that were previously assumed to have been guaranteed. That has included state-owned enterprises, LGFVs and even some large private firms (mainly property developers). Several small banks have experienced capital shortfalls, resulting in the first bank failures in China in 20 years (Boulter and Adeney 2020; RBA 2019). While such defaults remain much less common than in other economies, they are a marked shift from China's past.

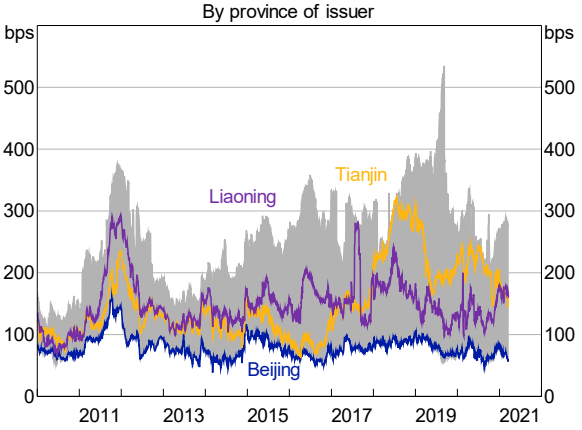


These events mean increased credit risk for investors, which in turn is beginning to affect the pricing and allocation of credit. Credit risk has varied geographically because of the important role that has been played by local government backing. For example, Beijing has made it clear that local governments (and not the central government) are responsible for resolving troubled banks in their provinces. Regions with industries burdened by over-capacity and shrinking populations tend to have local governments with higher debt burdens, which reduces their capacity to support local firms (both state-owned and private). That has been the case especially for the economically depressed provinces in north-eastern China (notably Liaoning). This has led to higher funding costs in the bond market for local SOEs and slower rates of credit growth for these provinces over the past year. As a result, credit is now being allocated towards regions that can deploy it more efficiently and sustainably (Rhodium names redacted 2020; Rhodium names redacted 2021).

5 In its recent Article IV Report for China, the IMF considers the challenges to China's reform process, as well as opportunities for further development. See International Monetary Fund (2021a) for more details.

Corporate Bond Spreads*

By province of issuer

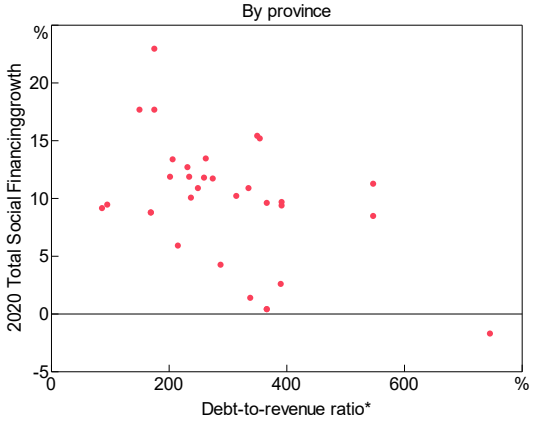


* Average spread to central government bonds across all maturities longer than 6 months. Shaded area shows minimum and maximum spread on each date.

Sources: RBA; WIND Information

Growth in Total Financing versus Debt Ratio

By province



* 2019 debt-to-revenue ratio only includes bond debt.

Sources: RBA; Rhodium Group; WIND Information

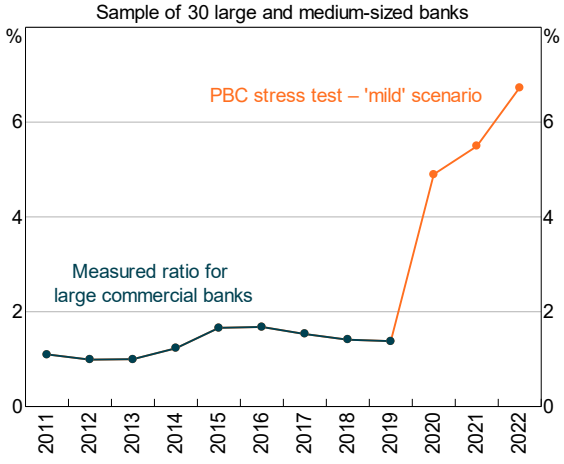
That said, improvements in the availability of finance for small and private enterprises have lagged (name redacted 2019; name redacted 2020). The bond market remains heavily dominated by SOEs, while private firms still face elevated funding costs (names redacted (x2) 2020). To address this, a range of other policies have been used to encourage banks to provide more credit to small businesses and improve private firms' access to equity capital (International Monetary Fund 2021b).

Allowing investors to incur losses has posed a significant risk of triggering wider financial stress. Each credit event has prompted a repricing of assets previously considered safe, amplified by uncertainty over where the perimeter of policy support will settle. As a result, the first small bank failure in 2019 saw interbank funding markets freeze up. Also, the default of a major SOE in late 2020 saw a widening of spreads and corporations found that it was very difficult to raise funds in the bond market for a time. In each case, the People's Bank of China (PBC) has injected substantial liquidity to avoid wider spillovers.

Looking ahead, while GDP has recovered quickly over the past year, and this has alleviated some risks, there are questions about how the authorities will deal with specific sectors and regions that are likely to have difficulty servicing their debts. Widespread failures could precipitate a crisis, while a comprehensive state backstop could encourage further poor-quality lending. It is not clear whether the central government will ultimately step in to help alleviate the debts of some economically depressed provinces. In addition, some banks are likely to fall short of capital because of a rise in non-performing loans (name redacted 2020b). That is especially so among smaller banks, and for loans to smaller firms (which lack a state backstop) or SOEs whose government backing has weakened. That shortfall is likely to be resolved slowly with a mix of borrower forbearance, easier regulatory requirements and recapitalisation (directly or indirectly), but there may also be further bankruptcies.

Non-Performing Loans

Sample of 30 large and medium-sized banks



* Orange line shows the PBC's stress test results for a sample of 30 large and medium-sized banks under their 'mild' scenario.

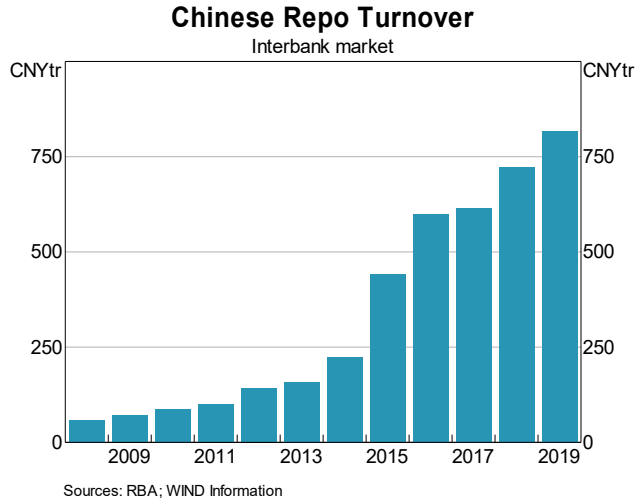
Sources: People's Bank of China; RBA

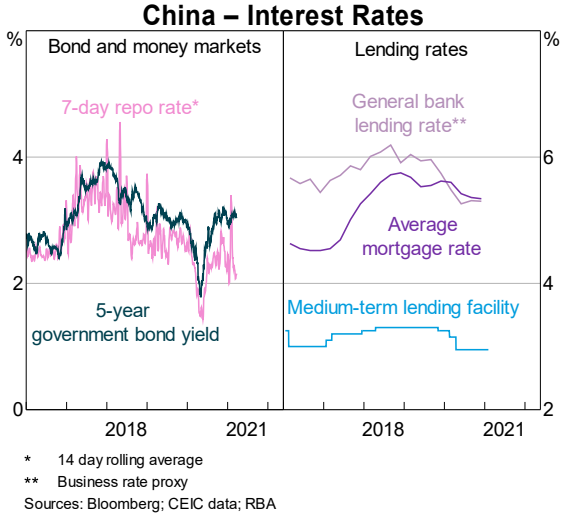
(2) Interest rate reform

The authorities have gradually deregulated interest rates over the past couple of decades. Artificially low interest rates had encouraged investors to seek higher returns, including in the (less regulated) shadow

financial system and by speculating in property. Interest rate controls also made lending to the private sector unattractive because banks could not charge higher rates to compensate for the risks involved.[6]

In addition, short-term interest rates in money markets were not a useful tool of monetary policy because they had little bearing on the rates faced by end borrowers (though those rates were adjusted directly at times). Instead, monetary stimulus was provided by directly guiding banks to expand credit and facilitating this by lowering reserve requirements and extending central bank funding ('quantity-based' tools) (names redacted (x2) 2019).





As interest rates were liberalised, it became more effective to use short-term interest rates as a countercyclical ('price-based') tool. Several related steps were taken. A deep interbank money market was developed and the PBC improved its control over interbank interest rates (names redacted (x3) 2020). A more liquid yield curve for government bonds that embodies expected future short-term interest rates was developed, acting as a benchmark for other issuers in the bond market. Finally, interest rates on bank loans were linked to a new benchmark (the Loan Prime Rate, LPR), which tracks rates on the PBC's facilities for lending to banks (specifically, the Medium-term Lending Facility, MLF) (names redacted (x2) 2019; name redacted 2020a).

During the pandemic, these new price-based tools were employed as part of the PBC's modest and targeted easing. Money market interest rates were lowered, which transmitted to lower borrowing costs for governments and corporations in the bond market. A small decline in the MLF rate was passed through to the LPR and business lending rates. Policy interest rates have remained well above zero, and so the PBC has not purchased government securities to lower long-term interest rates further.

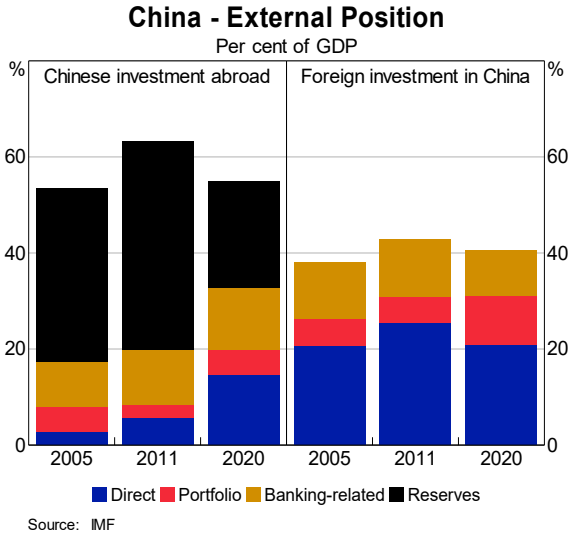
Despite these reforms, policy continues to rely on an array of quantitative tools and direct guidance, including as part of the pandemic response (name redacted 2020c). Moreover, the incomplete nature of interest rate reform has constrained the use of price-based tools. More of the easing has passed through to bank lending rates than to deposit rates (which remain subject to more controls), thereby putting pressure on bank profits (name redacted 2020b).

(3) Capital account reform

Following the global financial crisis, the authorities opened up further to cross-border capital flows. The overall strategy was to liberalise inflows before outflows, given the potential for a large outflow of domestic savings into foreign assets. As well as permitting 'direct investment' in China by corporations, cross-border banking flows were favoured because they were expected to support use of the renminbi

[6] One earlier reason for interest rate controls also diminished over time – namely, to help recapitalise the banking system (by artificially lifting net interest margins) after a severe rise in non-performing loans in the late 1990s.

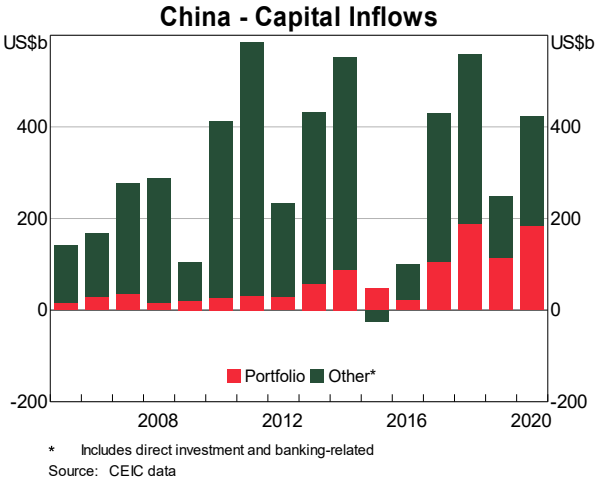
internationally and expose the domestic banks to helpful competition. 'Portfolio flows' into bond and equity markets were not liberalised initially, because they tend to be relatively volatile.



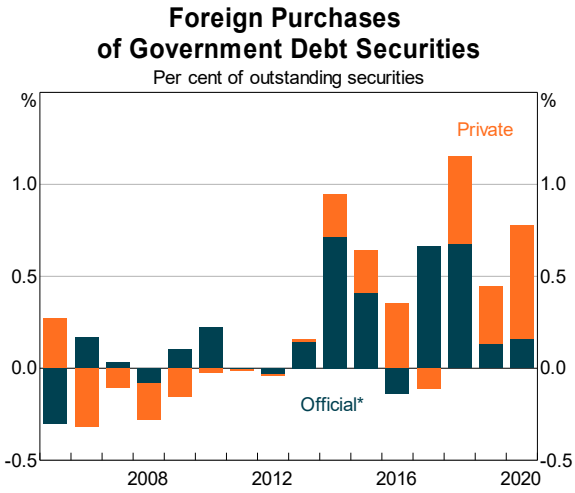
With greater openness to capital flows, it was necessary for the renminbi to become more flexible and market-based (names redacted (x2) 2019). But in 2015, a slowing of the economy and an easing in monetary policy prompted more capital outflows and pressure for depreciation than the authorities were comfortable with, so they intervened to support the currency and halted the process of opening up (name redacted 2018).

Since then, there have again been several important steps towards liberalising capital flows. Most importantly, foreign portfolio investors have been given much greater access to Chinese bond and equity markets. That is seen as helpful for developing these markets, as well as supporting the use of the renminbi in international finance and trade. Several important steps were: (i) the opening of 'connect' schemes between exchanges in China, Hong Kong and London; (ii) the inclusion of Chinese onshore bonds and equities in international indices that form a benchmark for around US$8 trillion of investments; and (iii) giving foreign investors more access to derivatives markets to manage the risks of their investments (name redacted 2020).

As a result, portfolio inflows have, for the first time, become among the largest sources of foreign capital inflows to China (even exceeding direct investment in recent quarters). Moreover, private investors have begun to dominate those inflows, compared with reserve managers and sovereign wealth funds in the past. These inflows reflect a 'latent' demand by investors to hold Chinese assets that can now increasingly be met, which is motivated by the diversification benefits and the relatively high returns on Chinese assets. However, investors have been reluctant to take exposure to Chinese local governments or SOEs; instead, they are investing almost exclusively in sovereign bonds. These inflows could have much further to run if investors eventually match new benchmark weights.



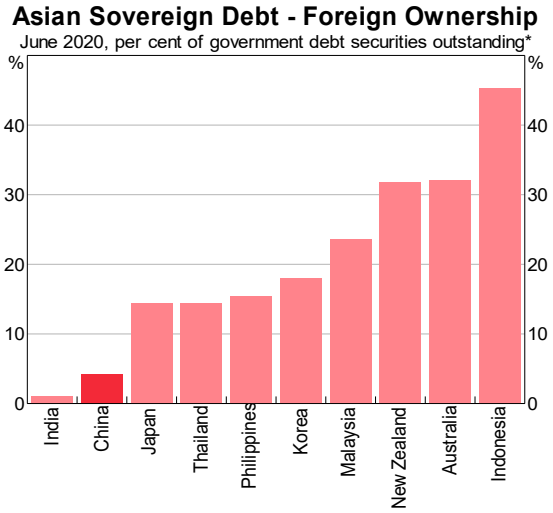
* Includes direct investment and banking-related
Source: CEIC data



* Includes central banks and international financial institutions
Source: IMF

More freedom in the movement of private capital has once again required more exchange rate flexibility, most recently in the form of an appreciation. That has reflected the stronger recovery of the Chinese economy and the fact that controls on capital inflows have been eased more than those on outflows. The authorities have welcomed the role of the appreciation as a macroeconomic 'shock absorber'. But it has adversely affected many exporters (especially smaller businesses) that are reportedly not well hedged against the risk of an appreciation, and some steps have been taken that at least slow the pace of the appreciation[7].

A key issue remains how far China will pursue an opening of its capital account. In particular, it remains unclear to what extent the authorities will ultimately permit Chinese residents to invest more abroad. A reversal in foreign portfolio flows could also prompt tighter controls on outflows to mitigate stress in China's markets. That said, the size of foreign holdings of Chinese securities still remains small compared with other economies. Indeed, the fact that debt in China continues to be owned mainly 'internally' (and in domestic currency) rather than by foreign investors gives the authorities considerable scope to control the pace of any deleveraging.



* Includes central, state and local government debt
Source: IMF

As well as gradually allowing more capital flows, the authorities have promoted the use of renminbi more widely outside China in both trade and finance. That reflects a desire to counter the dominant role of the US dollar, which the authorities see as leaving China vulnerable to US financial sanctions and stresses in US dollar markets (especially for trade finance)[8]. Those efforts have included setting up offshore centres for settling renminbi transactions, developing a pool of offshore renminbi deposits and providing liquidity backstops abroad with bilateral currency swap agreements.

7 See name redacted and name redacted (2020) for a discussion of renminbi stability in the early months of the COVID-19 pandemic.

8 For a recent analysis of the dominant role of the US dollar, see name redacted (2019).

IMPLICATIONS FOR THE GLOBAL FINANCIAL SYSTEM

China has become increasingly important for the global financial system. There are three key aspects of this: (1) China's excess of savings over investment (or relatedly, trade surpluses); (2) China's increased integration with global trade; and (3) China's increased integration with global capital markets and, relatedly, the international use of the renminbi. These have the potential to influence risk-free interest rates, exchange rates and risk premiums globally.

Historically, China's influence on the global financial system was via excess savings

China has long had domestic savings in excess of its domestic investment (which is equivalent to having more exports than imports, or a current account surplus). China's remarkably high rate of savings is partly a result of its under-developed social safety net (International Monetary Fund 2021a). This was exacerbated by financial repression especially through the 2000s, which promoted export-led growth. To manage the exchange rate, excess savings were channelled abroad via the accumulation of foreign exchange reserves, which are invested in the debt of foreign governments. Some observers saw this 'savings glut' as contributing to a persistent decline in long-term, risk free interest rates globally prior to the global financial crisis (Bernanke 2005).

Since the mid 2000s, the difference between China's savings and investment has declined from 10 per cent of its GDP to about 1 per cent. The rate of savings has declined from very high levels as the economy has begun a transition towards higher levels of consumption. But investment also rose after the global financial crisis, which was associated with rapid growth in credit and related financial vulnerabilities.[9] That is, the decline in the extent of the 'external imbalance' has been associated with a rise in 'internal imbalance'.

The extent to which China exports net savings to the rest of the world in the coming years (if at all) will depend partly on how these internal imbalances are resolved. A return to reducing financial system risks could weigh on investment, which by itself would see external surpluses rise. But the authorities are also looking to further the transition to other sources of domestic demand (i.e. consumption), partly to reduce reliance upon export markets. That would lower the rate of savings, reducing the external surplus. Over a longer period, the ageing of the population and building out of the social safety net could also see the savings rate decline, which might even see China import savings from the rest of the world.

[9] From a trade perspective, the decline in the current account surplus reflected a substantial appreciation of the exchange rate, a natural slowing in China's penetration of export markets and a rise in reported tourism imports.

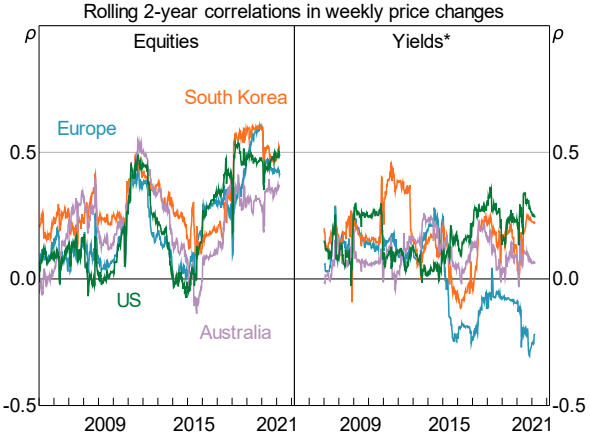
Large trade flows have given rise to indirect effects on global markets

China now plays a critical role in global trade, as both its imports and exports have grown as a share of the world economy (that is, in *gross* rather than *net* terms). As a result, its business cycle has become more important for other economies, affecting interest rates, profits and asset returns globally. In turn, it has had a growing *indirect* effect on global markets, even while it has remained relatively closed financially.

That growing influence helps explain the rising co-movements between Chinese and international markets. That is especially marked for equities, while co-movements with government bond yields remain lower. For example, a more positive outlook for China's economy over the past year would have helped to lift equity prices in China but also abroad. At the same time, Chinese markets may be more heavily influenced by global developments than in the past, as its trade and financial linkages have grown.

Correlations with Chinese Financial Markets

Rolling 2-year correlations in weekly price changes



* 5-year government bond yields

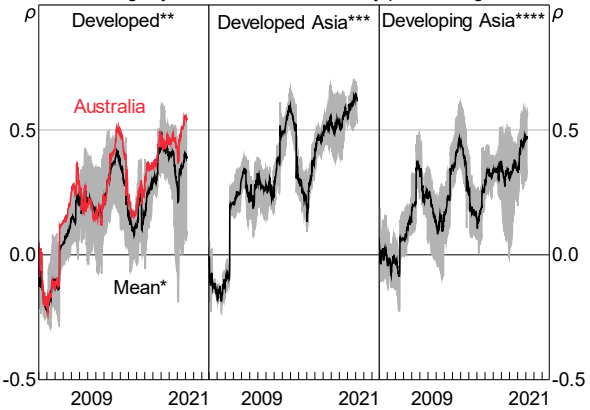
Sources: Bloomberg; ECB; RBA

A more flexible exchange rate and capital flows have deepened China's direct links

As China moves towards a more market-based financial system, its relationship with global markets is evolving. The exchange rate now responds more flexibly than before to developments in the Chinese and global economies. As a result, it moves more closely with a range of other currencies (and not only the US dollar). An improved outlook in China also tends to place upward pressure on the currencies of commodity exporters (e.g. Australia), while some other economies in Asia manage their exchange rates to maintain their export competitiveness with China.[10]

Exchange Rate Correlations with Renminbi

Rolling 2-year correlations in weekly price changes



* Shaded area around mean indicates minimum and maximum; all exchange rates against US dollar

** Canada, Japan, UK, Australia, euro area

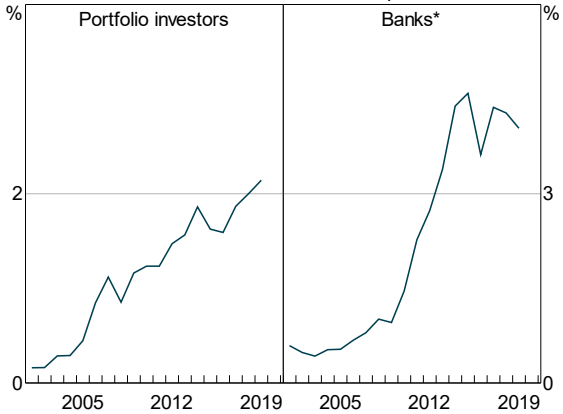
*** South Korea, Taiwan, Singapore

**** Philippines, Malaysia, Indonesia, Thailand

Source: Bloomberg

International Exposures to China

Per cent of total cross-border exposures



* Using consolidated (total) exposures

Sources: BIS; IMF

[10] Statistical methods that identify co-movement with the renminbi more precisely (by abstracting from the common effect of US dollar movements on all exchange rates) also show a rising relationship with exchange rates of other Asian economies (name redacted 2018c).

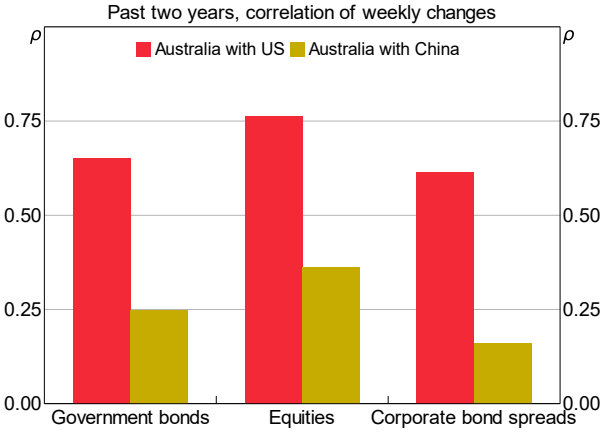
As capital flows have been gradually liberalised, *direct* exposures to Chinese assets in the international financial system have risen. China's share of international portfolios has doubled over the past decade, while international banks' lending into China has also risen. However, the size of these links still remains modest (around 2 per cent of international portfolios and 4 per cent of international banks' cross-border loans).

China's investment abroad has also shifted over time from predominantly foreign exchange reserves into a wider range of assets. In recent years, that was mainly direct investment and increasingly by private companies. However, such outflows have slowed substantially after authorities curtailed a wave of debt-funded acquisitions by Chinese corporations expanding outside of their core areas of business. There has also been some easing of restrictions on portfolio outflows.

China affects Australian financial conditions mainly because of its importance for trade

China's effect on Australian financial markets has risen, as it has for many other economies. That reflects deep trade linkages, particularly in relation to Australia's resource exports. The Australian dollar moves more closely with the renminbi than do the currencies of other advanced economies. That said, many Australian asset prices continue to move much more closely with those in the United States than those in China[11].

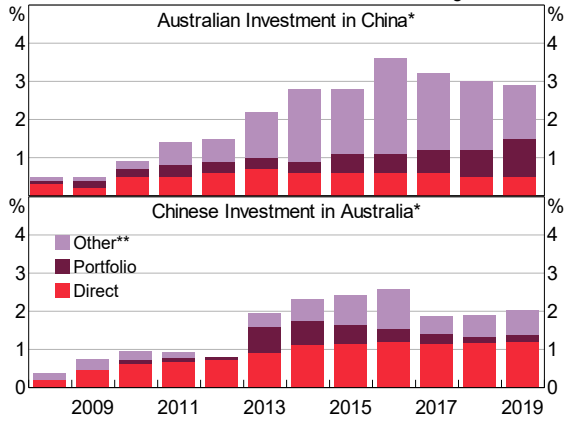
Financial Market Correlations
Past two years, correlation of weekly changes



Sources: Bloomberg; ICE; RBA

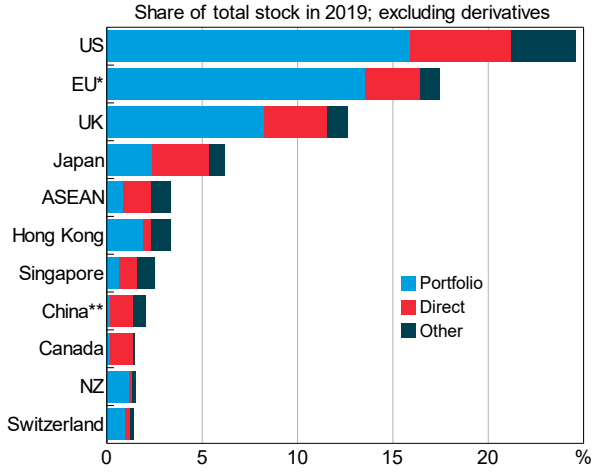
With capital flowing more freely across its borders, China has at times been a source of investment flows into Australia. China is a substantial investor in Australian government debt through its foreign exchange reserves. In recent years, inflows were mainly in the form of direct investment by Chinese corporations, initially in the mining sector but more recently in a broader range of industries. Australian investments in China were mainly banking-related in the past, but portfolio investments in China have become much more important in recent years as market access has improved.

Stock of Investment
Share of total inbound/outbound investment, excluding derivatives



* Includes mainland China only
** Loans, currency and deposits, trade finance and other assets
Sources: ABS; RBA

Stock of Foreign Investment in Australia
Share of total stock in 2019; excluding derivatives



* Excludes UK
** Includes mainland China only
Sources: ABS; RBA

11 This builds on analysis in name redacted (2019).

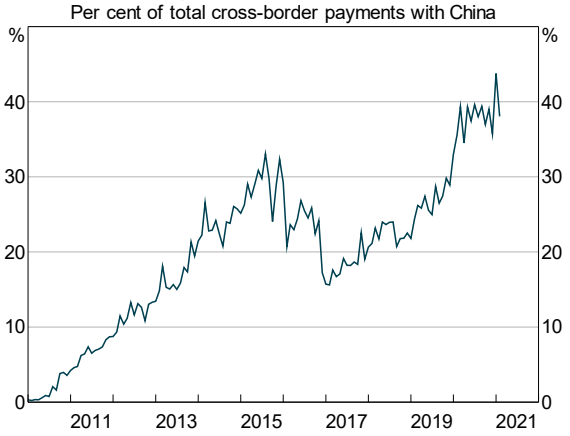
Overall, the size of these investments remains modest and there is considerable scope for further growth. China accounts for only 2 per cent of foreign investment in Australia and 3 per cent of Australian investment abroad (compared with around one-third of Australia's exports). More generally, advanced economies continue to account for around 90 per cent of foreign investment in Australia.

The renminbi could play a larger role in the international financial system

China's efforts to promote the wider international use of the renminbi have seen some limited progress. Most notably, a rising share of payments involving Chinese entities are in renminbi, recently as much as 40 per cent. That reflects increased foreign activity in Chinese securities markets (which are transacted in renminbi) and also more of China's trade being invoiced in yuan (Windsor 2018a; Windsor 2018b). But the wider international use of the renminbi (including between non-Chinese entities) remains small for both trade and investment, and well below use of the US dollar, euro and even the Japanese yen and UK pound sterling.

International Payments with China in Renminbi*

Per cent of total cross-border payments with China

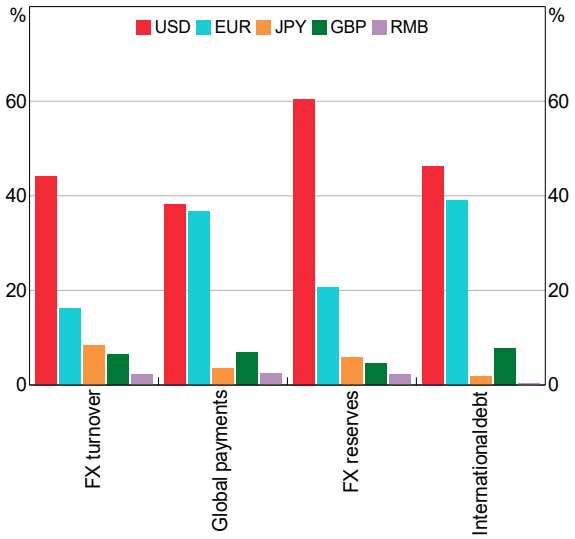


* For Chinese non-financial sector

Source: CEIC

A Snapshot of International Currency Use

Share of total



Sources: BIS; IMF; SWIFT

One issue that is attracting attention is the possibility that a Chinese central bank digital currency might gain greater use internationally, especially in Asia. The development of a 'digital yuan' is at an advanced stage, with large-scale trials last year in several Chinese cities and a nation-wide rollout expected in the year ahead. This is currently a domestically focused project, with objectives similar to those highlighted by some other emerging market economy central banks (improving domestic payments, widening financial inclusion, etc.). The digital yuan is also likely to displace some private-sector digital payments, and possibly enable the authorities to have greater visibility over the transactions of their citizens. But a mature digital yuan with an efficient payments network might in future be extended internationally, and even be promoted as a means of settling international trade with China. An early indicator of this might be that the PBC has recently established a joint venture with SWIFT (a service that facilitates the vast majority of international payments), which some reports suggest could set up international payments in digital yuan.

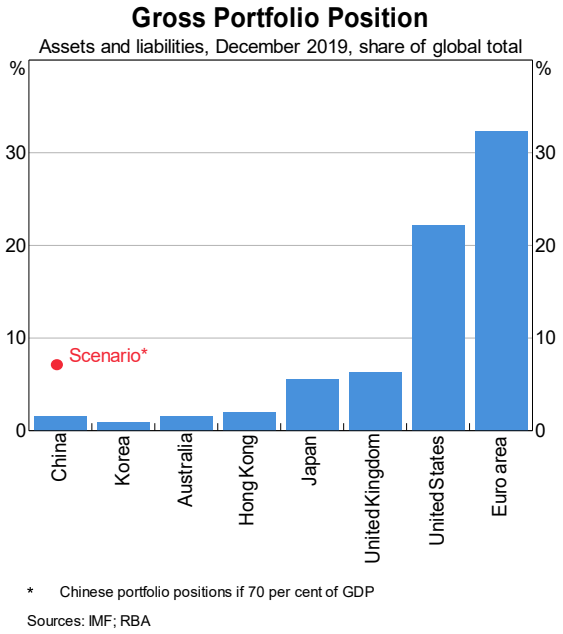
In time, wider international use of the renminbi could reduce the dominance of the US dollar in the global financial system. Of course, that may occur regardless of the digital yuan. Through history, the currency of the largest economy (or economies) of the day has tended to gain wide use internationally. But those economies have usually had open capital flows, strong property rights and well-developed domestic financial markets. Recent steps to improve foreign access to Chinese securities and hedging markets are helpful developments. But the US dollar continues to offer important advantages as an international store of value and unit of account that may not arise for many years (or indeed ever) for the renminbi. It appears most likely that the renminbi could gain increased use within Asia – given the region's integration into Chinese trade and production – but less so beyond that.

CONCLUSION AND OUTLOOK

Risks in China's financial system remain high despite its economy's strong recovery from the pandemic and the modest and targeted use of monetary stimulus. These risks will continue to shape its economic management in the years ahead, with implications for growth and, in turn, financial conditions in the global economy.

While China has become heavily integrated with the global trading system, its integration with global capital markets is still at a formative stage. It is unclear just how far and how quickly China will open further to international capital flows. The history of other economies suggests that there is merit in proceeding slowly, especially if the financial system does not yet have adequate risk management practices in place (as seen for Australia in the 1980s, Asia in the 1990s and China's own episode in 2015). There are also ongoing political efforts in the United States to constrain China's access to global capital.

But China's large size means that even partial progress will make it much more important for the global financial system. While the scale and nature of this shift is difficult to predict, we can consider what would happen if China's stock of portfolio positions (both inward and outward investments) were to reach 70 per cent of GDP – half that of the United States or Australia, but similar to South Korea. In that case, China would account for around 8 per cent of global portfolio investment, third behind the euro area and United States (and compared with 1 per cent currently)[12].



More generally, further opening would mean increased holdings of foreign assets by Chinese residents and increased holdings of Chinese assets by the rest of the world. That large rebalancing could affect asset prices and financial conditions differently across regions and markets. The renminbi might become a more widely used international currency, especially within Asia. Over time, financial conditions in Australia are likely to be increasingly influenced by the news in Shanghai and Shenzhen alongside New York and London.

Names redacted (x4)
International Department
29 March 2021

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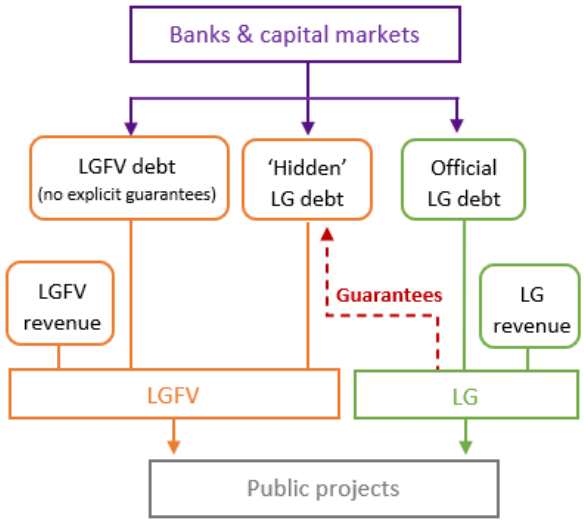
NOTE ID: STRESS IN CHINESE LOCAL GOVERNMENT FINANCING VEHICLES – ON COURSE FOR COLLISION?[1]

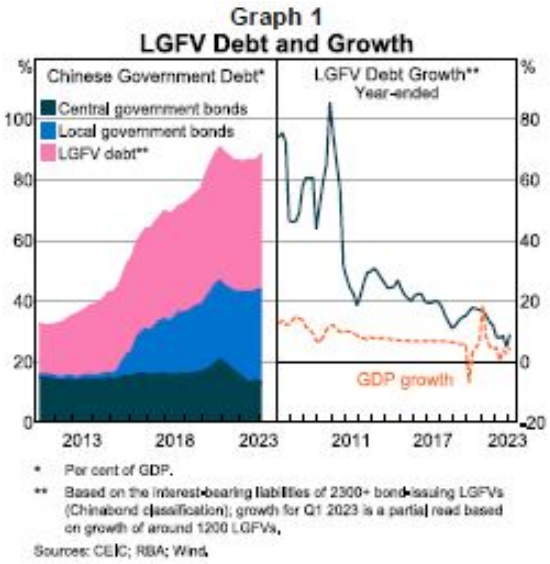
Increased financial stress in Chinese Local Government financing vehicles (LGFVs) – state-owned investment companies historically used to raise local government (LG) debt – has raised concerns around widespread bond defaults for a sector with debt equivalent to around half the size of GDP. Risks are concentrated in more indebted and economically weaker provinces with large upcoming bond maturities. LGs in some of these provinces have relied heavily on LGFVs to finance their deficits and now have a reduced capacity to prevent LGFV defaults. While authorities have reiterated longstanding financial stability priorities of reducing hidden debt and breaking perceptions of implicit guarantees, they are unlikely to risk the significant consequences for stability and growth that an LGFV default would trigger before the recovery is entrenched. This note assesses the drivers and magnitude of LGFV financial stress, regions most at risk and the trade-off authorities face in deciding to allow LGFV bond defaults.

What are LGFVs?

Local Government financing vehicles (LGFVs) are state-owned investment companies established by local governments (LGs), historically used as an opaque way for LGs to issue debt (name redacted (2022)). Following tax-sharing reforms in 1994, LGs were no longer allocated sufficient funds to finance required public spending.[2] Since LGs were unable to raise funds from banks or debt markets, they used LGFVs to borrow and issue debt on their behalf in order to make up for the funding shortfall. LGs supplied LGFVs with collateral (primarily government land) to raise funds, used off-balance sheet government income to service debt and provided explicit guarantees to support LGFV borrowing.[3]

Figure 1: Stylized LGFV Structure Since 2014





LGFV debt has risen considerably since then to around 50 per cent of GDP at the start of 2023 (Graph 1).[4] This is despite attempts by authorities to reduce it, including by: allowing LGs to issue debt themselves in 2014 (official LG debt), removing LGs' legal responsibility for repaying previously issued LGFV debt, and by making it illegal for LGs to guarantee LGFV debt (referred to as 'hidden' or off-balance sheet LG debt; Figure 1).[5] The large size of LGFV debt, and widening LG fiscal deficits over 2022 have increased concerns of potential LFGV defaults. Perceived LGFV risk depends, in part, on LGs' capacity to support them; while LGs are no longer allowed to explicitly guarantee LGFV debt, their close ties continue supporting perceptions of strong implicit guarantees. Indeed, some creditors lend to LGFVs based on the creditworthiness of the LG rather than project viability.

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1 I would like to thank names redacted (x5) for their comments on this note.
2 See Graph A1 and name redacted (2022) for more background on LGFVs and regulatory timelines.
3 In 2010, the China Banking Regulatory Commission found that almost half of LGFV debt was guaranteed by LG fiscal revenue, and around a quarter of this debt had been assessed as high risk.
4 LGFVs statistics aren't readily available. Our estimate uses a measure of quarterly interest-bearing liabilities constructed in Wind. See names redacted (x2) (2021) for discussion of limitations in estimation method.
5 In one province, these explicit guarantees covered 71 per cent of LGFV loans in 2009. See Wong (2011) for more detail.

Why should we care about LGFV defaults?

Disorderly LGFV defaults could weigh on short- and long-term growth via several channels:

- *Disruptions to strategically important assets:* As LGFVs were set up to fund infrastructure projects on behalf of LGs, they own and operate strategically important assets like ports, toll roads, transport and utilities. Infrastructure investment remains a major component of authorities' plans to support China's recovery and growth, so LGFVs are an important channel of policy implementation.
- *LG fiscal sustainability issues:* Extending support to prevent LGFV defaults could reduce LGs' capacity to support growth an allocate public resources to more productive means. The size of total LG debt (including implicit debt) is very large; taken together, LG net bond issuance and LGFV debt is equivalent to 80 per cent of GDP. This represents an upper bound as not all LGFV debt is hidden LG debt, but the perception of implicit guarantees has blurred the distinction.
- *Domestic financial market spillovers:* LGFVs make up a large share of Chinese funding markets (40 per cent of the corporate bond market; 14 per cent of total bank loans).[6] Given there have been no major LGFV bond defaults to date, an LGFV default would likely see an unwinding of the implicit guarantee and a sell-off in LGFV bonds that could trigger a disorderly repricing of risk in Chinese financial markets.[7] This would also call into question the safety of other state-owned enterprises that had previously benefited from implicit guarantees.
- *Bank asset quality:* Such significant repricing could lead to a deterioration in bank asset quality and profitability – particularly in more indebted and economically weaker regions – and could slow credit growth. In the event of a default, banks could also face losses on credit extended to LGFVs if land prices fall, as LGFVs use land as collateral for borrowing.[8]

LGFV debt levels are high, but growth has slowed since LGs were allowed to issue their own debt

LGFV debt is significantly higher than official Chinese local government debt at around 50 per cent of GDP (80 per cent of GDP if non-interest-bearing debt is included; see Graph A2). LGFV debt had been growing by over 20 per cent a year prior to the reform in 2014, much higher than the pace of economic growth. The main drivers include:

- *LG funding requirement:* The structural LG funding requirement described above was the main driver of LGFV debt growth from the 1990s.
- *Post-GFC stimulus:* LGFV debt grew significantly as China rolled out its US$4 trillion post-GFC stimulus package. At the time, the central government actively encouraged the creation and use of LGFVs to deliver this stimulus, with infrastructure a major driver of the recovery. LGFVs had no difficulties in issuing this debt because creditors viewed it essentially as risk-free given both explicit government guarantees and the perception of implicit guarantees.[9]
- *Weak profitability:* Many LGFVs have needed to increase borrowing to service existing debt given returns have been insufficient to cover financing costs (see more detail below).

LGFV debt growth slowed following the 2014 reform, while LG debt grew rapidly. The central government encouraged LGs to issue new bonds to 'swap' for LGFV debt issued on their behalf, bringing it back on to the LG balance sheet within 5-10 years.[10] This contributed to rapid growth in official LG net bond issuance

6 An estimated 50 per cent of LGFV debt is held by banks (see Appendix Table 1). ANZ estimate banks account for around 90 per cent of LGFV financing, including direct loans, LGFV bonds, non-standard investment and off-balance sheet investments including wealth management products (WMPs). Around 2 per cent of total LGFV debt was issued offshore in 2021.

7 Authorities intervened to ease restrictions and recapitalize an LGFV in Yunnan in 2011 after it announced that it would stop repaying principal on its loans (technical default) and LGFV spreads widened sharply. See name redacted (2022) for more details.

8 China Chengxin find that banks could absorb less than 20 per cent of LGFV debt before capital ratios would become inadequate.

9 LGFVs accounted for around a third of new loans in 2009 and around 40 per cent of new loans in Q1 2010. China Development Bank was particularly exposed, with LGFVs accounting for more than half of new loans in 2009. The growth of LGFV debt and associated projects was then blamed for overheating the economy; see name redacted (2011) for more details.

10 According to the National Audit Office, LGs issued CNY12.2 trillion in bonds to replace LGFV ('hidden' government) debt. A national audit that began in 2013 uncovered an estimated CNY7 trillion of LGFV borrowing on behalf of LGs. However, this likely underestimated the true level of 'hidden' government debt given the negative stigma and incentives for LG not to appear linked with too much risk.

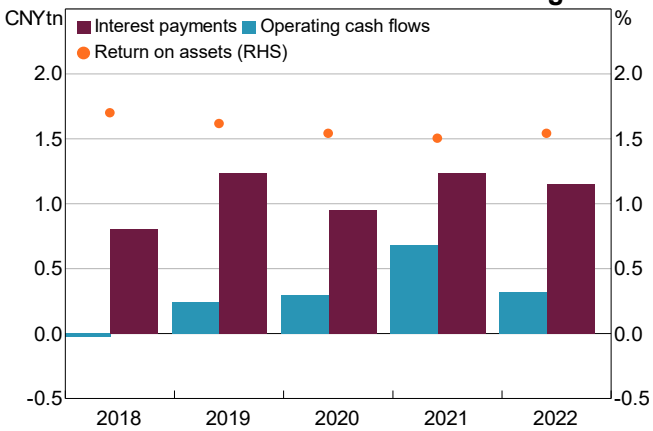
(around 20 per cent per year for the past five years). Limited government and financial resources have made additional debt-swap progress difficult, particularly in economically weaker provinces.

LGFV debt growth has slowed to be around 9 per cent in 2023 in year-ended terms, as deleveraging continues to be a top priority for authorities. The People's Bank of China's (PBC) 2018 Financial Stability Report highlighted one province where LGFV debt was 80 per cent higher than official debt as an example of growth it aimed to curb. Reducing LG fiscal risks and curbing the expansion of LFGV debt has also been a focus of recent Central Economic Work Conferences (CEWC) and was included in the 2023 Government Work Report, stating there will be no bailouts.[11]

Concerns around the risk of LGFV defaults have increased

LGFV debt serviceability concerns are not new. Given a focus on utilities, infrastructure and – initially – projects for public welfare on behalf of LGs, LGFVs typically don't generate enough cash flow to service debt. LGFVs' return on assets (ROA) has been weak for several years (Graph 2). LGFV debt financing costs are higher and in shorter tenors than official LG debt. Market economists estimate LGFV financing cost to be around 5 per cent, higher than the 3 per cent on official debt and much higher than the 1½ per cent LGFV ROA in 2022. Analysts estimate that 84 per cent of bonds proceeds in the first half of 2022 were used to refinance debt due to their low returns and high financing costs.[12]

Graph 2
Chinese LGFVs' Returns and Borrowing Costs



* Based on sample of around 2300 bond-issuing LGFVs.
Sources: RBA; Wind

These concerns were exacerbated in 2022 as assets operated by LGFVs were particularly affected during COVID lockdowns (e.g. transport). Around half of the LGFVs in my dataset had interest expenses that exceeded operational income in 2022. The distribution of this shortfall is uneven geographically: interest payments exceed operating revenue in 21 of the 31 provinces (see Graph A3). At the end of February 2023, total government spending on interest payments had grown the fastest of all fiscal spending components (27 per cent in year-ended terms). Interest payments were equivalent to more than 10 per cent of gross fiscal revenue in a third of Chinese cities, and as high as 75 per cent in Lanzhou (Gansu).

LGs' fiscal sustainability pressures intensified over 2022…

Despite weak LGFV profitability, the implic guarantee of LG support has largely kept LGF default risks contained. However, LGs have also see fiscal sustainability pressures increase. China stringent COVID containment policy and widesprea lockdowns led to an increase in LG spending and decline in revenue. Land sales revenue – a important source of LG revenue – contracted by 5 per cent (CNY2 trillion) amid intensifying propert sector stress (Graph 3).

11 See China Office's Government Work Report summary and China Matters (March) on financial regulatory structure changes.
12 Estimate from Huaan Securities; see Caixin (2022) for details.

…which has led to further reliance on LGFVs and central government transfers

LGs have relied increasingly on LGFVs to replace developer demand in land auctions and offset falling land sales revenue; land transactions by property developers fell 53 per cent in 2022. In the December quarter of 2022, LGFV purchases accounted for 65 per cent of total land sales, up from 20 per cent in 2021 (Graph 3).[13] During this time, the Ministry of Finance (MoF) forbid state-owned enterprises (SOEs) from inflating land sales.

LGs had reportedly instructed LGFVs to buy land in poorer areas where developers have less incentive to buy, increasing LGFV vulnerability to property sector stress.[14] Increasing financial stress and pressure to prioritise deleveraging may reduce this participation in the future (indeed land sales have been lower in 2023).[15]

Transfers from the central government have also supported LG fiscal balances, increasing by 17 per cent in year-ended terms in 2022. The MoF indicated these payments would increase by a further 4 per cent to CNY10 trillion in 2023. The size of these transfers are significant, equivalent to around 85 per cent of LG general public budget revenue and around 95 per cent of central government general budget income (both excluding bonds), which suggest there's a limit to possible future increases.

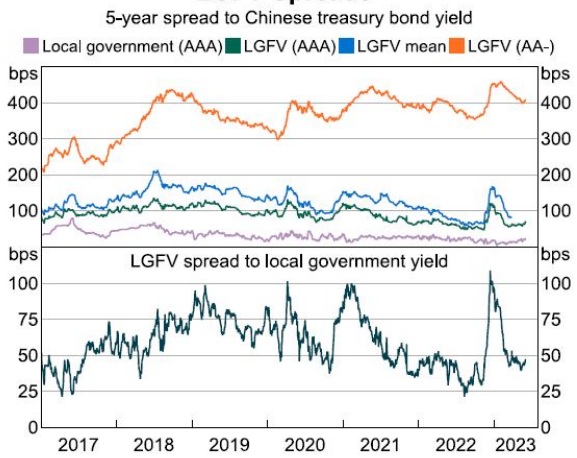
LGFVs are closely linked with the property sector

Intensifying property sector stress over 2022 has also exacerbated concerns around LGFV defaults due to their close links with the sector. LGFVs are heavily reliant on rising land valuations for securing and servicing finance, which fell significantly in 2022. Additionally, some LGFVs develop property themselves; 25 per cent of LGFVs list property development as their main registered business.

How have markets reacted?

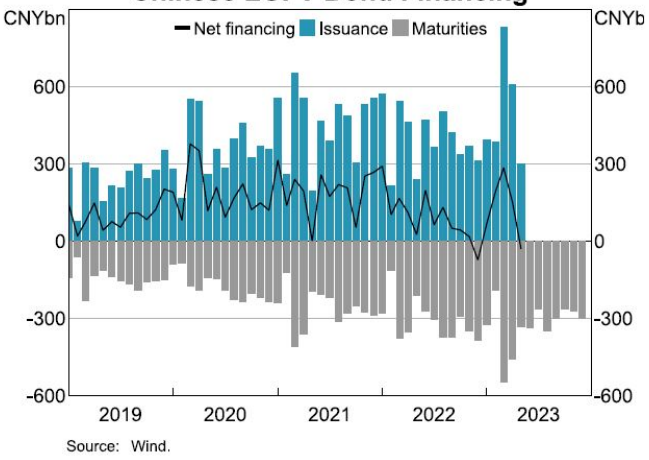
Markets continue to price in an implicit guarantee on LGFV debt: spreads to LG debt have been narrowing over the past few years outside episodes of stress (Graph 4). LGFV spreads widened sharply at the end of 2022 alongside the episode of bond market turmoil sparked by wealth management product (WMP) redemptions; the majority of WMP funds are invested in corporate bonds, and LGFV bonds account for 40 per cent of the market.[16] However, LGFV bonds are quite illiquid, so spreads do not accurately reflect stress.

Graph 4
LGFV Spreads*



* LGFV mean series discontinued from 27 March 2023.
Sources: Bloomberg; CEIC; RBA; Wind.

Graph 5
Chinese LGFV Bond Financing



Source: Wind.

LGFV net bond issuance declined significantly over 2022, which market commentators interpreted as an indication that some LGFVs were experiencing difficulties refinancing (Graph 5). Net bond issuance turned negative in December, falling around CNY90 billion in the second-largest monthly issuance contraction on record, alongside the spike in spreads and bond market volatility. Several bond issues were cancelled or

13 LGFVs accounted for more than 80 per cent of land sales in some provinces including Gansu and Hubei in the first half of 2022.
14 LGFVs accounted for 61 per cent of land by floor space in suburban areas in 2022, up from 58 per cent in 2021.
15 One LGFV in Henan stated it won't bid for another plot until it reduces leverage to a reasonable level.
16 See name redacted (2022) for details. LGFV bond spreads had narrowed over 2022 after the widespread lockdowns in China lead investors to seek a relatively safe investment (Graph 4). The popularity of LGFV bonds was driven by a lack of other safe options offering high returns as authorities increased liquidity, rather than higher credit quality.

redeemed early as higher coupon rates increased financing costs which are already higher than many LGFVs can service.[17]

LGFV net bond issuance increased significantly in the first quarter of 2023; LGFV bond spreads narrowed alongside increased near-term confidence following the reopening and accommodative levels of liquidity. However, market pricing still reflects elevated concern for LGFV debt serviceability: spreads remain above levels seen late last year, particularly for the lower-rated bonds. Net financing in March was its highest since January 2022 alongside the highest gross issuance on record. This could reflect front-loading of issuance given the significant refinancing needs and bond maturities coming up in 2023 (around CNY3 trillion). It could also represent delayed issuance postponed from Q4 in 2022 owing to the poor financing conditions or stimulus related to authorities' new policy focus on supporting growth, particularly through new infrastructure investment. Net bond issuance was much lower in April and became negative in May. In April 2023, regulators reportedly tightened restrictions on private equity funds' LGFV investments due to the elevated risks.[18]

LGFV defaults on other financial products have increased

LGFVs defaults on off-balance sheet products including commercial acceptances, WMPs and trust products increased over 2022.[19] Rhodium estimates LGFV defaults on commercial acceptances increased sharply in August, a ten-fold increase compared to January 2022 (Graph 6).[20] These defaults have been viewed as an early warning sign of liquidity stress, as LGFVs choose to default on these instruments to avoid defaulting on publicly traded bonds. Since August, there have been further defaults alongside increased financial stress: Bloomberg reported 22 LGFV bond issuers missed commercial bill payments in January 2023, up from 17 in December 2022.

Credit risks are highest in more indebted and lower-income regions

Risks are elevated for highly leveraged LGFVs in economically weaker and more indebted provinces (Graph 7). These mainly consist of inland regions in the West and North-eastern 'rust belt' that are economically weaker and less likely to have benefited from the reopening due to a smaller share of domestic consumer-based products and services. LGFVs in these provinces also experienced greater difficulty refinancing debt (negative net bond issuance has been more prevalent in these provinces; Graph 8). LGFV bond spreads are wider in provinces where LGFVs are more indebted, particularly where the LG debt-to-revenue ratio is also high (Graph 9). Deteriorating financial conditions in Guizhou led the LG to post on its official website that its debt problem is 'impossible to effectively solve' on their own, calling for support from central authorities. Bond spreads are relatively low in provinces where the aggregate level of LGFV debt is highest, which may reflect the relatively low LG indebtedness and higher income (i.e. Jiangsu, Zhejiang, Sichuan and Beijing; see Graph 7 and A5). In Jiangsu province, where debt is highest, the government applied caps on LGFV funding costs and active debt resolution programs to some cities. Despite the increase in net issuance in aggregate to positive levels in Q1 2023, it's still negative in almost half of all Chinese provinces (Graph 8). This was mainly in economically weaker provinces including Gansu, Guizhou and Yunnan, where refinancing and default risk

17 Early redemption usually indicates restructuring their finance, swapping bonds for bank loans at longer maturities and lower interest rates, as has happened in the past to avoid default. 40 per cent of LGFV debt will mature within 5 years (Graph A4).

18 Private equity funds have reportedly been told to reduce exposure to LGFV bonds before issuing new products if it has more than 30 individual investors or more than 50 per cent paid-in capital from individual investors.

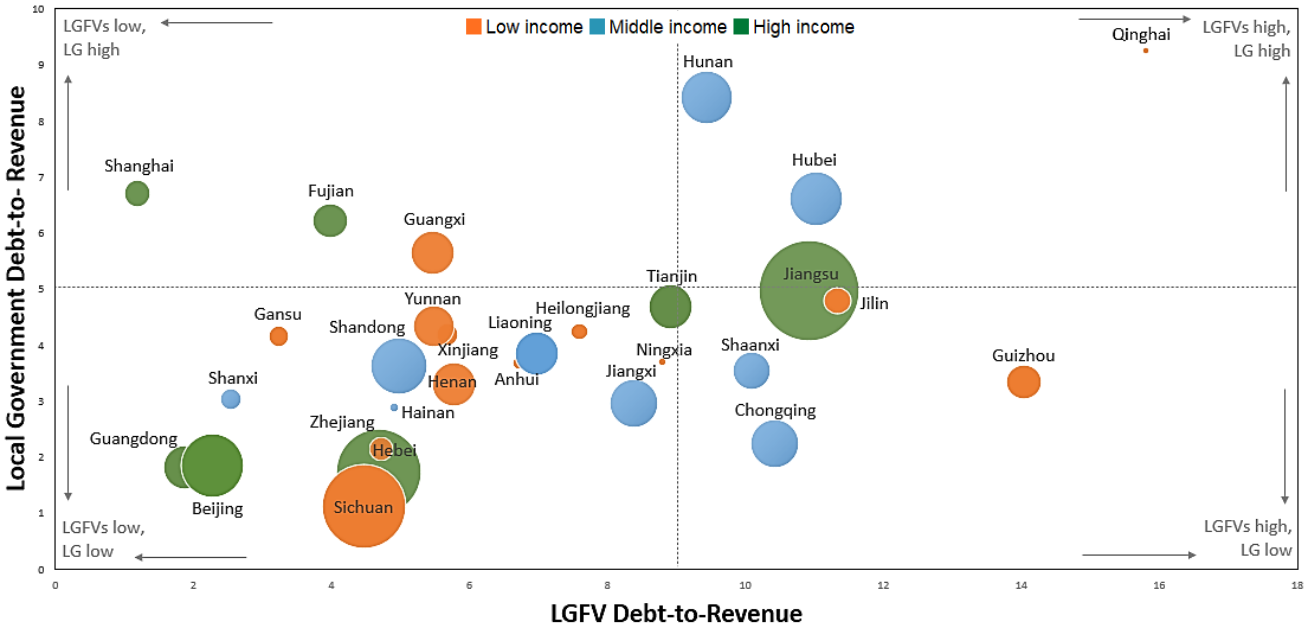
19 Commercial acceptances are short-term debt instruments regarded as an off-balance sheet liability.

20 Some debts were repaid shortly after the missed repayment and some have been attributed to technical difficulties: one LGFV attributed payment delays to COVID travel restrictions, but eventually paid. A large LGFV in Yunnan failed to comply with court orders to repay debts of CNY330 million since the end of 2022, triggering threats of legal action from two Shanghai courts.

is greater, but also included Guangdong; Guangdong has some of the largest upcoming maturities in 2023 (see Graph A6).

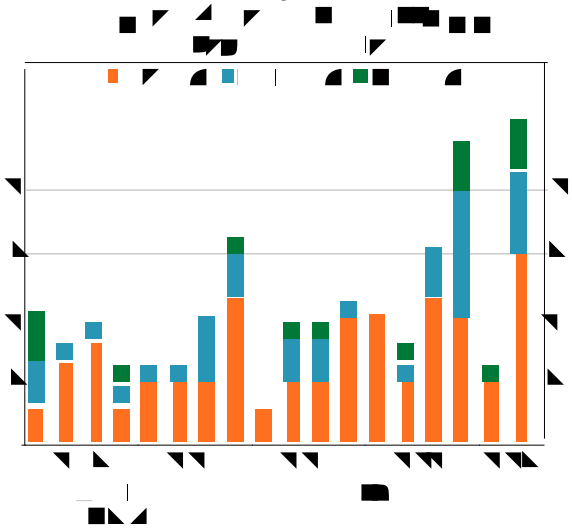
Coupon rates on newly issued LGFV bonds are higher in economically weaker provinces (Graph 10). They increased significantly alongside bond market volatility in late 2022 but have remained elevated into 2023, particularly in economically weaker provinces. Coupon rates remaining elevated beyond the episode of bond market volatility may reflect investors' demand for additional compensation given elevated credit risk on LGFV debt. New LGFV debt was also issued at shorter tenors, reflecting limited demand to hold longer duration LGFV debt. However, this was partially reversed in the first few months of 2023 as the average maturity of new LGFV debt increased alongside an easing in financing conditions.

Graph 7
LGFV and LG Indebtedness*

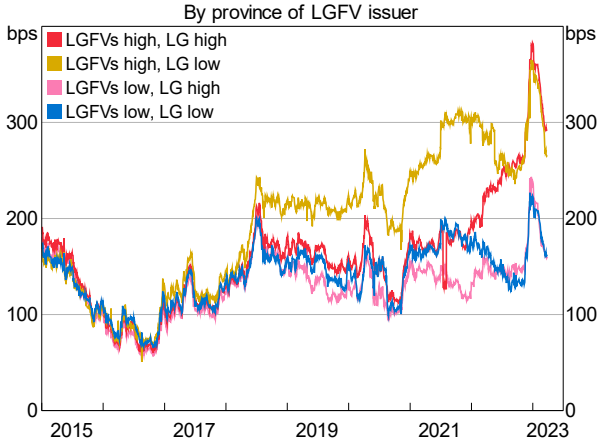


* Size represents total LGFV debt stock and colour represents province GDP per capita.

Graph 8



Graph 9
LGFV Bond Spreads by Debt-to-Revenue Ratio*
By province of LGFV issuer



* Average spread to central government bonds across all maturities longer than 6 months; the four categories relate to quadrants of Graph 7.

Sources: RBA; Wind

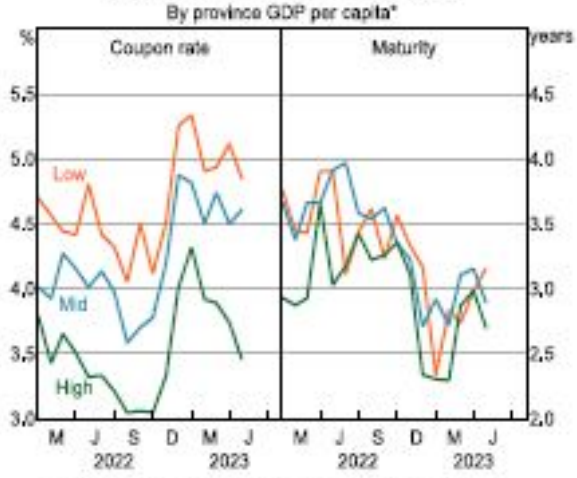
Concerns around LG fiscal sustainability and health have increased rating agencies' and investors' perception of credit risk for some LGFVs. Fitch recently downgraded credit ratings for 11 rated LGFVs: 9 due to deteriorating LG creditworthiness and resilience to economic shocks (in Tianjin, Fujian and Shandong) and 2

due to lower likelihood of support from LGs (in Yunnan and Ningxia). Fitch had previously highlighted elevated fiscal deficits and refinancing risk in 10 provinces, including some linked with these downgrades.[21]

LGFVs face higher maturities in 2023, particularly in higher-risk regions

Around half of the CNY3 trillion in LGFV bond maturities over 2023 are due in provinces where LGFVs are of higher risk (based on LGFV indebtedness, net bond financing trends and the economic strength of the province of the LGFV issuer; Graph 11). However, these risk metrics are highly influenced by Jiangsu given the relative size of LGFV debt and maturities in that province (17 per cent of total debt and 25 per cent of maturities in 2023).

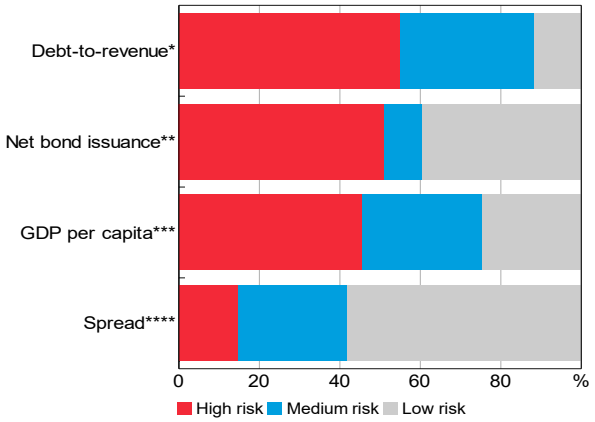
Graph 10
Chinese LGFV Bond Issuance
By province GDP per capita*



* Low includes provinces with GDP per capita between CNY40,000 and 70,000 (14), mid includes provinces between CNY70,000 and 100,000 (9), and high includes those over CNY100,000 (7).

Sources: RBA; Wind.

Graph 11
LGFV Bond Maturities by Risk Category
2023



* Maturities in provinces where LGFV ratio is above 8 is high, 4-8 is medium and below 4 is low.

** Average Q4 2022 net bond issuance; between -CNY5 and -CNY1 billion is high, -CNY1 billion to zero is medium, positive average net issuance is low.

*** Less than CNY70,000 is high, CNY70,000-CNY100,000 is medium and above CNY100,000 is low.

**** Province average spread to central government bonds above 200bps is high, 80-200bps is medium and below 80bps is low.

Sources: CEIC; RBA; Wind

Authorities face a trade-off in allowing potential LGFV defaults

Allowing insolvent LGFVs to fail would help achieve progress towards authorities' longstanding goals of breaking perceptions of implicit guarantees, remove moral hazard and reduce financial risk. It would accelerate LGFV deleveraging and lead to more efficient pricing of risk and allocation of capital. Indeed, it is the view of some analysts that authorities would allow LGFV defaults more broadly, in line with their communication.

However, allowing a default of any size may be very costly and place the operation of strategically important assets at risk. It could lead to a sharp repricing of risk in Chinese credit markets, given the perception of LGFV debt as a safe asset. This would also disrupt the economic recovery (which is not yet entrenched) and would undermine confidence and stability.[22] Stress could spread to healthy issuers and financial institutions – particularly small banks, where LGFV exposure is high – and could require liquidity support from the PBC. The broad repricing of risk could also disrupt the recovery in the property sector, making developer defaults more likely and further complicate LGs' fiscal consolidation of LGs. Further stress in the property sector would make it more difficult for LGs to support LGFVs and pursue deleveraging priorities.

There have been some recent examples of intervention by authorities to restructure LGFV debt. A city-level LGFV in Guizhou – one of China's most indebted provinces where defaults on non-standard debt have been high – avoided default by restructuring CNY16 billion of bank borrowing and extending the maturities to 20 years. The favourable terms of the restructuring reflects the influence of LGs and the significant links between

21 The LGs were Tianjin, Ningxia, Gansu, Liaoning, Yunnan, Qinghai, Jilin, Guangxi, Heilongjiang and Guizhou. Fitch warned that a 'dramatic' economy recovery or intervention would be required to alleviate stress.

22 Finance minister Liu Kun noted that while revenue growth was expected to improve, the fiscal balance 'situation is still grim'.

LGFVs and local banks.[23] It has become increasingly common for LGFVs in economically weaker provinces to restructure debt, but the duration of this agreement was unprecedented.[24]

While it is likely authorities will continue to use window guidance to extend LGFV debt maturities and lower interest rates on debt, this is unlikely to be a sustainable solution on its own. Notwithstanding the debt extensions negotiated above, the LG in Guizhou signed an agreement with China Cinda Asset Management – one of China's big five national asset management companies – in April to assist with reducing financial risk following the warning on the LG website calling for assistance from central authorities. Other potential ways for the authorities to support LGFV deleveraging include introducing a larger bond swap program (much larger than previous programs given LGFV debt accumulation). Changes in newly announced capital adequacy ratio calculation requirements are likely to improve investor appetite for LG bonds: the China Banking and Insurance Regulatory Commission halved their risk weight which reduces the capital institutions are required to hold against LG bond holdings.

It is possible authorities could allow some smaller LGFVs to default in sectors deemed less strategically important, following sufficient warning from authorities so that markets won' be taken by surprise. Some economists have suggested authorities may choose to commercialise some LGFV assets and operations and transfer them to non-LGFV corporate debt, though this process would be complicated by unfavourable asset valuations and potential defaults once perceptions of guarantees are removed.

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23 The restructured loans will be interest-only in the first 10 years, and interest rates were lowered significantly from around 7.5 per cent to 3-4.5 per cent by the 21 banks involved. The restructure follows more than 100 LGFV non-standard debt defaults in Guizhou between 2018 to 2022.

24 Moreover, Yunnan LG stepped in to help an LGFV repay a CNY1 billion bond after it missed payment in late May. Market concern for LGFV defaults increased following the late payment. Intervention by the LG (notwithstanding its deteriorating credit profile) supports the view that LGs will continue to prevent defaults: the recent Fitch downgrade of a Yunnan LGFV reflected their assessment of a lower likelihood of LG support. The LGFV later denied repayment difficulties and reports of LG support.

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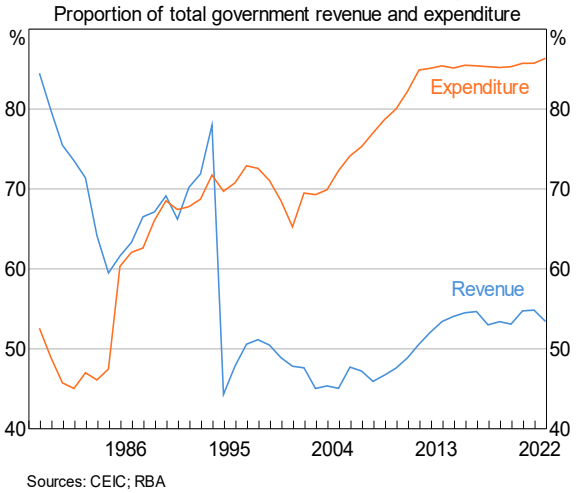
Appendix

Appendix Table 1: Zhongtai Securities Estimate of LGFV Funding in 2020

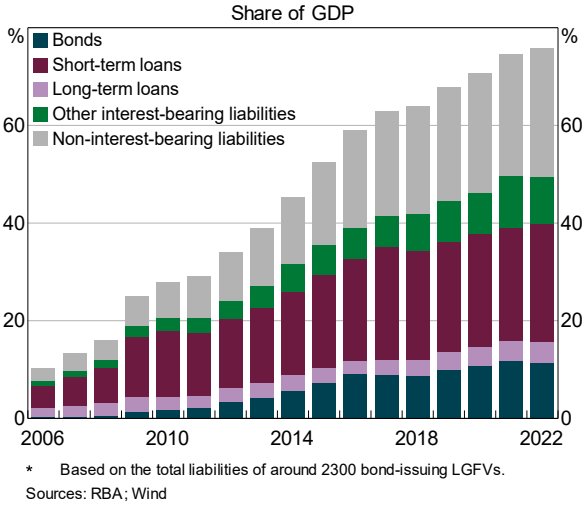
Funding Source	*CNY bn*	*Share of total funding*
Bank loans	25, 506	55.4%
Corporate bonds	5, 748	12.5%
Trust and asset management loans	5, 791	12.6%
Off-balance sheet bank corporate bonds	4, 352	9.5%
Pledged Supplementary Lending (policy banks)	3, 235	7%
Off-balance sheet bank wealth management products	1, 408	3.1%
Total	**46, 041**	**100%**

Source: Zhongtai Securities (2021)

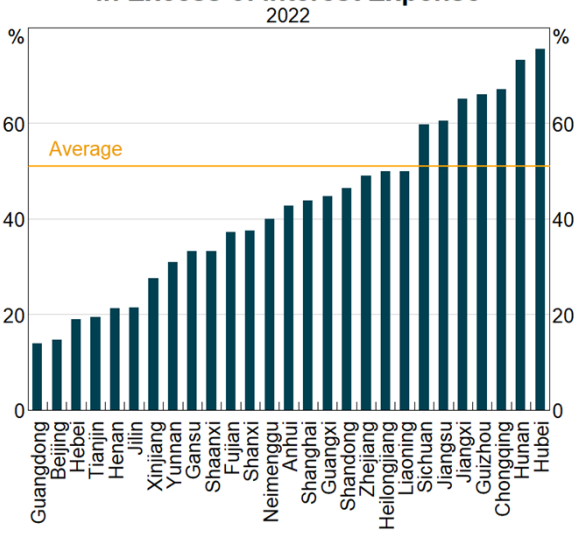
Graph A1
Local Government Revenue and Expenditure



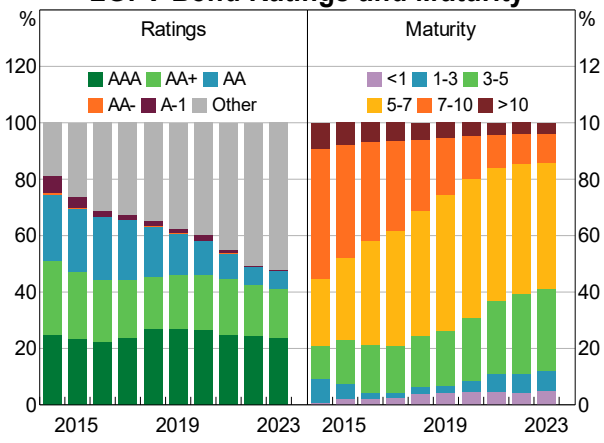
Graph A2
Chinese LGFV Debt by Type



Graph A3
Share of LGFVs with Operating Income in Excess of Interest Expense



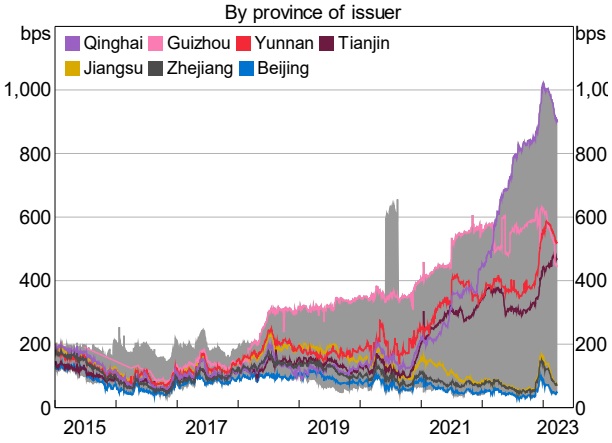
Graph A4
LGFV Bond Ratings and Maturity



Sources: RBA; Wind

Graph A5
LGFV Bond Spreads*

By province of issuer

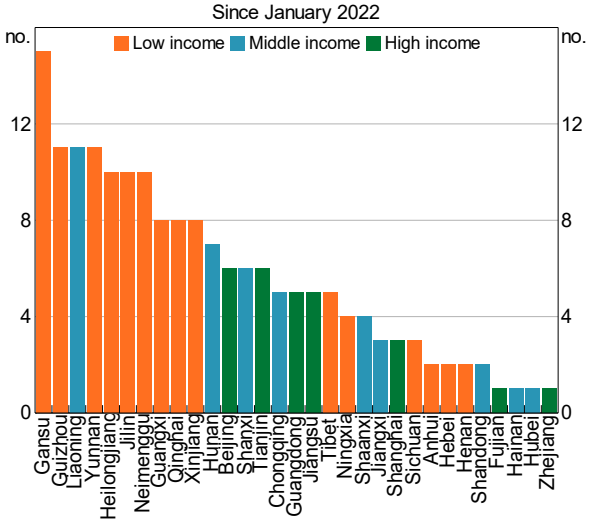


* Average spread to central government bonds across all maturities longer than 6 months; grey shading shows range between minimum and maximum average spreads by province.

Sources: RBA; Wind

Graph A6
Months of Negative Net LGFV Bond Financing*

Since January 2022



* Low, middle and high income given by GDP per capita.

Sources: CEIC; RBA; Wind