CHINA'S LOCAL GOVERNMENT FINANCING VEHICLES: A DEBT CRUNCH COMING?

In China, local government financing vehicles (LGFVs) are off-balance sheet entities established to circumvent regulatory constraints on local governments' ability to raise debt. Over 10 000 LGFVs now operate in China, accounting for at least CNY7 trillion in debt through bank and trust loans and bond issuance. The credit quality of many LGFVs is non-transparent and appears to be poor, while local governments that are presumed to back these vehicles are also under fiscal pressure in light of their reliance on property markets. Recent regulations attempt to mitigate the resulting risks by shifting both current and future borrowing to local governments (that is, on balance sheet), while at the same time guarding against the risk of a withdrawal of credit to infrastructure projects. However, these reforms are still partial, suggesting that LGFVs will remain important, and may not prevent a marked slowing in credit to infrastructure construction.

Why do local government financing vehicles exist and how important are they?

Until recently, China's Budget Law has prohibited local governments (that is, governments other than the central government) from borrowing directly from financial markets, while other regulations have constrained their access to bank finance (see name redacted 2010).[1] However, during the global financial crisis, local governments were required to finance the majority of the Chinese government's stimulus package and engage in large-scale infrastructure projects, without the provision of (significant) additional funds. As a result, most LGFVs were subsequently set up to circumvent regulatory constraints and raise off-balance sheet funds. LGFVs are set up as legally distinct entities – usually as construction and utility investment corporations – and are primarily treated as state-owned enterprises (SOEs), thereby falling into China's 'corporate' market. Despite this, local governments and LGFVs are heavily intertwined and they commonly share assets and personnel.

Market analysts suggest that the number of LGFVs operating in China is over 10 000.[2] At mid 2013, LGFVs were responsible for at least CNY7 trillion (or 40 per cent) of local government debt (see name redacted 2014),[3] or around 25 per cent of total general government debt (which in aggregate is close to 45 per cent of GDP). Results from the 2014 audit have not yet been published, though leaked reports suggest that local government and LGFV debt has increased significantly since this time.

LGFVs typically engage in the construction of economic infrastructure as well as social services projects and environmental protection. A number of LGFVs are able to derive significant revenue through toll road and other charges and the on-sale of land use rights, which have been transferred to them by local governments,[4] but many other LGFVs derive little revenue from their operations. It is widely believed that many LGFVs are unable to meet interest and principal repayments and may experience some difficulty rolling over debts (IMF 2013; Deutsche Bank link no longer valid 2015). This note will discuss how LGFVs are funded, the key risks and recent regulatory changes. In the absence of data from the most recently completed National Audit, this note primarily uses data from the 2013 National Audit and the WIND Information database.

How are LGFVs funded?

There are three ways that local governments fund LGFVs. One way is that they typically transfer budget revenue and existing assets, such as land rights, to LGFVs to provide initial capital requirements. LGFVs also reportedly make use of local governments' assets that are not under their ownership as collateral for their bank and trust loans, despite regulatory restrictions on such activities. Third, LGFVs tend to benefit from *de facto* local government guarantees, which help them to obtain loans since many LGFVs do not generate adequate revenue to service their debt. Some LGFVs also raise private capital through initial public offerings.[5]

1 See Article 28 of Budget Law. Direct borrowing has been allowed in certain circumstances where approved by the State Council. While borrowing from banks is not explicitly barred in China's Budget Law, banks were directed in 2010/2011 to not increase total lending to local governments that do not have revenue-generating projects (PIIE).

2 See Forbes and Standard Chartered.

3 Total local government debt amounted to CNY17.9 trillion at mid 2013. Local governments are directly responsible for CNY10.9 trillion of this, with the remaining CNY7 trillion recorded as a contingent liability to local governments.

4 For example, Sichuan Road & Bridge Co (a listed entity) generated CNY27 billion revenue and CNY1.2 billion net income in 2014.

5 Minimal data are available on the LGFV IPOs and these are not discussed in this note.

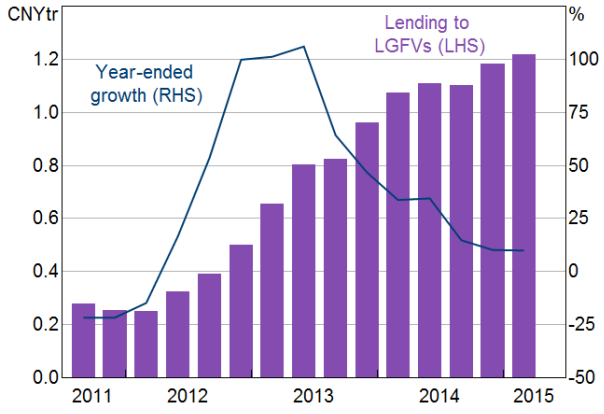
LGFVs then use this capital (and collateral) to obtain bank or trust loans or issue bonds. Based on the 2013 National Audit, we estimate that around 55 per cent of outstanding LGFV debt came from bank loans, while trust loans and bond financing each accounted for 20-25 per cent of LGFV debt. Since then, it is likely that the share of bond financing has increased, due to a sharp increase in issuance in 2014 and regulatory restrictions on bank and trust loans.

Size, composition and history

Bank loans to local governments totalled CNY10 trillion in mid 2013, and we estimate that around CNY4 trillion was in the form of bank loans to LGFVs.[6] The share of bank loans declined from 80 per cent to 55 per cent of LGFV (and local government) debt between 2010 and 2013 due to regulatory restrictions enacted in response to concerns over asset quality (see risks section below). In particular, the China Banking Regulatory Commission (CBRC) issued directives in 2010 that: limited the number of new loans; encouraged banks to re-classify loans as non-performing where necessary; required that the stock of LGFV loans not exceed its end 2012 level; and only allowed new loans to be granted to LGFVs where their cash flow coverage was above 100 per cent and their liability-to-asset ratio below 80 per cent. While these regulations slowed growth in bank lending to LGFVs, the IMF (2013) suggests that implicit local government guarantees, pressure on banks to maintain (or gain) market share, and local governments' lobbying power have forced banks to continue to extend loans to some LGFVs, even where this is against the directives.

This tightening of bank funding and broader growth of the shadow banking sector led to a rise in the use of trust financing by LGFVs. Assuming that no trust loans have been extended to local governments directly, trust financing to LGFVs rose from zero to CNY1.4 trillion between the 2010 and 2013 audits, though growth has slowed since the 2013 audit in line with regulatory restrictions on shadow banking (Graph 1).

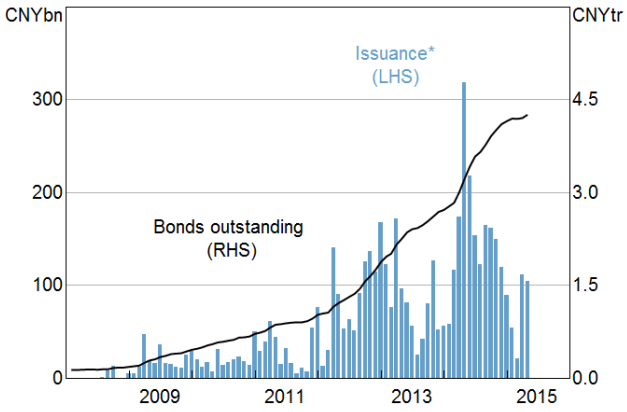
Graph 1
LGFV Trust Loans



Source: China Trustee Association

Corporate bond financing has emerged as a key source of LGFV fund raising over the past year in light of these restrictions. Issuance increased sharply in 2014 (in both gross and net terms), reaching a monthly peak of around CNY320 billion in April, with the total value of bonds outstanding at the end of 2014 totalling CNY4.2 trillion (6.6 per cent of GDP; Graph 2; Ho and Conrad 2015 link no longer valid, search for title substituted).[7,8] LGFV issuance has contributed heavily to growth in China's corporate bond market, amounting to around one-third of issuance in recent years.

Graph 2
Urban Infrastructure Bonds



* Excludes bonds that were issued but have since matured.

Source: WIND Information

Maturity

While no data are available on the maturity of LGFV bank loans, trust loans typically have a short-term maturity (of around two years) and LGFV bonds typically have a medium-term maturity (with the weighted average remaining time to maturity on outstanding bonds around 4½ years, and less than 5 per cent of bonds having a remaining time to

6 This estimate is calculated by assuming all trust and bond financing figures in name redacted (2014) are solely attributable to LGFVs and not local governments more broadly, and that other forms of funding to LGFVs not captured in this note are insignificant or zero. This value of bank credit also incorporates LGFV build-transfer debt.

7 Urban infrastructure bonds are the best measure available. This may overstate issuance as it captures some SOEs that are not LGFVs, though this may be partially offset by the dataset failing to capture all of LGFVs' bond issuance.

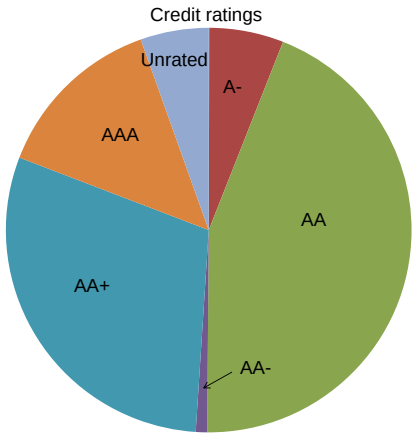
8 LGFV bonds are typically issued, though not restricted to, enterprise bonds, which accounted for around 40 per cent of LGFV bonds issued over the past five years (see ~~name redacted~~ 2015. Data on LGFV bonds are more up-to-date than data on bank and trust loans.

maturity of over 7 years). A sizeable portion of this debt matures over the coming year, with CNY520 billion due to mature in the next 12 months. Both of these liability maturities are less than the very long-lived assets they fund, giving rise to some rollover risk.

Credit ratings of LGFV bonds

LGFV bonds are typically only rated by local credit ratings agencies and the majority of LGFV bonds have investment grade ratings of AA and above, as is the case with China's onshore corporate bond market more broadly (Graph 3).[9] However, the average rating of LGFV issuers is lower than the bonds they issue according to Luo and Chen (2013), primarily because some LGFVs receive government guarantees. It is also likely that a number of LGFVs have lower credit quality than what their ratings suggest (given that ratings in China appear inflated), with S&P noting that around half of China's provinces (rather than LGFVs) deserve junk credit ratings (IMF Global Markets Monitor 2014; name redacted 2014).

Graph 3
Urban Infrastructure Bonds



Source: WIND Information

Cost

While the maturity of LGFV bank loans is unknown, we can assume that LGFVs borrow such funds at rates similar to the weighted average general loan rate, which is currently around 6.5 per cent. In contrast, infrastructure trust loans typically provide investors with a return of around 9 per cent, suggesting that the rates charged to borrowers are somewhat higher. For LGFV bonds, yield data are unavailable and as a result, coupon rates are the best gauge of market pricing. The weighted average coupon rate on currently outstanding bonds is 6.5 per cent, ranging from between 5.5 per cent for AAA rated issuers to 8 per cent for A+ rated LGFVs.[10] AAA rated LGFV debt therefore has a financing cost (approximately) equivalent to taking out a 1-5 year bank loan at the PBC's current benchmark rates, but appears to be significantly cheaper than raising funds from the shadow banking sector. One possible reason why LGFVs still obtain funding from trusts is that only LGFVs that can obtain a reasonable credit rating issue bonds. Supporting this, only around 1 000 out of at least a possible 10 000 LGFVs issue bonds (Deutsche Bank 2015 link no longer valid).

Taking a weighted average of these rates (based on debt outstanding at the time of the 2013 audit) suggests that the implied interest cost for the average LGFV is a bit over 7 per cent. In monetary figures, this would equate to an interest burden of at least CNY650 billion.[11]

Despite the perception that LGFV bonds are guaranteed by local governments, LGFV bond coupon rates are substantially higher than those on local government bonds (Ho and Conrad 2015). In particular, 3- to 10-year local government bonds generally offered a coupon of between 3.9 and 4.2 per cent in 2014.

What are the risks associated with LGFVs?

Given that LGFVs have commonly been set up to build infrastructure that is likely to provide relatively low economic returns, at least in the near term, there is some concern about their ability to service their debt without continued local government support. These concerns are particularly relevant in instances where they have invested in low-yielding social projects or where they are located in lower socio-economic regions where user-pay charges are difficult to implement. For example, LGFVs established by the province of Changzhou report a return on assets of only 0.5 per cent and financial expenditures that exceed their operating profit (Deutsche Bank 2015 ink no longer valid). Moreover, the China Banking and Regulatory Commission (CBRC) estimated in 2010 that around half of all bank loans to LGFVs were poorly collateralised and/or were being

9 The AA credit rating from Chinese ratings agencies is presumed to be the lowest investment grade rating.

10 Zero coupon bonds have become more common through 2014, which may bias this result.

11 The interest burden of bonds is calculated on the value outstanding as at end 2014, while the stock of bank and trust loans is from the mid 2013 audit and hence is understated. Of our total estimate, CNY270 billion is for bonds, CNY250 billion is for bank loans and CNY130 billion is for trust loans.

repaid by guarantors, with LGFVs unable to generate sufficient revenue to meet repayments. To date, there is no public record of an LGFV defaulting on its obligations. Nonetheless, recent regulatory statements (see below) provide evidence of authorities' continued concerns about the ability of LGFVs to maintain access to finance. These regulations, which have altered the borrowing power of local governments and LGFVs, also highlight the authorities' concern regarding how the off-balance sheet nature of LGFVs and the lack of clarity regarding the extent of local government support cloud the transparency of local government balance sheets.[12]

This support from local governments for their LGFVs means that concerns surrounding local government finances are also relevant for LGFVs. Of particular concern is the large gap between local government expenditure and revenue, with the IMF (2013) suggesting that local governments account for around 70 per cent of China's government spending, but only receive around 50 per cent of total government revenue. This gap is not easily filled by returns from infrastructure projects, since these often fail to generate sufficient revenue, and local governments have therefore relied heavily on the property market as a source of income and collateral. Recent weakness in the property market has reduced potential cash flow from this source, with research suggesting that declining land sales will reduce local government revenue by CNY500 billion in 2015 (UBS 2015).[13]

LGFVs (and hence local governments) face increased likelihood of financial stress at the point where they are required to rollover existing LGFV debt, in part because the maturity of their liabilities is shorter than the maturity of the assets they finance. Even for those that are earning some revenue through infrastructure projects, weakness in the property market has lowered the value of eligible collateral which will make it more difficult to roll over loans. The 2013 National Audit noted that around 60 per cent of total local government debt will mature by the end of 2015, implying that LGFVs (and/or local governments) face large scale debt rollover in the short run (De Nederlandsche Bank 2014).

Even if LGFVs are able to roll over existing debts (which is possible given new regulations; see below), the ability of LGFVs and/or local governments to raise new debt to fund future infrastructure projects is questionable. Infrastructure investment has accounted for a significant share of GDP growth in China over the past two decades (accounting for around one-sixth of GDP growth in 2013; Wilkins and Zurawski 2014) and a sizeable portion of this is likely due to LGFV investment. To the extent that local governments and LGFVs are unable to obtain sufficient new financing via on-balance sheet municipal bond issuance or PPP financing (see below), this could then weigh on economic growth.

Regulatory developments and outlook

Chinese authorities have introduced a number of regulatory changes over the past year in response to the risks associated with local government and LGFV financing. Some of these policies are aimed at improving the quality and transparency of existing local government debt, while others are directed at ensuring that credit to the sector is not withdrawn. The regulations have ultimately lowered incentives for investors to hold LGFV debt and allow local governments to issue debt directly, with the aim of abolishing LGFVs by 2016 (see Appendix for a list of some of the more relevant regulations). These regulations appear to have been effective, with net LGFV bond issuance in 2015 to date close to zero.

To deal with existing debt, Chinese authorities have so far announced a CNY2 trillion debt swap that will convert high-cost maturing LGFV debt into lower-yielding municipal notes, which have been permissible under certain conditions since mid 2014.[14] Within this, around CNY600 billion of LGFV debt will be eligible to be directly swapped into bonds via negotiations with the existing holders of LGFV debt.[15] Rates on these

12 In many cases of LGFV debt, there are reportedly 'letters of comfort' from local governments, which banks and trust companies use to provide funding. This is not believed to be the same as explicit local government guarantees.

13 Land sales reportedly account for one-third of local government income (De Nederlandsche Bank 2014).

14 Jiangsu province was reported to have initially faced difficulties in issuing bonds under this program, but was successful in its second attempt following regulatory changes that eased issuance conditions for local governments. The bonds it ultimately issued offered virtually no spread to Chinese government bonds despite requiring a higher risk weighting (20 per cent) and somewhat higher credit risk.

15 This CNY600 billion was widely reported when the first CNY1 trillion of the debt swap was announced. It is not clear that the size of eligible debt would have increased with the additional CNY1 trillion increase to the quota in June.

bonds must be within 1 and 1.3 times prevailing CGB yields of the same tenor.[16] Local government bonds will also be eligible as collateral for central bank operations, which may increase investor demand. As an indication of investor demand, the Jiangsu, Xinjiang and Guangxi provinces have been able to issue bonds under this program at yields similar to CGBs (though for privately placed bonds that cannot be traded in the interbank market, Jiangsu paid a 15 per cent premium over CGBs).

The total size of the debt swap is non-trivial, being equivalent to around 30 per cent of LGFV debt or 11 per cent of total local government debt as captured by the 2013 audit (although it is likely to be a smaller share now). It also amounts to four times the amount of LGFV bonds that mature over the next 12 months. If the debt swap solely converts high-cost LGFV bonds to lower-cost local government bonds, then it should reduce LGFVs' interest burden by around 100 basis points, given the roughly 3 percentage point difference between LGFV coupons and the rate paid on recent local government bond issues (multiplied by the 30 per cent of debt that the swap agreement covers). This should also reduce the rollover risk facing LGFVs in the short run. These regulations imply a significantly diminished role for LGFVs in coming years (and an associated reduction in corporate bond issuance), though at least 70 per cent of total LGFV debt remains unaccounted for by the debt swap.

Concerns over existing LGFV debt and the viability of current infrastructure projects have also led financial regulators, alongside the PBC, to issue a directive that banks must ensure construction projects initiated before this year have ongoing access to bank finance, even where the project will be unable to yield returns to pay back the loan. In this instance, banks and local governments are required to renegotiate the terms of the loan without increasing local governments' total debt obligations.

While these regulations improve local government financing conditions, they have potentially negative implications for banks and other investors.[17] These investors have been able to achieve higher returns from LGFV bonds compared with the local government bonds they are now swapping into, apparently due to the uncertainty surrounding guarantees and the ability of LGFVs to repay debt. To the extent that this merely replaces a high-return risky asset with a lower-risk, lower-return asset it may not hamper risk-adjusted return, but there is a chance that the lower risk does not fully compensate for the lower returns now earned by banks.[18] To support demand, banks can use bonds as collateral in PBC liquidity operations, possibly providing some offset, but it is not clear that collateral eligibility is important for them given the size of their current security holdings. Regardless, the explicit directive to banks to fulfil earlier lending commitments to LGFVs regardless of credit quality will impact banks' underlying asset quality and suggests that LGFVs have faced challenges gaining continued access to finance from the banking sector.

Looking at banks' loan exposure to LGFVs, the IMF (2013) suggests that between 4 and 7 per cent of state-owned banks' outstanding loans were to LGFVs in 2011. China Development Bank's share is significantly higher at 67 per cent, which is perhaps unsurprising given its role as China's infrastructure financing policy bank. Banks are likely also exposed to LGFVs through some entrusted loans, although the size of this indirect exposure is unclear.[19]

More broadly, these regulatory changes raise concerns about the ability of governments and/or LGFVs to finance new infrastructure. To avoid this, authorities have granted permission for local governments to issue CNY600 billion of bonds this year, outside the LGFV swap program. Some local governments have been allowed to issue bonds directly under trial programs or via approval from the State Council since mid last year (see name redacted 2014), though the CNY600 billion quota for 2015 significantly expands this.[20] In particular, this quota is around CNY200 billion more than the combined value of bonds issued in 2014 by local governments (CNY110 billion) and the Ministry of Finance on behalf of local governments

16 There also appears to be a yield cap on the CNY600 billion quota in new local government bonds that will be issued this year outside of the CNY1 trillion debt swap arrangement.

17 Banks hold around one third of corporate bonds, with similar shares held by other financial institutions and funds managers or insurers (see Name redacted 2015). Given their categorisation as corporate sector bonds, this ownership structure is a reasonable proxy for LGFV bonds to be swapped.

18 Reasons to suspect this include that local government bonds seem to be a very cheap form of funding (offering a minimal spread to CGBs), while the spreads of LGFV bonds seem high given very few commentators believe they are not backed by local governments.

19 Entrusted loans are commonly disguised as bank loans and so these may be bank initiated.

20 Ho and Conrad link no longer valid (2015) indicate that local government bonds outstanding totalled CNY1.2 trillion at end 2014.

(CNY290 billion). However, it is not large enough to also replace the CNY690 billion of LGFV issuance over 2014 and, as a result, sizeable LGFV issuance may be required in 2015. This is possible given that LGFVs will be allowed to issue for the remainder of 2015, and LGFVs are still permitted to fund projects through PPP, an alternative source of financing that has been encouraged by authorities for project development moving forward. Nonetheless, possible constraints on financing pose a downside risk to infrastructure spending in the year ahead.

International Financial Markets
International Department
9 June 2015

APPENDIX: ADDITIONAL RELEVANT LOCAL GOVERNMENT FINANCING VEHICLE REGULATIONS SINCE MID 2014

- In August 2014, a revision to China's Budget Law allowed local governments to directly issue debt under the control of the central government, effective January 2015 (see name redacted 2014). Local governments were also required to ensure bond issuance proceeds went towards future investments and not current expenditures, publish their balance sheets, and ensure all their bonds are rated.
- An October 2014 regulation enabled local governments to finance existing projects through LGFVs until the end of 2015, but as of January 2015 new projects were only allowed to be financed through official local government financing channels, with LGFVs banned from transferring debt to local government balance sheets.
- All guarantees that local governments have extended must be placed on balance sheet, with existing LGFV debt classified into one of three categories with risk assigned based on who borrowed the funds (see name redacted 2015).
- In mid December, the China Securities Depository and Clearing Corporation issued a regulation effectively making much LGFV debt ineligible as collateral in new repo operations on the exchange market.

FINANCIAL STABILITY IMPLICATIONS OF CHINA'S POLICY RESPONSE TO COVID-19[1]

China's response to COVID-19 will alleviate immediate stress in the financial system, but is likely to increase vulnerabilities in the short to medium term and slow the de-risking of the financial system. In particular, policies such as loan forbearance and encouraging loans to micro and small enterprises helped mitigate the effects of the shock. However, banks will face a deterioration of asset quality in an environment of already elevated financial stability risks. This is particularly the case for smaller Chinese banks, in which risks are concentrated. In addition, authorities have delayed reforms aimed at lowering financial stability risks. Therefore, our expectation is that financial stability risks in China will remain elevated for quite some time.

Summary and assessment

In the year or so prior to COVID-19, growth in China was slowing due to weaker global growth, the escalation of trade tensions with the US, and the effects of a financial de-risking campaign on domestic demand.[2] As a result, the authorities faced a difficult trade-off between addressing financial vulnerabilities and avoiding a slowdown in credit that would further constrain economic growth. Authorities decided to engage in targeted fiscal and monetary policy easing, but still placed a high priority on financial de-risking.

The authorities' response to COVID-19 has much in common with many other economies, including easier fiscal and monetary policy. However, easing in China was relatively modest and more targeted by international standards and in comparison to its own past stimulatory episodes. Chinese authorities also provided forbearance and other support to borrowers (including tax cuts and rent waivers), as well as relaxing regulations around NPL recognition and provisioning for loan losses, and providing liquidity support to banks.

China's policy response is distinct in that more is being asked of banks to support the real economy, particularly micro and small enterprises (MSEs). Banks have been given explicit targets for lending to MSEs (often without guarantees) and have also been instructed to 'share their profits' with the real economy (i.e. record profits that are 75 per cent lower than 2019 levels) by increasing lending at lower rates. Banking system profits over the first half of 2020 were about 10 per cent lower than the first half of 2019, suggesting that banks will need to record sharp losses in the second half of 2020 in order to reach their target.[3] China's fiscal policy response is also unique in that much of the burden falls on local government, some of which entered the pandemic with vulnerable balance sheets.

China's policy response to COVID-19 alleviates immediate stress in the financial system, by lowering short-term default risk. In addition, the authorities have not signalled any meaningful change to China's overall policy objectives; they have reiterated there will not be a 'flood-like' stimulus and appear to be committed to preventing a renewed build-up of risks. The macro-leverage ratio is expected to gradually return to a 'reasonable' level after rising sharply in the first half of 2020.[4]

Nevertheless, vulnerabilities are likely to increase in the short to medium term, in an environment where financial stability risks were already elevated. Banks will face heightened credit risk and a deterioration of asset quality, particularly once loan forbearance policies expire. This will put the most pressure on smaller banks, which already have relatively thin capital buffers and more risky credit exposures.[5] Further, important financial regulations for addressing existing vulnerabilities have been delayed: namely, reforms to shadow banking and stronger recognition of non-performing non-loan assets.

Table 1 provides a summary of the various policy measures introduced by the Chinese authorities and an assessment on how each of them affects financial stability risks in China. The remainder of the note outlines these measures in more detail and will be of most interest to China specialists.

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1 I would like to thank names redacted x2 for helping me understand many of the policies mentioned in this note. The note also benefited from feedback provided by named redacted x2 through the drafting process.

2 See Doc 10 in this release pack (2020) for more background and detail on the economic implications of China's policy response.

3 CBIRC (August 2020) (Chinese) and Large Chinese Banks' Financial Results – First Half 2020 (forthcoming)

4 Chinese Economy and Financial Markets Wrap-up (May 2020)

5 See names redacted x2(forthcoming)

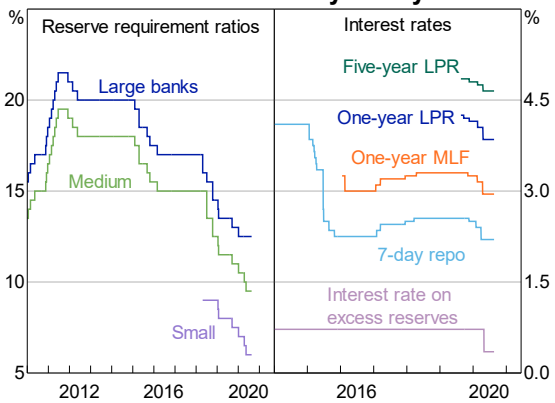
Table 1: Summary of China's Policy Response to COVID-19

Support for	Policies	Effect on financial stability risks
Borrowers	- Forbearance for MSEs and households - Tax cuts and postponements - Rent waivers - Reduction in other business costs	↓ ST (these policies are designed to keep borrowers solvent and prevent defaults)
Lending	- Increased lending to MSEs and manufacturing - Loan guarantees	↑ (lending to MSEs is risky and regulated lending rates means risk might not be appropriately priced, loan guarantee program is small)
Banks' balance sheets	- Forbearance and NPL recognition - Provisioning guidance	↓ now, ↑ ST/MT (banks do not have to deal with poor asset quality until the expiry of forbearance policies, lower provisioning delays the recognition of potential losses)
Capital positions	- No restrictions on dividends and share buybacks - Guidance to decrease profits	↑ (core capital positions will weaken as dividends continue to be paid and lower profits limit the ability to rebuild with retained earnings)
Delayed regulation	- Asset management regulations - Classification of financial asset risk	↓ now, ↑ MT (banks do not immediately need to recognise a wider pool of non-performing assets, but delaying reforms that improve financial stability)
Memo: macro-leverage ratio	- *Increased lending* - *Local government special bond quotas*	↑ *(macro-leverage has sharply increased, expected to gradually return to a 'reasonable' level, but a desire to maintain a reasonable level of growth and higher bond quotas might work against this)*

Monetary and fiscal policy response

Between February and April, monetary policy was eased through reductions in reserve requirement ratios (RRRs) and lending rates (Graph 1). Since April, RRRs have been reduced for small- and medium-sized banks only, and there have been no further reductions in policy rates. This is consistent with comments from authorities that there will not be a 'flood-like' stimulus.

Graph 1
Chinese Monetary Policy



Sources: CEIC Data; RBA

Fiscal policy has also expanded. AERU's consolidated measure of the budget deficit shows the deficit will increase from 5.7 to 11.5 per cent of GDP this year, the largest fiscal impulse since the GFC. This expansion is being funded more transparently than during the GFC. In particular, local governments are required to raise funds through the issuance of 'special purpose bonds' rather than opaque local government financing vehicles. Most of these proceeds will be directed towards infrastructure spending, but CNY 200 billion can be used to recapitalise small and mid sized banks.[6] There are reports of a lack of viable projects which suggests the risk of poor investment decisions has increased.

See Document 10 in this release pack (2020) provides a comprehensive review of China's monetary and fiscal policy response through an economic lens.

Policies that support borrowers

Forbearance policies

In February, regulators instructed banks to be more lenient to MSEs and more tolerant when recognising NPLs.[7] At the beginning of March, authorities allowed MSEs and medium-sized enterprises (jointly called MSMEs) who were having difficulties repaying their loans to be given a temporary extension of principal and interest payments until 30 June without interest penalty.[8] This extension period could be lengthened for firms that were severely affected by the shock and had a long expected recovery period, but good prospects.

At the beginning of June forbearance was extended until 31 March 2021 for inclusive MSE loans (MSE or personal business loans of less than CNY 10 million) again without penalty interest.[9] Other MSMEs are able to negotiate extensions on a case by case basis. A condition of being granted forbearance is that firms must keep employment stable.

Forbearance has also been granted for mortgages, credit cards and other personal loans for individuals affected by COVID-19 who were treated in a hospital or placed under observation, those who participate in disease prevention work, or who have lost income sources as a result of COVID-19.[10] No explicit guidance on timing has been provided; banks have been asked to 'rationally extend' repayment periods.

Easier access to corporate bond financing

Regulatory changes helped to promote issuance and reduce defaults, including: the introduction of 'anti-epidemic bonds'; allowing issuers to sell new bonds for the purpose of refinancing; and simplifying the process for corporate bond issuance. Further, authorities have reportedly been pressuring investors to offer

6 Caixin (July 2020), Chinese Economy and Financial Markets Wrap-up (May 2020), Chinese Economy and Financial Markets Wrap-up (June 2020), China Banking News (July 2020)

7 MSEs are an important part of the Chinese economy and make up a significant proportion of employment. They have typically had trouble accessing finance through the traditional banking system because of their high credit risk relative to state-owned enterprises (which have an implicit government guarantee). MSEs have historically accessed finance through the shadow banking system, but as authorities have increased oversight and tightened regulations on shadow banking, various policy measures have been introduced to encourage lending by the traditional banking system to MSEs.

8 CBIRC (March 2020) (Chinese)

9 PBC (June 2020) (Chinese)

10 State Council (January 2020) (Chinese), China Banking News (February 2020)

debt relief and provided firms with greater leeway to restructure their debt. For more details on the Chinese corporate bond market's resilience during COVID-19, see Document 9 in this release pack (2020).

Tax cuts and postponements

Policies have largely exempted MSMEs from various insurance contributions and reduced or cancelled VAT payments for the whole of 2020.[11] Initially, tax relief was provided to businesses directly related to managing COVID-19, such as medical suppliers and certain manufacturers.[12] Tax relief was later expanded allowing MSEs and sole traders to postpone the payment of income tax to 2021.[13] In addition, companies will be reimbursed 50 per cent of their unemployment contributions from 2019 if they promise not to lay off workers. VAT exemptions were granted on public transport, delivery services and essential goods and services until the end of 2020.

Rent waivers

In May it was announced that MSEs which lease their premises from state-owned enterprises would be exempt from paying rent for at least three months in the first half of 2020. This could be supplemented or extended in the second half of 2020 if required. The policy does not apply to MSEs that were already in arrears for some time.[14]

Other business costs

Energy prices will be reduced by 5 per cent for large industrial business and internet charges will be cut by 15 per cent in the second half of 2020.[15]

Policies that support lending

Lending to MSEs

Policymakers have implemented specific directives to banks to further increase their lending to MSEs. In April, the CBIRC released draft guidelines that required commercial banks to lend to MSEs at a pace no lower than the industry lending growth rate. In May, authorities provided explicit targets for the large five state-owned commercial banks to increase their lending to MSEs by at least 40 per cent.[16] Total inclusive MSE lending of the large five SOCBs was CNY 2.6 trillion in 2019, which is only 4 per cent of their total loan book. The small share of MSE loans on the largest banks' balance sheets means that the policy might not have a large effect on aggregate MSE lending.

To facilitate increased lending to MSEs, the PBC has taken various actions to provide more funding at lower interest rates for banks (Table 2).

Lending to the manufacturing sector

China's 2020 Work Report and National Development and Reform Commission (NDRC) Report said that loans to manufacturers should be 'markedly' increased and directed towards upgrading equipment.[17] The CBIRC has set an explicit target for large banks to increase their lending to manufacturers by 5 per cent in 2020.[18] Lending to the manufacturing sector in the first five months of 2020 was reportedly 10 per cent higher than in 2019.[19]

11 name redacted (2020) 'China – Meeting of the National People's Congress 2020'
12 Chinese Economy and Financial Markets Wrap-up (February 2020)
13 Chinese Economy and Financial Markets Wrap-up (May 2020)
14 Chinese Economy and Financial Markets Wrap-up (May 2020), State-owned Assets Supervision and Administration Department Financial Review (2020) No. 42, State-owned Assets Supervision and Administration Department Financial Review (2020) No. 158
15 name redacted (2020) 'China – Meeting of the National People's Congress 2020'
16 Compared to a 30 per cent growth target in 2019. China Banking News (June 2020)
17 name redacted (2020) 'China – Meeting of the National People's Congress 2020'
18 China Banking News (May 2020)
19 Xinhua (June 2020)

Table 2: Programs to Support Lending to MSEs

Policy tool	Details
Relending and rediscount quotas	- CNY 300 billion special relending fund announced in February 2020 (for select banks to lend to firms affected by COVID-19 at a reduced rate) - Special relending program was increased by CNY 500 billion and expanded to included rediscounting (funds to largely be directed to MSEs) [20] - Both quotas increased by CNY 1 trillion at the end of March bringing the total quota to CNY 1.8 trillion
Relending and rediscount rates	- One-year relending rate cut by 25 basis points in late February and again in July to be 2.25 per cent[21] - Rediscount rate was cut by 25 basis points in July, for the first time in a decade - Rediscount rate related to financial stability (PBC's lender of last resort function) was cut by 50 basis points to 1.75 per cent
PBC using relending quota to buy MSE loans	- PBC will issue CNY 400 billion in special relending funds to buy loans made by eligible small lenders to MSEs[22] - Eligible loans are unsecured inclusive MSE loans made by eligible locally incorporated banks between 1 March and 31 December 2020 with a maturity of at least six months - PBC will purchase 40 per cent of these loans on a quarterly basis but will not bear credit risk (banks are required to repurchase the loans after one year) - Program essentially provides interest free funding for one year to support unsecured MSE lending
Financial bonds	- Financial institutions are being supported to issue CNY 300 billion of financial bonds to be used as loans for MSEs[23]
Reserve requirement ratios	- RRRs for selected city commercial banks and rural banks were cut by 1 percentage point to encourage lending to MSEs

Loan guarantees

In April the PBC announced an additional CNY 400 billion for the National Financing Guarantee Fund (NFGF) to increase its re-guarantee options.[24] The NFGF will also cooperate with financial institutions in undertaking batch loan guarantees and increase its share of the risk liability to 30 per cent.[25] The proportion of MSEs with access to guarantee and re-guarantee services were expanded and fees were halved to be less than 1 per cent for 2020.[26]

20 The special relending program provides funds for small and medium-sized banks that meet inclusive financing requirements. These funds are issued for one year and are used to provide loans at reduced rates. The rediscount program is available to all financial institutions for up to six month terms. It allows banks to obtain funding from the PBC by providing loans and other obligations as collateral on a discount basis. See name redacted (2020) for more details.

21 The three-month and six-month rates were also cut in July. Caixin (July 2020) and FSB policy tracker

22 China Banking News (June 2020)

23 No detail was provided on how financial institutions would be supported. State Council (March 2020)

24 In 2018, the Ministry of Finance and 20 financial institutions launched the NFGF to mitigate financing difficulties and reduce funding costs for small businesses and the agricultural sector (and support the development of new sectors) by making equity investments and providing guarantees for guarantors. See Caixin (July 2020).

25 China Banking News (June 2020). JPMorgan (4 June 2020) 'China banks: PBOC measures to support SMEs ease asset quality concerns and indirectly ease labor market pressure'.

26 Ministry of Finance (April 2020) (Chinese)

Policies that support banks' balance sheets

Forbearance and NPL recognition

Alongside the authorities' instruction for banks to provide forbearance on certain loan repayments, banks have also been directed to 'not lower loan risk classifications due to epidemic factors'.[27] That is, loans which have deferred repayments because of COVID-19 will not be recognised as non-performing until the expiry of those measures (currently March 2021). In addition, the authorities have stated that they will tolerate a higher level of NPLs.[28]

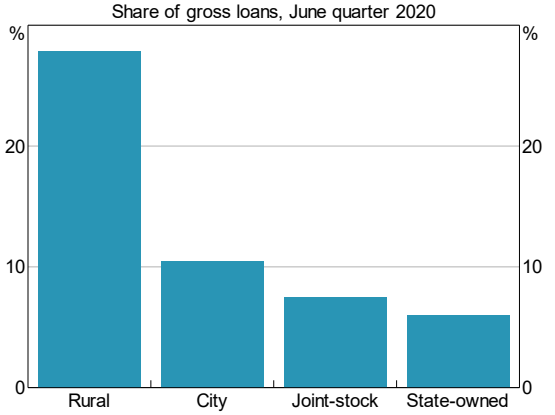
To assist banks in providing forbearance, the PBC announced at the beginning of June that it will provide banks with incentives equal to one per cent of the principal of inclusive MSE loans under deferred payment. The PBC has allocated CNY 40 billion in relending funds and will conduct interest rate swaps with local banks through a special purpose vehicle to facilitate this. In addition, financial institutions have also been granted VAT exemptions on interest income from loans made to MSEs until 2023.[29]

Approximately CNY 7 trillion of MSE loans (approximately 4 per cent of total system loans) qualify for forbearance and by August CNY 2.46 trillion of MSE loans have had repayments extended (approximately 2 per cent of total system loans).[30] Though authorities have also reported that more than 40 per cent of loans to MSMEs have received some form of support (including refinancing).[31]

Graph 2

Chinese Banks – Financial Inclusion SME Loans

Share of gross loans, June quarter 2020



Sources: CEIC Data; RBA

Smaller banks have a higher relative exposure to MSE loans than larger banks; around half of inclusive finance loans are lent by city commercial banks or rural financial institutions (Graph 2). These policies will therefore be more supportive to small banks in the near term, though raise more concerns about their future asset quality. It is difficult to estimate by how much NPLs will increase on the expiry of forbearance policies. While authorities are anticipating an increase in NPLs, they also expect that the banking sector will dispose of CNY 3.4 trillion of NPLs in 2020 (CNY 2.3 trillion higher than 2019 disposals) which will mitigate the deterioration in banks' asset quality and ease pressure on capital levels.[32]

Provisioning guidance

The loan loss provision coverage ratio for small and medium lenders was lowered by 20 percentage points from its minimum level of 120-150 per cent in April.[33] In June there were reports that the loan loss provision ratio had been lowered again for certain banks.[34] These changes allow small and medium lenders to carry more bad loans at lower cost and should also encourage them to increase their lending to MSEs.

Chinese banks have been reporting under IFRS 9 accounting standards, which require banks to make loan loss provisions based on expected future losses, since the beginning of 2018. Authorities have made no comments about the treatment of expected losses under IFRS 9 in the context of COVID-19.

27 PBC (June 2020) (Chinese)
28 CBIRC (March 2020) (Chinese). In the IMF's 2017 FSAP it was noted that banks had been more actively disposing of bad loans to avoid intensified scrutiny if their NPL ratio rose above 2 per cent.
29 Chinese Economy and Financial Markets Wrap-up (April 2020)
30 CBIRC (August 2020) (Chinese). Goldman Sachs (2 June 2020) 'China: PBOC announced credit loan purchase program to support SME lending'. JPMorgan (4 June 2020) 'China banks: PBOC measures to support SMEs ease asset quality concerns and indirectly ease labor market pressure'.
31 Financial News (June 2020) (Chinese)
32 China Banking News (August 2020)
33 China Banking News (April 2020)
34 Caixin (June 2020)

Policies related to banks' capital positions

Dividends and share buybacks

Regulators have not placed any restrictions on, or given any guidance towards, dividend payouts and have approved some share buybacks.[35] Indeed, two-thirds of listed Chinese banks have increased dividend payout ratios for their 2019 earnings.[36] In contrast to many other economies where dividends have been restricted so that banks preserve their capital, in China the largest five banks are state-owned and small banks are typically majority owned by provincial governments which means dividend payments will alleviate some pressure on the fiscal budget.[37] However, bank profits are likely to be much lower in 2020 which will put pressure on future dividend payout ratios, particularly for smaller banks.

Profit guidance

In June, the State Council asserted that banks should 'make reasonable profit transfers of CNY 1.5 trillion' to help support the economy.[38] This amount is approximately equal to 75 per cent of net profit made by the commercial banking industry in 2019.[39] Banks are expected to achieve this by implementing many of the other policies announced by the authorities. CNY 930 billion is expected to come from lower lending rates with smaller contributions from credit provision, forbearance and lower bank charges.[40] It has also been reported that regulators have asked some banks to keep their profit growth less than 10 per cent in 2020.[41]

Delays to new regulation

Asset management regulations

Chinese regulators announced finalised asset management rules to curb risks in the financial sector, particularly related to shadow banking, in April 2018.[42] These regulations address risks related to implicit guarantees, liquidity, leverage, contagion and regulatory arbitrage. There was a 32-month grace period for banks to conform to the new rules which were due to come into full effect in 2020. However, at the end of July 2020, the deadline for implementation was postponed by one year to end-2021.[43]

Classification of financial asset risk

In early 2019, the CBIRC published draft regulations to change commercial banks' provisioning requirements. These included expanding the scope of financial assets for which credit risk should be classified and accounted, formalising the number of overdue days as an objective indicator of credit risk classification, introducing a debtor-centred classification concept and clarifying how credit risks in restructured assets should be classified and treated.[44]

The rules are yet to be formalised, but in August 2020 it was reported that the CBIRC is planning to loosen the proposed regulations. Prior to the COVID-19 shock it was estimated that the initially proposed rules would lead to a 60 per cent increase in banks' non-performing assets; this estimate would likely be larger in current circumstances.[45]

Senior Analyst

Policy and International | Financial Stability Department
31 August 2020

35 In June the CBIRC approved Bank of Communications' US$2.45 billion share buyback plan. See S&P Global Market Intelligence.
36 Dividend payout ratios are typically around 30 per cent for Chinese banks. S&P Global Market Intelligence (May 2020)
37 SCMP (May 2020)
38 State Council (June 2020) (Chinese), China Banking News (June 2020)
39 SCMP (June 2020)
40 PBC (July 2020) (Chinese)
41 Bloomberg (June 2020)
42 FS Briefing (July 2018)
43 China Banking News (August 2020)
44 FS Briefing (May 2019)
45 Caixin (August 2020)

PEOPLE'S BANK OF CHINA 2020 FINANCIAL STABILITY REPORT[1]

The PBC recently published its 2020 Financial Stability Report. The PBC assessed that the financial system has remained generally stable throughout 2020 and highlighted its role in supporting the recovery. However, credit risk is heightened and the financial sector is expected to face more difficulties in the period ahead.

Stress tests of the banking system found that under the mild scenario (which is similar to AERU's current forecast), 10 of the 30 large and medium-sized banks 'fail' the test after the first year. These banks are assumed to retain profits and raise capital over the next two years and ultimately 4 banks fail under the mild scenario, with the NPL ratio rising to 6.73 per cent. 21 banks 'failed' the extreme scenario. In addition, several hundred smaller banks failed an NPL sensitivity analysis.

The report makes several policy recommendations for managing financial sector risks and details the authorities' approach to intervention at high-risk Chinese banks. The PBC emphasised the role of local governments in taking primary responsibility for handling stress at small banks in their jurisdiction. It appears the PBC also recommended an increased supervisory role for the deposit insurance agency.

The PBC identified almost 600 large enterprises 'in danger' in 2019, 20 per cent of which missed bond repayments. The report also included a summary of developments in macro-prudential policy, regulation of financial holding companies, perpetual bond issuance by Chinese banks, and climate change.

Banking sector conditions and stress test

- The PBC characterised the banking sector as generally stable, but emphasised the importance of reforming financial institutions and preventing and resolving major financial risks (particularly at small and medium-sized banks).
- The PBC conducted a stress test of the banking system, which suggests large banks in China are undercapitalised. The solvency macro-scenario stress tests included three scenarios (mild, moderate and extreme) and lasted for three years (from 2020 to 2022). Like in 2019, the test was applied to 30 large and medium-sized banks. Table 1 shows the GDP growth rates assumed in each scenario. Of note, the mild scenario is similar to the IMF and AERU's current forecasts.

Table 1: GDP Growth in the Stress Test Scenarios

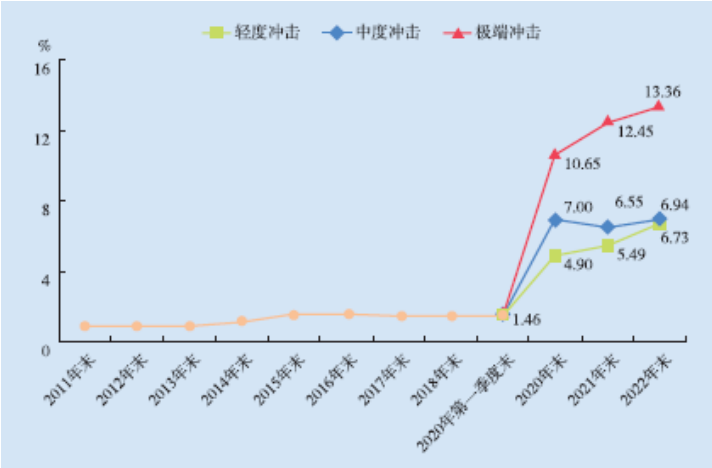
	Mild	Moderate	Extreme	*IMF**
2020	1.59	-0.24	-2.89	*1.85*
2021	7.80	6.81	4.75	*8.24*
2022	5.91	5.36	4.26	*5.80*

*Forecast from October 2020 WEO

- When aggregated, the 30 banks as a whole withstand the mild and moderate scenarios, but 'fail' the extreme scenario. Banks fail the stress test if either their CET1 ratio falls below 7.5%, their Tier 1 ratio falls below 8.5% or their total capital adequacy ratio falls below 10.5% (which includes the capital conservation buffer of 2.5%). These thresholds are higher than stress tests conducted in other jurisdictions, but capital levels in China are widely considered to be overstated.
- However, 10, 13 and 21 banks fail under the mild, moderate and extreme scenarios at the end of the first year, respectively. The stress test then assumes that these banks retain profits and raise capital over the next two years, and ultimately 4 banks fail under the mild scenario and 8 banks fail under the extreme scenario. Under the extreme scenario, 21 banks still fail at the end of the third year.
- Credit risk is the main factor affecting the capital adequacy of banks under the scenarios. Loan quality deteriorates, and assuming no disposals, the NPL ratio rises sharply (Graph 1).

Graph 1: NPL Ratio under the Stress Test Scenarios*

1 The PBC's 2020 FSR is currently only available in Chinese and this note is largely written from a Google translated version. I would like to thank Michelle Chen for her expert help in translating certain parts of the document. P&I will circulate any additional information or clarifications from the official English translation when it is published by the PBC.



* The green, blue and red lines represent the mild, moderate and extreme scenarios, respectively

- The PBC also conducted solvency stress tests using sensitivity analysis on a larger sample of 1,550 banks.[2] The 30 large and medium-sized banks all passed these tests, but other small and medium-sized banks were not as resilient.
  - Around 600 banks failed the test in which the NPL ratio rises by 100%. This increases to around 800 banks when the NPL ratio increases by 200% and around 1,000 banks when the ratio increases by 400%.
  - Around 600 banks failed the test when 50% of small and medium-sized banks' special mention loans became non-performing (and 700 banks failed if 100% of SMLs become NPLs).
  - These results are concerning because NPLs in China are widely considered to be under-reported.
- The PBC also highlighted risks in the following areas: customer concentration, off-balance sheet business, local government debt and real estate loans.

Policy recommendations to manage financial sector risks

- The PBC made several policy recommendations:
  - **Improve governance**: the Financial Stability and Development Committee takes the lead in supervising overall planning and coordination to guide relevant departments and local governments to formulate financial risk treatment plans and supervise their implementation.
  - **Further compact the responsibilities of all parties and prevent moral hazard**: consistent with the authorities' previously stated view, local governments are primarily responsible for financial supervision and management. When necessary, the PBC will assume its responsibility as the lender of last resort. Incentive and restraint mechanisms should be designed so that local governments treat risk resolution as their own business.
  - **Strengthen the PBC's systemic financial risk prevention and resolution functions**: the PBC should work with relevant departments to supervise and intervene in risk prevention and resolution of systemically important financial institutions. This includes taking certain measures against shareholders or creditors, coordinating with local governments, providing liquidity support, and setting up special purpose entities to acquire, inject capital and hold shares of problematic institutions.
  - **Clarify the source and order of use of funds when dealing with financial risk**: in principle, losses should be first absorbed by shareholders' equity, followed by a write-down of unsecured claims, local government financing and deposits.
  - **Improve the deposit insurance system**: establish a long-term mechanism for using deposit insurance for handling bank risks. Our translation suggests this would involve the deposit insurance agency monitoring indicators such as capital adequacy, non-performing loan ratios and other hidden risks related to off-balance sheet businesses and corporate governance.

2 In the sensitivity analysis, banks' capital ratios are tested against various individual shocks including an increase in the NPL ratio of 100%, 200% and 400%, and a 50% and 100% transition of special mention loans to non-performing loans, among others. Banks fail the sensitivity stress test if their total capital adequacy ratio falls below 10.5%.

- Institutions that are particularly risky would be monitored on a monthly basis. For institutions with insufficient capital, the deposit insurance agency would issue early correction notices and require the establishment of a capital replenishment plan.
- This plan would include measures such as profit retention, expense control, restricted salaries, disposals of non-performing assets, the introduction of strategic investors, and requirements for shareholders to subscribe to private placements or inject cash.
- Provincial governments are responsible for the risk management and disposal of rural credit cooperatives (including rural commercial banks and rural cooperative banks). Local governments are notified of the risks identified by the deposit insurance agency given their primary responsibility in resolving risks in their region.
- It is not clear how authorities would deal with the overlap in regulatory responsibilities between the deposit insurance scheme and the CBIRC in such a system.

Managing and resolving risks at Chinese banks

- The report details the approaches taken by authorities in resolving risks at Baoshang Bank ('acquisition and undertaking'), Hengfeng Bank ('local government capital injection and restructure by introducing strategic investors') and Bank of Jinzhou ('early intervention without market interruption') in 2019.[3] It then discusses three considerations of the PBC in determining which method is appropriate for handling specific types of risk:
  - First, **liquidity vs solvency issues**. If a bank only has liquidity problems and it has sufficient collateral, then the deposit insurance fund or the PBC can provide the bank with liquidity. For insolvent institutions, market discipline should be strictly enforced and market withdrawal should be implemented.
  - Second, the **systemic nature of a bank**. For systemically important institutions it is necessary to weigh up the relationship between preventing systemic risks and preventing moral hazard. The PBC follows the principle of 'one matter, one discussion' and takes into account its scale, business complexity, its coverage of financial services and relevance to other financial institutions. The PBC prefers to adopt a gradual approach to avoid risks in disposal.
  - Third, **external constraints**. These include considering the holistic risk of an institution (beyond standard data indicators), general market conditions, and the role of local governments. The PBC specified that the more active the local government is and the more solid their responsibility is, the better and smoother the resolution process is.

Corporate debt default

- The PBC's FSR was published before the recent defaults by several Chinese SOEs, but the report did highlight the need monitor and deal with the risk of large-scale corporate bond defaults. Some large firms have complicated ownership structures and large amounts of financing, and defaults could be harmful to regional financial stability.
- At the end of 2019, the PBC identified almost 600 large enterprises 'in danger'. 80 per cent of these firms had serious liquidity difficulties during 2019 and about 20 per cent had not made scheduled bond repayments.
- The PBC attributed the risks of corporate debt default to 'blind expansion' across industries and countries, problems with corporate governance and internal management, equity pledging and taking out additional loans to make principal and interest payments on existing debt.[4]
- The PBC made several policy recommendations to address risks at large enterprises, including broadening disposal channels for non-performing assets, improving the bond default resolution mechanism, making full use of creditor coordination committees, and improving the corporate bankruptcy system.

3 'Early intervention without market interruption' is a method to keep banks with sufficient collateral operating, rather than having them taken over.

4 Equity pledging is where borrowers post their shares in a company as collateral to obtain a loan. This can be problematic for the company if the borrower defaults and the collateral becomes the property of the lender. It can also be problematic for the borrower and lender if the value of the collateral declines sharply.

Macro-prudential regulation

- There was some interesting information on **macro-prudential assessments (MPAs)**. The PBC noted that MPAs account for the provision of finance to private enterprises, MSEs and the manufacturing sector. Loan conditions and interest rates are included in the MPA to ensure that targeted RRR cuts and LPR cuts flow through to the real economy.
- The process of designating **domestically systemically important banks (D-SIBs)** is yet to be completed. Draft rules for evaluation methods, indicators and process were published in November 2019 and the next step will be the release of the final assessment measures.[5] Then the PBC and CBIRC will propose a preliminary list of institutions which will be released after deliberation by the Financial Stability and Development Committee. Additional regulations for the supervision of designated institutions will then be promptly formulated.
- The authorities have introduced numerous rules to improve the **regulation of the asset management industry**, but due to the COVID-19 shock the transition period for complying with these rules has been extended to the end of 2021. The PBC will continue to strengthen its monitoring of asset management products and work with regulatory authorities to lower vulnerabilities in asset management businesses in a steady and orderly manner.
- The **trust industry** in China has developed rapidly in recent years and while it has played an important role in the economy, it has also introduced a high level of risk. The risk exposure of trust companies is increasing alongside the current downward pressure on the Chinese economy.
  - The PBC listed numerous policy recommendations to strengthen the stability of the trust industry, including: strengthening external supervision and promoting compliance with regulations; improving capital supervision standards; implementing asset management regulations; eliminating multi-layer nesting, continuing to shrink channel businesses, cleaning up non-standard capital pools and strictly controlling leverage.[6] The PBC also highlighted the need to improve professional investment capabilities and avoid major shareholders' interference in the daily operations of trust companies.

Financial holding companies

- In recent years some Chinese non-financial companies have invested in, and obtained control of, financial institutions. Often, these firms lack financial expertise, have complex ownership structures and sometimes engage in improper transactions.
- In response, the authorities introduced regulatory rules for financial holding companies in September 2020. Generally, the regulatory measures seek to separate the operations of the financial sector from the industrial sector.
  - **Institutions in scope**: an institution will be classified as a financial holding company if the controlling shareholders are: domestic non-financial enterprises; natural or legal persons; if the institution controls two or more financial institutions; or if the assets of the financial institutions under control reach a certain size.
  - **Supervision**: the PBC will carry out continuous supervision of financial holding companies, and work with the regulators of the non-financial companies that control the financial holding companies.
  - **Capital requirements**: the source of capital must be authentic and reliable, and be legally owned by the providers (i.e. investors cannot use non-owned funds such as entrusted funds and investment funds). Financial holding companies must not make false capital injections, recycle capital injections or withdraw funds from financial institutions. A capital adequacy system must be established for the consolidated institution to ensure the group as a whole is holding sufficient capital for their asset scale and risk level.
  - **Ownership structure and corporate governance**: ownership structures must be transparent, corporate governance must be standardised and there must be effective internal control mechanisms (including comprehensive risk management and internal firewall systems).

5 The November 2019 report referenced is called 'Measures for Evaluation of Systemically Important Banks (Draft for Soliciting Comments)'. China Banking News reported in October 2020 that the release of the final document ('Systemically Important Bank Assessment Measures') was imminent.

6 Multi-layer nesting is where investment products sold by a trust company are comprised of investment products from other trust companies. These investments often have complex and opaque structures.

Perpetual bonds

- Perpetual bonds have become an important channel for Chinese banks to supplement their Tier 1 capital in an environment where other channels for replenishing capital are limited. Chinese banks began to issue perpetual bonds in January 2019 and the pace of issuance has increased since then.
- The PBC introduced a central bank bill swap tool for perpetual bonds to support the liquidity of the market and to support issuance by small and medium-sized banks. The swapped central bank bills cannot be used in transactions such as spot bond trading, but can be used as collateral in the PBC's monetary policy operations.
- The main buyers of perpetual bonds are asset management firms, securities companies, insurance companies, banks and other non-bank institutions.

Climate risk

- The PBC included a discussion of the impact of climate change on financial stability in its report. While the discussion made no specific references to China, it outlined the different ways that climate change can impact financial stability (physical risks, transition risks and generally representing a long-term structural change). The PBC also outlined the various approaches taken by other central banks to model the impact of climate change on financial stability (macro scenario analysis and sensitivity analysis) and listed some of the challenges with data and model construction in this area.

Senior Analyst
Policy and International
Financial Stability Department
24 November 2020

CHINESE BANKS AND COVID-19: WHAT ARE THE POLICY OPTIONS?[1]

China's banking sector is vulnerable; many banks will likely face difficulty absorbing losses stemming from the COVID-19 shock. Authorities have several options at their disposal to support the banking system, including: selling banks' non-performing loans to asset management companies; forcing mergers; recapitalisation from local and central authorities; and changing regulations. However, these options are complicated by several factors such as a desire to reduce implicit guarantees, the low-growth environment and the relatively poor fiscal position of many local governments. More broadly, in the event of widespread distress the authorities will have to make many decisions, and the probability of a policy mistake may increase as a result.

Assessment

Risks in China's financial system were elevated prior to the COVID-19 shock, despite having made some gains in 'de-risking' in recent years. There have been doubts around asset quality and capital adequacy, and concerns about the opacity of banks' links to the shadow banking system and liquidity risks due to banks' use of short-term funding. These risks are concentrated within the smaller banks in China (of which there are around 4,000 that comprise around a quarter of system assets). [2] Some of these risks manifested in 2019, with four smaller banks requiring intervention. Nevertheless, there were also some concerns surrounding the health of some of the larger joint-stock commercial banks, and all of the larger banks are likely exposed to smaller banks through interbank lending.

The economic shock to China in 2020 and the policy response will likely increase stress within China's financial system, with the banking system likely to face significant losses.[i] In the past, authorities have been able to handle periods of distress. When solvency issues arose, authorities have used a combination of: non-performing loan (NPL) sales to asset management companies; forcing mergers; and recapitalisations from local and central authorities. Authorities have also proved adept at quickly resolving liquidity issues in the form of deposit runs or stress in the interbank market.

More recently, reports suggest authorities have settled on a plan for handing distress among smaller banks. These will be dealt with on a case by case basis, but ultimately local governments will be leant on to provide capital to banks that can be saved and central government intervention will only occur when necessary.

However, these options are complicated by:

- Authorities' stated desire to reduce implicit guarantees. There are widespread perceptions of implicit guarantees in China's financial system, including in the shadow banking system. In the event of widespread stress, authorities will likely step in to maintain economic and political stability. In contrast, they may be more willing to force losses in a perceived idiosyncratic event. But by doing so, they risk creating wider distress to the extent confidence in the safety of other institutions and products becomes compromised.
- The relatively low (nominal) growth environment. In the past, authorities could rely on high growth to either help struggling financial institutions directly, or allow these institutions to sell assets at above market rates. In the current environment, it is likely that institutions or governments will have to more explicitly wear the costs of many policy options.
- The relatively poor financial health of many local governments, which may make local recapitalisations more difficult.
- Changing regulations to help smaller banks could increase stability risks in the medium term.
- Authorities may struggle to resolve any distress in the shadow banking system, given the complexity of the system.

More broadly, the probability of a policy mistake increases if there are several instances of distress requiring intervention (with the consequences of any mistake potentially quite large).

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1 Thanks to names redacted x3t for their help on this note.

2 The Chinese banking system comprises five state-owned commercial banks (SOCBs), 12 joint-stock commercial banks (JSCBs) and approximately 4,000 small banks. There are also three policy banks and a Postal Savings Bank of China. See appendix table for industry structure. See IMF China FSAP (2017), Hack (2020) 'FS Briefing: Smaller Chinese Banks'

The rest of this note provides an overview of risks in China's financial system in the context of the pandemic, and discusses options for how authorities can resolve solvency and liquidity issues.

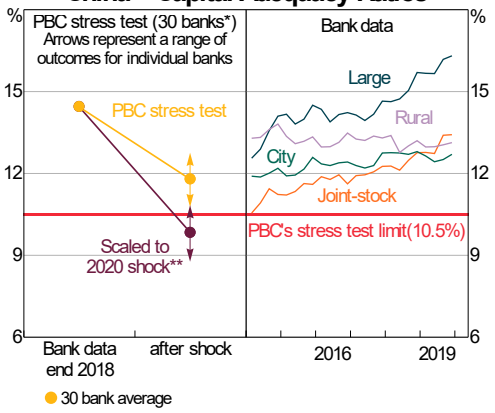
Risks in China's banking system and the effect of COVID-19

Solvency and liquidity stress tests conducted in recent years by the PBC and IMF highlight the vulnerability of China's financial system. In interpreting these tests, it is important to note that reported capital adequacy metrics among many Chinese banks are likely inflated reflecting: unrecognised NPLs; banks holding less capital than should be required for the risk of their assets; and banks' extensive use of shadow banking.

In 2019, the PBC found that under a 'severely adverse' scenario in which GDP growth slowed by 2.65 percentage points, the aggregate capital adequacy ratio (CAR) of a sample of 30 of the largest banks remained well above minimum regulatory capital requirements (Graph 1). However, individually, 17 of these banks failed.[3] Scaling this scenario to the size of the COVID-19 shock using AERU's forecast for GDP in 2020, the capital adequacy for the whole sample would fall below the regulatory minimum. The IMF's 2017 Financial Sector Assessment Program (FSAP) conducted a stress test of similar magnitude and found that undercapitalisation was concentrated at joint-stock and city-commercial banks.[ii]

Graph 1

China – Capital Adequacy Ratios



* Aggregate of 30 largest banks; includes 6 large banks, 12 joint-stock, 9 city and 3 rural

** Scaled linearly; based on AERU forecast of 1.5 per cent growth in 2020

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

Liquidity stress tests by the IMF also emphasised that mid-tier and small Chinese banks might face difficulties, particularly as many receive funding from larger banks. A feature of the Chinese banking system is that funding flows from the PBC to big banks and then to smaller banks. Smaller banks also tend to have a smaller depositor base and so are more dependent on interbank funding. In fact, many small banks were temporarily cut off from interbank funding by large banks and there was a spike in spreads on negotiable certificates of deposit (NCDs) when Baoshang Bank defaulted on its interbank depositors and subsequently failed in May 2019.

Business credit

Business loans account for around 40 per cent of bank assets (and around twice the amount of household loans). Within this category, loans to micro and small enterprises (MSEs) account for about 25 per cent of all loans outstanding and are more concentrated in smaller banks (which generally have lower CARs and higher NPLs).[iii] MSEs have borne the brunt of the COVID-19 shock because they rely more on operational income and are more concentrated in sectors that were affected by the pandemic (i.e. services). In addition, bigger banks have been 'stealing' premium MSE clients from smaller banks to reach lending quotas, pushing smaller banks to riskier clients (and with pressure to keep interest rates low, little scope to be compensated for increased risk).[iv]

Authorities have implemented several policies to support struggling businesses that place the burden on banks, most notably forbearance policies. Inclusive MSE loans have been granted forbearance until 31 March 2021 and loans to other MSEs, which were initially granted forbearance until 30 June 2020, have been able to further extend repayments on a case by case basis.[v] This policy will help to keep firms in business but will add stress to banks.

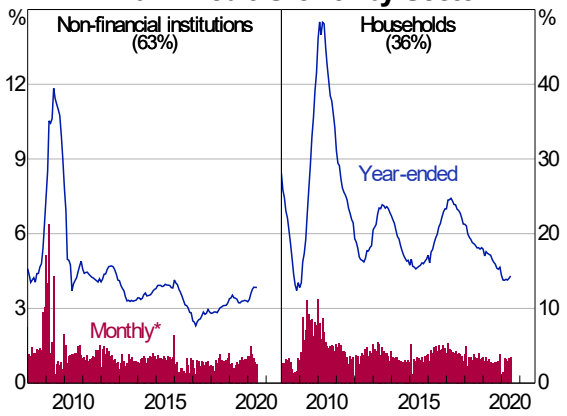
Authorities have also given specific directives to banks to increase their lending to MSEs and reduce interest rates. SOCBs were instructed to increase their lending to MSEs by at least 40 per cent, and commercial banks have generally been instructed to lend to MSEs at a pace no lower than the industry lending growth rate. Furthermore, banks have been pushed to extend more unsecured lending, in part to support the services sector.[vi] These policies explain some of the recent growth in business lending in China (Graph 2). The State Council has said that it expects banks to sacrifice CNY 1.5 trillion in profits in 2020 as banks support and

3 A broader sample of 1,171 banks underwent stress tests based on a sensitivity analysis to various individual risks. The full sample of banks also underwent liquidity stress tests to assess their capacity to withstand funding pressures. For full details, see PBC 2019 FSR.

implement the various announced policies. The sacrificed profits will largely go towards lower interest rates but will also support forbearance and increased lending to small businesses.

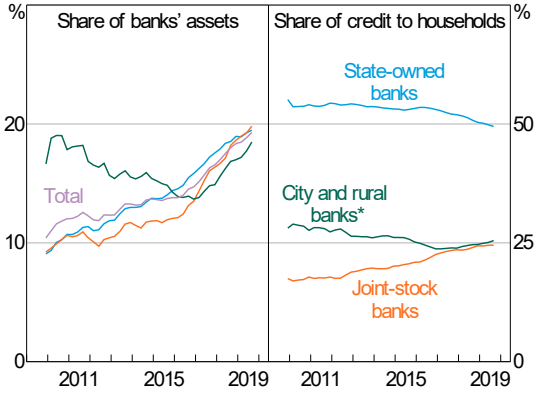
While bigger firms may generally be faring better than MSEs, those that are struggling may find it hard to get help from local governments, which would affect their ability to service loans. In normal times bigger regional firms tend to be supported by local governments which have a key objective to maintain employment.[vii] However, given the tight financial situation that many local governments are currently in, some firms may not receive the same local government financial support they might have in the past.

Graph 2
China – Credit Growth by Sector



* Break and seasonally adjusted
Sources: CEIC Data; RBA

Graph 3
China – Banks' Claims on Households



* Includes cooperatives
Source: CEIC Data

Household credit

Household debt has grown considerably over the past decade, with mortgages the biggest driver. Credit cards and other consumer loans have also grown quickly but from a small base.[viii] JSCBs have been particularly aggressive in expanding their retail business, particularly consumer credit (Graph 3).[ix] Households may be more vulnerable than businesses in this economic shock as government support has focussed more on supporting businesses rather than directly supporting households.[x] In addition, debt to income ratios are very high for low income households,[xi] and these households appear to have suffered the most. This affects rural and migrant worker households in particular as they generally have lower incomes. City and rural banks are likely to be more exposed to rural and migrant workers.

NPL ratios for household loans have typically been much lower than for business loans. But even if NPLs rise for household loans, this does not necessarily represent a threat to banks as a large majority of these loans are mortgages. Mortgages in China generally have low LVRs and house prices have increased since 2015. However, deposits are often borrowed (via other consumer loans or informal loans through friends and family) so LVRs may not be as healthy as they appear on face value. In addition, if the forced sale of housing becomes widespread, this could put downward pressure on house prices.

Local government exposure

Banks are exposed to local governments through investments in local government bonds and loans to local government financing vehicles (LGFVs). A deterioration in local government finances due to COVID-19 may constrain local governments. However, liaison suggest that local governments have a large stock of assets (including land and local SOEs) that can be sold in the event of financial difficulty.[xii]

Shadow banking

Chinese banks have strong links to the shadow banking system, particularly the smaller banks. Banks use shadow banking to hide (riskier) assets and NPLs, implying they hold less capital than they should. Funding for these assets is also likely to be short-term in nature, increasing liquidity risks. In addition, the shadow banking system is very complex, which is a risk in itself. It is possible that COVID-19 will cause more stress in the shadow banking system than the formal system. For an update on shadow banking see Sutton and Taylor (forthcoming).

Options for handling solvency stress

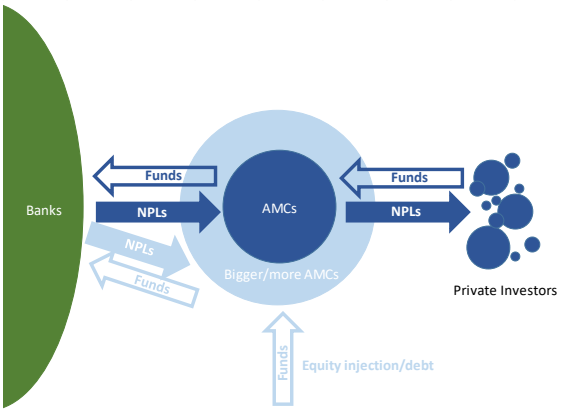
When faced with an erosion of capital, banks themselves can raise more capital or retain profits if conditions allow, but authorities can also help. There are several options available to authorities, including NPL purchases; changing regulations; recapitalisations; and forcing mergers.

Leaning on Asset Management Companies (AMCs)

AMCs or 'bad banks' were created with state capital in China in the late 1990s to carve out state-owned banks' bad corporate debts.[4,xiii] These AMCs can recover collateral on bad loans themselves, on sell NPLs and write off unrecoverable NPLs.[xiv] If AMCs pay banks above market value for NPLs it is a form of recapitalisation. Paying above market value is the norm and in the past few years, authorities have pushed AMC's to purchase more NPLs, which has happened at above market rates.[xv]

The ability of AMCs to digest higher NPL flows due to the pandemic depends on: the ability of AMCs to dispose of NPLs; whether the AMC system as a whole grows larger; and whether AMCs can supplement losses from buying NPLs at above market rates with other income (Figure 1).

Figure 1: NPL Disposal



AMCs are typically the only purchasers of NPLs in the primary market for regulatory reasons. However, AMCs are allowed to sell NPLs in the secondary market, which is a key method of disposal for AMCs (Figure A1). [xvi] Loans that are sold in the secondary market are typically collateralised by real estate, which is the main source of value of NPLs to investors. However, if NPLs are concentrated in smaller businesses (which may have lower levels of collateral), the flow of NPL sales to investors could slow.[xvii] In addition, there has been an increase in unsecured lending at the behest of the PBC in 2020, which could make it more difficult for AMCs to sell NPLs.[xviii]

Authorities have recently released a draft plan for comment that would to make it easier for banks to dispose of NPLs. The new rules would expand the scope of NPLs that banks can sell to AMCs, allowing banks to sell single business loans to AMCs (rather than mainly in bulk) and also allow the bulk sale of consumer NPLs (which would include mortgages, credit card debt, personal loans etc). The rules in the draft would also slowly relax regional restrictions on local AMCs buying NPLs outside their local jurisdiction.[xix]

Authorities have already taken steps to expand the size of the AMC market; two national AMCs received equity injections in 2018, they have been encouraged to issue bonds, and a new national AMC (China Galaxy) was created in 2020. China Galaxy is 70 per cent owned by Central Huijin Investment (ultimately owned by the central government) and 30 per cent by CITIC Securities. There are likely to be more equity injections into AMCs, and the CBIRC has foreshadowed the creation of more AMCs, including foreign funded AMCs and more local AMCs.[xx] However, pressure on local governments' finances may affect their ability to supply capital to local AMCs.

AMC's have broadened the scope of their business beyond their original mandate as 'bad banks' in the last decade, including more direct investment into real estate (possibly as a way to subsidise their NPL business). This may be more difficult going forward as authorities have required AMC's to rein in non-core functions as part of the de-risking campaign.[xxi]

Changing regulations

In response to COVID-19 the authorities announced measures to help prevent an immediate realisation of risks.[xxii] However, these changes could increase risks in the longer term.

4 There are now five national Asset Management Companies in China and each province is allowed up to two local AMCs (there are currently around 60 local AMCs across 31 provinces).

- Banks were instructed not to downgrade classifications for deferred loans, preventing a large increase in NPLs. Like other countries, recognition of NPLs will largely be delayed until repayments are due to resume, which is in March 2021 for MSEs. [xxiii] Authorities have also stated that they will tolerate a 'higher level' of NPLs.
- The loan loss provision coverage ratio stipulates the funds banks are required to put aside to cover potential loan losses (expressed as a share of NPLs). This ratio was lowered by 20 percentage points for small and medium lenders from its minimum level of 120-150 per cent in April. In June, there were reports that the loan loss provision ratio had been lowered again for certain banks. In addition, draft regulations related to expanding the scope of commercial banks' provisioning requirements published by the CBIRC in early 2019 have reportedly been loosened.
- The deadline for implementation of asset management regulations to curb risks in the financial sector, especially related to shadow banking, has also been delayed by one year to end-2021.

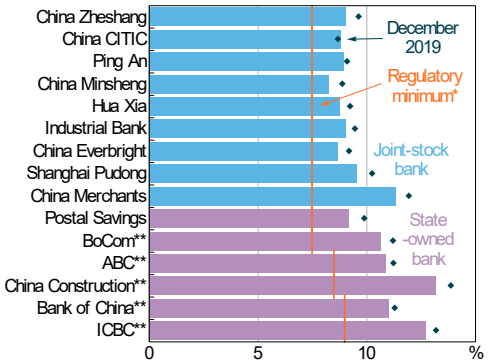
Banks can raise their own capital

CET1 capital buffers at joint stock and smaller banks are relatively thin, with bigger banks better placed (Graph 4). CET1 capital can be increased by raising equity and retaining earnings.

Graph 4

Chinese Banks' CET1 Capital Ratio

June 2020



* Consists of 5% minimum CET1 capital requirement plus 2.5% capital conservation buffer, with some state-owned banks also subject to G-SIB capital buffer

** Based on internal ratings-based approach

Sources: RBA; S&P Global Market Intelligence

However, regulation restricts Chinese banks from issuing shares when their share-price-to-book ratio is below one, which is the case for most banks. In addition, retained earnings may be weak in the periods ahead due to loan losses and compressed net interest margins.

Therefore, banks will likely raise other forms of capital. Additional Tier 1 (AT1) capital provides loss absorption on a going concern basis, but is subordinate to CET1 capital. Issuance of AT1 capital by Chinese banks increased sharply over 2019, particularly in the form of perpetual bonds (which Chinese banks have been allowed to issue since November 2018). Perpetual bonds are a more popular form of AT1 capital than preference shares for a few reasons; preference shares are limited to listed lenders and their sale is restricted to no more than 200 qualified investors; the approval process is lengthy and the market is not very liquid.[5] The liquidity of perpetual bonds is supported by the PBC which allows holders to swap their holdings for central bank bills. Further, perpetual bonds have a favourable tax treatment which is not available to issuers of preference shares. Recent issuance of perpetual bonds is also likely to have been motivated by the need of the largest Chinese banks to meet total loss absorbing capacity (TLAC) requirements in the next few years. AT1 capital has increased as a share of risk weighted assets (and of total capital) over the past year, but it is not clear that smaller banks will be able to raise enough capital to handle a sharp increase in NPLs.

Recapitalisation by local governments

Local governments have a strong incentive to support local banks due their importance to local economies, and have intervened in the past (including by calling on SOEs and LGFVs). [xxiv] Furthermore, central authorities are drawing up a plan on bank recapitalisation that suggests local governments will continue to play a large role. [xxv] However, local governments and associated institutions may themselves be constrained in the current climate. Many local governments were in a tight fiscal position before COVID-19, and this year's Work Report foreshadowed an even tougher year.

The State Council gave China's local governments permission to use some of the proceeds from the sale of special purpose bonds to recapitalise some small and mid-sized banks. Local governments will reportedly be able to allocate CNY 200 billion of the CNY 3.75 trillion quota for bank recapitalisation, though this amount will likely only be suitable for targeted relief and is reportedly only to be used after other avenues for

5 Preference shares give investors a fixed dividend that is paid prior to the common shares dividend. It has characteristics of both common shares and debt which is why it does not meet Common Equity Tier 1 standards.

recapitalisation have been exhausted.[xxvi] Assuming a minimum CAR of 8 per cent, this could cover around CNY 2.5 trillion in risk weighted assets (RWA). Alternatively, CNY 200 billion could add about 0.4 percentage points to the aggregate CAR of city and rural banks (these banks had an estimated CNY 50 trillion in RWA as at March 2020).

Central authorities may also allow local governments to expand the use of special local government bonds for recapitalisation beyond the original CNY 200 billion quota. However, this may be unpalatable to central authorities as recapitalisation is less likely to stimulate short-term economic activity.

Forcing mergers

Authorities are reportedly pushing smaller banks to merge together and issue new equity.[xxvii] There have been two recent examples: Wuxi RCB and Jiangyin RCB will reportedly merge with one other (as yet unnamed) local bank, and five city commercial banks in Shanxi will reportedly merge to become Shanxi Bank.[xxviii] How they deal with legacy NPLs is unclear, but one China Office contact suggests that investors will receive a package deal that includes acquiring NPLs from the merging banks and shares from the new institution.[xxix]

Another approach is to have bigger banks that are better capitalised absorb smaller banks. A senior Chinese banking regulator said in June that future bank interventions will likely involve mergers with bigger institutions.[xxx] The bigger bank could purchase a large equity stake or absorb the smaller bank.[6] However, this could be difficult unless regulators make changes or delay GSIB requirements. The biggest four Chinese banks are GSIBs and are required to meet total loss absorbing capacity (TLAC) requirements, which will increase their effective capital requirements to 19.5-20 per cent of RWA by 2025 and 21.5-22 per cent by 2028. [xxxi] These four banks are still well short of these requirements, and may need to raise around CNY 4 trillion in new capital.[xxxii] Furthermore, these banks are being forced to forsake profits due to the pandemic, which will make it harder to increase capital internally from profits.

Indeed, large banks have played a minimal role in terms of equity injections in the public interventions so far (though they have been heavily leant on in terms of administering the resolutions). In practice, regulators meet a lot of resistance to acquisitions. It is difficult to force a private bank to merge and big banks are usually wary of private banks. Local governments also strongly resist losing regional SOE banks to mergers as they do not want to lose the valuable local banking license.[xxxiii]

Bailers out of last resort

While local governments may be constrained, the central government is not. Explicit general government debt in 2018 (local plus central government) was around 50 per cent of GDP. This is considerably lower than in many other advanced economies, suggesting significant room to expand the central government deficit. Ultimately, the PBC has substantial scope to bail out banks by using its balance sheet, with some economists believing this a likely outcome.[xxxiv] Indeed, the PBC and the MoF have had a hand in bailouts since 2019. However, heavily leaning on the PBC and the central authority's balance sheets comes with its own set of risks – including moral hazard, increased inflation and downward pressure on the RMB.

Recent examples of small bank recapitalisations

Restructures at a number of smaller banks have made the news since May 2019, with these banks facing difficulty before the COVID-19 epidemic. The banks that made the news were (in chronological order) Baoshang Bank, Bank of Jinzhou, Hengfeng Bank and Bank of Gansu.[7, 8, 9,xxxv] While these banks are small, they are large relative to their home province which makes it difficult for provincial governments to quietly deal with them (Graph 5). A range of measures discussed above were employed in these resolutions. Details

6 The latter may consume more capital from the four biggest Chinese banks that are GSIBs as those new assets brought into the big bank would also have to meet the GSIB requirements.

7 Bank of Gansu's issues were not related to the epidemic, despite news of its bailout breaking during the epidemic.

8 Bank of Harbin also made the news in late 2019, but the change in ownership appeared to be primarily related to issues with the owners. However, net profit declined by almost 40 per cent in 2019 largely because of higher loan impairment charges.

9 Numerous other small banks that missed annual reports in 2018 did not otherwise make the news. One exception was Henan Yichuan Rural Commercial Bank that experienced a bank run but subsequently reopened and is operating normally. Chengdu RCB and Bank of Jilin's are two other big banks (relative to home province) with delayed reports, but these delays appear to be related to corruption investigations and do not appear to have resulted in large capital injections.

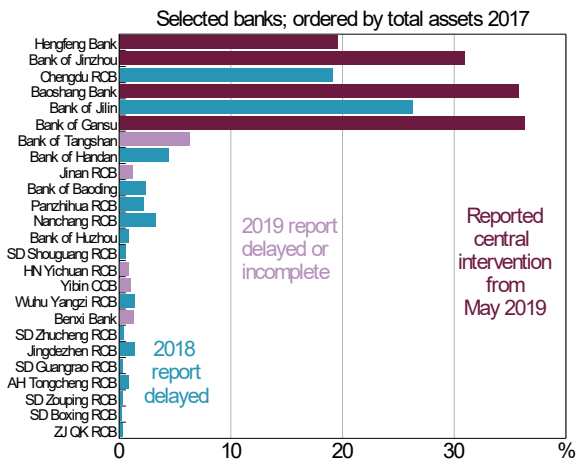
and timelines of these bank resolutions are not entirely clear and some actions are ongoing, but Table 1 outlines details obtained from media reporting.

Table 1: Recent Examples of Small Bank Recapitalisation

Baoshang Bank	• Government takeover in May 2019. • Healthy parts of the bank transferred to Mengsheng Bank (newly created) and Huishang Bank (one of Baoshang's shareholders). • Equity of original shareholders liquidated and Baoshang declared bankrupt in August 2020. Large unsecured creditors incurred some losses. • Source of the largest equity injections in new bank unclear but largest shareholders include the PBC (through wholly owned subsidiary Deposit Insurance Fund Management) and local LGFVs and SOEs. • China Construction Bank (involved in Baoshang's administration) also has a small share in new bank.[xxxvi] • The PBC supported the restructure with liquidity through its standing lending facility (SLF).[xxxvii]
Bank of Jinzhou	• Liquidity strains appeared to trigger rescue in mid 2019. • CNY 12.1 billion in capital from an SPV controlled by the PBC (but owned by China Cinda AMC) and a LGFV set up to deal with the bank. • ICBC (involved in Bank of Jinzhou's administration), China Cinda AMC and China Great Wall AMC also involved in the bank's recapitalisation.[10,xxxviii] • Other moves to shore up its balance sheet include a CNY 21 billion asset sale to the PBC and CNY 5 billion in annual income from an asset issued by state-backed firms.[xxxix]
Hengfeng Bank	• 60 billion capital from the country's sovereign wealth fund, CNY 36 billion from a Shandong LGFV (where the bank is based) and a small amount from Singapore's UOB.[xl] • The sale of NPLs to improve its capital position.[xli]
Bank of Gansu	• Equity injections from two Gansu LGFVs and three Gansu SOEs.[xlii] These provincial government entities reportedly receive special loans from the PBC to help fund the bailout.[xliii]

Graph 5

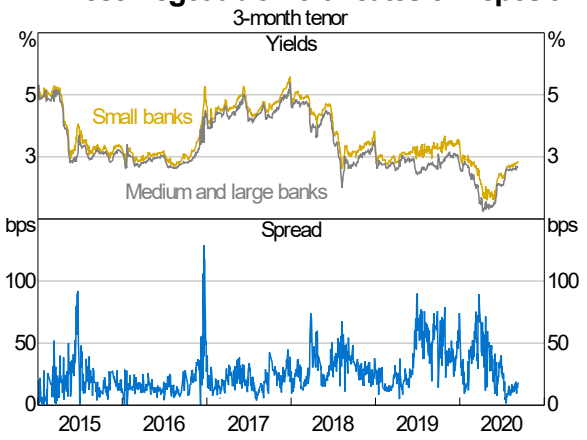
China – Bank Assets-to-Provincial GDP 2017



Sources: Bank Annual Reports; Barlay's Research; CEIC Data; Financial Times; RBA

Graph 6

Chinese Negotiable Certificates of Deposit



Options for handling liquidity stress

Liquidity issues stemming from the pandemic have so far been limited. One concern is around a run on banks that are considered to be in a weak position. In fact, there have been some bank runs, but these appear to have been sparked by rumours after officials were detained on corruption allegations. Authorities were quick

10 Cinda and Great Wall AMC's are two of the large, central, state-owned 'bad bank' AMCs.

to step in and guarantee depositors at these institutions. More broadly, the authorities implemented a deposit guarantee scheme in 2015, which could help limit the propensity for bank runs.[xliv]

The PBC has been intent on keeping liquidity conditions in the interbank market ample both with standard and new policy tools, especially in the first half of 2020. Yields on NCDs (one of the main instruments used for interbank funding) declined in the first half of the year and only began to increase again as economic conditions normalised and PBC monetary policy returned to a more neutral stance (Graph 6, above).

Liquidity issues may yet arise. If any smaller banks become insolvent, all smaller banks may find it difficult to access their most important funding source – big banks – as big banks become more wary of credit risks. [xlv]

However, in the past the PBC has effectively dealt with liquidity issues in the interbank market, and has the tools to continue doing so. For example:

- In mid 2013, the PBC tightened liquidity conditions more than markets expected, in an effort to reign in some of the riskier lending to NBFIs. This caused NCD rates to spike significantly, and likely by more than the PBC expected. To calm the market, the PBC published a note saying that there were plenty of excess reserves in the system and that it had the ability to compel larger banks to lend to smaller banks. The PBC also explained that it wanted tighter liquidity conditions but would manage any excessive liquidity shortages with various monetary policy tools including the SLF. This statement was reaffirmed with window guidance to larger banks to lend to smaller banks.[xlvi,xlvii]
- The PBC used similar tools to lower interbank spreads in late 2016, when a securities company defaulted in an informal repo market. This spilled into the formal market, and caused lending to dry up before the PBC intervened.[xlviii]
- The Baoshang takeover in mid 2019 temporarily caused the interbank market to dry up and the PBC employed some old and some new strategies. As in 2013, the PBC put pressure on large banks to maintain short-term lending. It also deployed its short-term liquidity tools, though there was more direct lending to smaller banks in this episode (the PBC mainly used its re-discount facility and the SLF).[xlix] The PBC also put in place interbank borrowing guarantees to calm the NCD market.[l]

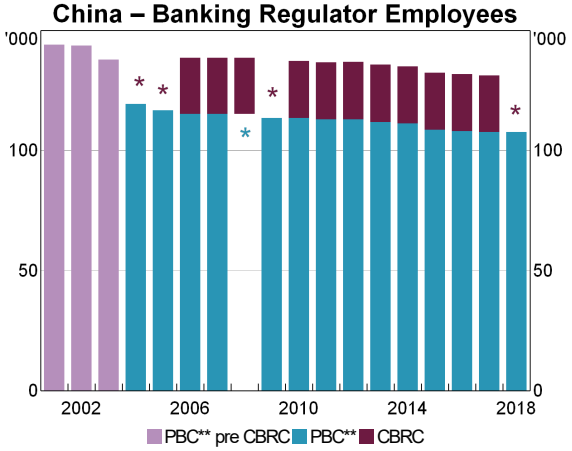
It may be more difficult for the PBC to direct liquidity if there is a run on shadow banking entities. The shadow banking system is very complex, and the authorities may not be able to quickly identify where liquidity is needed, which may cause stress to spread within the financial system. Nevertheless, it is likely the authorities will direct banks to lend to these entities (or lend directly to a shadow entity's sponsoring bank) if needed.

The cost to human capital

Regulators have proved quite adept at resolving banking issues so far, intervening in individual banks and reassuring the market without major disruptions to financial markets. However, authorities may have difficulty dealing with the banking system purely in terms of human resources. Despite the banking system increasing rapidly in size and complexity since 2001, the number of employees at the PBC and CBRC has declined over time (Graph 7).

Graph 7

China – Banking Regulator Employees



* Data unavailable
** Excluding Note Issue
Sources: PBC and CBRC Annual Reports; RBA

It has largely been the large SOE banks that have been leant on to provide management teams to take over administration of banks while they are being resolved. Large SOEs are reportedly beefing up these capabilities, but even the four bank failures from last year consumed a significant level of human resources of state owned banks.[li] Putting together bailout plans takes time and effort from regulators and administrators and can be problematic. For example, details of the Baoshang takeover were reportedly still being debated by parties involved over a year after authorities intervened.[lii]

names reacted x2 / EA and FS/ 16 September 2020

Appendix link

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i name redacted(a) (2020)
ii IMF China FSAP (2017)
iii Moody's (April 2020)
iv Liaison
v name redacted(a) (2020)
vi Liaison
vii Liaison
viii RBA (Oct 2019)
ix Liaison
x name redacted (b)(May 2020), name redacted (c) (August 2020)
xi Liaison, name redacted (d) (October 2019)
xii Liaison, Liaison
xiii names redacted x2 (e) (Dec 2019)
xiv Liaison
xv Liaison
xvi names redacted x2 (e) (Dec 2019)
xvii Moody's (April 2020), Liaison
xviii Moody's (April 2020), Liaison
xix Sina Finance (July 2020)
xx Trivium (March 2020)
xxi Liaison, Liaison
xxii name redacted(a)(2020)
xxiii CBIRC (March 2020) (Chinese)
xxiv Liaison
xxv Caixin (August 2020)
xxvi Caixin (July 2020)
xxvii Liaison
xxviii Caixin (June 2020), Sina Finance (August 2020)
xxix Liaison
xxx Reuters (June 2020)
xxxi Liaison
xxxii S&P Global (June 2019)
xxxiii Liaison
xxxiv Diary Note: Lowy Zoom Seminar (July 2020)
xxxv FS Briefing – Recent Government Interventions in Struggling Banks in China (August 2019)
xxxvi Caixin (April 2020), Caixin (August 2020)
xxxvii Caixin (August 2020)
xxxviii Caixin (March 2020), Caixin (July 2019)
xxxix WSJ (April 2020)
xl Reuters (December 2019)
xli Yicai Global (April 2020)
xlii Caixin (July 2020), Caixin (August 2020)
xliii Liaison
xliv China Daily (May 2019)
xlv Caixin (August 2020)
xlvi Close (2013)
xlvii Rhodium Group (January 2014)
xlviii Kendall and Lees (June 2017)
xlix Caixin (June 2020)
l Rhodium Group (July 2019)
li Liaison
lii Reuters (June 2020)

MONETARY POLICY TRANSMISSION IN CHINA: CHANGES TO LOAN BENCHMARKS

Summary

- China has announced that the Loan Prime Rate (LPR) will become the reference rate for all new non-mortgage lending from 20 August 2019.
- China has made changes to the manner and frequency by which it calculates the LPR.
- The 1-year rate offered by the People's Bank of China through the medium-term lending facility will have a greater influence over the interest rates offered on new lending.
- Our assessment is that the implementation of the new framework represents a slight easing of monetary policy in and of itself, as, looking forward, the PBC expects the LPR to fall to better reflect recent falls in banks' funding costs, as well as greater competition.

The change

China's State Council and the People's Bank of China (PBC) announced changes to the reference rate which will be used for setting interest rates on all new lending (except for mortgages).[1] From Tuesday 20 August 2019, the 1-year Loan Prime Rate (LPR) will replace the 1-year loan benchmark rate as the reference rate for new non-mortgage loans. The LPR will now be calculated and published on the 20th day of each month (except for holidays). The first published rate was 4.25 per cent, 10 basis points below the old loan benchmark, and 6 basis points below last week's LPR.

The changes were made at this juncture because the PBC believes that banks have sufficiently developed their independent pricing abilities, and recent economic developments have increased the urgency of improving the allocative efficiency of credit.

How it will work

Before 9am on the 20th day of the month, a panel of banks will submit quotes for the rate they offer their best customers on 1-year loans (the best customers are usually corporates). The quotes will be in multiples of 5 basis points and quoted relative to the 1-year rate offered by the PBC through the medium-term lending facility (MLF). The National Interbank Funding Centre (NIFC) will then remove the highest and lowest quotes, take a simple arithmetic average, and publish the result at 9:30am on the 20th day of the month. The PBC has also introduced a 5-year term LPR. This will not initially be a reference rate, but it is expected to become a reference rate for longer-term loans, including mortgages.

Previously, the LPR was calculated daily using a panel of 10 national banks (see below) and published each day at 11:30am. Banks on the LPR reference panel would quote the rate they offered their best corporate customers as a multiple of the benchmark lending rate (i.e. 0.95 times the benchmark lending rate) to the National Interbank Funding Centre (NIFC). After removing the highest and lowest quotes, the NIFC would calculate a weighted average of remaining quotes based on the proportion of RMB loans outstanding at the end of the previous quarter for submitting banks. As far as we and others can tell, the old LPR was not used for pricing any loans.

All new loans, except for mortgages, will need to be priced relative to the LPR from 20th August. Existing loans and all mortgages will keep current arrangements (where they are priced as multiples of the benchmark lending rate – i.e. 1.05 times the benchmark rate). To ensure banks use the LPR for loan pricing, the PBC will include the use of the LPR in loan pricing in the macro-prudential assessment of banks (MPA). The PBC will also include in the MPA the extent to which banks have been competing for lending through the interest rates they offer.

The panel

The panel of banks used to form the LPR has been expanded from 10 to 18 banks. These banks were chosen because of the extent of their lending activity, their loan pricing frameworks, and many of the smaller banks were included because of the extent of their micro and small enterprise (MSE) lending activity. The list is expected to expand in the future.

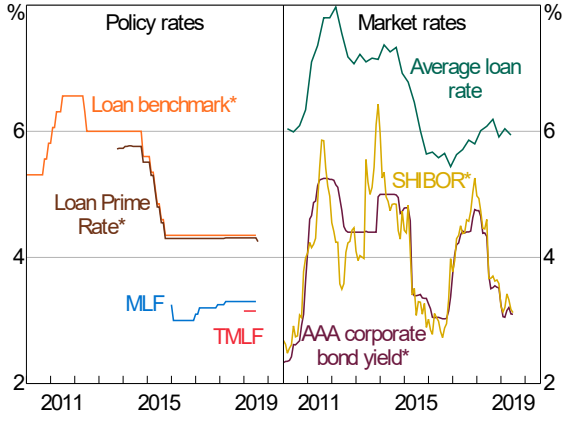
1 The PBC foreshadowed that an announcement on mortgage pricing would be made within days.

National Banks (original 10)	City Commercial Banks
Industrial and Commercial Bank of China (ICBC)	Bank of Xi'an
China Construction Bank (CBC)	Bank of Taizhou
Bank of China (BOC)	**Rural Commercial Banks**
Agricultural Bank of China (ABC)	Shanghai Rural Commercial Bank
Bank of Communications (BCOMM)	Shunde Rural Commercial Bank, Guangdong
China Merchants Bank	**Foreign-owned Banks**
Shanghai Pudong Development Bank	Standard Chartered Bank (China)
Industrial Bank	Citi Bank (China)
CITIC Bank	**Private Banks**
China Minsheng Bank	WeBank (Tencent)
	MYBank (Alibaba/Ant Financial)

Reasons for the change

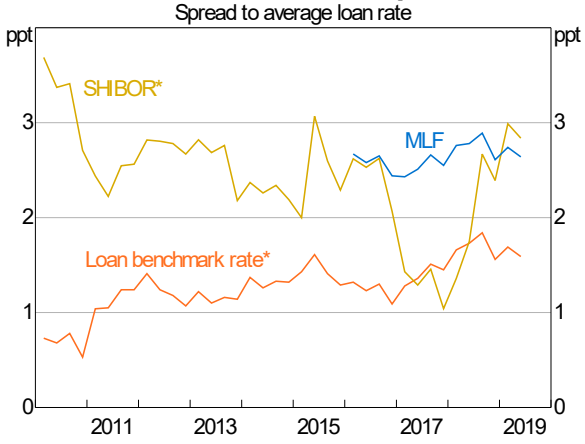
The PBC was concerned that banks had been coordinating on an implicit floor on loan rates that was a multiple of the benchmark lending rate (thought to be 0.9 times the benchmark lending rate). This meant that as market rates and bank funding costs declined, these lower rates were not being transmitted to the real economy because loan pricing was too closely linked to the benchmark lending rate (Graphs 1 and 2). In implementing these changes the PBC wants to break this implicit rate floor, thereby improving the efficiency of interest rate transmission and increase the competitiveness of the loan market, particularly for MSEs.

Graph 1
China – Interest Rates



* One year
Sources: CEIC Data; RBA

Graph 2
China – Interest Rate Spreads
Spread to average loan rate



* One year
Sources: CEIC Data; RBA

The PBC and State Council have been reluctant to lower benchmark rates of late to reduce borrowing costs. One reason for this is that a reduction in the benchmark interest rate would also lower mortgage rates and risk heating up the housing market. The exclusion of mortgage loans from these changes will allow the PBC to use interest rates for the MLF to influence the pricing of other types of loans without affecting mortgage rates. Another reason for the PBC's hesitation to lower benchmark rates is that the authorities have, for some time and a range of reasons, tried to take pressure off the RMB to depreciate much further, for which a cut in benchmark interest rates would have been counterproductive. The PBC has said that it does not expect these reforms to have much of an impact on the RMB.

Impact

While the new framework will allow future changes to the MLF to flow directly through to non-mortgage loan rates, it is also seen by analysts as a slight easing measure in and of itself. The expectation is that pricing prime corporate loans relative to the 1-year MLF rate will gradually reduce the price of such loans because the 1-year MLF rate is currently 105 basis points below the 1-year benchmark lending rate. As such, the LPR will decline somewhat, partly because of the new reference (to better reflect banks' funding costs) and partly due to expected greater competition (in particular removing the ability of banks to coordinate a floor on loan rates).

Although the PBC wants this premium to fall, that fall may be limited if banks feel that risks on corporate loans are elevated. Banks may also be reluctant to lower rates and increase lending if they fear another round

of deleveraging could return at some point in the future. Further, as Chinese banks, and particularly large Chinese banks, are predominantly funded by deposits, without changes to the deposit benchmark rates, there is a limit to how much lower interbank rates can actually influence loan pricing.

The PBC has acknowledged that the effect of the reform on banks' spreads and earnings in the near-term is difficult to quantify, but in the long term believes that improved loan pricing will be beneficial to banks and the broader economy.

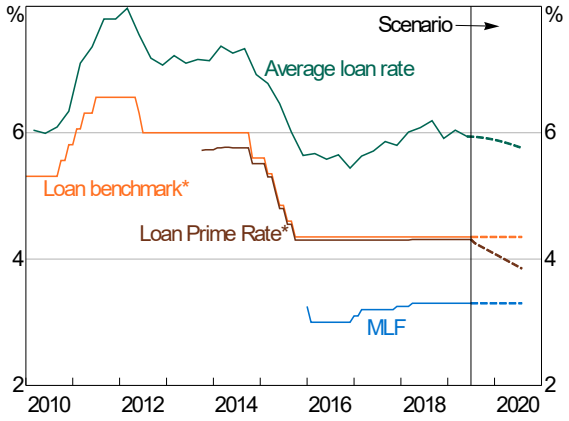
Scenario

A number of market analysts have suggested that the over the course of the next 12 months, the LPR could fall by around 40-50 basis points. A fall of this size would be consistent with the spread between the benchmark rate (which the LPR had been closely linked to) and the SHIBOR narrowing to its post-2014 average. This would also reduce the LPR to be slightly below the implicit floor on lending rates that the PBC cited among its reasons for implementing the change.

To estimate the impact of such an adjustment in the LPR over the next year, we evaluate how this change would flow through to the average non-mortgage lending rate, assuming the MLF one-year rate were held constant. Under the assumption that the LPR falls linearly to 3.85 per cent by August 2020 (i.e. 50 basis points below the loan benchmark), and that these reductions flow through to the average lending rate on new non-mortgage loans, we estimate that the average interest rate on the total stock of non-mortgage loans would fall by 18 basis points to 5.76 per cent.[2] In other words, a little over a third of the fall in the LPR will flow through to the average interest rate over the next year. This effect would be greater if credit were to accelerate over the coming year.

Graph 3

China – Interest Rates



* One year

Sources: CEIC Data; RBA

Senior Representative
China Office
21 August 2019

Economist
Asian Economies Research Unit

2 Other assumptions are listed in the appendix.

Appendix: Assumptions made in quantifying impact of the change

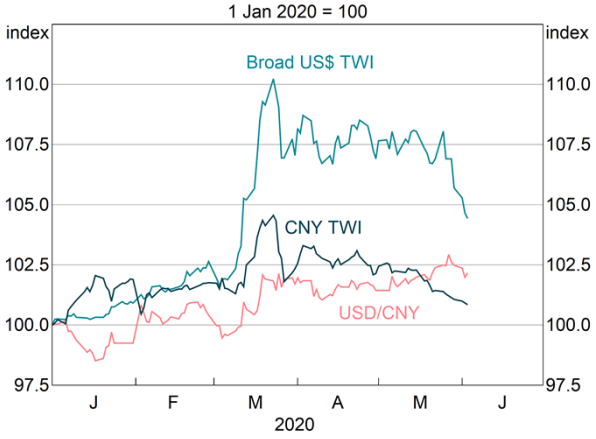
We make a number of assumptions in this calculation:

1. No changes to the MLF – these would flow through to the LPR over and above the fall we have factored in here.
2. No changes to the risk premium – i.e. we assume the spread between the LPR and the average loan rate remains the same as it now.
3. The stock of each category of credit grows at its average monthly rate of the past year. We ignore medium-long term household credit for consumer purchases as these are predominantly mortgage loans. We also ignore bill financing, loan write-offs and other smaller categories of credit published by the PBC. If the rate of credit growth were to faster than assumed then the flow though to average lending rates would be higher than our estimate. Alternatively if credit growth continues to slow then the flow through to average interest rates will be less than calculated above.
4. Each month $1/12^{th}$ of the stock of short-term credit rolls off (i.e. the average duration of short-term credit is one year) and $1/60^{th}$ of the stock of medium-long term credit rolls off (i.e. the average duration of medium-long term credit is five years).
5. Changes in the LPR flow directly through to the interest rate charged on new non-mortgage credit.

ID Chatter: RMB stability during COVID-19: managed or market-based?

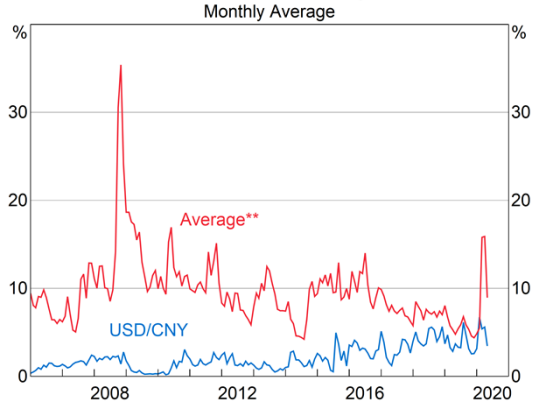
The RMB has been relatively stable compared with most other currencies since the start of the year. This has occurred despite increased uncertainty about the economic effects of COVID-19, which led to heightened volatility in a number of financial markets, including in foreign exchange markets, and a recent re-emergence of US-China tensions. Despite these events, the RMB has depreciated by only 2 per cent against the US dollar, and has been little changed on a TWI basis (Graph 1). Volatility in the currency has also been relatively muted compared to other currencies (Graph 2).

Graph 1
US Dollar and Chinese RMB
1 Jan 2020 = 100



Sources: Bloomberg; RBA

Graph 2
Realised Volatility*
Monthly Average

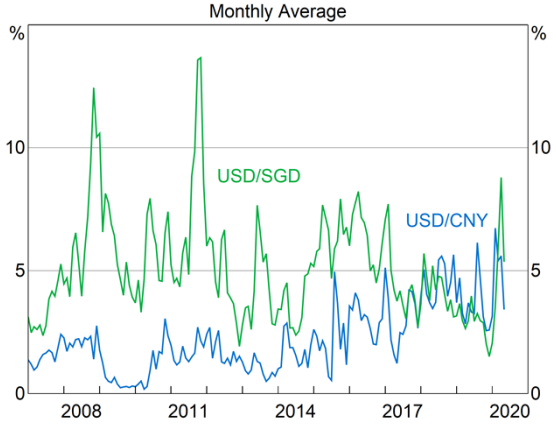


* Rolling standard deviation of log changes in spot rate
** Average of JPY, EUR, AUD, GBP and CAD against USD
Source: Bloomberg

In this chatter, we explore the RMB's relative stability during the COVID-19 episode. Recent stability is certainly related to the fact that the RMB is a managed currency, but its stability also appears to be consistent with other indicators which reflect market forces. Similarly, recent news and developments do not necessarily suggest it should have moved markedly in either direction over the crisis period.

It is worth keeping in mind that despite recent stability, RMB fluctuations have been larger than seen historically as the authorities have continued to allow the currency to be more freely traded and market-driven (Graph 3). Indeed, RMB volatility has trended higher over the past decade and is now around levels seen in the Singapore dollar, another managed currency in the Asian region. Certainly, the authorities remain cautious of a disorderly depreciation, especially after the 2015/2016 experience. In a period of economic crisis like the current one, it is not unreasonable to think the authorities will want to maintain some RMB stability to support market confidence and avoid these sorts of dynamics. But a reversion towards tightly controlling the currency to stamp out volatility, as occurred in the Asian and Global Financial Crises, has not occurred.

Graph 3
Realised Volatility*
Monthly Average

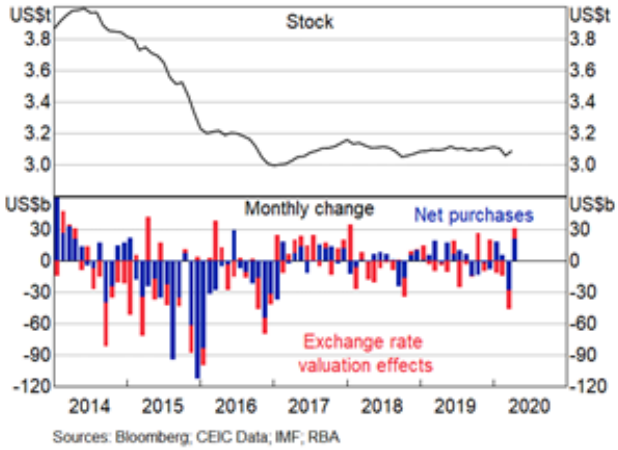


* Rolling standard deviation of log changes in spot rate
Source: Bloomberg

Indicators of RMB management during COVID-19

While the management of RMB is not always transparent, there are a couple of indicators that can shed light on what has been happening. **China's foreign currency reserves** declined by US$46 billion in March, of which it is estimated reserve sales accounted for US$28 billion (with valuation effects accounting for the remainder; Graph 4). However, this was mostly offset by a US$30 billion increase in reserves in April (of which we estimate US$9 billion was due to valuation effects). While these movements are small compared with the 2015/16 episode, they are larger than what we have seen through recent trade tensions prior to COVID-19, and suggest there has been some management of the exchange rate. We will get more colour on these flows in the coming months with final Balance of Payments data.

Graph 4
China's Foreign Currency Reserves

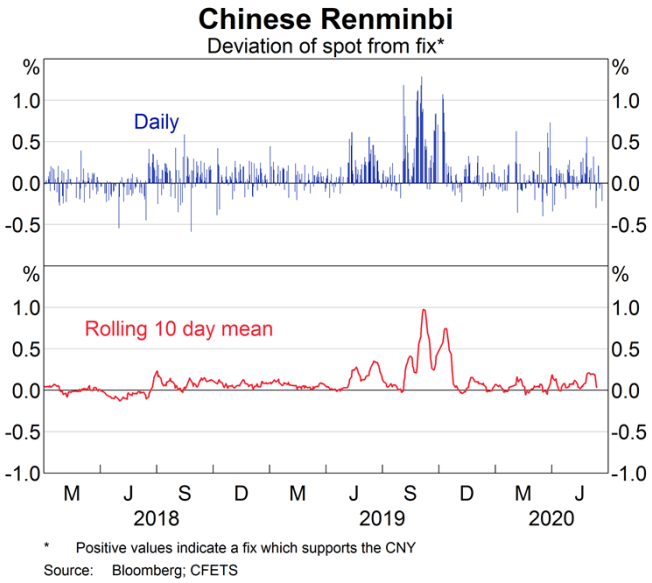


Sources: Bloomberg; CEIC Data; IMF; RBA

The RMB also appears to have been supported via the PBCs setting of the **daily fix** in recent months. The daily fix is the midpoint rate around which the onshore RMB can trade ±2 per cent each day, set by the PBC as a function of market movements, with some massaging at its own discretion (see D17/183373). A supportive bias in the daily fix has been apparent: the PBC has set the fix in a manner that worked against large CNY depreciation since March (Graph 5). It has also been set in a way to dampen general swings in the RMB (as is a stated objective of the authorities' fixing system). Similar dynamics were seen in 2015 and 2016, and again in 2019: authorities supported CNY with

their discretionary influence over the fix. Recent use of the fix has been less heavy-handed than these earlier episodes to date. MA plans to investigate this use of the fix in more detail in upcoming analytical work.

Graph 5

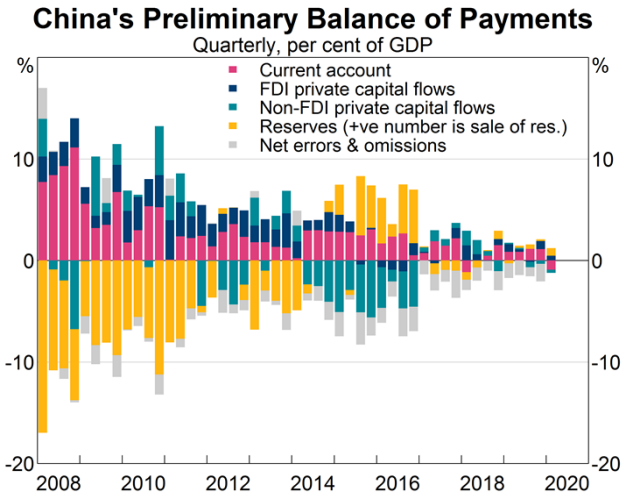


The nature of China's managed currency regime is inevitably also at play. PBC vice governor Chen Yulu recently made a rare direct comment on the level of USD/CNY, hinting that the PBC sees USD/CNY remaining roughly stable around 7 (PBC). Amid this sort of jawboning, and market participants' knowing that the authorities have a range of tools to push back against overly large RMB moves (those mentioned above but also the ability to exert pressure on state-owned financial institutions), there is a disincentive to trade the RMB too far up or down. To do so may risk losing business, licensing or market access, or being stamped out of positions that become unaffordable (as many market participants found in the 2015/16 episode amid hefty PBC intervention via offshore banks).

Are capital flows data consistent with movements in the RMB?

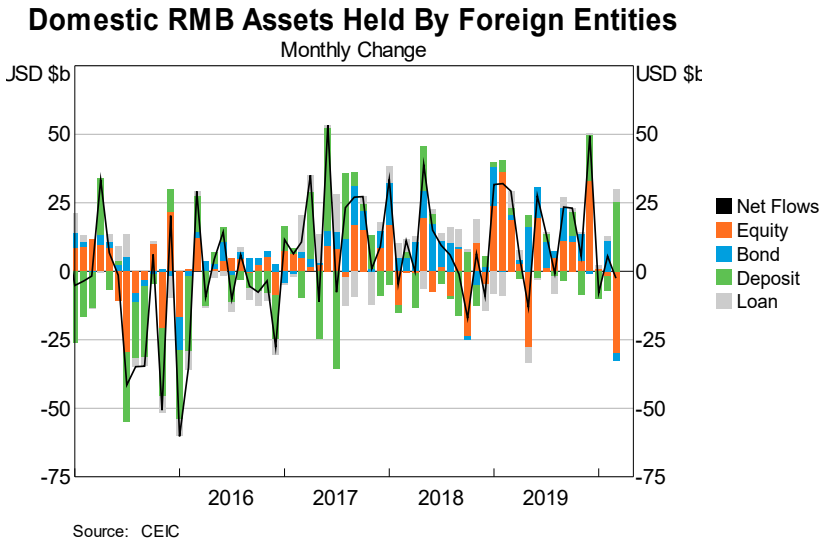
Preliminary Balance of Payments data for the March quarter show that capital flows were small, particularly relative to previous years (Graph 6). This suggests there was not particularly strong pressure on the RMB from either capital outflows or from a large current account deficit.

Graph 6



There is also little evidence of persistent capital outflows in more timely data. Portfolio outflows (including those via Stock and Bond Connect) were large in March amid heightened volatility in global financial markets (Graph 7). However, outflows reversed in April – so were unlikely to have caused persistent pressure on the RMB. It should be noted that these data need to be interpreted with caution as they account for only a small share of total capital flows. Another useful indicator is domestic RMB assets held by foreigners. Consistent with Stock and Bond Connect, they show foreign holding of equities and bonds falling in March, but they also show an offsetting increase in deposits. As a result, there was little net change in domestic RMB assets held by foreigners, which is consistent with small capital flows.

Graph 7

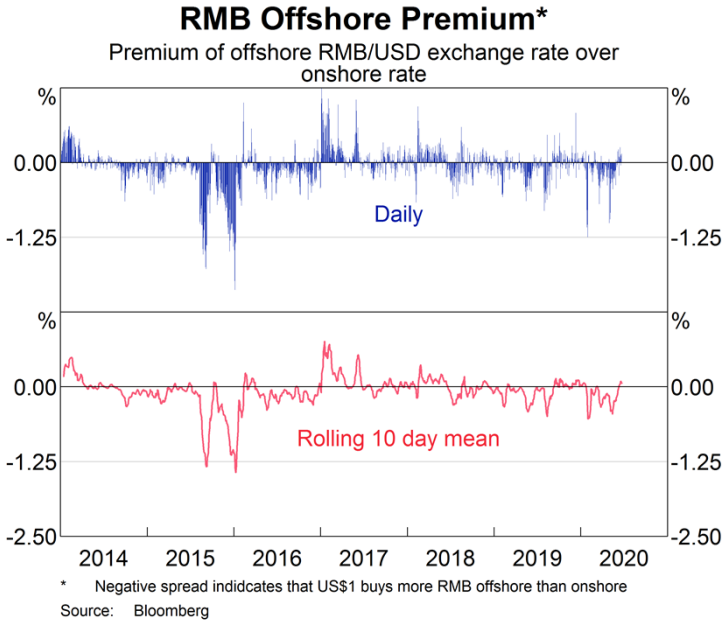


What are market expectations about the RMB telling us?

Market expectations for the RMB do not seem to have been especially skewed over this period. While the RMB offshore premium, the difference between the freely traded offshore RMB and the more restricted onshore rate, has widened slightly in recent months, the move has been relatively modest compared with to those in 2015/2016 (Graph 8). Firm conversion rates of foreign currency to RMB are in line with recent levels; a change to the degree of foreign currency 'hoarding' has not

occurred. Similarly, the market has a small net long RMB position in onshore FX forwards, that is, positioning does not suggest significant RMB depreciation expectation. Offshore RMB deposits, which tend to rise or fall alongside changing RMB expectations (Windsor 2018), have remained stable in 2020.

Graph 8



Does the flow of news and recent developments suggest the RMB should have moved more than it has?

While ongoing trade tensions with the US and recent developments in Hong Kong would be expected to weigh on the RMB, there are also numerous supporting factors:

- China's relatively successful COVID response and economic recovery.
- Chinese yields remain significantly higher than those in advanced economies, whose aggressive monetary easing has pushed rates towards zero. Chinese government bonds are trading around 2 percentage points over Treasuries – the biggest spread in almost a decade.
- Relatedly, the authorities have maintained their longstanding commitment to ongoing capital account liberalisation. In recent months, they have pledged to further shorten the negative list for foreign investment, expand the number of free trade zones and implement ongoing reforms to protect foreign intellectual property and investments. These measures increase incentives to invest in China (or, at the very least, not withdraw investments), and may support capital inflows and the RMB.
- Political reasons also feed into a desire to maintain RMB stability, with China having only been de-listed as a 'currency manipulator' by the US in January. China likely does not want to re-spark tensions with the US vis-a-vis the bilateral rate.
- The credibility of the exchange rate regime may also have helped support the currency. The size of China's reserve stockpile, history of maintaining stability and array of available tools makes a rapid market forced depreciation unlikely, which itself may prevent a build-up of the positions that could cause one.

It is not clear which of these numerous forces should dominate, and until there is a flashpoint perhaps RMB stability is warranted.

name redacted | Senior Analyst | Market Analysis
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| e: name redacted@rba.gov.au | w: www.rba.gov.au

name redacted | Senior Analyst | Market Analysis
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| e: name redacted@rba.gov.au| w: www.rba.gov.au

CHINESE GOVERNMENT BUDGET – 2021[1]

According to our preferred measure, the 2021 Chinese government budget projects a consolidated fiscal deficit of 8 per cent of GDP, which is only slightly smaller than the deficit of 8.6 per cent of GDP in 2020. This projected fiscal consolidation is less than expected, reflecting authorities' desire to safeguard the economic recovery and drive the 14th Five-Year Plan. The headline balance reported by authorities decreased from 3.7 to 3.2 per cent of GDP, but this measure has become less informative over recent years due to the rising importance of special government bonds.

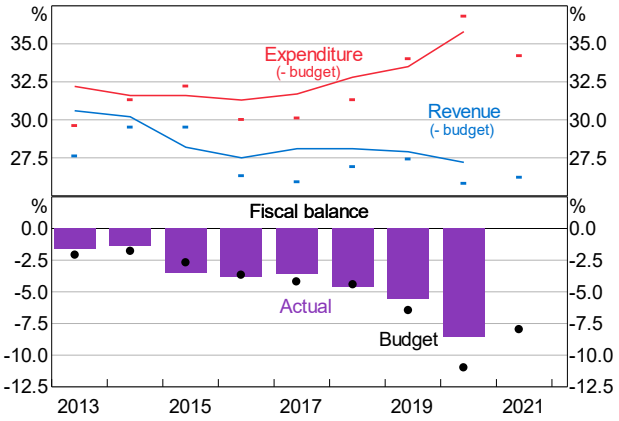
The overall stimulus that will actually be delivered by the budget will depend on the degree to which the special bonds quota for this year and unspent funds from last year will be translated into expenditure. All else equal, the budget implies less downside risk to China's economic recovery (and, by extension, steel demand) relative to our February SMP forecast.

The projected budget deficit for 2021 is larger than expected…

The budgeted **consolidated fiscal deficit** of 8 per cent of GDP for 2021 is slightly smaller than the deficit of 8.6 per cent in 2020 (Graph 1 and Table 1). The 'consolidated' balance is our preferred measure of the budget balance as it includes special government bonds, an increasingly important component of overall government finance (see the appendix or name redacted (2019) for a summary of the different definitions). The budget implies that **Chinese government debt** will increase from 47 to 54 trillion yuan, or from 47 to 49 per cent of GDP (Graph 2).[2]

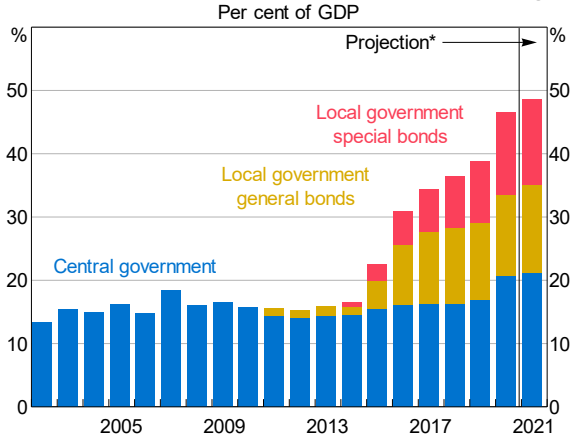
Authorities noted there are 'significant difficulties' in balancing the budget and described projected revenues and expenditures as 'quite grave' for fiscal sustainability, with revenue 'lacking momentum' and some local governments facing severe deficits. A key focus for authorities in this regard will be to clamp down on 'hidden' local government debts.

Graph 1
China – Fiscal Expenditure and Revenue
Annual as a share of GDP



* Consolidated; includes general and local government managed funds; 2021 GDP based on implied target of 9.8 per cent.
Sources: CEIC data; RBA

Graph 2
China – Government Bonds Outstanding
Per cent of GDP



* Figures for 2021 assume nominal GDP level implicit in budget documents (growth of 9.8 per cent)
Sources: CEIC Data; MoF; RBA

The projection for the **headline deficit**, the official measure of the general government balance, decreased to 3.2 per cent of GDP in 2021 (from 3.7 in 2020). This measure is less informative because it doesn't include special government bonds and because of higher withdrawals from budget stabilization funds over recent years (Graph 3). The projection for the **underlying deficit**, which does not include special bonds but abstracts from injections and withdrawals from government stabilisation funds, decreased to 4.7 per cent of GDP (from 6.2 per cent in 2020).

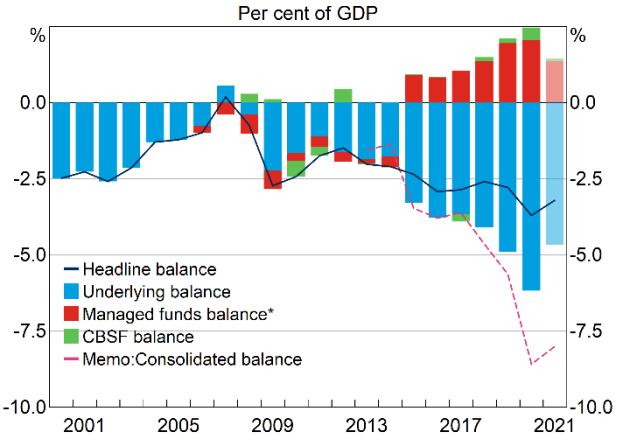
1 The budget accompanies the national People's congress' Work Report (forthcoming; Beijing Office)
2 Authorities' stated debt limit for 2021 will be 57 trillion yuan.

The special bond quota for 2021 was lower than last year but stronger than expected by most analysts

The local government **special bond quota** was lowered from 3.75 trillion yuan in 2020 to 3.65 trillion yuan in 2021, or from 3.7 to 3.3 per cent of GDP (Graph 4). Nevertheless, the special bond quota was larger than expected by commentators and contacts in liaison. Authorities' reasoning for maintaining a high quota was to minimise financial risks related to local government debts. Authorities also noted the large amount of unspent funds from special bonds issued in 2020. They anticipate these funds to increase expenditure on top of the new special bond issuance (we estimate these unused funds to be around 2.5 per cent of GDP). Authorities will relax regulations around the issuance and use of special bonds, but, it is not guaranteed that local governments will be able to find appropriate projects and translate funds into investment given the significant challenges faced last year. [3] Regarding the timing of stimulus, contacts from Beijing office liaison expect that the leftover funds from last year will be used early this year and the new quota likely in the second half, when some contacts are concerned that the economic recovery could slow.

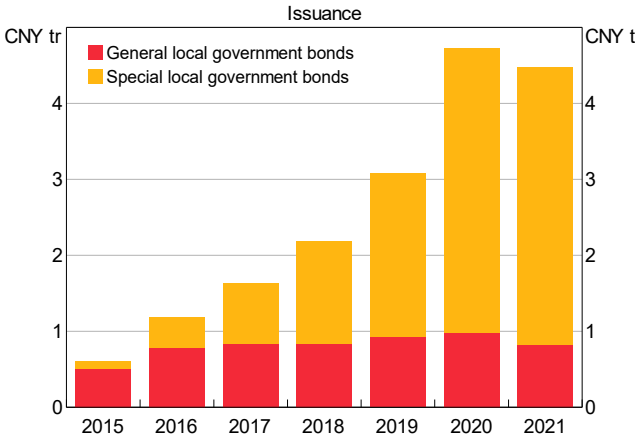
The main stated priority for **infrastructure investment** will be to accelerate works that enable transport of industrial goods into rural areas and agricultural products into cities, which would suggest a focus on roads and bridges. In August, the transport ministry announced plans to double the length of China's high-speed railway networks to 70,000 km within 15 years (now under construction), which will make China's high speed rail network roughly five times longer than that in the rest of the world combined.[4] For special bond issuance, the Ministry of Finance suggested that they will prioritise support for ongoing projects, implying a continued high share of infrastructure and construction-related activity (see December monthly note).

Graph 3
China – General Government Budget*



* Values for 2021 assume nominal GDP growth of 9.8 per cent
** Includes unused government-managed funds and repayments of principal on loans
Sources: CEIC Data; MoF; RBA

Graph 4
China – Local Government Bond Quotas*



* Excluding debt swap quota
Sources: MoF; RBA

Fiscal priorities for 2021 will be focused on high-technology, in line with the 14th Five Year Plan

New expenditure priorities will align with the 14th Five-Year Plan, with a focus on science and technology. Key measures include:

- Significantly increasing central government research expenditure and funding research institutes
- extending full VAT refunds for the advanced manufacturing sector, insurance subsidies for high-technology industries, and subsidies for high-tech micro and small enterprises
- encouraging investment in as integrated circuits, new materials, and next-generation IT,
- raising the tax deductibility of research and development costs for manufacturing enterprises to 100 per cent (from 75 per cent),
- actively encouraging banks to support tech innovation
- Authorities will work to incentivize **consumer spending** by reducing inequality, expanding the role of the social insurance system (the social safety net), public education, elderly care, healthcare, and childcare,

4 This includes high-speed railway lines announced or under construction, defined as rail transport at speeds of at least 200 km/h.

which they hope be conducive to people 'being less worried about spending money and more willing to increase consumption'.

The deficit was much lower than expected in 2020

The consolidated Chinese government deficit in 2020 was 8.6 per cent of GDP, significantly below the projection of 11 per cent in last year's budget. The shortfall mostly reflected sluggish usage of special government bond funds due to a lack of shovel-ready projects and projects having insufficient groundwork. General central and state governments narrowly met their underlying deficit targets.

Economist
Asian Economies Research
Economic Analysis Department
16 March 2021

Table 1: Main Budget Aggregates
Share of Nominal GDP

	2021 Budget [a]	*2020 Actual*	*2020 Budget*	2019 Actual	*2019 Budget*
Underlying revenue	17.7	18.3	18.0	19.2	19.4
Additional revenue[b]	1.5	2.6	2.6	2.4	1.6
Underlying expenditure	22.4	24.6	24.2	24.1	23.7
Additional expenditure[c]	0.0	0.1	0.1	0.1	0.1
Underlying Deficit	4.7	6.2	6.2	4.9	4.3
Headline Deficit	3.2	3.7	3.7	2.8	2.8
Consolidated Deficit	8.0	8.6	11.5	5.7	6.5

(a) Figures for 2021 assume nominal GDP level implicit in the Budget documents (growth of 9.8 per cent).
(b) Includes local government stabilisation funds remitted to the central government and contributions from the CBSF
(c) Includes contributions to the Central Budget Stabilisation Fund (CBSF)

Sources: CEIC Data; MoF; RBA

Appendix A: Budget definitions

The general government budget includes central and local government budgets. There are several measures of the general government fiscal position:

- The headline balance is comprised of 'underlying' expenditure and revenue items as well as some additional items used to ensure that the headline balance is in line with the announced target. These additional items include withdrawals from (or injections into) government-managed funds.
- The 'underlying' balance, which excludes these items, can be considered a more useful measure of the 'true' stance of fiscal policy. The underlying balance is not officially reported in budgetary documents.
- AERU also estimates a consolidated budget balance, which includes the general government budget and budget balance of central and local government-managed funds. In contrast to official calculations, this approach recognises withdrawals from the fiscal stabilisation fund and the use of leftover funds accumulated in past years as deficit financing items rather than as sources of revenue. Government proceeds from special bonds issued are also treated as a deficit financing item in the consolidated balance, rather than a revenue source. See name redacted (2019) for a more detailed description of the construction of the consolidated balance.

ID Chatter: Signs of more liberalisation of China's capital account? (10 July 2020)

The Chinese authorities have multiple, sometimes competing objectives when it comes to capital flow management. On the one hand, they have demonstrated an aversion to volatility, especially in periods of heightened risk like the Asian Financial Crisis, 2008/09 crisis or the 2015-2016 period. This preference has seen Chinese policymakers pull back on previous attempts to liberalise capital flows or the renminbi (RMB) during crisis periods.

On the other hand, Chinese policymakers have a longstanding objective to liberalise the capital account (Lien and Sunner 2019, McCowage 2018). With real economic conditions having worsened in recent months, there is an added motivation to ease restrictions on foreign investment inflows, a process which now both aligns with the authorities' long-term reform objectives and meets immediate policy goals.

In this chatter, I detail recent policy changes, speculate on why the authorities have chosen the current timing and discuss possible implications of the measures.

Recent policy changes

Measures	Affected Capital Flows
A) Foreign ownership restrictions on asset management firms removed. In principle, international asset management companies can now take full control of local asset management operations without the help of a local partner or JV. This policy was previously flagged in 2019, to take effect in 2021 (implementation was brought forward).	**Foreign direct investment (FDI) inflows***- FDI accounts for the majority of capital inflows to China at around 50-60 per cent in recent years. China has been relatively open to FDI inflows for many decades now, but it has remained restricted in sectors like financial services.
B) China's foreign investment negative list for 2020 lowered from 40 to 33 (Caixin). (This lists the sectors in which foreign investment is prohibited or requires approval.). Notably, foreign ownership caps were removed for securities companies, fund managers, futures companies and life insurers.	
C) Restrictions on foreign investment in Chinese A-shares eased. The minimum asset threshold that foreign investors must meet in order to invest in Chinese A-shares has been lowered: they must now either own US$50m or manage US$300m in assets (from US$100m and US$500m). The 'lock-up' period on A-share purchases was lowered from three years to one.	**Portfolio inflows**** - these flows account for a minority share of total inflows due to historically tight capital controls. However, they have been rising.
D) Wealth Management Connect announced (Bloomberg). This is a long-awaited pilot program that will allow HK residents to invest in mainland WMPs, and vice versa (subject to quotas). This will be the third cross-border investment system following the Stock and Bond Connect programs.	

*Flows where a foreign investor gains an ownership stake of more than 10 per cent in a company

** Cross-border investment in debt or equity securities.

Why the current timing?

The COVID-19 outbreak has likely created a new sense of urgency to promote foreign investment. Encouraging more foreign capital inflows could help the authorities achieve their aim of easing financing conditions while the risks associated with further opening measures in the current environment appear relatively benign (see details in names redacted x2, ID Chatter):

- RMB expectations are stable. This is in contrast to 2019 when the RMB was expected to depreciate amid trade tensions with the US.
- Sentiment towards Chinese assets is positive. This reflects China's relatively successful virus response to date and signs that economic activity is improving.
- Capital flows remain balanced.

With little reason to expect 'excessive' hot money flows or RMB volatility from further opening, the environment may be ripe for the authorities to push on with (controlled) capital account liberalisation.

Opening up also provides an opportunity to further develop the financial system. For instance, the PBC has noted that opening up the asset management sector will allow Chinese firms to learn from the experiences of foreign firms in this area, which can in turn improve and develop China's asset management sector (see PBC Financial Stability Review). The hit to growth associated with the COVID-19 crisis may have now compelled serious commitment to reform and opening in the pursuit of these development benefits (see China Dashboard 2020).

Political economy aspects are also likely at play. The recent changes go some way towards meeting China's Phase One trade deal commitments as well as broader demands around better access to China's markets. The current environment also represents a 'strategic opportunity' for China to develop and promote its financial markets, expand its global financial influence and encourage RMB usage, as the rest of the world (especially the US) deals with the COVID-19 crisis. Indeed, a former chairman of China's securities regulator recently noted that the development of capital markets is, in the Party's view, indicative of a nation's economic power.

Implications of easing measures

- All else equal, these measures *should* increase both portfolio and foreign direct investment in China, across a wider range of sectors and by a greater range of foreign investors. However, this could also lead to increased volatility as well as potential outflows (for instance, as foreigners repatriate returns or sell investments).
    - Portfolio inflows have been resilient in recent months (see infographs below) and there are signs that inbound FDI is already picking up as foreign firms take advantage of looser foreign ownership limits (Rhodium 2020). Notably, commentary suggests there is somewhat of a 'frenzy' taking place among international asset management firms to set up on the mainland, hoping to service China's fast-growing domestic asset management market (FT).
- Assuming more flexible capital flows, the authorities may need to accept greater RMB volatility. For example, sharp increases in Chinese equity prices and associated foreign inflows this week were associated with some larger-than-usual movements in the RMB. Instances like this could become more frequent.

- Financial conditions in other economies could become more sensitive to China's monetary policy and financial conditions, and vice versa, via capital flow fluctuations as expected relative returns on securities change. We could see more synchronisation in Chinese and ROTW asset prices – which historically has been low.
- Capital account liberalisation can be associated with financial stability risks, especially given China's domestic financial sector and regulatory system is not yet fully matured.

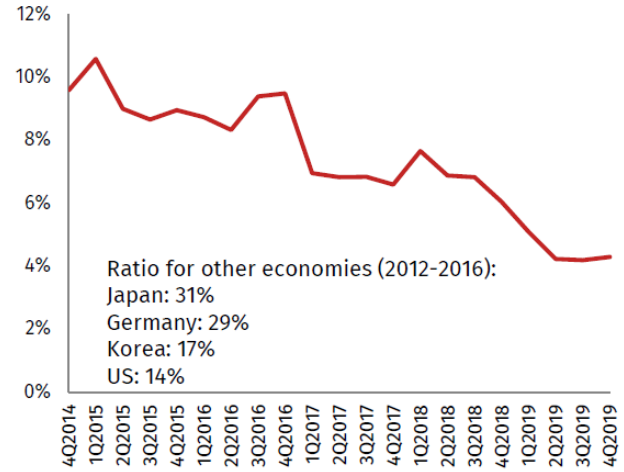
It is difficult to know what impact easing measures will have in practice, if any

The authorities have committed to capital account liberalization, in principle, for many years now, but this has not translated to concrete policy changes or a meaningful pick-up in cross-border capital flows relative to GDP (Graph 1). The recent measures appear to be concrete steps towards further liberalization, but a healthy degree of skepticism as to whether they will meaningfully impact China's openness to foreign investment is warranted. Their true impact will become apparent in the coming months when we have access to more capital flows data.

Graph 1

Primary Indicator: External Financial Liberalization

Gross sum of cross-border investment flows under China's financial account (excluding reserves) as a share of GDP, year to date, percent



Source State Administration of Foreign Exchange. National Bureau of Statistics.

Other factors may lessen the impact of these policies. Many sectors opening to foreign investment are dominated by a handful of established local players, which could make it difficult for global firms to gain market share. Political pressure for Western firms to bring activities 'back home' and redirect investment away from China could also bite, although there are few signs of this to date. Even amid a relaxed regulatory environment, practical and operational considerations still deter many foreign investors (Schipke et al 2019).

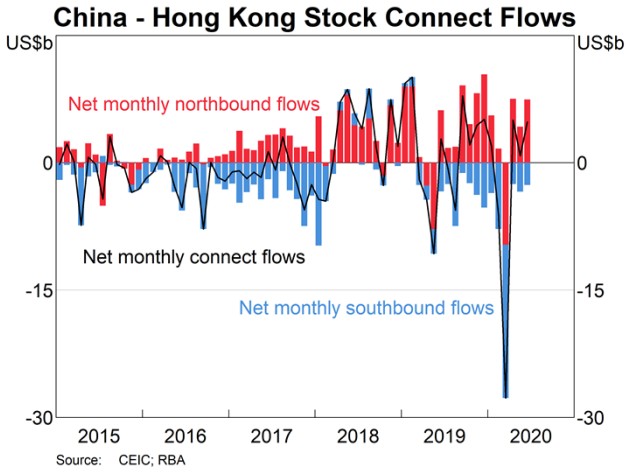
And recent measures do not signal that a fully convertible capital account is imminent

While foreign investor access to China's markets appears to be improving at the margin, the authorities' ultimate aim is for a managed opening alongside the retention of some control over cross-border capital. Under Xi Jinping, stability and control of resource allocation remain guiding principles of the Chinese leadership. As a result, it is unlikely that China would tolerate volatile 'hot money' capital flows, risks to

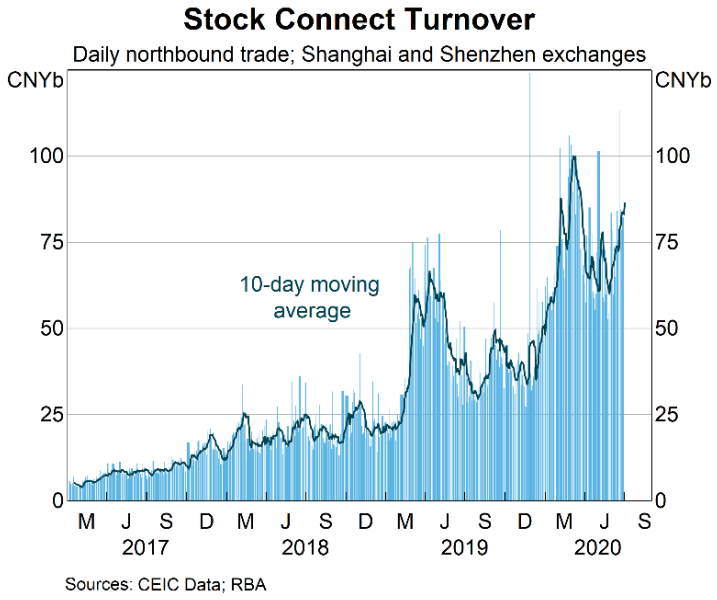
financial stability and the diminution of state control over the financial system and economy that a full opening might entail.

Infographs

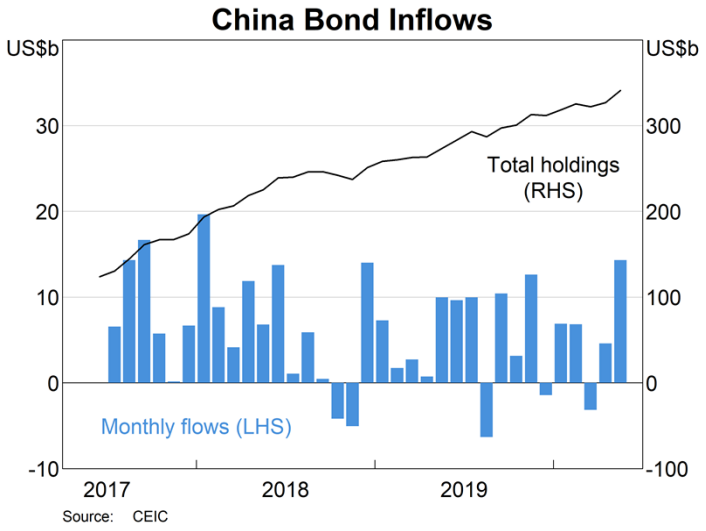
Inflows to Chinese equities via Stock Connect have proven resilient in recent months, rebounding after large outflows in March



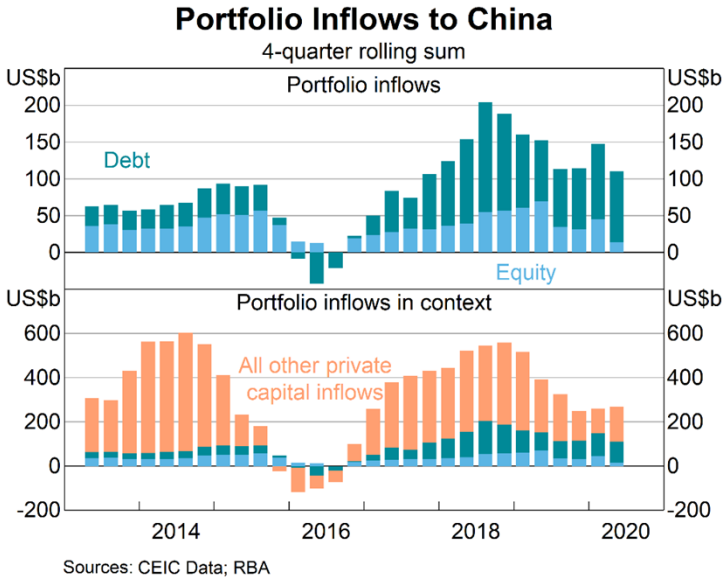
Turnover activity through Stock Connect has also risen notably (as well as through Bond Connect, not shown)



Inflows to Chinese bonds have also held steady.



Portfolio inflows to China are higher than they were in 2015 and 2016, but have stalled in recent years in level terms and as a share of GDP (latter not shown). They have accounted for a rising share of total inflows over time, but are still less than half.



name redacted | Senior Analyst | Market Analysis & International Financial Markets
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

CHINA'S CORPORATE BOND MARKET DURING COVID-19: REMARKABLY RESILIENT… BUT AT WHAT COST?[1]

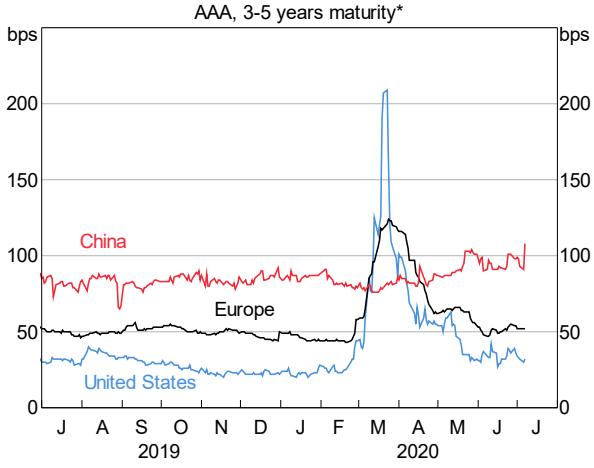
Conditions in China's onshore corporate bond market have been remarkably resilient since the onset of the COVID-19 crisis. In this note, we discuss two key factors that can explain this recent calm: unique structural features of the market, and the authorities' policy response to the current crisis. We also explore the extent to which conditions have been supportive of different types of firms, and find that the market has been much more resilient for state-owned enterprises and a handful of large, highly-rated privately-owned firms. Recent developments in this market highlight the tension authorities face between supporting short-term financial conditions and reforming the corporate bond market to be more market-driven and transparent. Specifically, some of the extraordinary measures adopted to support conditions may inhibit market development in the long-run.

Introduction

China's onshore corporate bond market has been remarkably resilient in the face of the COVID-19 crisis. Spreads have widened slightly, but less than in other major markets at the height of the crisis (Graph 1). Net issuance has hit record highs and there has been little to no pick-up in defaults, which remain low as a proportion of total issuance (Graph 2). This has occurred despite the authorities not having introduced direct backstops for this market, as seen in other economies (like the US or Eurozone), and despite China's corporate bond market having come under considerable strain in 2018 following a surge in defaults.[2]

In this note, we put forward two sets of explanations for the recent calm in the onshore corporate bond market: structural features of the market, and the authorities' policy response to the COVID-19 crisis. We conclude by analysing the extent to which supportive onshore bond market conditions have been available to all firms, state- or private-owned, alike, and how conditions may differ for firms issuing in the offshore bond market. The role of the corporate bond market in the authorities' long-term reform agenda is discussed throughout. Supplementary charts can be found in Appendix A.

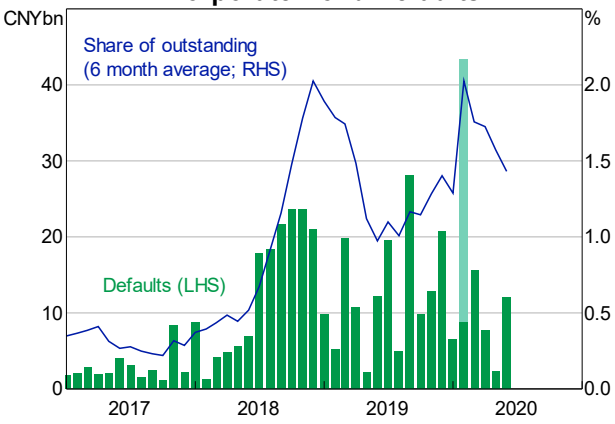
Graph 1
Corporate Bond Spreads
AAA, 3-5 years maturity*



* AAA rated bonds were used given their prevalence in China's market; while there are fewer AAA constituents in the US and Europe, movements in these spreads are comparable with those across corporate bonds of different ratings in these markets

Source: ICE Data is used with permission

Graph 2
Corporate Bond Defaults



* Light green is default by 'Founder Group', an SOE facing repayment difficulties since 2019 due to liquidity issues

Sources: RBA; WIND Information

Motivating analysis is the sheer size of China's corporate bond market, now the second largest in the world in absolute terms and equivalent to 30 per cent of China's GDP. Moreover, the market is of systemic importance in China's financial system, accounting for almost 12 per cent of total social financing (TSF), up from 4 per cent in 2009. This role in credit provision is likely to increase going forward: the State Council has stated that it will guide net corporate bond issuance in 2020 to be CNY1 trillion higher than in 2019, as they

1 We would like to thank names redacted x5 for help with this note.

2 See name redacted (2015), names redacted x2 (2015) and name redacted (2017) for previous work on China's corporate bond market.

encourage overall credit growth to be 'notably higher' than last year.[3] Relatedly, Chinese authorities have a longstanding aim to improve private sector access to credit and one avenue for this would be to further facilitate more bond issuance by privately-owned enterprises (POEs). POEs have historically struggled to compete with state-owned enterprises (SOEs) in access to bank loans and capital markets.

Corporate bonds also play a key role in the authorities' long-term reform objective to make credit allocation more market-based. In an effort to temper perceptions of a state guarantee, authorities have begun to allow some corporate bond defaults to occur; defaults across all sectors increased in 2018 and 2019 (especially among private issuers). Such default events are expected to improve credit risk pricing and market discipline, speed up market exit, facilitate economic restructuring and reduce perceptions of implicit guarantees.[4] Authorities have also taken steps to improve other aspects of the market, such as bondholder protection.[5] As discussion will show, recent developments triggered by the COVID-19 outbreak call into question whether the authorities can and will remain committed to these long-term reform goals.

Explaining sanguine conditions of recent months

1. Market structure and composition

Composition of issuers and the implicit state guarantee

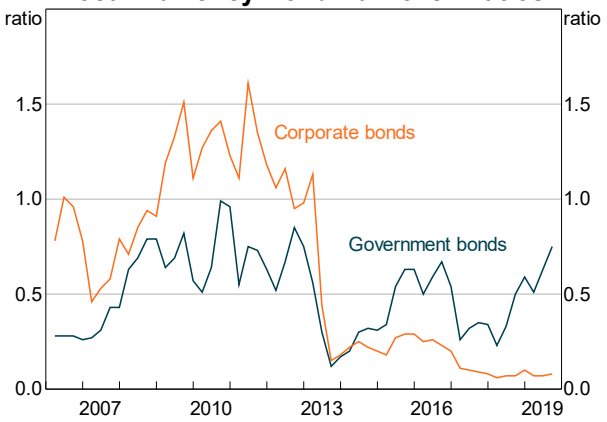
Highly-rated[6] SOEs dominate China's corporate debt issuance and account for around 90 per cent of outstanding bonds (Table 1, Appendix B). There are widespread perceptions of an implicit state guarantee on the debt of these firms due to their systemic importance in the Chinese economy.[7] Consequently, China's corporate bond market has generally been perceived as less risky than many overseas corporate bond markets, and has historically been less sensitive to sharp increases in global risk aversion. POE-issued bonds account for only 6 per cent of the market.

Investor composition and market liquidity

China's corporate bond market is a buy and hold market, helping explain this market's tendency to be less reactive to news and macroeconomic developments. Its investor base is primarily domestic commercial banks and other financial institutions, which hold over 80 per cent of corporate bonds and typically engage in buy and hold type strategies (Table 2, Appendix B). This sees a large amount of bonds bought from issuance and held until maturity, without flowing into the secondary market for trading. As a result, turnover (measured by the size of secondary market trading relative to the amount of bonds outstanding) has been particularly low in recent years, and remains notably lower than in other corporate bond markets in the Asian region (Graph 3). This sees relatively fewer transactions during periods of stress, which in turn limits outsized movements in prices.

Graph 3

Local Currency Bond Turnover Ratios



* Value of corporate bonds traded in the secondary market over the total value of outstanding corporate bonds each quarter

Sources: Asia Bonds Online; RBA

The market is also less exposed to global financial conditions as foreign investors hold less than 1 per cent of outstanding corporate bonds. This largely reflects the presence of capital controls. Other barriers to foreign

3 See State Council 2020 and Work Report 2020

4 See the PBC's 2019 Financial Stability Review.

5 Bloomberg 2020; PBC 2020.

6 Bonds rated AA and higher are considered investment grade, while bonds rated AA- and lower are non-investment grade.

7 While SOEs are generally less productive and account for less employment than POEs, they play an important role in the Chinese economy, such as through large infrastructure investment, social welfare provision and job creation. Some large POEs also receive the benefits of the implicit state guarantee if they are deemed 'too big to fail' for the local economy (IMF 2019).

investment include concerns about market illiquidity and the fact that ratings provided by local credit ratings agencies are not consistent with international standards.[8]

2. The policy response

Monetary easing

Monetary easing in response to the COVID-19 crisis by the People's Bank of China (PBC) has driven a fall in firms' financing costs and increased credit availability.[9] The PBC has cut many of its money market rates and policy rates, helping to bring about ample onshore liquidity and a fall in government bond yields since the beginning of the year (notwithstanding a recent increase in yields).[10] This has helped to alleviate financing pressures for firms, as bond funding costs have fallen with the lower risk-free rates. A range of other policies implemented by the authorities to support credit conditions, bank lending and liquidity have also contributed to ongoing supportive financial conditions for firms in China.

Regulatory forbearance

Authorities have also implemented a number of regulatory changes in the corporate bond market to promote issuance and reduce defaults, some of which were a direct response to the COVID-19 crisis and others of which were planned beforehand. For example:

- Authorities began allowing firms adversely affected by COVID-19 or involved with containing its spread to issue 'anti-epidemic bonds' in February. These bonds have streamlined regulatory approvals and lower borrowing costs, secured in part by the authorities encouraging state-owned banks to purchase these bonds. Anti-epidemic bond issuance has been sizeable: as of the end of June, anti-epidemic bonds accounted for 9 per cent of gross onshore corporate issuance.
- The National Development and Reform Commission (NDRC; a key regulator of China's corporate bond market)[11] has begun allowing issuers to sell new bonds for the purpose of refinancing – a practice that was not previously allowed in China's corporate bond market.[12] This measure addresses the cause of many of the 2018 and 2019 defaults, which were generally triggered by illiquidity (in part due to regulatory constraints) rather than corporate insolvency.
- Authorities have also implemented some policies that were announced prior to the outbreak of COVID-19. In March, the NDRC simplified the approval system for corporate bond issuance, shortening the process from 2-6 months to approximately 2 weeks. Requirements for corporates to meet prior to issuing bonds were also eased. For example, the limit on outstanding bond value relative to company asset value was removed.

State pressure on investors to offer debt relief

Authorities have also reportedly been pressuring investors to offer debt relief and provide firms with greater leeway to restructure their debt. As a result, many companies have found ways to avoid a technical default including postponing repayments, implementing bond swaps[13] and cancelling early redemptions. Many of the negotiations can be quite opaque, making it difficult to gauge the prevalence of these practices.[14] Although authorities have recently suggested they will seek to make the default process more transparent and market-based in principle, there are increasing concerns that bondholders are being pressured into bad

8 Chinese rating agencies appear to rely on implicit government guarantees when assigning corporate credit ratings, generally resulting in inflated ratings (name redacted 2014). Market distortions also contribute to this: there is some pressure on ratings agencies to inflate ratings for securities to be made eligible for purchase by banks, who face minimum ratings requirements on securities investments (Fitch 2019).

9 See Chinese Economy and Financial Markets Wrap-Up (April 2020) and Takeaways from the Early Stages of China's Recovery from COVID-19 for more details on recent monetary easing and policies to support credit conditions.

10 See Chinese Economy and Financial Markets Wrap-Up June 2020

11 China's corporate bond market has three separate regulators: the NDRC, the China Securities Regulatory Commission (CSRC) and the National Association of Financial Market Institutional Investors (NAFMII). The NDRC oversees enterprise bond issuance, which account for around 15 per cent of corporate bonds and are mainly issued by SOEs and government-backed agencies.

12 NDRC 2020.

13 These involve offering the investor a new bond paying a higher coupon that matures in 2021 in exchange for the current one.

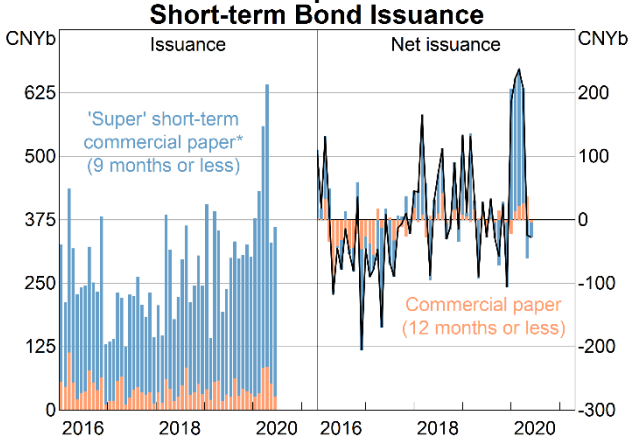
14 As of April 2020, only eight borrowers reported extending the exercise date of the embedded put option or the maturity of their bonds. However, the actual number of issuers that have postponed repayments or restructured debt is likely to be larger.

deals as authorities try to avoid a wave of defaults. With investor protection already relatively weak, moves such as this may erode the authorities' nascent efforts to improve bondholder protection and undermine investor confidence in the market.

Are these resilient conditions sustainable?

While many of the above measures have been implemented to support firms experiencing temporary liquidity difficulties as a result of the COVID-19 crisis, they could serve to conceal solvency issues faced by some firms and artificially extend their lifespan. This suggests that these measures may have merely transferred corporate bond market stress down the road. For example, refinancing efforts to date have led to a large pick-up in short-term commercial paper issuance since the beginning of the year (Graph 4). Around half of this has been by less-than-AAA-rated firms who have seen their financial, liquidity and cash flow positions deteriorate during COVID-19. With the value of short-term maturity issuance having risen sharply, especially for firms with shakier financial footing, repayment pressure may bite again over the next 6-12 months if authorities begin to reduce implicit and explicit support for the market, or the economic recovery is slower than expected. Indeed, the first default on a bond swap initiated in March occurred in mid-June – the first piece of evidence that these restructures are not solving the cash flow problems of many firms.[15]

Graph 4
Short-term Bond Issuance



* AAA+ issuers only
Sources: CEIC Data; RBA

Has the price and availability of corporate bond finance differed for SOEs compared to POEs?

In aggregate, POEs appear to have been benefiting from the easing conditions

POEs active in the corporate bond market have benefited from regulatory and monetary easing over 2020 alongside SOEs. The pick-up in spreads facing POEs has been very similar to that facing SOEs, although the price of credit they face is higher in a level sense (Graph 5). POEs have still been able to issue corporate bonds, with their share in overall issuance having held up during the crisis, although it remains at low levels (Graph 6). In addition, POEs continue to account for around three quarters of defaults, as was the case pre-COVID-19, and the share of outstanding POE bonds defaulting relative to SOEs has not increased (Graph 7).

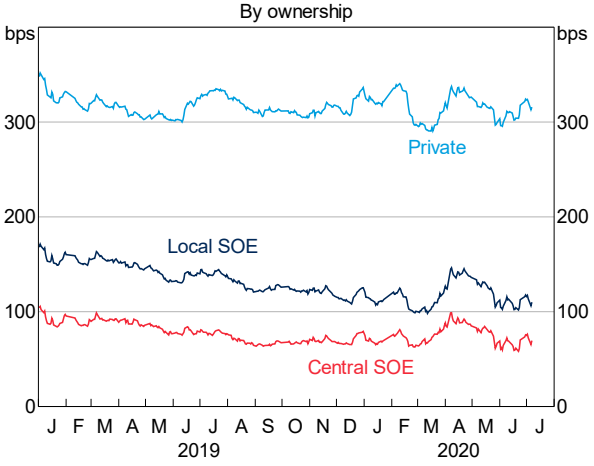
But not all POEs are created equal, and certain pockets of tightness are appearing

That being said, these dynamics do not reflect funding pressures facing China's private sector as a whole. Spreads are notably wider for low-rated 'riskier' POEs (Graph 8).[16] A rising share of issuance has been accounted for by large, AAA-rated POEs (Graph 9). This suggests it has become more difficult for lower-rated private issuers to access funding as investor risk appetite has deteriorated.

15 Caixin 2020.
16 See name redacted 2020

Graph 5
Corporate Bond Spreads*

By ownership

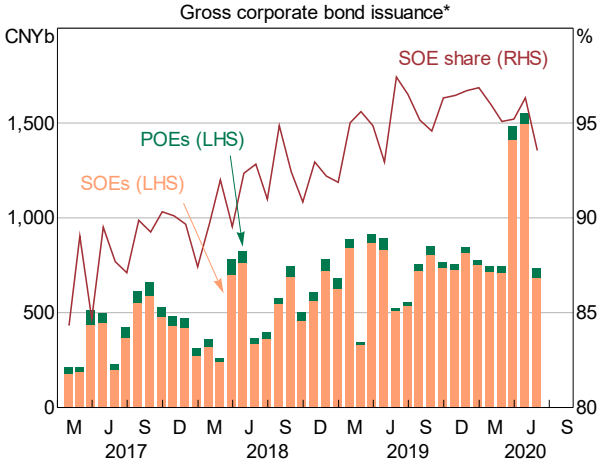


* Average spread across all maturities longer than 6 months

Sources: RBA; Wind Information

Graph 6
Issuance - SOEs vs POEs

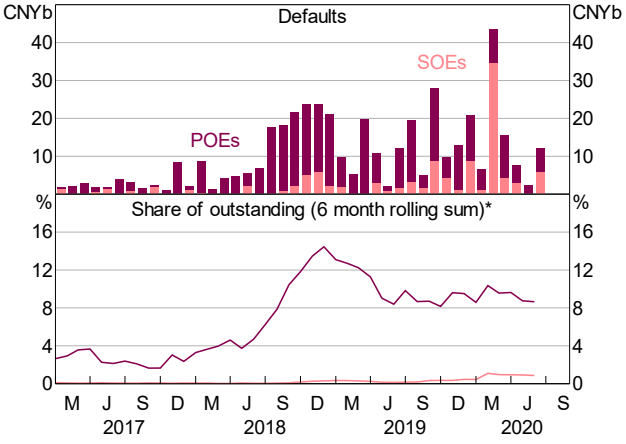
Gross corporate bond issuance*



* Enterprise bonds, corporate bonds, medium term notes, commercial paper and private placements

Source: WIND Information

Graph 7
Defaults - SOEs vs POEs

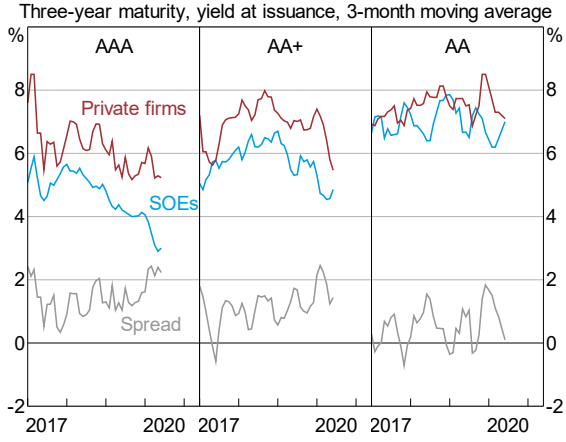


* As a share of outstanding enterprise bonds, corporate bonds, medium term notes, commercial paper and certificates of deposit; calculation assumes 90% of outstanding bonds were issued by SOEs, and the remainder was issued by POEs

Sources: RBA; WIND Information

Graph 8
Corporate Bond Yields

Three-year maturity, yield at issuance, 3-month moving average



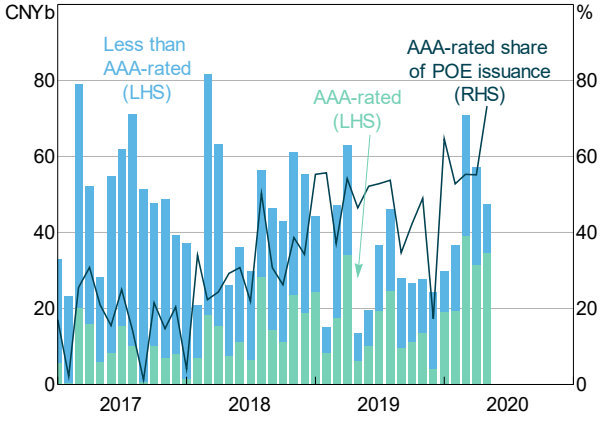
Sources: RBA; WIND Information

POEs are also more dependent on offshore debt

While the offshore corporate bond market is smaller and less systemically important than the onshore market (bonds issued offshore account for approximately 20 per cent of corporate bonds outstanding), the market is not insignificant and can provide important information about current financial conditions for some Chinese firms. For example, there are pockets of firms that have trouble accessing credit in the onshore market that are now also facing constrained access to finance offshore. This could have financial stability and activity implications. For example, the offshore market is a growing funding source for Chinese construction firms and property developers, whose

Graph 9
POE Corporate Bond Issuance

By rating



Sources: RBA; WIND Information

activity is an important contributor to overall GDP.[17] These firms, already facing significant disruption to their activity due to the effects of the COVID-19 shock, are among China's most highly leveraged firms and face large offshore bond maturities in 2020 and 2021.[18] Tighter offshore borrowing conditions could therefore strain developer financing further.

Chinese authorities also have a lower degree of influence in the offshore corporate bond market compared with onshore, suggesting that conditions in this market may be more reflective of 'true' funding conditions. However, the compositional differences between the two markets make it difficult to accurately compare onshore and offshore conditions.

Conclusion

Recent moves to support China's corporate bond market, like monetary easing and regulatory forbearance, have helped ease liquidity and financing conditions for now and in turn ensured that credit continues to flow to the real economy. However, some of the extraordinary measures adopted to facilitate this may inhibit market development in the long-run, and worsen the efficiency of credit allocation, market discipline, risk pricing and moral hazard in a market that was just beginning to mature. For instance, low defaults, despite the huge shock to China's economy and financial system, suggests the trend in allowing corporate defaults may be slowing. Reports that authorities have been pressuring bondholders to provide relief also appears to be a reversion to state involvement in credit allocation. Moreover, the benefits of recent measures have disproportionately flowed to SOEs and a handful of large, highly-rated POEs. This is in contrast to the authorities' stated wish to improve access to credit for private firms, especially smaller ones. Tighter conditions offshore could also create financing difficulties for 'riskier' POEs who are more active in tapping funds in the offshore bond market.

In the face of a huge economic crisis like that generated by the COVID-19 pandemic, authorities all around the world must balance the need to support the economy in the near-term against their longer-term objectives. Like many governments worldwide, the key priority for Chinese authorities under these circumstances appears to be keeping firms afloat and supporting employment. As a result, the COVID-19 crisis seems to be testing the authorities' commitment to their long-term reform agenda, and the move towards a more market-based bond market appears to have been postponed for now. The tension facing authorities between pushing on with reform on the one hand, and managing the economic and financial fallout from COVID-19 on the other, is evidently playing out in this specific market.

Senior Analyst
International Financial Markets/Market Analysis
International Department

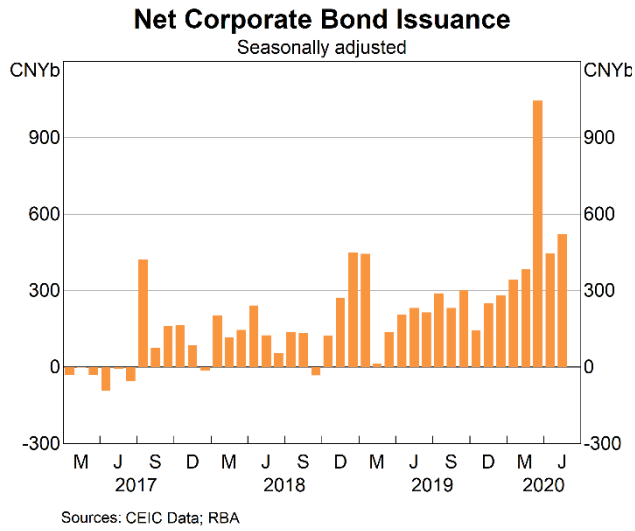
Analyst
International Financial Markets
International Department
9 July 2020

17 More than half of offshore corporate bond issuance in 2019 was by high-yield and unrated issuers, especially from property and construction sector firms.

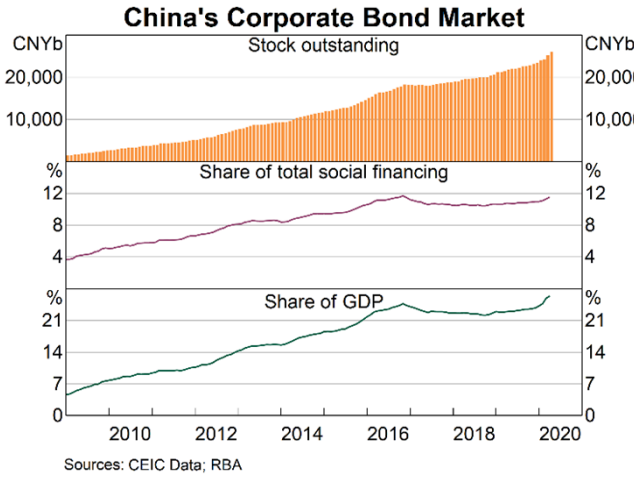
18 Kemp, Suthakar and Williams (2020).

Appendix A: Supplementary charts

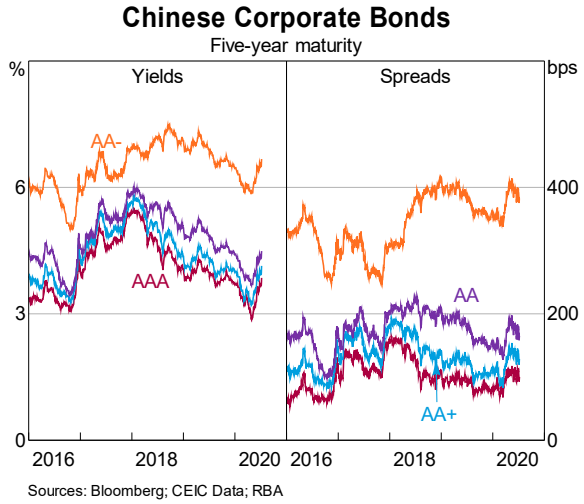
Corporate bond issuance in 2020 has been resilient.



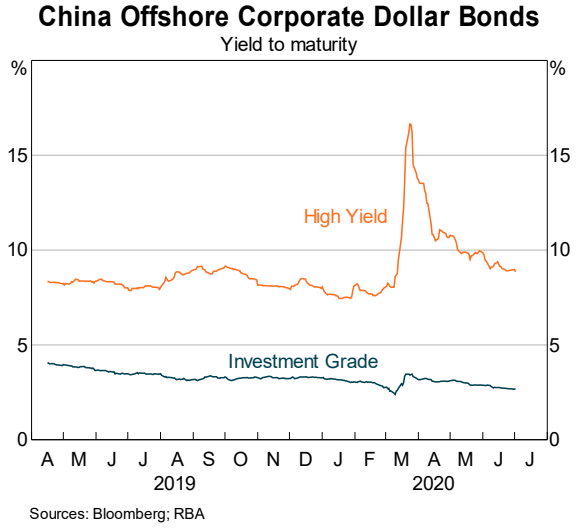
China's corporate bond market has grown in absolute size and as a share of credit to the real economy in the past ten years



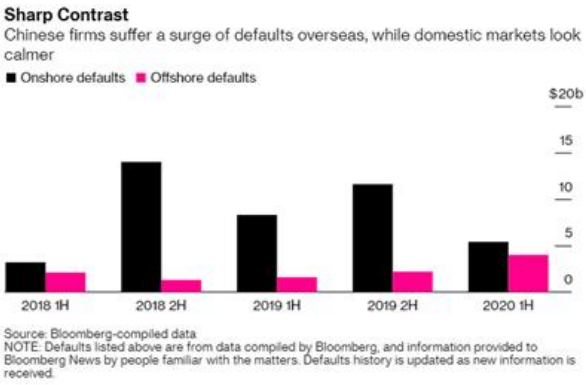
Chinese corporate bond yields and spreads have picked up slightly during the COVID-19 crisis, especially for lower-rated issuers



Conditions in the offshore corporate bond market tightened significantly in March



Defaults in the (much smaller) offshore market have picked up sharply in 2020 to date, while defaults onshore have slowed



Appendix B

Table 1: Outstanding corporate debt by rating and ownership

Excluding commercial paper

	Central SOE	Local SOE	Private	Other	Subtotal
AAA	29.7%	25.4%	2.3%	2.8%	60.2%
AA+	0.8%	17.0%	1.8%	0.5%	20.1%
AA	0.2%	16.1%	1.1%	0.3%	17.7%
AA- & lower	0.2%	1.0%	0.8%	0.1%	2.1%
Subtotal	30.9%	59.5%	5.9%	3.7%	100%

WIND Information, Gavekal Dragonomics research, RBA

Table 2: Share of outstanding bonds held by investor type

Enterprise bonds, medium-term notes and commercial paper

	Share of holdings
Wealth management products and mutual funds	62.4%
Commercial banks	19.8%
Stock exchanges	6.7%
Securities companies	5.2%
Insurance companies	2.5%
Policy banks	1.3%
Foreign investors	0.8%
Other	1.3%

Source: CEIC Data

CHINA'S ECONOMIC POLICY RESPONSE TO COVID-19[1]

This note assesses China's economic policy response to the COVID-19 shock against past instances of stimulatory policy in China. China's policy response so far has been more restrained than in 2009, but still represents the largest fiscal and monetary expansion since that time. While the initial response consisted primarily of targeted support measures, policy has gradually evolved to resemble previous stimulatory episodes which relied on infrastructure spending and credit stimulus. However, implementation has differed to previous stimulus efforts in some respects, with a greater focus on transparency, supporting micro and small enterprises and a commitment to prevent liquidity from flowing into the property sector. These differences partly reflect the different nature of the shock, but also signal that the authorities remain committed to their longer-term goal of de-risking the financial sector.

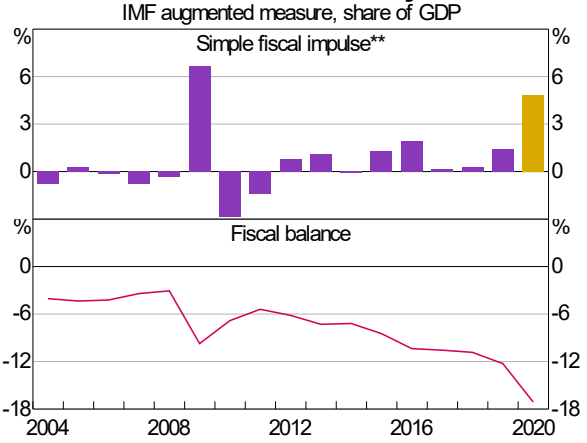
Assessment

To date, China's economic policy response to the coronavirus-induced slowdown has been more restrained than in 2009, but it still represents the largest fiscal and monetary expansion since that time. The fiscal deficit is projected to expand by 5-6 per cent in 2020, which is the largest fiscal expansion since the GFC (Graph 1). New total social financing (TSF) will reach 21 per cent of GDP, a noticeable increase from recent years but far below the growth seen following the GFC (Graph 2).[2]

Graph 1

China – Fiscal Policy*

IMF augmented measure, share of GDP

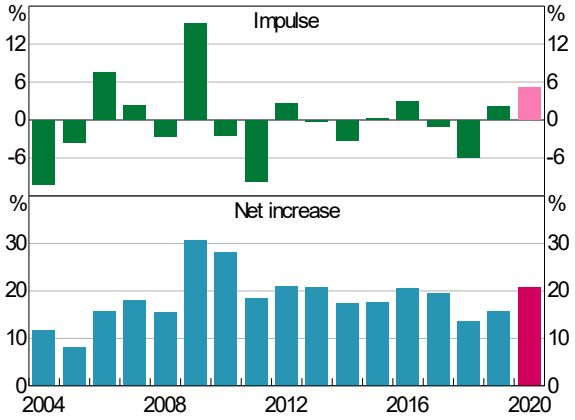


* Estimate for 2020 based on expansion in standard IMF measure
** Change in fiscal balance
Sources: CEIC Data; IMF; RBA

Graph 2

China – Total Social Financing*

Share of GDP**



* Adjusted measure, which strips out IMF estimates of funds raised by local government financing vehicles
** 2020 estimate based on comments from PBC and China's 2020 budget
Sources: CEIC Data; IMF; RBA

The policy response has evolved from consisting primarily of targeted support measures to resemble previous stimulatory episodes in China, which relied on infrastructure spending and credit expansion. However, there are some differences to the nature of the support and stimulus measures, as well as the attitude of authorities in rolling them out. In particular:

- The response recognises that the shock is different to those in previous downturns – measures to keep businesses solvent constitute a significant part of the response.
- Property stimulus is not part of the response – 'housing is for living in, not for speculation' remains the official mantra.
- Authorities' language, particularly regarding the credit expansion, is more restrained and targeted than in the past – officials have emphasised the importance of sustainability and frequently highlighted the need for new credit to flow to micro and small enterprises (MSEs).
- The stimulus makes use of more transparent funding means than in the past – local governments are raising funds through bond financing rather than opaque financing vehicles, and the TSF expansion has been driven by bank loans and bond financing rather than off-balance sheet mechanisms.[3]

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1 Thanks to name redacted for helpful discussions and putting together some of the data used in this note.
2 Changes in the way local governments raise funds for mean it is difficult to compare headline TSF for 2009 with 2020. This is explained further below on p 7.
3 Note that the data in Graphs 1 and 2 adjust for this; borrowing by local government financing vehicles has been removed from the TSF data and added to the fiscal deficit.

- Prior to the coronavirus outbreak local government officials were concerned that there were few viable infrastructure projects left available to them – as such there are questions about how productive new infrastructure stimulus will be.
- Government debt is high, which may make authorities cautious about increasing government debt levels much further.

The rest of this note will further expand on these points. Those familiar with the recent history of Chinese macroeconomic policy may wish to skip to 'The COVID shock and subsequent policy response'.

Background

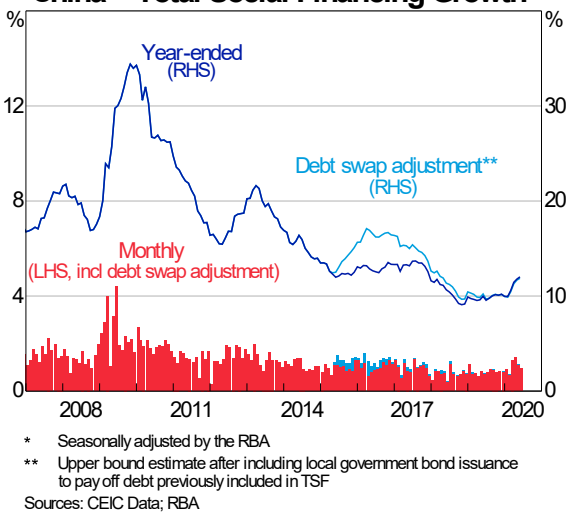
Past stimulatory episodes

The GFC triggered a fall in global demand that spilled into China via weak export growth.[4] In response, the government sought to accelerate domestic development to stimulate the economy. It unleashed a wave of infrastructure projects and encouraged property market development, while easing credit conditions to help finance these efforts. In addition to regular state policies and instruments, Chinese authorities also leant on SOEs in key sectors (particularly banking) to ensure funds were made available and used.[5]

The size of the stimulus is obvious in the rate of TSF growth and the expansion in infrastructure spending over 2009 (Graph 3 and Graph 4). The favourable credit conditions subsequently led to a significant expansion in real estate investment and a rapid rise in housing prices. During this period there was little oversight of how funds were raised and put to use. As such, while the government's policies were considered a success in restoring growth, they led to criticisms based on financial stability and public governance grounds, as well as renewed concerns about China's over-reliance on investment for growth.[6]

Graph 3

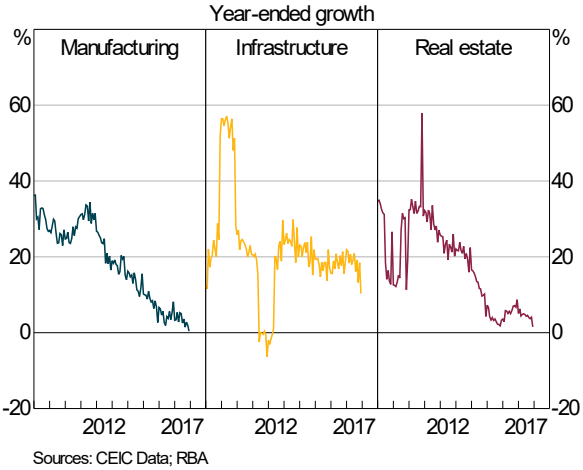
China – Total Social Financing Growth*



* Seasonally adjusted by the RBA
** Upper bound estimate after including local government bond issuance to pay off debt previously included in TSF
Sources: CEIC Data; RBA

Graph 4

China – Fixed Asset Investment



Sources: CEIC Data; RBA

Chinese authorities used similar methods to stimulate the economy following more modest slowdowns in 2012 (due to weak external demand following the Euro crisis) and 2015 (in response to weak consumer demand and deflationary pressures). Although smaller than the post-GFC stimulus, these episodes were again characterised by an acceleration in credit growth, increased infrastructure spending and a pick-up in residential real estate investment growth. Little effort was made to address the concerns associated with the GFC stimulus – local governments funded infrastructure spending using opaque methods, real estate activity and prices became detached from fundamentals, and the macro-leverage ratio continued to rise.[7]

Macroeconomic and financial stability management in recent years

Since 2016 the authorities have sought to restrain the build-up of financial system risks that were partly caused by stimulatory policies used in the past. Three closely-related policies are worth highlighting:

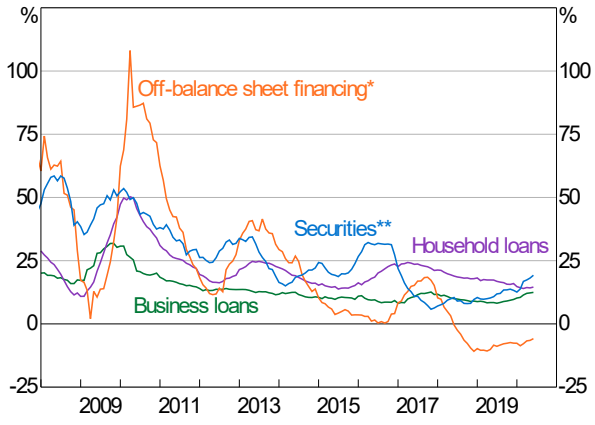
4 names redacted x2 (2011).
5 names redacted x2 (2018).
6 IMF (2010); name redacted 2011); names redacted x2 (2014); names redacted x3 (2012).
7 IMF (2013). The macro-leverage ratio is the ratio of non-financial sector debt in the economy to GDP.

1. **Improving transparency in the financial system:** Following the GFC, businesses and local governments who found it difficult to access mainstream financing channels turned to shadow lenders (who often had strong connections to mainstream lenders) to raise funds. Concerned by the opacity and risks of these funding measures and uncertain who in the system ultimately bore responsibility for the risks, the authorities embarked on a campaign to restrict access to these financing channels.[8] Policy makers have had success in bringing this about – off-balance sheet-financing included in TSF contracted over 2018 and 2019, and bank claims on non-bank financial institutions have shrunk (Graph 5 and Graph 6).[9]

Graph 5

China – Total Social Financing Growth

Year-ended

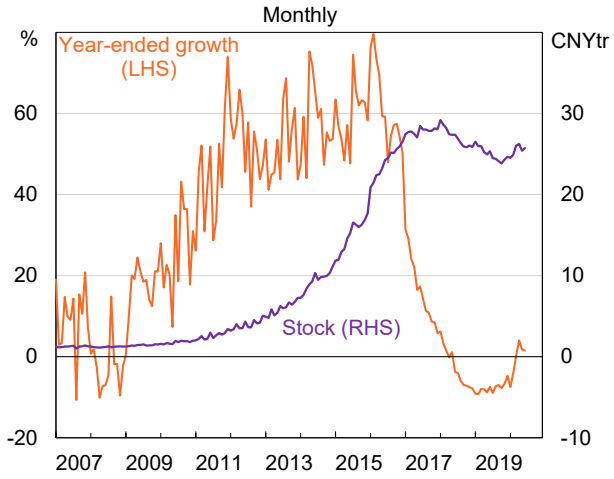


* Entrusted loans, trust loans and undiscounted bank acceptance bills
** Equity and corporate bond financing
Sources: CEIC Data; RBA

Graph 6

Banks' Claims on NBFIs

Monthly



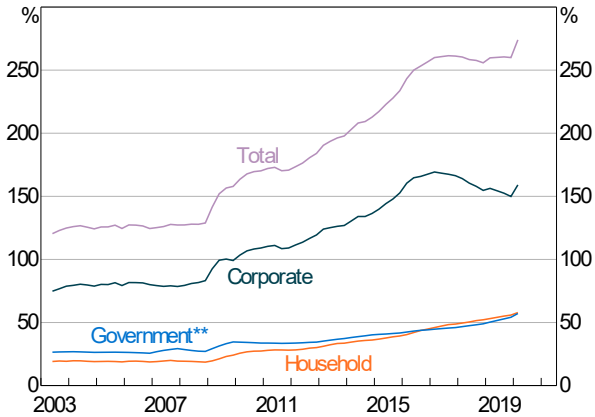
Sources: CEIC Data; RBA

2. **Stabilising macro-leverage:** Following the 2016 stimulus, authorities expressed concern about the rapid increase in debt, particularly corporate debt. The People's Bank of China (PBC) and the China Banking and Insurance Regulatory Commission (CBIRC) sought to stabilise the macro-leverage ratio by targeting credit and TSF growth that was in line with growth in nominal GDP. Policy makers were successful in reducing corporate leverage and stabilising the total level of debt in the economy between 2017 and 2019 (Graph 7).

Graph 7

China – Non-financial Sector Debt*

Per cent of nominal GDP

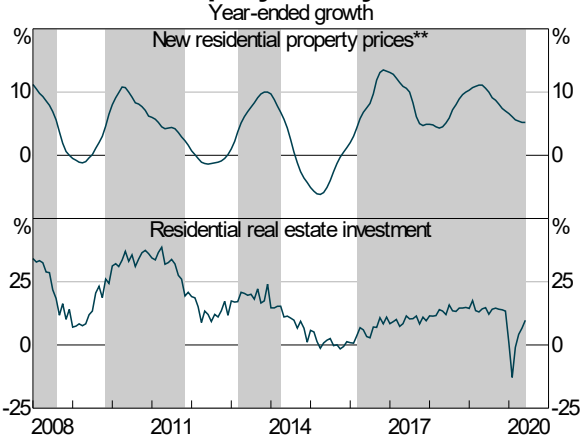


* Includes RBA estimates of shadow financing that is not included in total social financing
** Includes some borrowing by local government financing vehicles
Sources: BIS; CEIC Data; RBA

Graph 8

China – Property Activity Indicators*

Year-ended growth



* Shaded bands denote periods where central government policy has generally been tightening
** Index growth
Sources: CEIC Data; RBA

3. **Reducing property market speculation:** Perhaps the most consistent mantra by policy makers over recent years has been 'housing is for living in, not for speculation'. Past stimulatory episodes have been accompanied by substantial increases in housing prices as well as the construction of a large stock of vacant properties.

8 names redacted x3 (2018)
9 For more information see names redacted x2 (2020, forthcoming).

Authorities imposed various purchase and loan restrictions as they sought to deflate a perceived housing price bubble, but have only been partially successful in doing so (Graph 8).[10]

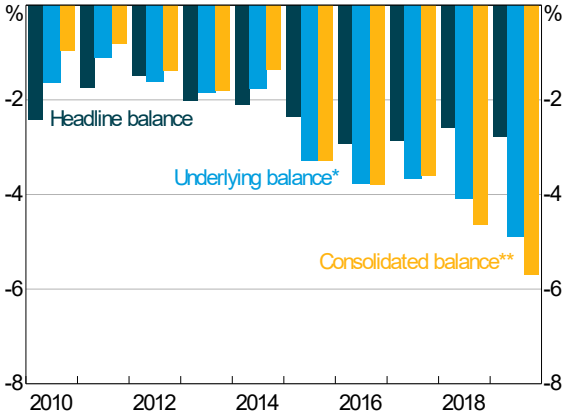
The pre-COVID environment

China was already in the middle of a period of supportive fiscal and monetary policy before the onset of COVID-19. The easing was partly in response to slower global growth, the escalation of trade tensions with the US and slower growth in domestic demand because of the de-risking campaign.[11] In 2019, the consolidated fiscal deficit expanded to 5.7 per cent of GDP, making the expansion of the deficit over 2018 and 2019 similar to that seen over 2015 and 2016 (Graph 9). Government debt was higher than it had ever been leading into 2020 (Graph 10).

Graph 9

China – General Government Budget

Share of GDP



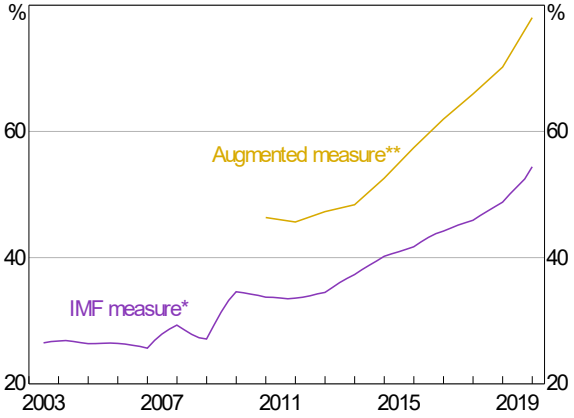
* Budgeted revenue minus budgeted expenditure
** Underlying balance adjusted to take account of the budget balance of government-managed funds

Sources: CEIC Data; MoF; RBA

Graph 10

China – Government Debt

Per cent of GDP



* IMF measure includes official central and local government debt plus local government financing vehicle debt recognised explicitly as government debt
** Augmented measure includes debt held by local government financing vehicles not recognised explicitly as government debt

Sources: BIS; CEIC Data; IMF; RBA

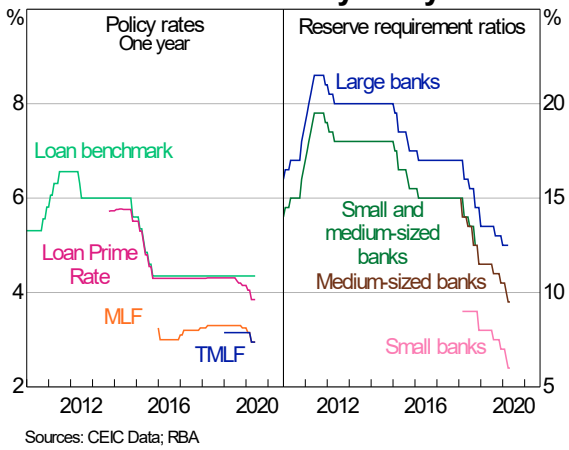
Fiscal support over 2019 was generally targeted, with policies to lower value added tax, reduce taxes for MSEs, incentivise durable goods consumption, and increase export rebates.[12] It also comprised an expansion in local government special bond quotas, from CNY 1.35 trillion to CNY 2.15 trillion.[13] In late 2019 the authorities sought to strengthen their counter-cyclical fiscal policy; the government announced that advanced special bond quotas of CNY 1 trillion for 2020 would be available to local governments from 1 January (as opposed to after the National People's Congress usually held in March). The Ministry of Finance stressed that the funds should not be used for real estate development, and should instead be mainly put towards infrastructure projects.[14] However, even at this time some analysts questioned whether there were enough profitable projects for this increased infrastructure spending to be productive.[15]

The PBC also eased policy throughout 2019 but stressed its targeted nature. It was particularly focused on improving access to credit for MSEs.[16] From 2018 to the beginning of 2020, it reduced RRRs by 800 basis points for small banks, and 450 basis points for large and medium-sized banks (Graph 11). A target was also set in 2019 for inclusive lending to grow by 30 per cent.[17] Notwithstanding these measures, the PBC and CBIRC remained committed to keeping the macro-leverage ratio stable and continued to oversee a reduction in off-balance sheet financing.[18] Significantly, the PBC reformed its loan benchmark to improve the transmission of monetary policy; as part of this reform it specifically carved out a separate set of rules for mortgage lending so as not to stimulate the property market.[19] As a result, mortgage lending rates have not declined as much as other lending rates over the past year.

10 names redacted x2 (2019).
11 names redacted x2 (2019).
12 State Council (2019); names redacted x2(2019); name redacted (2019).
13 Local government special bonds are bonds which raise funding for projects whose revenues are meant to pay back the debt.
14 Ministry of Finance (2019).
15 names redacted x2 (2019).
16 PBC (2019b); PBC (2019c); name redacted (2019).
17 name redacted (2019). Inclusive lending refers to loans to MSEs of less than CNY 10 million, and loans to sole traders.
18 PBC (2019a); State Council Information Office (2019).
19 names redacted x2 (2019).

Graph 11

China – Monetary Policy



Sources: CEIC Data; RBA

The COVID shock and subsequent policy response

Lockdowns, social distancing and precautionary consumer behaviour in response to the coronavirus outbreak saw China's economy contract by 10 per cent in the March quarter. For China, this represents a much sharper shock than the GFC, but, provided there is not a large resurgence in cases, a shorter-lived one; activity rebounded to pre-COVID levels in the June quarter. Consensus forecasts have gone from expecting growth in 2020 of 5.8 per cent in January, to 1.7 per cent in July.

The economic policy response evolved in two stages. Initially, a *support phase* aimed to: a) bolster the health and logistics industries so that the health crisis could be dealt with effectively; and b) assist businesses and workers affected by the lockdowns and facilitate a return to work. This has been followed by a *stimulus phase* to kick-start the economic recovery.

The support phase

Early economic support measures focused on assisting medical suppliers and providing infrastructure to deal directly with the virus, including the construction of two new hospitals in two weeks. Manufacturers of key products were granted VAT exemptions and tax deductions for equipment purchases, and health workers were given an allowance on top of their regular wage.[20] In addition a number of port, railway, container and cargo fees were removed or waived.[21]

Support for businesses affected by the lockdown was directed with the intention of keeping small businesses solvent. The central government reduced/removed social insurance contributions and local governments offered guarantees and subsidies on loans. The PBC made low-cost loans available to vulnerable businesses and allowed banks to offer loan deferments.[22] The central government also provided a living allowance for workers who had been displaced because of the virus situation.[23]

The authorities have also leant on SOEs to bear some of the cost that would otherwise fall on businesses or the government, as they have done in the past. This is a policy option not generally available in other countries. State-owned banks have been directed to forego CNY 1.5 trillion of profits this year by offering loan forbearance to MSEs and lowering interest rates on MSE loans.[24] Other SOEs are encouraged to hire more graduates, offer rent discounts to their tenants, and to pay their suppliers on time while extending credit to their customers.[25]

The stimulus phase

Once the worst of the health crisis had passed, authorities turned to infrastructure spending and credit growth to stimulate the recovery, as they had done previously. However, they have been mindful to not completely abandon the financial stability goals of recent years. The language around the credit stimulus remains measured. The authorities have cautioned that a flood of credit will not be forthcoming and that substantial portions of the

20 Xinhua (2020); State Council (2020b).
21 State Council (2020a).
22 21st Century Business Herald (2020); Shanghai Securities News (2020); PBC (2020a); State Council (2020e).
23 State Council (2020b).
24 State Council (2020g). Net profits in 2019 were around CNY 2 trillion.
25 State Council (2020d); State Council (2020c).

additional liquidity available should flow to MSEs.[26] Nevertheless, the support does amount to the largest package of fiscal and monetary support for the economy since the GFC.

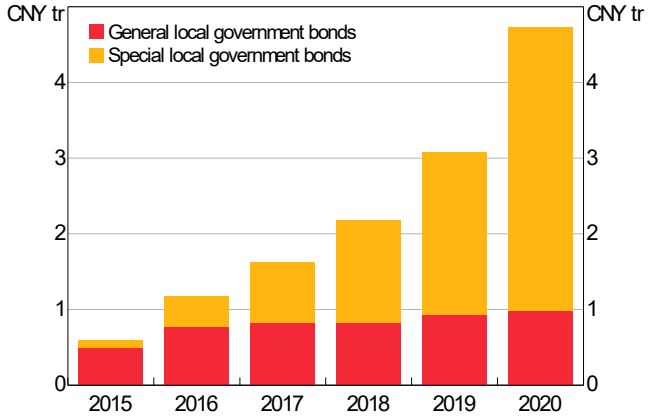
Fiscal

China's budget for 2020 reveals a significant expansion of fiscal support this year. AERU's consolidated measure of the budget deficit, which accounts for the balance of government-managed funds, shows the deficit will increase from 5.7 to 11.5 per cent of GDP this year. Key measures include: an increase in the local government special bond quota from CNY 2.15 trillion to CNY 3.75 trillion (Graph 12); issuance of CNY 1 trillion of COVID-19 bonds, to be used for bank recapitalisation and local public health and other infrastructure construction; and tax and fee cuts worth CNY 2.5 trillion.

This fiscal expansion is occurring more transparently than in the past. Local governments have been required to raise funds through the issuance of local government special bonds instead of through local government financing vehicles (LGFVs).[27] The greater use of LGFVs in the past makes it difficult to compare the fiscal expansion this year with previous fiscal expansions. Our consolidated deficit measure is only available from 2010 and fails to capture funds raised by LGFVs (instead these funds generally get included in TSF). To make a more meaningful comparison I look at the IMF's augmented measure of the general government deficit, which attempts to correct for these discrepancies. On this measure the government deficit in China expanded by 6.7 per cent in 2009. Assuming that new LGFV financing remains around the level of the past three years, the fiscal expansion this year will be a little smaller than that seen in 2009 (Graph 1 and Graph 13).[28]

Graph 12

China – Local Government Bond Quotas*

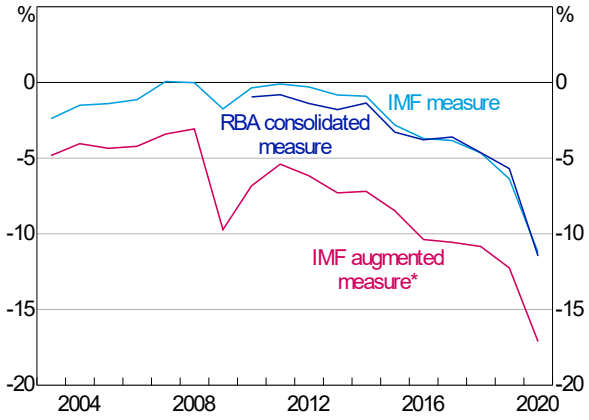


* Excluding debt swap quota

Sources: MoF; RBA

Graph 13

China – Fiscal Deficit



* 2020 estimate based on expansion in the standard IMF measure

Sources: CEIC Data; IMF; RBA

Monetary

TSF growth has steadily increased since February (Graph 14). Bankers perceive monetary policy sentiment to be loose and loan approvals have increased as they have sought to implement the PBC's directive to increase lending (Graph 15). Comments by PBC Governor Yi Gang suggest that credit will grow by at least 13 per cent this year (up from 12.4 per cent last year), and that TSF overall will grow by 12.2 per cent (up from 10.2 per cent).[29] However, these remain relatively modest targets and the language of the PBC remains restrained, with a focus on directing credit in line with other objectives.

As noted before, a direct comparison of TSF between 2009 and 2020 is difficult, given the movement away from LGFV financing (which is included in TSF) to the use of special bonds (which are not). To compare TSF growth over time, I subtract the IMF's estimate of new LGFV financing (which is included in the IMF's augmented fiscal measure) from our headline TSF measure. Based on public announcements this year, it suggests that the TSF impulse will be well below that seen during the GFC, but a little higher than in 2012 and 2016 (Graph 2).

26 State Council (2020f); PBC (2020b).

27 Local government financing vehicles are enterprises set up by local governments to raise money for local government spending. They were initially set up to get around regulations that prohibited local governments from issuing debt.

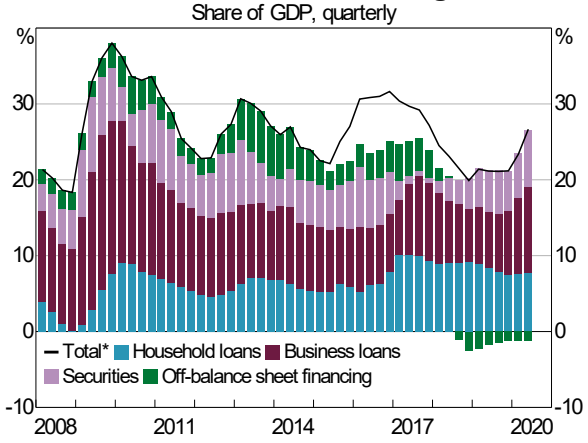
28 This calculation assumes the IMF augmented deficit will increase by the same amount as the IMF's standard deficit measure.

29 name redacted (2020). These figures are based off AERU's adjusted version of TSF, which removes government bonds.

Graph 14

China – Total Social Financing Flows

Share of GDP, quarterly



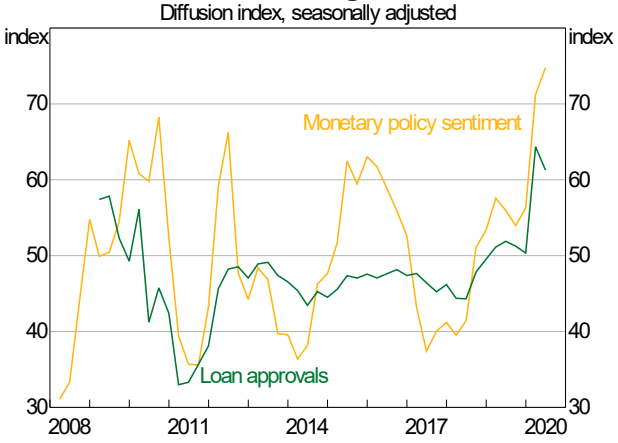
* Upper bound estimate after including local government bond issuance to pay off debt previously included in TSF.

Sources: CEIC Data; RBA

Graph 15

China – Banking Climate

Diffusion index, seasonally adjusted



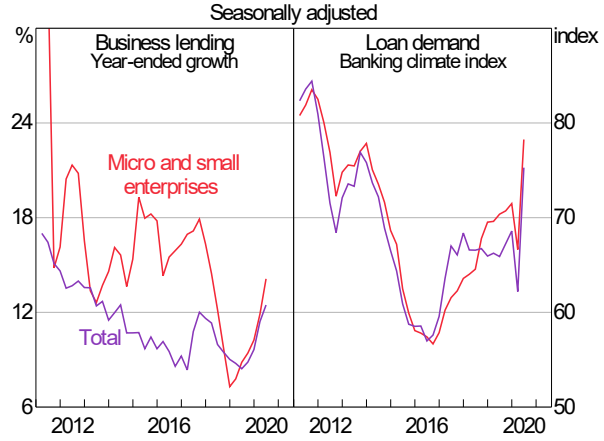
Sources: CEIC Data; RBA

Increased lending appears to be going to the areas that authorities want it to (i.e. businesses) and staying away from the areas authorities don't want it to flow to (i.e. property). Bank lending to businesses and increased bond and equity financing have been responsible for almost all the pick-up in new financing. Importantly, there has also been strong growth in lending to MSEs– banks have heeded the PBC's call to direct funds their way (Graph 16).

Graph 16

China – Bank Finance

Seasonally adjusted

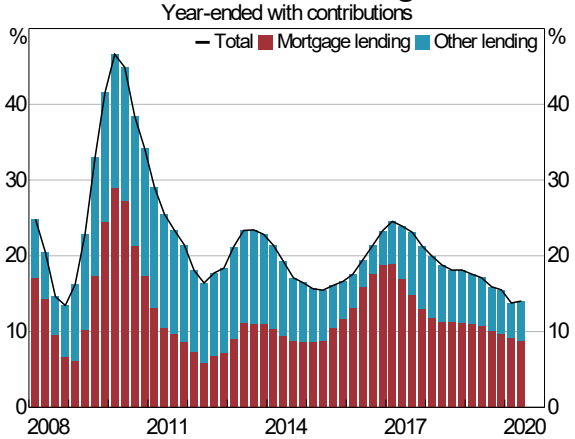


Sources: CEIC Data; People's Bank of China; RBA

Graph 17

China – Household Lending Growth

Year-ended with contributions



Sources: CEIC Data; RBA

Lending growth to households has remained more or less stable, suggesting that excess funds have not been flowing into the property market (Graph 17). Still, authorities remain alert to this possibility and have warned banks against facilitating the practice.[30] In addition, Vice-Premier Han Zheng convened a meeting with local government officials to reiterate that they should not resort to housing stimulus.[31]

Unlike in previous stimulatory episodes, off-balance sheet financing continues to contract in spite of the general easing. Nevertheless, the CBIRC remains watchful of a potential resurgence in shadow financing; it has issued draft rules that would further limit trust company investments in non-standard credit assets, and has cracked down on those breaching existing regulations.[32] There have been reports that corporates are taking advantage of low bond rates to raise money that is then invested in structured deposits at a higher rate of return, but authorities have already taken steps to limit this practice.[33]

30 CBIRC (2020b).
31 State Council (2020h).
32 CBIRC (2020a); Liang and Jia (2020).
33 names redacted x2 (2020b); names redacted x2 (2020, forthcoming).

The outlook for policy

China's economy recovered remarkably in the June quarter, with output growing 11.5 per cent to return to its pre-COVID level. This was achieved largely because of effective containment of coronavirus, which allowed people to return to work and spend money. Support measures, which have helped businesses remain solvent, have no doubt contributed to this quick turnaround, as has the authorities' ability to instruct SOEs to return quickly to high levels of production. As local governments embark on their infrastructure spending the recovery is expected to proceed further.

Given the strength of the recovery so far, it may be that significant further stimulus, at least of the type seen in the past, is unnecessary. The decision to refrain from setting a growth target amidst the virus uncertainty also suggests that, at least for this year, authorities will not pursue growth for growth's sake. Instead, their primary concerns at the moment are employment and consumption. Recent public statements by officials appear to recognise that further infrastructure spending or 'flood-like' credit stimulus are not the most effective means by which to generate a stronger recovery in these respects; even local officials are concerned that there are few remaining infrastructure projects worth taking at present.[34] For China's recovery to be sustainable any further stimulus measures will likely need to support employment and encourage consumer spending.

Economist
Asian Economies Research
Economic Analysis Department
7 August 2020

34 name redacted (2020); State Council (2020f); name redacted (2020).

References

21st Century Business Herald (2020), 'Ministry of Finance: This year, the social security burden will be reduced by more than 1 trillion, and more new tax and fee reduction policies will be introduced' [in Chinese], *Baidu*, 3 March 2020

Batson, Andrew (2020), 'The Great Fiscal Role Reversal', Gavekal Dragonomics, 24 March 2020

Bowman, Joel, Mark Hack and Miles Waring (2018), 'Non-bank Financing in China', *RBA Bulletin*, March 2018

Cagliarini, Adam and Brendan Russell (2019), 'Monetary Policy Transmission in China: Changes to Loan Benchmarks', RBA note

China Banking and Insurance Regulatory Commission (2020a), 'The spokesperson of the China Banking and Insurance Regulatory Commission answers reporters' questions' [in Chinese], 11 July 2020

China Banking and Insurance Regulatory Commission (2020b), 'The heads of the relevant departments of the China Banking and Insurance Regulatory Commission answered reporters' questions on prominent issues in reporting shadow banking and cross-financial businesses' [in Chinese], 14 July 2020

Eftimoski, Martin and Kate McLoughlin (2019), 'Housing Policy and Economic Growth in China', *RBA Bulletin*, March 2019

Fang Zuwang and Han Wei (2019), 'China Weighs New Subsidies to Spur Home Appliance Sales', *Caixin Global*, 19 April 2019

Fardoust, Shahrokh, Justin Yifu Lin and Xubei Luo (2012), 'Demystifying China's Fiscal Stimulus', World Bank, Policy Research Working Paper 6221

Gan J (2008), 'Privatization in China: Experiences and Lessons', in Barth J, J Tatom and G Yago (eds) *China's Emerging Financial Markets: Challenges and Opportunities*, Springer, Boston

IMF (2010), *People's Republic of China: 2010 Article IV Consultation*

IMF (2013), *People's Republic of China: 2013 Article IV Consultation*

IMF (2019), *People's Republic of China: 2019 Article IV Consultation*

IMF (2020a), *Fiscal Monitor – April 2020*

IMF (2020b), *World Economic Outlook – April 2020*

Li Keqiang (2019), 'Report on the Work of the Government', Delivered at the First Session of the 13th National People's Congress of the People's Republic of China, 5 March 2019, Beijing

Liang Hong and Denise Jia (2020), 'China Everbright Trust Suspended from Financing Trust Business', *Caixin Global*, 24 July 2020

Lockett, Hudson and Sun Yu (2019), 'China's special-purpose bonds fall short of Beijing's ambitions', *Financial Times,* 26 November 2019

McKissack, Adam and Jessica Xu (2011), 'Chinese macroeconomic management through the crisis and beyond', Australian Treasury, Treasury Working Paper 2011-01

Ministry of Finance (2019) 'Press Conference of the Ministry of Finance, PRC' [in Chinese], 6 September 2019

People's Bank of China (2019a), 'First Quarter Monetary Policy Implementation Report' [in Chinese], 17 May 2019

People's Bank of China (2019b), 'China Small and Micro Enterprise Financial Services Report (2018)' [in Chinese], 24 June 2019

People's Bank of China (2019c), 'Taking the New Development Concept as Guidance, and Promoting Steady, Healthy and Sustainable Development of the Chinese Economy' Press Conference Transcript [in Chinese], 24 September 2019

People's Bank of China (2020), 'Record of the press conference of the State Council's Joint Prevention and Control Mechanism "Financial Policy Supports Epidemic Prevention and Control and Resumption of Work and Production"' [in Chinese], 15 March 2020

People's Bank of China (2020b), 'First Quarter Monetary Policy Implementation Report' [in Chinese], 10 May 2020

RBA (2017), 'Box B: Recent Developments in Chinese Financial Regulations', *Statement on Monetary Policy*, August 2017

RBA (2018), 'Box A: Ongoing Financial Regulatory Reform in China', *Financial Stability Review*, October 2018

Roberts, Ivan and Brendan Russell (2019), 'Long-term Growth in China', *RBA Bulletin*, December 2019

Shanghai Securities News (2020), 'Let banks dare to lend and willing to lend to many fiscal places in the war epidemic to introduce risk-sharing measures' [in Chinese], *Baidu*, 11 March 2020

State Council of the People's Republic of China (2019), 'China introduced further tax reduction measures to increase support for small and micro enterprises' [in Chinese], 9 January 2019

State Council of the People's Republic of China (2020a), 'Li Keqiang presided over the executive meeting of the State Council to deploy and improve the coordination mechanism of the "six stability" work to effectively respond to the impact of the epidemic and promote stable economic and social operations' [in Chinese], *State Council*, 3 March 2020

State Council of the People's Republic of China (2020b), 'Li Keqiang presided over the meeting of the Central Leading Group for Response to the New Coronary Pneumonia Epidemic, and requested that the targeted effectiveness of prevention and control work be strengthened, and measures to care for frontline medical personnel are implemented' [in Chinese], *State Council*, 5 March 2020

State Council of the People's Republic of China (2020c), 'Li Keqiang presided over an executive meeting of the State Council to determine new measures to deal with the impact of the epidemic to stabilize foreign trade and foreign investment, etc' [in Chinese], *State Council*, 11 March 2020

State Council of the People's Republic of China (2020d), 'Li Keqiang presided over an executive meeting of the State Council to deploy the in-depth promotion of the reform of "delegation, management and service", fostering new growth momentum, promoting stable employment, etc' [in Chinese], *State Council*, 17 March 2020

State Council of the People's Republic of China (2020e), 'State Council Information Office Press Conference: A series of financial support measures to resume work and production are producing remarkable results' [in Chinese], *State Council*, 22 March 2020

State Council of the People's Republic of China (2020f), 'Premier Li Keqiang Meets the Press: Full Transcript of Questions and Answers' [in Chinese], *State Council*, 29 May 2020

State Council of the People's Republic of China (2020g), 'Li Keqiang presided over an executive meeting of the State Council to deploy and guide financial institutions to further transfer profits to enterprises to help stabilise the economic fundamentals etc' [in Chinese], *State Council*, 24 July 2020

State Council of the People's Republic of China (2020h), 'Han Zheng presided over a seminar on real estate work' [in Chinese], *State Council*, 24 July 2020

State Council Information Office (2019), 'The State Council Information Office held a press conference to resolutely fight against financial risks' [in Chinese], 25 February 2019

Sutton, Max and Grace Taylor (2020, forthcoming), 'Shadow Financing in China – Where Are We Now?', RBA note

Wang Jing (2020), 'Behind the new high in issuance of special bonds: There are fewer and fewer eligible infrastructure projects' [in Chinese], *Xinhua*, 10 July 2020.

Wei He (2020), 'The Next Infrastructure Stimulus', Gavekal Dragonomics, 27 February 2020

Wen, Yi and Jing Wu (2018), 'Withstanding the Great Recession like China', Federal Reserve Bank of St Louis, Working Paper 2014-007d

Wong, Christine (2011), 'The Fiscal Stimulus Programme and Public Governance Issues in China', *OECD Journal on Budgeting*, Vol 11/3

Wright, Logan and Allen Feng (2020a), 'Treating the Symptoms, But No Cure', Rhodium Group, 18 February 2020

Wright, Logan and Allen Feng (2020b), 'The Return of the Structured Shadows', Rhodium Group, 20 April 2020

Wright, Logan and Daniel Rosen (2020), 'Chinese Credit Stimulus: Yesterday's Solution, Not Today's', Rhodium Group, 23 March 2020

Xinhua (2020), 'China to take more steps to ensure supplies for epidemic control', *Xinhua*, 6 February 2020

Yang Zhijin (2020), 'A Restricted View on the Issuance of Special Debt: Five Major Issues Should Be Improved' [in Chinese], *21st Century Business Herald*, 9 July 2020

Yi Gang (2019), 'Stick to the goal of currency stability and implement a prudent monetary policy' [in Chinese], *Qiushi*, 1 December 2019

Yi Gang (2020), *Speech at the 12th Lujiazui Forum* [in Chinese], 18 June 2020, People's Bank of China

Zhang, Yuanyan Sophia and Steven Barnett (2014), 'Fiscal Vulnerabilities and Risks from Local Government Finance in China', IMF Working Paper, WP/14/4

Zhou, Shenglv, Minjun Shi, Na Li and Yongna Yuan (2011), 'Effects of Chinese Economic Stimulus Package on Economic Growth in Post-Crisis China', *Economics Research International*, Volume 2011, Article ID 492325

From: name redacted
Sent: Thursday, 27 February 2020 1:58 PM
To: ID Chatter; China News
Cc: names redacted (x2)
Subject: ID Chatter: An Update on China's LPR Reform [SEC=UNCLASSIFIED]

In August 2019, China's State Council and the People's Bank of China (PBC) announced that the Loan Prime Rate (LPR) would replace the benchmark lending rate as the reference rate for lending in China. The LPR reform has been steadily progressing since it was announced, with all new loans now linked to the new reference rate, and existing loans beginning to be repriced. Since then, the one-year and five-year LPR have fallen 26 and 10 basis points respectively; the most recent decrease occurring in February 2020. This chatter piece is a follow up on the SMP Box from November 2019, and discusses the reform's progress, the recent decrease in the LPR, and how these have been influenced by the COVID-19 outbreak.

Introduction
The LPR represents the interest rate offered by banks to their most creditworthy customers, and is calculated monthly as an average of quotes submitted by a panel of 18 banks. All quotes are expressed as a spread to the one-year rate offered by the PBC through the medium-term lending facility (MLF). This spread is determined by a range of factors including bank funding costs, the demand for loans and credit risk.

The LPR reform is one of a series of measures designed to move the Chinese monetary policy framework towards one that focuses on interest rates as a policy instrument. In particular, the reform is expected to lead to more efficient transmission of administered policy rates to lending rates in the real economy, and increased competition within the loan market. See SMP November 2019: Box A for more details.

Timeline for transition
The initial timeline for implementation set by the PBC was for a gradual transition towards all new loans referencing the LPR. The targets for the share of new loans linked to the LPR were: 30 per cent by end of September 2019, 50 per cent by end of December 2019, and 80 per cent by end of March 2020. In the 2019 September Quarter Monetary Policy Report, the PBC announced that 46.8% of new loans referenced the LPR. By late December 2019, it was reported that over 90% of new loans referenced the LPR, indicating that the reform was progressing faster than the initial timeline suggested.

On 28 December 2019, authorities revealed further measures to phase out the use of the benchmark lending rate. They announced that all new loans issued after 1 January 2020 must reference the LPR, and all existing loans are to be converted to the new reference rate between 1 March and 31 August 2020. Under this reform, existing floating-rate borrowers have two options: convert their pricing benchmark to the LPR, or convert their loan to a fixed interest rate loan. For borrowers with non-mortgage loans, the new rates are to be renegotiated on a case-by-case basis. Stricter guidelines have been given for individuals converting their existing mortgage loans. More specifically, mortgage rates must remain unchanged when converted to reference the LPR (typically the 5-year rate), and must have a repricing cycle of at least a year.

RECENT DEVELOPMENTS
Transition of outstanding loans
Recent market reports have suggested that banks such as the Bank of China (BoC) and ICBC have already begun to reprice existing loans, ahead of the March to August transition period. There are questions, however, regarding the relative bargaining power between banks and their customers, and how this will affect the renegotiated loan rates. In January, the BoC noted that although renegotiated non-mortgage rates are likely to differ from existing rates, overall the transition process is expected to be neutral on loan yield. However, the recent outbreak of COVID-19 has put pressure on the PBC to continue to ease monetary policy, with many market analysts expecting further cuts to the MLF and RRR, and a possible cut in the benchmark deposit rate. This suggests there may be downward pressure on the LPR, which may flow through to lower loan rates when contracts are renegotiated.

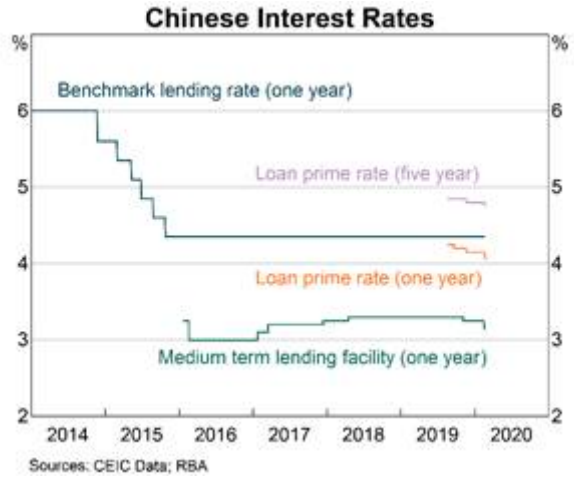
There are also questions surrounding whether the outbreak of COVID-19 will delay the transition of outstanding loans. In a recent statement, the PBC's Deputy Governor Liu Guoqiang stated that the central bank will continue to promote LPR reform within China, despite the current focus on virus containment and support measures for firms. However, the effect of the outbreak and its containment measures on the transition process is likely to vary significantly across regions based on their exposure to the virus.

Under instruction from Chinese authorities, banks have been making adjustments to their processes to allow enterprises and households to conduct financial services through online platforms such as mobile apps. This suggests that especially in medium- and low-risk regions, quarantine measures may have a limited impact on the ability of banks to convert outstanding loans to the new reference rate. Nevertheless, it is possible that banks will have limited resources to devote to this transition process, given the current disruptions to their operations and their focus on providing easier access to credit for firms directly affected by the COVID-19 outbreak.

The outbreak is likely to have some influence on the transition of outstanding loans, but it is still too early to say the extent to which it may delay the process, and whether it will affect the August deadline.

How should we interpret the recent changes to the LPR?

Since the announcement of the LPR reform, the one-year LPR has declined by 26 basis points: 6 basis points in August 2019, 5 basis points in September 2019, 5 basis points in November 2019, and most recently, 10 basis points in February 2020. The five-year LPR has moved similarly, falling by 5 basis points in both November 2019 and February 2020. The most recent decline in the LPR, announced last Thursday, was widely expected given the 10 basis point cuts to the MLF and 7-day repo rates earlier in the month. These cuts were made as part of a series of measures implemented by Chinese authorities to try prevent a significant tightening in financing conditions in the face of the COVID-19 epidemic.



The reform is still in its early stages, so it is difficult to assess the likely effect of the most recent LPR decline on economic activity. That said, the February decrease is expected to have a larger stimulatory effect compared to prior cuts for two reasons; firstly, the fall in the one-year LPR was larger; and secondly, a larger proportion of loans (both new and existing) are now linked to the LPR.

There are still many questions surrounding the factors that may result in changes in the LPR, and how effective the reform has been in achieving its goal of improving interest rate transmission throughout the Chinese economy. Answers to these questions will come once the reform is complete, and the market has had time to adjust to these changes.

| Analyst | International Financial Markets | International Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

From: name redacted
Sent: Tuesday, 24 March 2020 3:43 PM
To: ID Chatter; China News
Subject: ID Chatter: A Discussion of China's Benchmark Deposit Rate [SEC=UNCLASSIFIED]

In late February, the People's Bank of China (PBC) announced they were considering cutting their benchmark deposit rates. These rates have been on hold since October 2015. This chatter discusses the potential reasons for keeping the rates on hold, and why the PBC may now be considering a cut.

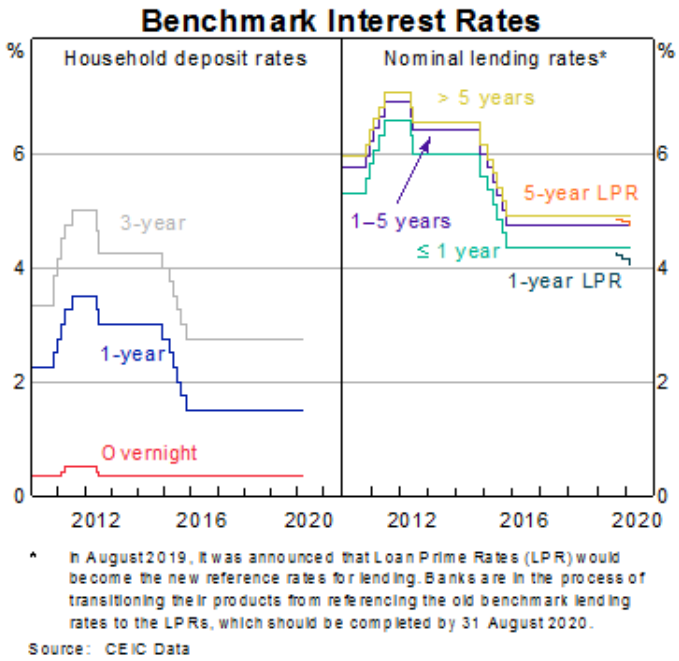
Introduction

Historically, Chinese interest rates have been heavily guided by the PBC and the State Council, and liberalisation of these rates has been gradual. In recent times, interest rate liberalisation has focused on lending rates, and in particular, the introduction of a market-based reference rate for loans (see 'An Update on China's LPR Reform (document 11)' for more details). In contrast, the benchmark deposit rate, the reference rate for all deposits in China, remains an administered rate. This means the benchmark deposit rate is set by the PBC and is not market-based.

Although the benchmark deposit rate is still an administered rate, the PBC has made progress towards liberalising deposit rates in the economy. In October 2015, authorities announced the removal of the ceiling on deposit rates, which restricted banks from offering deposit rates higher than 150 per cent of the benchmark deposit rate. The PBC suggested that the reform would improve the transmission of interest rates in the economy and strengthen the independent pricing capabilities of financial institutions. However, despite the removal of the official ceiling, authorities are still thought to have a strong degree of influence on deposit rates through implicit ceilings, indicating rates are still largely tied to the benchmark deposit rate.

Why have rates been on hold since 2015?

In the year leading up to October 2015, the one-year and three-year benchmark deposit rates were cut six times, as authorities attempted to reduce financing costs and stimulate the economy. Since then, the one-year and three-year rates have remained at 1.5 per cent and 2.75 per cent respectively. The overnight deposit rate has remained at 0.35 per cent since July 2012.



Authorities have continued to ease policy in response to the persistent slowdown in growth; however, they have focused on other policy tools such as the Reserve Requirement Ratio (RRR) and lending rates. This preference for other instruments is likely the result of a few factors.

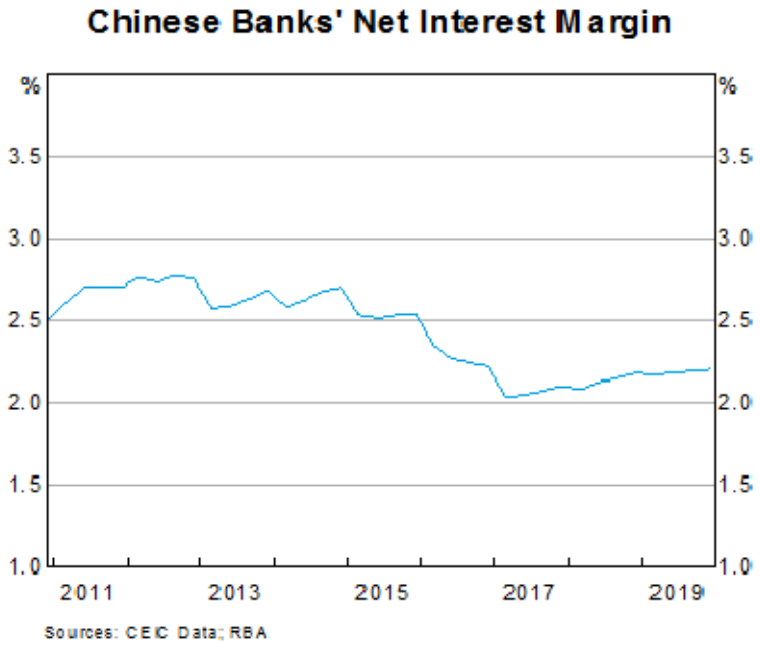
The costs of cutting the benchmark deposit rate may outweigh the benefits. For example, decreasing the return on deposits could drive market participants to move their savings towards riskier assets in search of higher returns. This could include assets such as wealth management products, many of which are unregulated and not guaranteed. Cutting the benchmark deposit rate could therefore have financial and social stability implications, which may contribute to the PBC's reluctance to cut. Furthermore, deposit rates are already very low, indicating there is little room for further cuts.

A further suggestion is that the rate has been kept on hold because the PBC is seeking to replace the benchmark deposit rate with one that is market-based. However, in a press conference in January, the Director of the PBC's Monetary Policy Department Sun Guofeng stated that the benchmark deposit rate will be retained for a long time. This echoed a comment from PBC Governor Yi Gang in 2019, in which he said the benchmark deposit rate will be kept for a long time to avoid a 'deposit war'. This implies no reform to the benchmark deposit rate is expected in the near future. Therefore, it appears unlikely that the possibility of a reform has been one of the key reasons to leave the rate unchanged.

Why is a rate cut being considered now?

The outbreak of COVID-19, and its corresponding containment measures, are expected to hinder Chinese growth. The government has implemented a range of fiscal and monetary measures in an attempt to support the economy. However, resumption of business activities has been slower than initially thought, suggesting China's growth is going to take a big hit in the first quarter of 2020.

According to some market analysts, the PBC has limited policy options to try to reduce the tightening in financial conditions. Over the last couple of years banks in China have been struggling with falling net interest margins (NIM). This suggests there is little room for further cuts to lending rates. The stress on banks has been particularly amplified in recent times, as the PBC continues to instruct banks to provide micro and small enterprises (MSEs) with easier access to credit and be more lenient towards firms struggling to meet loan repayments as a result of the COVID-19 outbreak. The LPR reform has also increased the downward pressure on banks' NIMs – pressure that is expected to increase as the proportion of loans that reference the LPR increases, and the LPR potentially declines in the coming months. A cut to the benchmark deposit rate will therefore provide some relief for banks, and potentially leave room for further cuts to lending rates.



What are the expectations of the magnitude and timing of the cut?

Given deposit rates are already very low, market analysts are expecting the one-year benchmark deposit rate to be cut by a maximum of 25 basis points, and the overnight deposit rate to be cut by 10 basis points.

The cut is expected to happen within the next couple of months. However, the MLF and LPR were left unchanged last week, contrary to markets' expectations. This may signal that the benchmark deposit rate cut will be sooner rather than later as it suggests authorities and banks are reluctant to reduce lending rates (possibly due to the current pressure on banks' NIMs) and therefore any further policy easing will require cuts to either the RRR or the benchmark deposit rate.

It is important to note that monetary policy cannot alleviate the supply-chain issues faced by China, limiting its effectiveness in the current situation. Nonetheless, the cut is likely to ease the pressure on banks and help prevent a tightening in financial conditions.

| Analyst | International Financial Markets | International Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

From: name redacted
Sent: Wednesday, 15 April 2020 10:31 AM
To: ID Chatter; China News
Subject: ID Chatter: A second wave of easing in China [SEC=UNCLASSIFIED]

Throughout most of March, while central banks across the world were aggressively easing monetary policy in response to the COVID-19 outbreak, authorities in China kept policy broadly unchanged. In recent weeks, however, China has rejoined the easing train with President Xi flagging a range of additional policy measures to be introduced in the coming months. As we enter what looks like the start of a second easing cycle in China, this chatter will explore whether this new cycle will mark a shift in the nature of the Chinese policy response.

Introduction

Throughout February, Chinese authorities implemented a raft of measures to support the flow of credit in the economy (for more information see: Chinese Economy and Financial Markets wrap up - Feb 2020. This policy response was largely targeted, with many measures directed towards supporting smaller firms in particular. The stance of monetary policy was broadly unchanged in March as authorities' attention shifted to facilitating the resumption of business activities.

More recently, with COVID-19 now largely under control within mainland China, the attention of policymakers has shifted further towards supporting the economy's recovery.

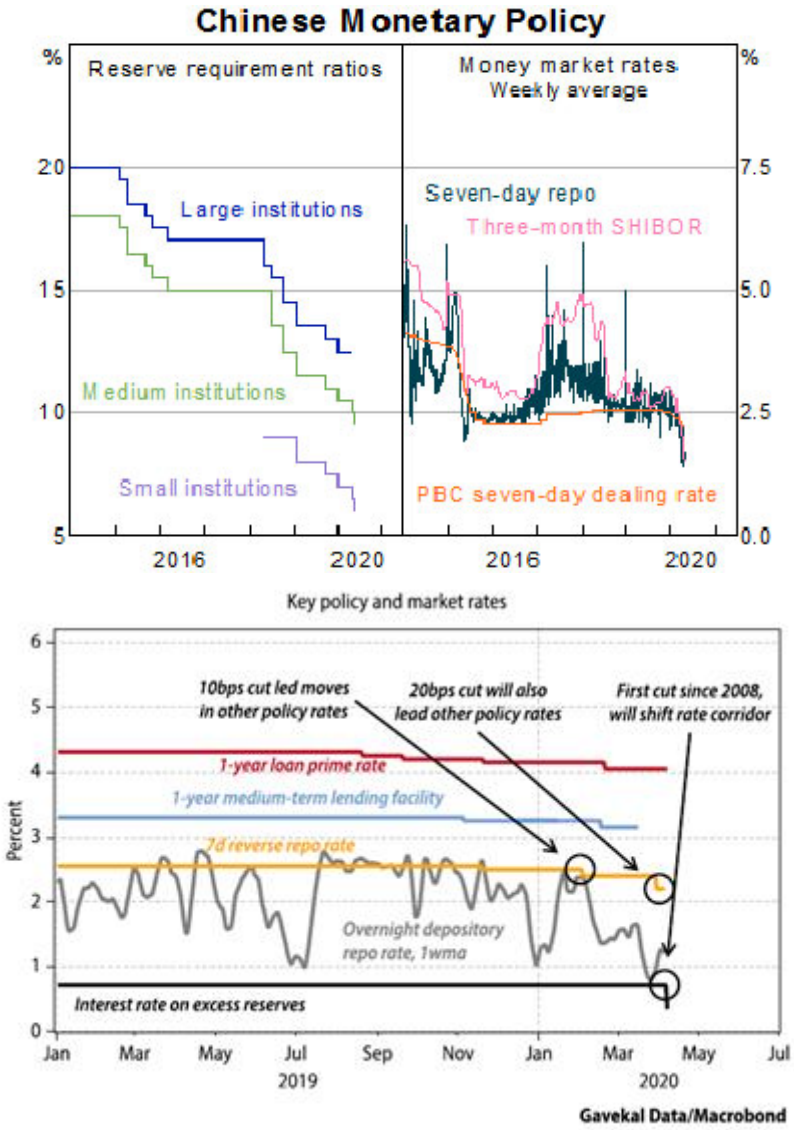
On 27 March, President Xi Jinping announced that the government would be implementing a range of additional measures to help support the economy. He reiterated that China needed to 'step up macroeconomic policy adjustment and implementation' and that the country needed more 'active' fiscal policy and 'flexible' monetary policy. While a broad range of *fiscal* policies were discussed, including plans to raise the fiscal deficit ratio, the remainder of this chatter will focus on the key *monetary* policy measures that have been introduced following Xi's speech.

A new stage in the easing cycle

Over the last two weeks, the People's Bank of China (PBC) has announced three rate cuts:

- a 20 basis point reduction in the seven-day reverse repo rate to 2.2 per cent
- a 100 basis point reduction in the Reserve Requirement Ratio (RRR) for small- and medium-sized banks to be conducted in two phases (50 basis points each on 15 April and 15 May)
- a 37 basis point reduction in the interest rate on excess reserves (IOER; serves as a floor for the PBC's interest rate corridor system) to 0.35 per cent

The reductions in the seven-day reverse repo rate and RRR suggest that the Loan Prime Rate is likely to fall in April, thereby lowering lending rates in the economy. While the repo rate and the RRR are policy instruments that are regularly used by the PBC, the IOER has not been adjusted since November 2008. Some analysts have noted (see document 11) that the PBC may have taken the unusual step of reducing the IOER in order to leave room for short-term interbank rates and bond yields to fall, which should in turn help facilitate the large-scale government bond sales that will be required in the coming months. Other analysts have observed that cutting the IOER could encourage banks to extend credit to the corporate sector (rather than deposit it with the PBC as excess reserves). The general consensus amongst analysts is that the effect of the change is likely to be relatively small.



In addition to these rate cuts, authorities have announced a range of other measures designed to boost credit in the economy, including:

- Expanding the relending and rediscount quota by RMB1tr to support bank lending to small- and medium-sized enterprises (SMEs)
- Guiding net corporate bond issuance to increase by RMB1tr from the 2019 level
- Supporting policy banks to issue RMB300bn of bonds to provide credit to SMEs
- Providing SMEs with RMB800bn of supply chain financing by encouraging financial institutions to accept accounts receivables as collateral
- Issuing Special Treasury Bonds (STBs; government bonds issued to support specific policies and project needs)

Most of these measures are designed to support the flow of credit to SMEs, with some measures simply extensions of existing facilities. Of particular interest is the announcement that STBs will be issued for the first time since 2007. At this stage, we do not know what the funds from this issuance will be used for, but some state economists have suggested the funds may be used to replenish capital in China's financial system to facilitate increased lending to SMEs or bail out firms. The size of the issuance is also unknown and will be announced at the (still unscheduled) National People's Congress meeting, but it is expected to be at least RMB1tr.

Conclusion

While Chinese authorities appear to have entered a second round of easing, policies continue to be fairly targeted in nature, with the main focus still on supporting SMEs. Furthermore, the PBC's communication has remained consistent with the first round of easing: the PBC has continued to stress that it will engage in flexible and

appropriate monetary policy and provide the market with ample liquidity. Indeed, the PBC appears to have even backed away from earlier suggestions that it might cut the benchmark deposit rate, with the Deputy Governor of the PBC stating that the rate would not be adjusted without considering the impact on inflation, the RMB and 'ordinary people'. All this suggests that the PBC is committed to continuing its targeted approach and will not engage in 'flood-like stimulus'. That said, the recent comment by a senior PBC official that the economy's macro-leverage ratio should be allowed to gradually rise suggests that authorities will look to ease credit conditions further in the future.

| Analyst | International Financial Markets | International Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

SHADOW FINANCING IN CHINA – WHERE ARE THEY NOW?[1]

In 2016, Chinese authorities launched a campaign to reduce risks in China's shadow banking system. The campaign has successfully halted and partially reversed the build-up of risk in China's shadow finance system, which has declined from over 60 per cent of GDP to around 40 per cent. This decline is a positive development from a systemic risk perspective, although it has contributed to the slowdown in economic activity in recent years. In addition, savers now have fewer investment options that offer attractive returns, intermediaries have faced pressures on both the assets and liabilities sides of their balance sheets, and the supply of credit has been curtailed in sectors that rely on shadow finance. For the regulators and monetary authorities, regulatory reform has improved their visibility over the financial system and improved their effectiveness. COVID-19 has further highlighted the difficult trade-off regulators face between containing financial system risks and supporting economic growth.

Background

Shadow financing is an integral part of the Chinese financial system. However, in recent years, regulators have sought to reduce the risks that shadow financing poses. This note examines the implications of China's clampdown on shadow finance activity that began in 2016 on savers, borrowers, intermediaries, policymakers and systemic risk in the financial system.

Shadow financing grew rapidly in China following the global financial crisis as a result of efforts to stimulate the economy with construction-related spending (Bowman, Hack and Waring 2018). Regulatory constraints meant it was difficult for local governments and property developers to source funding for this spending from the formal banking system. On the supply side, caps imposed by regulators on bank deposit rates and loan-to-deposit ratios limited banks' ability to raise on-balance sheet funding that they could use to lend to governments, SOEs and other businesses. In response, non-bank financial institutions (NBFIs) began to provide more credit, while banks innovated by raising off-balance sheet funding to lend to restricted industries via NBFIs.

The relationship between China's formal and informal banking systems has some similarities with those found in advanced economies prior to the global financial crisis. In both, NBFIs provided credit and funded their activity by raising funding in wholesale debt markets and by selling securitised assets (Financial Stability Board 2017). Banks acquired some of these assets, creating a high degree of interconnectedness between the formal and informal banking systems. Banks also engaged in shadow financing activity via off-balance sheet entities. This was particularly the case in China, where shadow lending by banks' own off-balance sheet entities occurred to a much greater extent than in advanced economies, with banks accounting for around two-thirds of shadow banking activity in 2016 (Sun 2019).

The risks posed by shadow financing were exacerbated by the use of short-term liabilities. These institutions funded much of their activity by offering wealth management products (WMPs) and other asset management products (AMPs). A reliance on short-term liabilities makes shadow banking entities vulnerable to sharp contractions in available funds as these entities do not benefit from liquidity facilities afforded to the formal banking sector (Sun 2019).

The shadow banking system had also become very complex and opaque. An investment could be channelled through multiple NBFIs, some of which had tranched liabilities (see Figure 1 from Ehlers, Kong and Zhu (2018) or Figure A1 from Bowman, Hack and Waring (2018)). In addition, banks often sold non-performing loans (NPLs) to NBFIs and re-purchased them as securities, which obscured the quality of their assets. Underlying this system was widespread moral hazard; consumers and businesses that provided the ultimate funding believed that banks would stand by their shadow banking products. This led to differences between actual and perceived risk in the financial system, which helped NBFIs and their sponsoring banks to minimise the effect of capital and liquidity regulations on their activities.

1 We would like to thank names redacted (x9) for their help on this note. We would also like to thank participants at EC, FMG, and FS seminars for their comments and feedback.

The campaign to reduce shadow financing risks

Authorities began to rein in shadow financing in 2016, following the introduction of a range of measures to reduce leverage, improve transparency and strengthen risk management practices in the financial system. The People's Bank of China (PBC) began to conduct quarterly macroprudential assessments of banks, which were extended in 2017 to include off-balance sheet products, including trust and entrusted loans, and WMPs (Chui and Upper 2017). Banks that scored poorly in certain areas of these assessments faced penalties including: higher required reserve ratios, higher central bank borrowing costs, and suspension as primary dealers. The authorities also increased the amount of debt that local governments could directly issue, reducing a key source of demand for shadow financing (Holmes and Lancaster 2019).

In 2017, the PBC and other regulators announced a series of reforms to the asset management sector to be phased in over a number of years. The regulations sought to address a range of risks related to non-bank financial intermediation, including regulatory arbitrage, implicit guarantees, interconnectedness and liquidity risks (Reserve Bank of Australia 2018). In particular, the reforms prohibited AMP issuers from providing principal and income guarantees and forbade borrowing to invest in AMPs, with the aim of making these products genuine wealth management vehicles rather than off-balance sheet deposits. The deadline for implementation of these reforms has been postponed multiple times and the targets have not yet been achieved, although financial institutions have made some progress (The People's Bank of China 2020a).

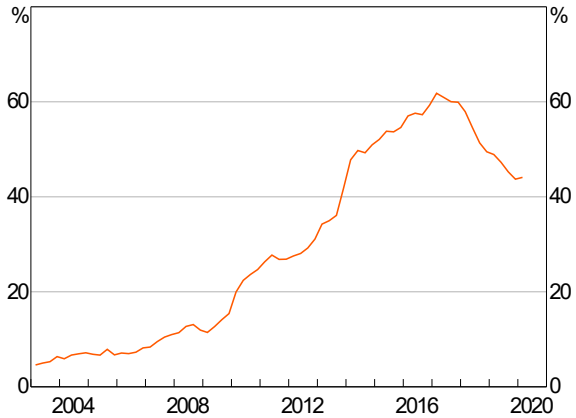
Coordination among regulatory authorities has also improved in recent years. A new Financial Stability and Development Committee was established under the State Council, consisting of the main Chinese financial regulators (State Council 2017).[2] The China Banking Regulatory Commission (CBRC) also merged with the China Insurance Regulatory Commission (CIRC) to improve prudential oversight, becoming the China Banking and Insurance Regulatory Commission (CBIRC). The merger clarified regulatory responsibility for shadow finance activities and reduced the duplication of regulations (State Council 2018).

Shadow financing activity has contracted from over 60 per cent of GDP to around 40 per cent as a result of these measures (Graph 1). This has materially reduced the size of risks that shadow finance poses to China's financial system. Though banks and NBFIs have continually adapted their business practices in response to regulatory changes, the restrictions on shadow banking have contributed to slower credit growth and GDP growth (The Economist 2018; Chui and Upper 2017). Overall, the clampdown and subsequent decline in shadow financing activity have had wide-ranging implications for participants in China's financial system, and the system as a whole.

Graph 1

China - Shadow Financing

Per cent of nominal GDP



Sources: CEIC Data; RBA; WIND Information

Implications for savers

Returns on deposits in the formal banking sector have historically been constrained by the use of benchmark deposit rates. This has materially impacted Chinese savers, given Chinese households' high propensity to save (Zhang *et al* 2018). In response, many households have sought higher returns in the shadow financing sector

2 The regulators on the committee are the PBC, the China Banking and Insurance Regulatory Commission (CBIRC), the China Securities Regulatory Commission (CSRC), the State Administration of Foreign Exchange (SAFE) and the State Council.

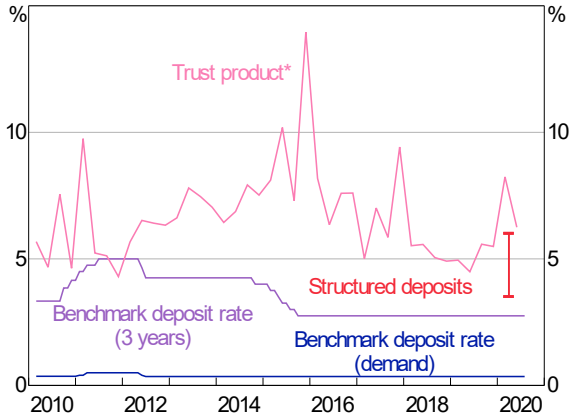
by investing in products like WMPs (Graph 2). While the PBC has taken steps to liberalise lending rates by establishing the Loan Prime Rate, deposit rates are still determined by the PBC.

The clampdown on shadow financing has reduced the attractiveness of investing in shadow financing products for households and businesses. Policies such as banning principal and income guarantees incentivised savers to invest their funds in the formal banking sector. In 2018 growth in saving deposits picked up, while shadow financing assets started to contract (Graph 3). Financial institutions then innovated to replicate the higher returns of shadow financing products with on-balance sheet products such as structured deposits (discussed further below). However, regulators have subsequently responded to ensure that the returns offered, to the extent they are guaranteed, are in line with benchmark rates.[3]

Measures have also made it easier for savers to understand the risks underlying shadow banking products. For instance, new AMP regulations have imposed stricter reporting requirements that make it easier for savers to monitor the investments that underlie shadow finance products. Among other things, this includes the requirement that AMP issuers frequently report a marked-to-market value to investors (Reserve Bank of Australia 2018).

Graph 2

Chinese Interest Rates and Returns



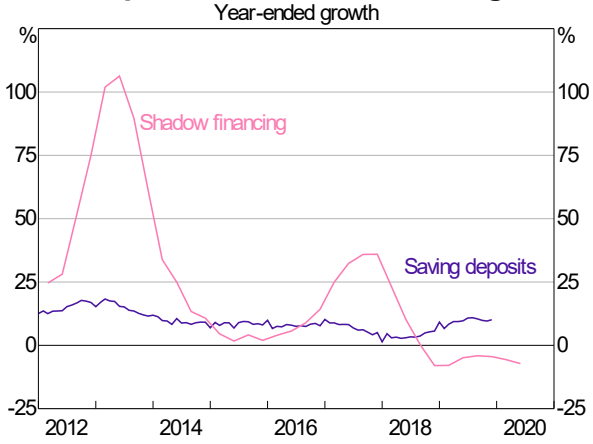
* Trust product consolidated yield, average annualised

Sources: CEIC; Standard Chartered

Graph 3

Deposits and Shadow Financing

Year-ended growth



Source: CEIC Data

Implications for borrowers

Borrowers through shadow finance channels have typically been those whose access to traditional bank credit is restricted by China's targeted credit policy. This includes local governments, private firms and real estate developers (Bowman, Hack and Waring 2018). The contraction in shadow financing since 2017 has disproportionately impacted these sectors.

A lack of data presents a challenge for assessing trends with respect to borrowers of shadow finance. The most detailed data come from the assets of trusts, which are one of the largest types of shadow financing providers. Since 2017, trust company assets have declined across most sectors (Graph 4). Although trust company data are not available by firm type, private firms' use of shadow financing has likely slowed in line with the broader decline in shadow finance. There is little incentive for SOEs to use shadow finance because they can generally access cheaper conventional funding sources (Bunny 2020).

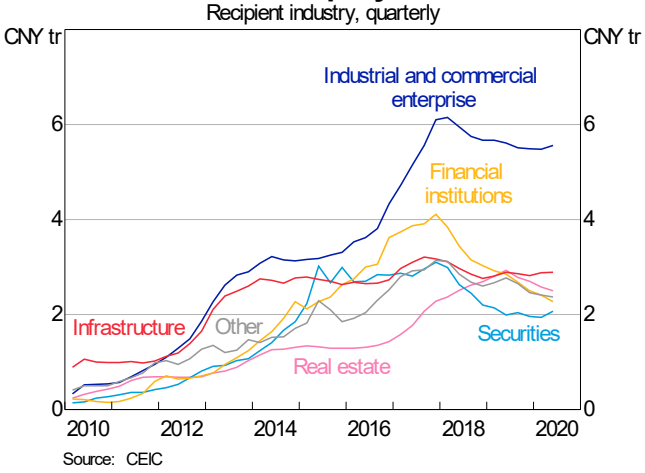
Real estate is the only industry where trust company investments have increased since 2017, which is consistent with authorities continuing to restrict the flow of formal credit to the real estate sector (The People's Bank of China 2020b). However, trust company investments in real estate began to decline in 2019 when the authorities turned their attention to the sector. Access to credit could get even more challenging for some property developers when the PBC introduces a 'three red-line' policy to curb lending to property

3 For example, in March 2020, banks received a notice from the PBC, which indicated that non-standard deposit products, including structured deposits, fall under the PBC's guidance for market pricing of interest rates (Jizhao 2020). This was followed by changes to the Macro Prudential Assessment Framework in September, where banks could be penalised if the guaranteed return on structured deposits is more than 1.4−1.5 times the benchmark interest rate (Yuan 2020).

developers in January 2021 (Qian and Mo 2020).[4] Although shadow financing is a relatively small funding source for property developers in aggregate, smaller developers, which make up the majority of the sector, are much more reliant on shadow funding sources (Suthakar 2019).

In contrast, local governments have been less affected by the contraction in shadow financing, because of the central government's strategy of 'opening the front door and closing the back door'. Under this policy, local governments were allowed to start raising debt directly from bond markets and could convert debt from local government financing vehicles into local government bonds under the debt swap program (Holmes and Lancaster 2019). Local government borrowing remains subject to strict quotas, but is less reliant on shadow finance than it was prior to 2015.[5]

Graph 4
China - Trust Company Investments
Recipient industry, quarterly



Source: CEIC

Implications for financial intermediaries

This section assesses the impact of tighter regulation of shadow financing on the assets and liabilities of banks and NBFIs. See Appendix A for a discussion of how regulatory reform has affected some alternative intermediaries in China's financial system.

Asset quality of NBFIs

Some of the risks that built up on the balance sheets of NBFIs over the previous decade have become more apparent as shadow financing has become more restricted. Some borrowers can no longer rely on continued access to new shadow finance to service their existing stock of shadow borrowing. Further, the regulatory clampdown led to a sharp slowdown in shadow financing growth and this has weighed on economic growth in recent years. Although these developments have helped to reduce risk in China's financial system, weaker structural and cyclical economic growth has contributed to a deterioration in shadow financing asset quality. The value of distressed trust assets has increased strongly over the past couple of years from less than CNY 200 billion in 2018 to over CNY 600 billion in 2020, which is around 3 per cent of total trust assets (Graph 5).[6]

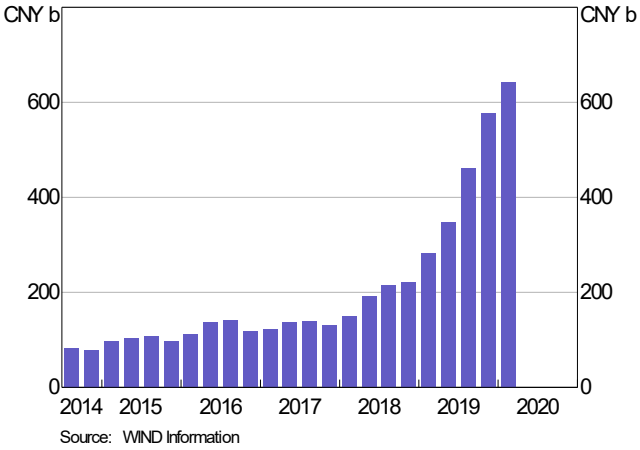
Over the past year, authorities have attempted to unwind some of the perceived implicit guarantees underpinning China's financial system by allowing some assets and companies to default for the first time in decades, most notably Baoshang Bank. In 2020, at least four of China's 68 trust firms have had investor protests outside their offices due to concerns that they will not recoup their investment (Wright and Feng 2020a). Defaults at trust companies could have implications for bank balance sheets given the large stock of banks' claims on NBFIs. The perception by investors that implicit guarantees are weakening poses a considerable risk to the financial system in the near term, but is expected to bring benefits in the long term.

4 The three red lines are a liability-to-asset ratio over 70 per cent, a net debt-to-equity ratio greater than 100 per cent and a cash-to-short-term-debt ratio less than 100 per cent. Restrictions are placed on developer debt levels depending on the number of red-lines that they cross.

5 See name redacted (2020) for details on the use of local government special bonds in the policy response to COVID-19.

6 It is unclear what defines a distressed or risky trust asset, although the China Trustee Association has outlined factors that can lead to trust assets becoming distressed (named redacted x2 2016).

Graph 5
Distressed Trust Assets

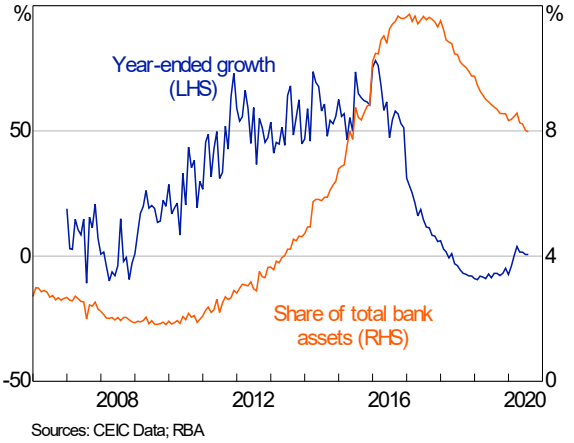


Links between NBFIs and banks in China's financial system

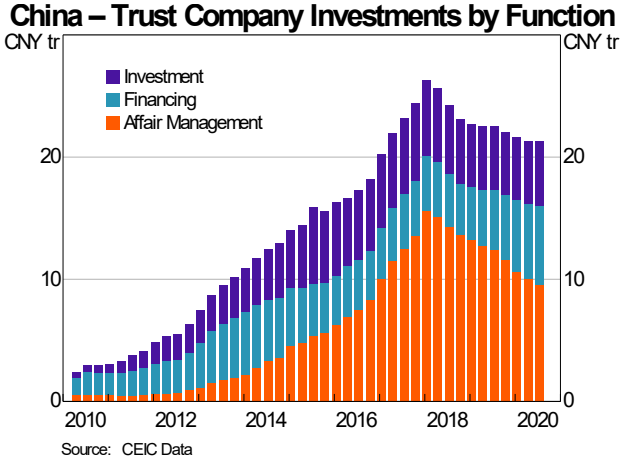
A key objective of the regulatory reforms was to reduce the risk posed by the links between banks and NBFIs, including by reducing the size of banks' on-balance sheet exposures to NBFIs and improving the transparency of banks' off-balance sheet exposures. In particular, regulators sought to reduce channel investing, which is when banks lend or invest using NBFIs as an intermediary (Reserve Bank of Australia 2017). Channel investing was appealing to banks because it allowed them to circumvent regulatory requirements such as capital and loss provisioning, while allowing them to extend loans to borrowers that they were prohibited from lending to on their balance sheets. Reforms also tightened the regulatory requirements for banks' off-balance sheet investments in NBFIs, which typically occurred via WMPs.

These reforms have significantly curtailed the amount of funding NBFIs receive from banks. Growth of banks' lending to NBFIs slowed sharply over 2017 and 2018, although the level remains high (Graph 6). The breakdown of trust assets by function shows a sharp decline in trust assets for the purpose of 'affair management' since 2017, which private sector analysts use as a proxy for channel investing (Graph 7).

Graph 6
Banks' Claims on Non-bank Financial Institutions



Graph 7
China – Trust Company Investments by Function



Bank assets

The direct links between banks and NBFIs mean that a deterioration in asset quality at NBFIs also implies a deterioration in asset quality at banks. Further, the factors that have contributed to a decline in asset quality at NBFIs are likely to have led to a deterioration in asset quality for banks' off-balance sheet assets, although there are no data available to verify this.

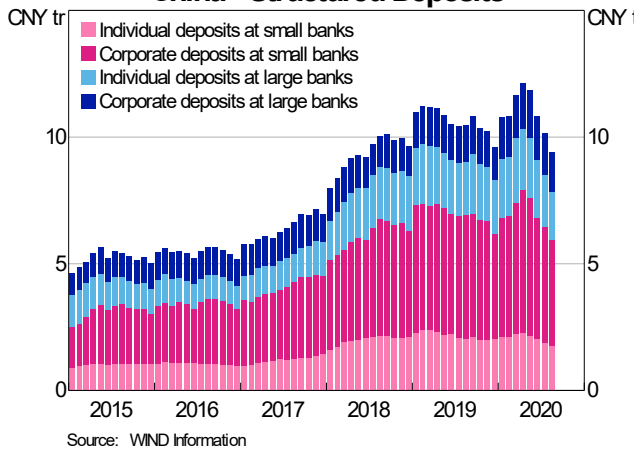
Bank liabilities

Regulatory reform has restricted the ability of banks to raise funding using off-balance sheet products with higher returns, such as WMPs (Wright and Feng 2020b). In response to the reforms, banks sought to attract funding by offering on-balance sheet funding at above benchmark deposit rates using instruments such as structured deposits. Structured deposits offer higher returns than traditional deposits by linking the interest rate on the product to a derivative on an underlying instrument, such as a stock or exchange rate.[7] In practice, the funds raised through structured deposits are often not invested in the underlying assets (Wright and Feng 2020b). Chinese regulators have raised concerns about consumer protection from the use of 'fake' structured deposits, which use rigged derivatives transactions to provide guaranteed higher returns as a subsitute for principal-guaranteed WMPs (CBIRC 2019a).

Most structured deposits are issued by smaller banks and tend to be held by corporates rather than households (Graph 8). Although they have increased in popularity, structured deposits remain a minor funding source for both large and small banks, accounting for around 6 per cent of total on-balance sheet funding for smaller banks and around 3 per cent for larger banks (Graph 9). The CBIRC has issued several notices over the past two years that have tightened restrictions on structured deposits and halted their growth as a funding source. Although the shift to more on-balance sheet liabilities improved transparency, regulators were concerned that the marketing of these products was misleading and that they undermined the PBC's benchmark interest rate system.[8] In May 2020, a branch of China Everbright Bank and a branch of China CITIC Bank were fined CNY 80,000 and CNY 800,000 respectively for issuing loans with the purpose of investing in 'fake' structured deposits (CBIRC 2020a; CBIRC 2020b). In June 2020, the CBIRC directed large and medium sized banks to reduce their structured deposits and to stop issuing structured deposits where yields do not reflect the level of risk (Hongyuran and Ziyi 2020).

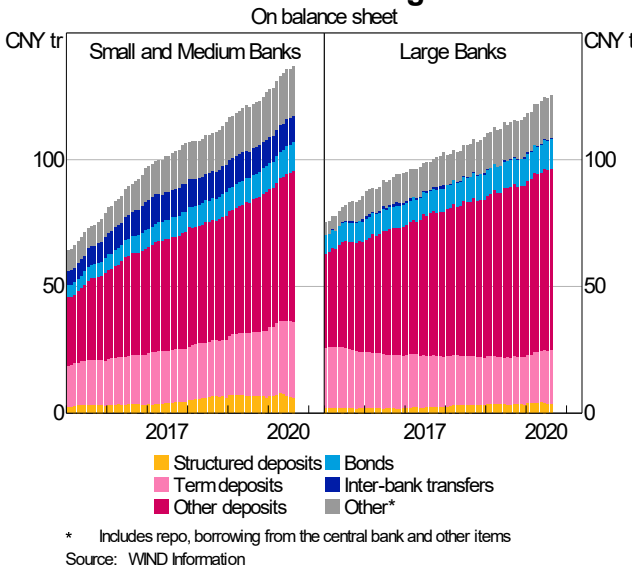
Graph 8

China - Structured Deposits



Graph 9

Chinese Banks' Funding Sources



For banks that do not have a derivatives trading license, and therefore cannot offer structured deposits, smart deposits have grown in popularity as a way of attracting customers. Smart deposits are a type of term deposit that offer significantly higher interest rates and allow customers to withdraw their money ahead of schedule. There are no data on banks' use of smart deposits, although term deposits account for about 20

7 Structured deposits make periodic coupon payments depending on the performance of the underlying asset relative to its initial level, but usually have a pre-determined trigger level, below which the coupon will not be paid. Investors incur penalties if they wish to access their money before maturity, which is usually between one month and three years. It is unclear if structured deposits are covered by the deposit insurance scheme. In some other jurisdictions the principal component is covered by the deposit insurance scheme (e.g. the United States), but in others it is not (e.g. Singapore).

8 The first notice was issued in September 2018, which required banks to have the relevant derivatives trading license to conduct structured deposit business and ensured that the regulations applicable to WMPs also applied to structured deposits. Another two notices were issued in October 2019 following the rapid growth of structured deposits over 2018. One notice required banks to clearly distinguish between structured deposits and regular deposits, while imposing stricter risk management and accounting requirements on banks (CBIRC 2019b).

per cent of bank funding. Small and medium-sized banks are the main issuers of smart deposits (Xinhua 2020). Small banks are also continuing to innovate in order to attract deposit funding, such as by offering group savings plans with higher interest rates (Xiaomeng and Shen 2020).

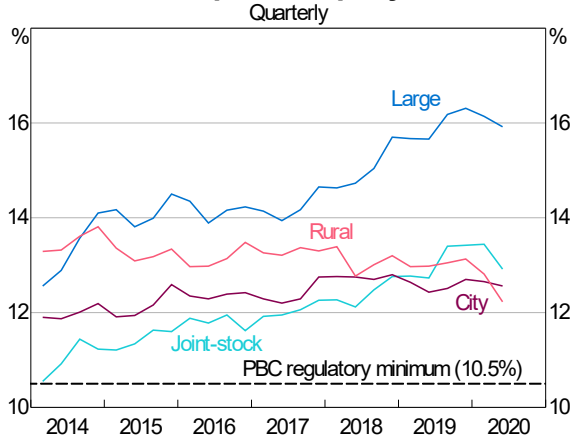
Bank capital

The impact of regulatory reforms on bank capital is difficult to assess due to data limitations. Data on bank funding sources suggest that regulatory reform has not had a material effect on the size of bank balance sheets, which has followed a consistent trend over the past five years.

Banks have typically held riskier assets and NPLs in shadow financing vehicles, which lowered their capital requirements. The shift of activity onto balance sheets has improved transparency and capital provisions will more accurately reflect banks' activity, however, reported capital adequacy may have declined if banks have been unable to set aside additional capital. Authorities have continued to monitor banks' capital levels, which have generally improved for large and joint-stock banks (Graph 10). However, capital adequacy ratios at city and rural commercial banks have not improved since 2014, and the latter have declined materially in the first half of 2020. In April, the PBC stated that only 4,000 of China's 4,605 small and medium-sized banks met the minimum required capital adequacy ratio of 10.5 per cent (The People's Bank of China 2020c). Further, in July the Chinese authorities authorised local governments to use some of the proceeds from special purpose government bonds to recapitalise some small and medium-sized banks (Siwei and Yingzhe 2020).

The deterioration in asset quality has been accompanied by a decline in profitability. The regulatory clampdown on AMPs has restricted the ability of banks to make high yielding investments, which has squeezed bank profit margins (Ding, Fung and Jia 2019).[9]

Graph 10
Banks' Capital Adequacy Ratios
Quarterly



Sources: CEIC Data; RBA

Implications for policymakers and systemic risk

The reforms in recent years have improved prudential oversight and supervision. Prudential authorities have been given greater powers and have improved inter-agency collaboration and regulatory coverage. Banks have also brought more of their activity and exposures onto their balance sheets, improving the transparency of the financial system and reducing interconnectedness. However, authorities will need to remain alert to new innovations from financial institutions. Low returns on standard financial products continue to induce search-for-yield behaviour from investors and households, who are often enticed by new shadow finance products with high returns. Notwithstanding these concerns, authorities have become more comfortable with China's shadow financing system and acknowledged that 'shadow financing is a necessary supplement to the financial market' (Gang 2018).

Monetary authorities have become more targeted in the way that they deploy monetary stimulus in recent years to try to prevent a resurgence in shadow financing activity. This approach has largely continued in response to COVID-19, even though it makes it more difficult to stimulate a broader recovery in economic

9 This problem has been exacerbated for small banks during COVID-19 because they have been directed by authorities to increase lending to businesses and consumers at low interest rates (name redacted 2020; names redacted x2 2020).

activity. Regulators have acknowledged that the COVID-19 outbreak and stimulatory credit policy have contributed to increased risk in the financial system and have continued to introduce targeted regulations as new risks emerge (Russell 2020; Adeney 2020). A renewed deterioration in conditions due to COVID-19 or further stimulus could result in a resurgence of risks from shadow banking activity.

Even in the absence of a resurgence in shadow financing activity, the level of risk in China's financial system remains high. The stock of shadow financing is equivalent to 40 per cent of GDP and exposures between financial institutions remain complex and opaque by international standards. Risks have also started to materialise in some shadow financing products as authorities try to unwind implicit guarantees. For example, default rates on trust products have risen since 2019. Problems in shadow banking could spill over to the formal system: smaller banks are often directly exposed to shadow banking activity, while larger banks supply funding to smaller banks. In the past, strong economic growth provided a backstop if shadow banking risks were realised – banks could cover losses or rebuild capital through their profits in the formal financial system – but this is less likely to be the case going forward as economic growth is now structurally lower. More generally, lower economic growth, combined with tighter access to finance for some borrowers, is likely to contribute to an increase in non-performing assets across both the formal and informal financial systems.

One of the key challenges for authorities in the near term is to ensure that small banks have access to sustainable business models. Authorities have restricted the ability of small banks to raise funds off-balance sheet, while also ensuring that they can't raise deposits above the benchmark rates and directing them to lend to riskier customers at low interest rates. These changes have created a challenging environment for smaller banks and they have been growing more slowly than larger banks. Consolidation of small banks is likely to be necessary in the longer term (Hack 2020; Adeney and Boulter 2020).

Conclusion

Chinese authorities have halted and partially reversed the build-up of risk in China's shadow financing system. Overall, this has been a necessary and positive development for China's financial system, although the implications for different parts of the financial system have been mixed. Households and businesses have fewer investment options that offer attractive returns and financial intermediaries face more restrictions on the types of funding sources that they can use. Economic activity has been disrupted in sectors that are particularly reliant on shadow finance, which has contributed to a decline in asset quality and a narrowing of profit margins at intermediaries. From the perspective of regulators, it is now easier to monitor and respond to risks than it was a few years ago, though the trade-off between financial de-risking and supporting economic growth has been further heightened by the COVID-19 outbreak. So far, authorities have walked a fine line between supporting the economic recovery and maintaining the progress of recent years in containing shadow financing risks.

Senior Analyst
International Financial Markets
International Department

Economist
Asian Economies Research Unit
Economic Analysis Department

7 October 2020

References

name redacted (2020), 'Financial Stability Implications of China's Policy Response to COVID-19 (document 2)', RBA *Internal Note*, August.

names redacted x2 (2020), 'Chinese Banks and COVID-19: What Are The Policy Options?' (document 4), RBA *Internal Note*, September.

name redacted (2019), 'The Rise and Fall of Peer-to-Peer (P2P) Lending in China', RBA *Internal Note*, June.

Bowman J, M Hack and M Waring (2018), 'Non-bank Financing in China', RBA *Bulletin*, March, pp 1–23.

Bunny M (2020), 'Private Sector Financial Conditions in China', RBA *Bulletin*, September.

CBIRC (2019a), 'Notice on rectification of chaos that violates consumer rights (Translated)', Media Release No 194, 10 October. Available at <https://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=848300&itemId=925&generaltype=0>.

CBIRC (2019b), 'CBIRC Releases the Notice on Further Regulating Commercial Banks' Structured Deposit Business', 18 October. Available at <http://www.cbirc.gov.cn/en/view/pages/ItemDetail.html?docId=850259>.

CBIRC (2019c), 'Notice on Strengthening the Supervision and Management of Commercial Factoring Enterprises (Translated)', Media Release No 205, 18 October. Available at <http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=876115&itemId=861&generaltype=1>.

CBIRC (2020a), 'Administrative Punishment Information Disclosure Form of Suzhou Banking and Insurance Regulatory Bureau (Translated)', Media Release No 8, 8 May. Available at <http://www.cbirc.gov.cn/branch/jiangsu/view/pages/common/ItemDetail.html?docId=903055&itemId=1262>.

CBIRC (2020b), 'Administrative Punishment Information Disclosure Form of Zhoushan Supervision Branch of China Banking and Insurance Regulatory Commission (Translated)', Media Release No 7, 7 May. Available at <http://www.cbirc.gov.cn/branch/zhejiang/view/pages/common/ItemDetail.html?docId=902654&itemId=1196>.

Chen S and L Liang (2016), 'The financing role of factoring in China context', unpublished manuscript, unpublished manuscript. Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.688.9672&rep=rep1&type=pdf>.

Chui M and C Upper (2017), 'Recent developments in Chinese shadow banking', SUERF Policy Note Issue No 20.

Ding N, H-G Fung and J Jia (2019), 'Shadow Banking, Bank Ownership, and Bank Efficiency in China', *Emerging Markets Finance and Trade*, pp 1–20.

Ehlers T, S Kong and F Zhu (2018), 'Mapping shadow banking in China: structure and dynamics', BIS Working Papers 701.

Financial Stability Board (2017), 'Assessment of shadow banking activities, risks and the adequacy of post-crisis policy tools to address financial stability concerns', Report to the G20, 3 July. Available at <https://www.fsb.org/2017/07/assessment-of-shadow-banking-activities-risks-and-the-adequacy-of-post-crisis-policy-tools-to-address-financial-stability-concerns/>.

Gang Y (2018), 'China's monetary policy framework - supporting the real economy and striking a balance between internal and external equilibrium', Lecture at Chang'an Forum, held by the Chinese Economists 50

Forum, Tsinghua University, Beijing, 13 December. Available at <https://www.bis.org/review/r190130b.htm>.

Hack M (2020), 'Smaller Chinese Banks', RBA *Internal Note*, March.

Holmes A and D Lancaster (2019), 'China's Local Government Bond Market', RBA *Bulletin*, June, pp 179–194.

Hong L and H Wei (2019), 'More Financial Institutions Exposed to Camsing Fraud Scandal', *Caixin*, 17 July. Available at <https://www.caixinglobal.com/2019-07-17/more-financial-institutions-exposed-to-camsing-fraud-scandal-101440552.html>.

Hongyuran W and T Ziyi (2020), 'CBIRC Tells Lenders to Reduce Structured Deposits', *Caixin*, 10 June. Available at <https://www.caixinglobal.com/2020-06-10/cbirc-tells-lenders-to-reduce-structured-deposits-101565611.html>.

Jizhao X (2020), 'Structured deposits soared by 1.19 trillion in January (Translated)', *21st Century Business Herald*, 10 March. Available at <https://m.21jingji.com/article/20200310/67c40d3fb23892001927ef82e8cb0ff3.html>.

Lin Z and H Lifeng (2016), 'Risk Disposal and Thinking of Trust Project (Translated)' *China Trustee Association Business Discussion*, xtxh.net site, 29 January. Available at <http://www.xtxh.net/xtxh/discuss/39437.htm>.

Qian L and Z Mo (2020), 'Heavy! 12 real estate companies participated in the central bank's housing construction symposium, requesting to submit a debt reduction plan before the end of September (Translated)', *21st Century Business Herald*, 28 August. Available at <https://m.21jingji.com/article/20200828/herald/78f8bf863efdc97b5a33f317bfb8d61b.html?mc_cid=4af2c181f8&mc_eid=16b5cca44f>.

Qinqin P and D Jia (2020), 'Central Bank May Delay New Rules for $12.9 Trillion Industry', *Caixin*, 11 July. Available at <https://www.caixinglobal.com/2020-07-11/central-bank-may-delay-new-rules-for-129-trillion-industry-101578519.html>.

Reserve Bank of Australia (2017), 'Box B: Recent Developments in Chinese Financial Regulations', *Statement on Monetary Policy*, August, pp 27–30.

Reserve Bank of Australia (2018), 'Box A: Ongoing Financial Regulatory Reform in China', *Financial Stability Review*, October, pp 19–22.

Russell B (2020), 'China's Economic Policy Response to COVID-19', RBA *Internal Note*, August.

Siwei C and G Yingzhe (2020), 'China Greenlights Use of Local Government Bonds to Recapitalize Small Banks', *Caixin*, 2 July. Available at <https://www.caixinglobal.com/2020-07-02/china-greenlights-use-of-local-government-bonds-to-recapitalize-small-banks-101574857.html>.

State Council (2017), 'China establishes financial stability and development committee', 9 November. Available at <http://english.www.gov.cn/news/top_news/2017/11/08/content_281475936107760.htm>.

State Council (2018), 'China to form new regulatory commissions', 13 March. Available at <http://english.www.gov.cn/state_council/ministries/2018/03/13/content_281476076582950.htm>.

State Council (2020), 'China makes progress in regulating banking sector', 15 September. Available at <http://english.www.gov.cn/statecouncil/ministries/202009/15/content_WS5f5ff891c6d0f7257693bf69.html>.

Sun G (2019), 'China's Shadow Banking: Bank's Shadow and Traditional Shadow Banking', BIS Working Papers 822.

name redacted (2019), 'Property Developer Financing in China', RBA *Internal Note*, November.

The Economist (2018), 'China's tighter regulation of shadow banks begins to bite', *The Economist*, 14 June. Available at <https://www.economist.com/finance-and-economics/2018/06/14/chinas-tighter-regulation-of-shadow-banks-begins-to-bite>.

The People's Bank of China (2020a), 'PBC Officials Answer Press Questions on Adjusting the Transitional Period of the Guiding Opinions on Regulating Asset Management Business', 3 August. Available at <http://www.pbc.gov.cn/en/3688110/3688172/4048269/4067819/index.html>.

The People's Bank of China (2020b), 'Symposium on Financial Support for Epidemic Prevention and Control and Economic and Social Development Held in Beijing (Translated)', pbc.gov.cn site, 4 March. Available at <http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/3983034/index.html>.

The People's Bank of China (2020c), 'Transcript of the press conference on financial statistics for the first quarter of 2020 (Translated)', pbc.gov.cn site, 10 April. Available at <http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/4005810/index.html>.

Wright L and A Feng (2020a), 'China's Slow-Motion Banking Crisis Is Picking Up Speed', Rhodium Group China Markets Research.

Wright L and A Feng (2020b), 'The Return of the Structured Shadows', Rhodium Group China Markets Research.

Xiaomeng W and T Shen (2020), 'Regulators Hone In On Banks' Latest Innovation -- Group Savings', *Caixin*, 27 May. Available at <https://www.caixinglobal.com/2020-05-27/exclusive-regulators-hone-in-on-banks-latest-innovation-group-savings-101559773.html>.

Xinhua (2020), 'Smart deposits accelerate the exit of banks', *Xinhua*, 6 May. Available at <http://www.xinhuanet.com/money/2020-05/06/c_1125946502.htm>.

Yuan L (2020), 'Changes in deposits: pressure drop for non-standard innovative products, self-regulation of bottom-line returns for structured products (Translated)', *21st Century Business Herald*, 2 September. Available at <https://m.21jingji.com/article/20200902/herald/48d4b621d77e369116c8f68a0aad421d.html>.

Yujian W, W Hongyuran, H Yue and H Wei (2019), 'Is China's Once-Booming P2P Sector Facing a Dead End?', *Caixin*, 2 December. Available at <https://www.caixinglobal.com/2019-12-02/in-depth-is-chinas-once-booming-p2p-sector-facing-a-dead-end-101489322.html>.

Zhang L, R Brooks, D Ding, H Ding, H He, J Lu and R Mano (2018), 'China's High Savings: Drivers, Prospects, and Policies', IMF Working Paper WP/18/277.

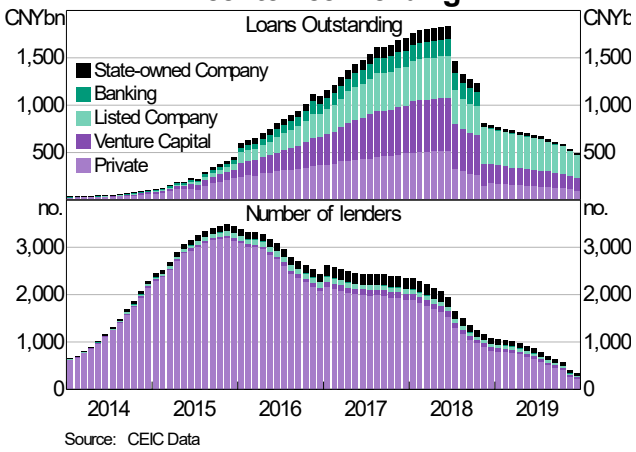
Appendix A

Peer-to-peer (P2P) lending

P2P lending matches borrowers directly with investors through online marketplaces, known as P2P platforms. A number of factors contributed to the initially strong growth in P2P services and their popularity (Bowman 2019). Chinese consumers and private businesses that had faced barriers accessing traditional lending services were able to access a new funding source. P2P lending also offered higher yields to Chinese savers than other investment products. Online P2P platforms were able to exploit China's high mobile penetration and use of mobile technology to reach lenders and borrowers. Chinese authorities also initially supported 'internet finance' as a means to improve the efficiency of financial resource allocation.

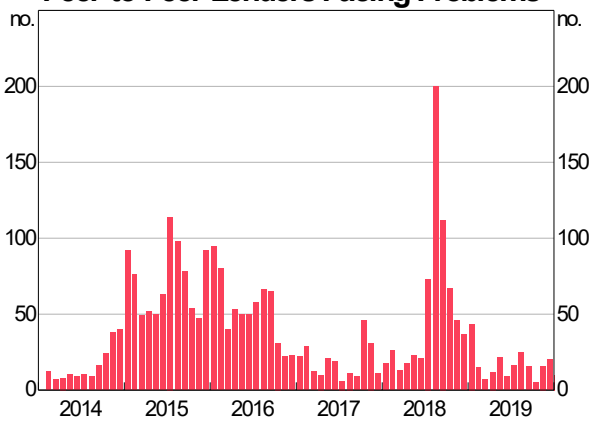
P2P lending activity grew rapidly between 2014 and 2017. The ease of establishing a P2P service drove strong growth in the number of privately run platforms initially. This was followed by a period of consolidation as some privately-run P2P platforms closed down (many due to fraudulent activity) and P2P platforms with other corporate structures began to increase their activity.

Graph 11
Peer-to-Peer Lending



Source: CEIC Data

Graph 12
Peer-to-Peer Lenders Facing Problems*



* Problems include police inspections, shareholder runaways, failure to provide withdrawals, deferred payments or closing of websites

Source: WIND

Authorities began establishing a regulatory framework for P2P lending in 2015. The China Banking Regulatory Commission (CBRC) was given primary responsibility for the oversight of P2P activity and issued the first comprehensive regulatory framework in August 2016. P2P lenders were required to register with regulatory agencies and banned from guaranteeing returns and issuing securities to lenders. Borrowing caps were also set for individuals and companies. Authorities took further steps following a large rise in P2P platforms facing difficulties in mid 2018, by prohibiting the creation of new P2P platforms and warning both platforms and borrowers of harsh penalties if they avoided their obligations. In November 2019, the CBIRC announced it would analyse the remaining P2P platforms: healthy platforms would be encouraged to restructure into more traditional lenders, while less resilient platforms would be directed to close (Yujian *et al* 2019).

The increase in regulatory oversight and restrictions has seen P2P activity decline consistently since mid 2018. At the end of 2019, only 343 P2P platforms were still active and the value of loans outstanding had fallen below CNY 500 billion. While at their peak P2P loans accounted for 0.85 per cent of bank lending, they now only account for 0.3 per cent.

Factoring

Factoring is a type of supply chain finance where a business sells its accounts receivable to a third party, usually a commercial factoring company, at a discount. Businesses might choose to factor their accounts receivable in order to meet immediate cash needs, while investors earn a return based on the spread between the receivables face value and the discounted purchase price.

Factoring is particularly beneficial for China's small and medium enterprises (SMEs), which have more trouble accessing bank lending. Banks may be more willing to offer SMEs supply chain finance in the form of factoring,

because it depends on the credit quality of the accounts receivable rather than the SME (names redacted x2 2016).

There is a concern among regulators that many of the underlying transactions that are involved in factoring are fraudulent. These concerns have been highlighted by a number of high profile cases, such as the detention of Camsing Global founder Lo Ching on supply chain financing fraud allegations (Hong and Wei 2019). In October 2019, the CBIRC issued a notice which tightened regulation and increased supervision of commercial factoring companies (CBIRC 2019c). The notice included limits on accounts receivables factoring relative to risk assets, increased reporting requirements, imposed tighter restrictions on market access and banned factoring companies from working with P2P lenders.

NATIONAL PEOPLE'S CONGRESS: REPORT ON THE WORK OF THE GOVERNMENT 2021

The National People's Congress (NPC) met in March to discuss and approve the government's policy agenda for the coming year. The key takeaways from this year's NPC are:

- *The government resumed the announcement of a GDP growth target. This year's target is for real GDP growth to be 'greater than 6 per cent', which is almost guaranteed to be achieved. It is likely that the target was set quite low in order to manage expectations for GDP growth in future years. The GDP target is considerably lower than the implicit GDP growth projection in the budget of 9.8 per cent.*
- *Fiscal and monetary policy will remain broadly steady, with a smaller fiscal consolidation than markets expected (see May 2021).*
- *Innovation, technological development and rural revitalisation were given greater prominence this year. A number of long-standing policy objectives remain on the agenda including improving the business environment, supporting employment and improving social services.*
- *Dual circulation policy priorities were included in the Work Report, although there was little new information in terms of the specific policies that will be used to implement the framework.*

Background

The National People's Congress (NPC) is China's national legislature, which typically meets every year in March to discuss and approve the government's policy agenda for the coming year. On the first day of the NPC, Premier Li Keqiang, delivered the annual Work Report, which contains the government's economic and reform priorities for the year. The government simultaneously released the National Development Reform Commission's (NDRC) Plan for Economic and Social Development and the Budget. [1]

Economic targets

The economic targets set for this year are almost guaranteed to be achieved unless there is another unforeseen economic downturn. The relatively low GDP target could be intended to manage expectations for the GDP growth target next year when GDP growth rates will no longer be boosted by COVID-19 base effects. Some market analysts have interpreted the low target as a shift towards growth 'floors' that internalise all of the downside risk in economic projections. This approach could be intended to de-emphasise GDP growth targets in the context of the structural slowdown of China's economy.

Economic, Fiscal and Financial Targets

	2021 Target	*2020 Target*	*2020 Actual*	*2019 Target*	*2019 Actual*
Real GDP (growth; per cent)	> 6	no target	2.3	6-6.5	6.1
CPI inflation (per cent)	3	?3.5	2.5	?3	2.9
Total retail sales of consumer goods (growth; per cent)	No target	no target	-3.9	9	8
Fiscal revenue (growth; per cent)	No target	no target	-3.9	5	3.8
Fiscal expenditure (growth; per cent)	No target	Drastically reduce	2.8	6.5	8.1
Headline fiscal deficit (per cent of GDP)*	3.2	> 3.6	3.7	2.8	2.8
Consolidated fiscal deficit (per cent of GDP)**	8.2	11	8.6		
Special local government bond issuance quota	CNY 3.65 trillion	CNY 3.75 trillion	CNY 3.75 trillion	CNY 2.15 trillion	CNY 2.15 trillio
Special treasury bond issuance quota	None	CNY 1 trillion	CNY 1 trillion	None	None
M2 (growth; per cent)	In line with nominal GDP growth	Notably higher rates than last year	10.1	In keeping with nominal GDP growth (7.8 in 2019)	8.7
TSF (growth; per cent)			13.3		10.7
Newly created urban jobs	> 11 million	> 9 million	11.86 million	> 11 million	13.5 million
Surveyed urban unemployment (per cent)	5.5	?6	5.2	?5.5	5-5.3
Registered urban unemployment (per cent)	Not specified	?5.5	4.2	within 4.5	3.6
Personal disposable income per capita (growth; per cent)	Steady growth	In step with economic growth	4.7	In step with economic growth	5.8
Housing units in run-down urban areas	Not specified	Not specified	2.09	2.89 million	3.16 million

Sources: MOF; NDRC; NPC; RBA

* Headline deficit, more details in a forthcoming budget note

** Implied target based on expected consolidated revenue growth of 6 per cent and expected consolidated expenditure growth of 5 per cent

Themes in the 2021 Work Report and NDRC plan

Fiscal and monetary policy will tighten marginally but remain accommodative

Fiscal policy will be less contractionary than markets expected this year, due to concerns about the sustainability of the economic recovery and risks associated with local government debt. Around CNY 2.8 trillion will be allocated directly from the central government to local governments this year, an increase

1 The 14th Five Year Plan was also published this year, but will be covered in a separate briefing.

from CNY 2 trillion last year. Some efforts to support micro and small enterprises will continue, such as raising the VAT tax-free threshold and halving the amount of income tax paid by these firms. However, waivers of social security payments announced in response to the pandemic have expired, and will not be renewed. See May 2021 for a detailed briefing on the 2021 Budget.

In 2021, monetary policy will aim to achieve a balance between promoting the economic recovery and preventing financial risks. In contrast, in 2020 the PBC relaxed its stance on containing financial risks in order to focus on supporting the economic recovery. As in 2020, monetary policy will remain flexible, targeted, reasonable and appropriate.. The PBC will endeavour to keep the macro leverage ratio stable and aggregate financing (TSF) growth in line with nominal GDP growth, after pursuing TSF growth notably higher than nominal GDP growth in 2020. The RMB exchange rate will be kept generally stable at an adaptive, balanced level.

Authorities will continue to allow micro and small enterprises to defer principal and interest payments on inclusive finance loans and the PBC will increase support for inclusive finance via re-lending and rediscounting. Inclusive loans to micro and small enterprises by large commercial banks will increase by over 30 per cent this year. Rewards and subsidies will be offered to reduce the cost of providing financing guarantees for micro and small enterprises.

More funds will be directed to key sectors by encouraging banks to increase credit loans and first-time loans and extending the pay-as-you-go lending model. These sectors include scientific and technological innovation, green development, micro and small enterprises, self-employed individuals, new types of agribusiness and to provide targeted supported for parts of the economy that continue to be affected by the pandemic.

Regulation of the financial sector remains a focus, with authorities will highlighting their intention to strengthen the regulation of financial holding companies and financial technology. The mechanisms for managing financial risks will be improved and authorities will ensure that no systemic financial risks arise. A registration-based IPO system will be established for the A-share market, while de-listing processes will be improved and de-listing will be treated as a mainstream practice.

Authorities continue to focus on promoting R&D and the development of high tech industries, with a strong focus on manufacturing sector

More funds will be directed into innovative projects. Central government funding for basic research will increase by 10.6 per cent this year, with research institutes to have more control over how the funds are used. Firms will continue to receive a 75 per cent tax reduction on R&D costs and this will be increased to 100 per cent for manufacturing firms. The proportion of loans to the manufacturing sector will be increased and investment in equipment and technology upgrades will be increased in order to make manufacturing supply chains self-sufficient.

China's technological infrastructure will be upgraded through a combination of investment in traditional infrastructure and logistics as well as new infrastructure such as 5G networks. Digital technology will be developed to improve data portability and streamline processes. For example, more government services will be digitised and integrated across regions. The authorities are supportive of platform enterprises pursuing innovative development, but will ensure that they are well regulated and operate in accordance with the law.

Rural revitalisation has been elevated following the end of the poverty alleviation campaign

Rural revitalisation is expected to take over as the next phase of the poverty alleviation campaign, which was completed last year. Counties that have been lifted out of poverty will continue to receive assistance for 5 years to encourage the development of jobs, industries and training programs that can help to avoid a re-emergence of poverty. Authorities will aim to increase rural incomes by promoting the faster development of rural industry and employment. Food security will be protected by the continuation of subsidies for key crops, expanding pilot crop insurance schemes and the development of agricultural belts.

Employment remains a key priority for 2021, although policies are little changed from previous years

The level of employment will continue to be supported by policies to lower businesses' labour costs (e.g. lowering or refunding unemployment insurance premiums), relaxing the requirements for obtaining

employment in some license-based professions and expanding vocational skills training programs. Employment conditions will be improved by progressing trials of an occupational injury insurance system and allowing people to access social security in the locality where they work even if they do not hold local residency.

Authorities will attempt to streamline business regulations and ensure equal treatment of firms

Administrative processes will be simplified for business operations requiring government review and for de-registering micro, small and medium enterprises. Operating costs including utilities, electricity, internet, tolls and transportation costs will be lowered for firms. SOE reform will continue and private and state-owned firms should be treated as equals. Anti-monopoly efforts will be increased to ensure fair competition. Environmental policies will support some progress towards China's longer term climate goals, but don't signal a sharp shift in policy this year

The Work Report set a target of a 3 per cent decline in energy consumption per unit of GDP in 2021. Clean heating will account for 70 per cent of all heating in northern China this year. Urban household waste sorting will be improved, the use of eco-friendly delivery packaging will be encouraged and the collection and treatment of hazardous waste will be improved.

The NDRC report noted that authorities will systematically increase their ability to ensure the supply of coal. This suggests that there is unlikely to be a major change to China's energy mix in the near term.

Efforts to improve education and social services will focus on the rural and migrant population

Authorities will endeavour to develop a more equitable and higher quality education system, by improving conditions and teacher salaries in rural schools. Better schooling will be provided for children of rural migrant workers in the cities and universities should continue to enrol more students from central, western and rural areas. Government subsidies for rural and non-working urban residents' medical insurance will increase by an average of CNY 30 per person. Subsidies for basic public health services will increase by CNY 5 per person.

Authorities will increase the supply of government-subsidised rental housing and shared ownership housing, while ensuring the well-regulated development of the long-term rental housing market, including tax and fee cuts for rental housing.

Dual circulation policy objectives featured in the Work Report, although there was little new information on how it will be implemented

Consumption will be supported by improving the networks that facilitate the flow of goods and services in urban and rural areas. Rural e-commerce and delivery services will be expanded to increase rural consumption. The quality and convenience of goods available for domestic consumption will be improved.

Investment will be supported by the substantial local government special bond quota, with the scope of use for these bonds to be expanded as appropriate. The central government will directly support investment projects that facilitate coordinated development across regions such as new major transport, energy, information network and logistics projects. The central government will rebuild 53,000 old urban residential communities. Barriers to private investment will be removed, such as streamlining approval procedures.

Policies will aim to promote the growth of international trade, such as providing credit support to foreign trade firms, working to smooth international logistics services, standardising port charges and simplifying the customs clearance process. The negative list for foreign investment will be reduced further and fair competition between domestic and foreign firms will be promoted. The authorities will seek to deepen multilateral and regional cooperation by accelerating free trade agreement negotiations with Japan and Korea and actively considering joining the CPTPP.

Assessment

The reports suggest that authorities remain cautious about the sustainability of the economic recovery from the pandemic and are mindful that the structural slowdown of the economy will continue in the coming years. Technological innovation and supply chain self-sufficiency are key priorities in 2021, and policies to increase growth of services appear to have been replaced by a return to support that targets the manufacturing sector. Rural revitalisation will be a policy priority this year following the completion of the

poverty alleviation campaign last year. A number of long-standing policy priorities remain on the agenda, such as boosting domestic demand, improving the business environment, supporting employment and containing financial system risks. The environment is a relatively new policy priority and, given that it is a longer-term challenge, was not a big focus of the Work Report.

Economist
Beijing Representative Office
23 March 2021

RECENT DEVELOPMENTS IN THE CHINESE INTERBANK REPO MARKET[1]

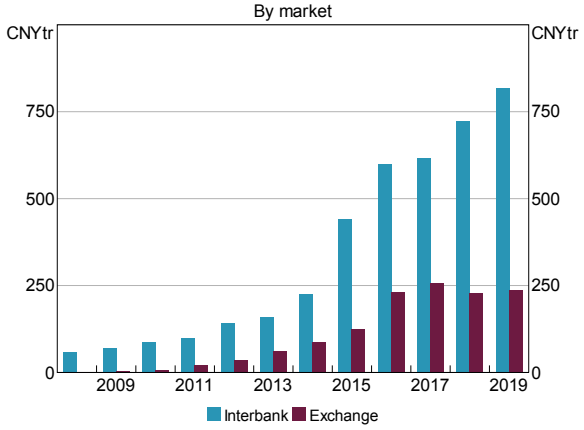
The Chinese interbank repo market is an important source of short-term funding for financial institutions operating in China. The interbank repo market has continued to grow in recent years and has gained further importance in the People's Bank of China (PBC)'s monetary policy framework as repo rates have become a key money market benchmark. This note outlines the major trends observed in the Chinese interbank repo market over the past three years, focusing on repo rates and volatility, before discussing more recent impacts of the COVID-19 pandemic. A key conclusion of this note is that, in carrying out its operations in the repo market in recent years, the PBC has been aiming to strike a balance between competing objectives. These objectives have included managing repo rates, reflecting their greater role as an interest rate benchmark, and managing risks associated with leveraged bond positions (bond positions funded with repo).

Introduction

Interbank repo is the most commonly used form of short-term wholesale funding for financial institutions operating in China. Repo is also one of the instruments used by the People's Bank of China (PBC) to adjust domestic liquidity conditions. The Chinese interbank repo market has grown rapidly since 2014 and remains much larger than the exchange-traded repo market or the unsecured interbank lending market (Graph 1 and Graph 2). There is now around CNY6 trillion (~US$0.9 trillion) of lending outstanding in China's interbank repo market, which is around one-third of the size of the US repo market.[2]

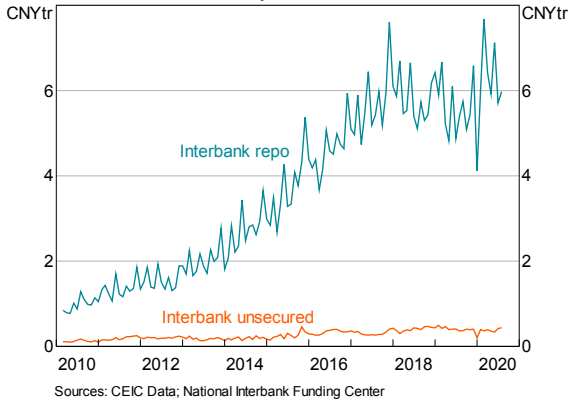
Since the Bulletin article *The Chinese Interbank Repo Market* was published in June 2017, several significant changes have affected the operation and size of China's interbank repo market. This note explores the broad trends observed in the Chinese interbank repo market over the past three years, before zeroing in on the more recent impacts of the COVID-19 pandemic.

Graph 1
Chinese Repo Turnover
By market



Sources: RBA; WIND Information

Graph 2
Lending Balance Outstanding
By market



Sources: CEIC Data; National Interbank Funding Center

Trends in the interbank repo market: 2017-2019

The following sections discuss some of the recent trends and developments in the interbank repo market, focusing on repo rates and repo rate volatility.

The PBC adjusts the overall liquidity conditions of the interbank market with several instruments, such as repo and reverse repo via its open market operations (OMO), the reserve requirement ratio (RRR) and the medium-term lending facility (MLF). Interest rates for repo transactions are commonly regarded as the most accurate indicators of liquidity, as repos represent the largest and most liquid segment of money markets. In

1 We would like to thank name redacted in IFM for her help with data provision for this note.

2 The size of the US repo market is around US$4 trillion (repos and reverse repos), based on 2019 data on repos outstanding from the Federal Reserve Bank of New York Primary Dealer Statistics database.

this note, we will focus on the most actively traded repo tenors (overnight and 7-day),[3] as indicators of liquidity.

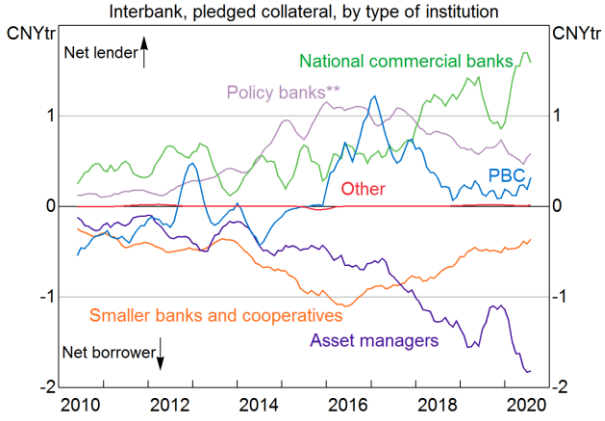
In recent years, the PBC has also consistently promoted the use of interbank repo rates in setting up its market-based benchmark interest rate system. The Depository-institutions Repo Rate (D-Repo) was developed to capture pledged repo transactions conducted among deposit-taking financial institutions, with a D-repo fixing subsequently launched on 31 May 2017. The interest rates on D-repos are generally lower than those on standard interbank pledged repos as depository institutions are perceived to have lower credit risk than non-bank financial institutions. Since D-repo's inception, the PBC has signalled it would nurture the 7-day D-repo rate as one of its future benchmark interest rates. In August, the PBC published a White Paper on China's benchmark interest rate system, where it reiterated the importance of D-repo as a key reference for monetary policy adjustment and financial market price setting.[4]

Reduced involvement of the PBC in the repo market

Despite the increased importance of repo rates as a financial benchmark in China, the PBC's outstanding repo lending has declined significantly from late 2016 (Graph 3). This could be a reflection of the PBC's preference to manage liquidity conditions through changes to RRRs rather than OMOs (discussed below). Similarly, while China's policy banks had previously been significant lenders in the repo market, their repo lending has also fallen substantially from its peak in 2016, as these banks instead increased their loan issuance.

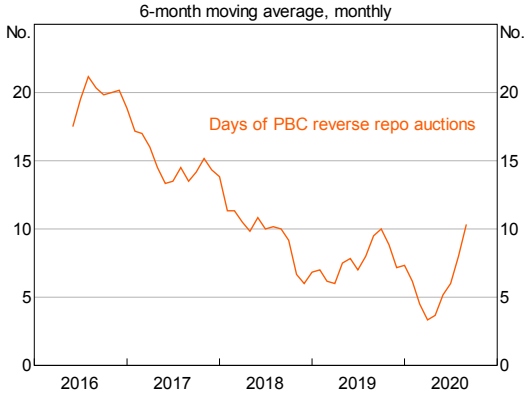
Over the past two to three years, the PBC displayed a less active approach to managing short-term fluctuations in liquidity, reducing the frequency of OMOs (Graph 4) as well as the size of cash injections (resulting in a smaller stock of outstanding repo). The reduced involvement of the PBC in the repo market could be a signal from the central bank that limiting money market volatility was no longer a high priority among the policy objectives of Chinese authorities. In particular, the PBC may have been more accepting of greater volatility in overnight repo rates as the central bank emphasised the importance of 7-day repo rates. The PBC may even have deliberately allowed the volatility of repo rates to rise in order to curb financial speculation and arbitrage such as bond carry trade (discussed below).

Graph 3
Net Outstanding Repo Lending Balance*
Interbank, pledged collateral, by type of institution



* Six-month rolling average
** Relabelled from 'special members' in source data
Sources: CEIC Data; China Central Depository & Clearing; RBA

Graph 4
PBC Open Market Operations
6-month moving average, monthly



Sources: Bloomberg; RBA

As shown in Graph 4, the PBC has held reverse repo auctions much less frequently in recent years compared with 2016 and 2017.[5] Instead, the PBC has been more selective in the timing of its liquidity smoothing operations, mostly conducting OMOs to ease short-term funding pressures only on days with large cash shortages such as tax payment deadlines or ahead of a holiday season. The by-product of this strategy,

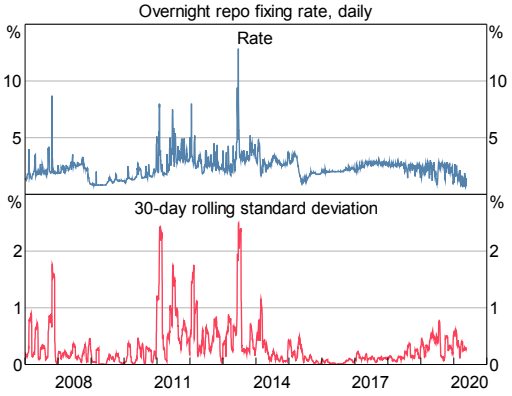
3 Repo fixing rates are the median repo rates for interbank transactions in the morning session (9:00am to 11:30am) of each trading day. The sample for calculating the repo fixing rates includes all interbank participants (i.e., both depository and non-depository institutions).

4 This note mainly analyses the broad repo fixing rate instead of D-repo fixing rate for two reasons. Firstly, the broad and D-repo rates have tracked closely since the launch of the latter in May 2017, especially for the overnight tenor. Secondly, the broad repo rate was selected due to its longer series.

5 The PBC moved from bi-weekly OMOs to daily OMOs in February 2016.

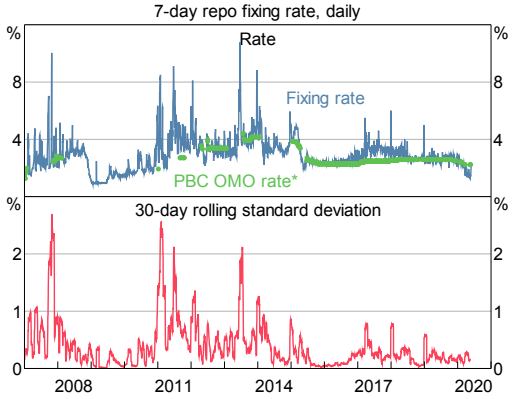
however, is increased volatility of overnight repo rates. Volatility in overnight repo rates was particularly low in 2016 and 2017 when the PBC had a higher stock of outstanding repo and was frequently injecting cash via repo (Graph 5), but has subsequently increased. Volatility in 7-day repo rates was also very low in 2016, but has only increased a little since that time,[6] consistent with the view that 7-day repo is a key policy instrument (Graph 6).

Graph 5
Repo Rate
Overnight repo fixing rate, daily



Sources: CEIC Data; RBA

Graph 6
Repo Rate
7-day repo fixing rate, daily

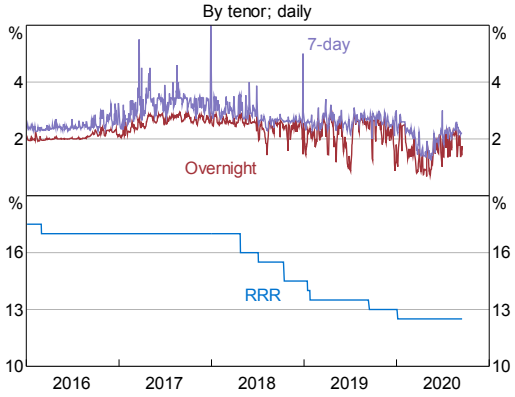


* Rate on PBC's 7-day open market operations (repos prior to May 2012, reverse repos since May 2012)

Sources: CEIC Data; RBA

Despite the higher volatility of overnight repo rates, repo market liquidity has likely been managed appropriately in recent years, as 7-day market repo rates have largely remained close to OMO rates since mid-2018. Furthermore, the overnight repo rates have largely traded below 7-day repo rates, suggesting the level of system liquidity has been sufficient to avoid undesirable spikes in repo rates. An increase in long-term system liquidity via RRR cuts in recent years appears to have helped achieve this (Graph 7).

Graph 7
Interbank Repo Rates
By tenor; daily



Source: Bloomberg

Bond carry trade

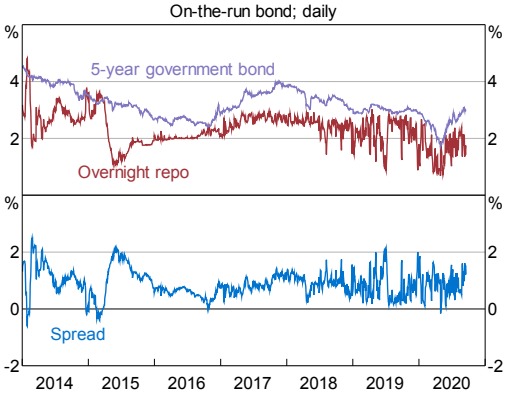
Banks and investors can use the repo market to fund bond carry trades, i.e. borrowing for a short tenor in the repo market and using the funds to purchase a bond with a longer tenor that has a higher yield.[7] Relatively steady and positive spreads between yields on longer tenor bonds and repo rates appears to have encouraged a large increase in bond carry trades, particularly by asset managers, in 2017 (Graphs 8 and 9).[8] Smaller banks had also steadily increased their repo borrowing in the few years to early 2018.

6 The increase in 7-day repo rates at the beginning of each year can be explained by higher demand for funding that spans across the Lunar New Year holidays.

7 The risk associated with most bond carry trades is interest rate risk, with little or no credit risk, as the over 90 per cent of repo collateral is of high credit quality, being Chinese government bonds or policy bank bonds.

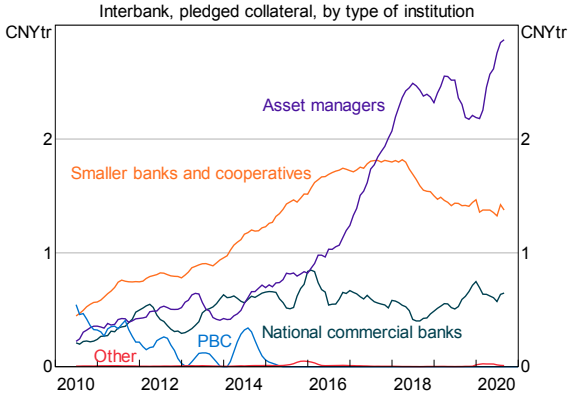
8 For the purpose of this note, we group together institutions recorded as fund institutions, insurance institutions, securities companies and non-bank financial institutions as asset managers.

Graph 8
Bond and Repo Rates
On-the-run bond; daily



Source: Bloomberg

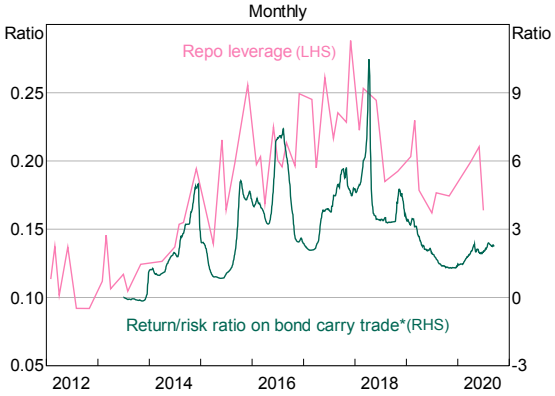
Graph 9
Outstanding Repo Borrowing Balance*
Interbank, pledged collateral, by type of institution



* Six-month rolling average
Sources: CEIC Data; China Central Depository & Clearing; RBA

By late 2017, bond market leverage – measured as the stock of outstanding repo borrowing over the stock of government and policy bank bonds[9] – had reached its peak (Graph 10). At this point, close to 30 per cent of the stock of government and policy bank bonds were being funded with repo. This high level of leverage coincided with a relatively high spread on bond carry trades relative to the risk (measured using the volatility of the spread between the bond yield and repo rate).

Graph 10
Interbank Repo Leverage
Monthly



* Spread of 5-year government bond over overnight repo rate as a ratio to the standard deviation of the spread, six-month rolling average, daily
Sources: Bloomberg; CEIC Data; National Interbank Funding Center; RBA

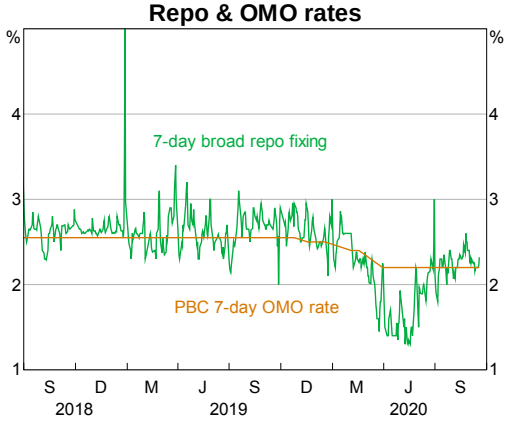
As discussed earlier, throughout 2017 and 2018, the PBC significantly reduced the frequency of its OMO, which has allowed increased volatility in overnight repo rates. The increased volatility of the spread between bond yields and repo rates increased the risk associated with bond carry trades and has likely been one of the factors that contributed to the reduction in leverage in the bond market. This action from the PBC coincided with the Chinese government's broader deleveraging campaign since the beginning of 2017 as Chinese authorities became increasingly concerned with excessive leverage and growing opacity in the financial system. For example, in its Q3 2017 report on monetary policy implementation, the PBC stated that it *"shall strike a balance between keeping liquidity basically stable and reducing the leverage"*. In 2017, authorities announced a series of reforms to the asset management sector to address a range of risks related to non-bank financial intermediation (Reserve Bank of Australia 2018).The reduction in bond market leverage also occurred after the PBC announced in January 2018 that financial institutions will be required to report to regulators if their exposure to repos (or reverse repos) exceeds a certain limit.

9 We used the total of Chinese government bonds and policy bank bonds as the bond universe as these securities represent the vast majority of the collateral universe.

The interbank repo market following the COVID-19 pandemic: 2020

Since the start of 2020, Chinese repo rates have moved in a relatively wide range (Graph 11). Over the first few months, repo rates fell significantly, as the PBC increased liquidity injection via OMO, MLF and targeted RRR cuts. The PBC also lowered interest rates on its reverse repo, MLF and excess reserves to ensure ample aggregate liquidity as global markets were undergoing significant disruption related to COVID-19. However, since late May, liquidity conditions (implied by repo rates) have gradually normalised from very easy levels as the PBC has not fully rolled over maturing loans via OMO or MLF. In the PBC's 2020 Q2 monetary policy report published in August 2020, the central bank stated that the zero interest rate and quantitative easing monetary policy adopted by the central banks of advanced economies had pushed down money market interest rates in April and the increase in money market rates since May has helped to re-align market and policy rates.

Graph 11
Repo & OMO rates



Sources: Bloomberg; PBC

With money market rates at relatively low levels in March and April, there were signs that authorities were concerned about rising financial risks from arbitrage activities, where some liquidity in the financial system was being deployed to seek high returns without flowing to the real economy. In addition to bond carry trades discussed above, there was scrutiny over corporates taking advantage of low money market rates to invest in high-yielding structured deposits. In June, Caixin reported that the China Banking and Insurance Regulatory Commission (CBIRC) had provided window guidance to several large and mid-sized banks, asking them to slash the amount of their structured deposits to the same level as the beginning of 2020 by the end of September and to cut the amount further to two-thirds of that level by the end of the year. These concerns may also have led the PBC to prefer more targeted measures to boost credit for small- and medium-sized enterprises (such as the new Credit Loan Support Program) rather than indirectly facilitating carry trades which benefit from lower repo rates.

Conclusion

The Chinese interbank repo market remains an important source of short-term funding for financial institutions operating in China and has continued to evolve in recent years. Throughout 2017 and 2018, the PBC became more selective in managing short-term fluctuations in liquidity and gradually lowered the frequency of its OMO, which saw overnight repo rates become more volatile. The PBC's tolerance for greater volatility in overnight repo rates likely reflected a deliberate strategy to address rising leverage in the bond market, which reached its peak in late 2017.

In carrying out its operations in the repo market in recent years, the PBC has been aiming to strike a balance between competing objectives. These objectives have included managing repo rates, reflecting their greater role as an interest rate benchmark, and managing risks associated with leveraged bond positions. With these objectives in mind, the PBC appears to have been successful in striking this balance as the volatility of 7-day repos has increased only a little since 2016, consistent with the role of 7-day repo as a key policy instrument, while leverage in the bond market has been reduced to a more acceptable level.

International Reserves
International Department
30 October 2020

THE EBB AND FLOW OF RENMINBI USAGE ABROAD

The Chinese renminbi (RMB) remains a modestly used international currency. Structural factors have driven a rise in RMB usage for trade – including by Australian firms. But for the most part, the ebb and flow of RMB usage abroad has been driven by 'transitive' factors, in particular Chinese firms' expectations for the path of the RMB. The share of Chinese firms' trade settled in RMB and the stock of RMB deposits held abroad increased rapidly over 2010 to 2015 as the currency steadily appreciated; declined over 2015 to 2017 as the currency fell; and has since stabilised as the currency has become a little more volatile. Over time, more variation in the value of the RMB could give rise to an increase in RMB usage for genuine risk management purposes. The Chinese authorities have recently opened up a number of new investment channels in an effort to attract RMB portfolio inflows. As a result, we are likely to see a gradual increase in Australia's portfolio flows into Chinese securities, deepening direct financial linkages between the two economies.

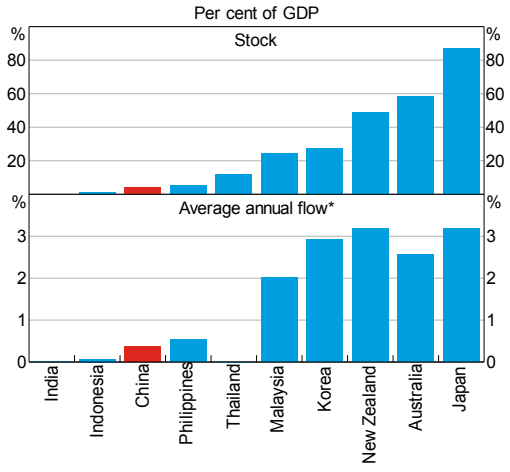
Introduction

The natural drivers for renminbi (RMB) 'internationalisation' are very strong. China is the world's largest trading partner and its equity and bond markets are among the largest in the world. As foreigners become more comfortable using the RMB and Chinese financial markets become more dependable, underlying demand for the RMB outside of China will rise, particularly in Asia.

China has strong trade ties with its Asian neighbours and has run a trade deficit with the region for a long time. If this continues, the associated net outflow of RMB from China will see Asian countries naturally accumulate RMB deposits and recycle these deposits back into Chinese financial markets, which are becoming more open to foreign investors. This will increase the region's exposure to developments in Chinese financial markets.

More broadly, RMB internationalisation is a vehicle for further capital account liberalisation (name redacted 2018). A more open capital account in China has the potential to significantly transform global financial markets. Estimates suggest that full capital account liberalisation in China would be associated with a sizable net capital outflow of at least 10 per cent of GDP. According to these estimates,[1] there would be a greater increase in flows out of China than in, as local residents use the opportunity to diversify their wealth offshore.

Graph 1
Asia – Offshore Portfolio Assets



* Over past five years
Sources: IMF; RBA

The composition of Chinese outflows is also likely to change as China's foreign assets shift from the central bank's (conservative) balance sheet to the private sector's balance sheet. At the moment, China's portfolio assets and associated outflows are smaller than that of its Asian neighbours (Graph 1). If such outflows were instead equal to the average for developed countries in the region (3 per cent of GDP) they would have amounted to US$360 billion last year. This is equal to the combined portfolio outflows of Germany, Japan, the United Kingdom and France.

Not quite there yet

This notwithstanding, the RMB has some way to go before it is a truly global currency supported by an open capital account. In its fullest sense, an international currency is one that is used by non-residents for transactions among themselves, with no participation by someone from the currency's home country (Kroeber 2013 and Lowe 2014). The role of the US dollar in denominating commodities trade between Australia and China is one example; another is the use of the US dollar as a funding currency by emerging market firms. There is little evidence the RMB is used like this.

1 Schipke (2016) provides a neat summary of the existing estimates.

More generally though, an international currency is simply one that is used extensively outside of its home economy for trade and investment. On this metric, the RMB is a modestly used international currency. One way to assess this is to examine the RMB's international role either as a store of value, unit of account or medium of exchange. As a store of value, an increasing number of countries are investing a portion of their foreign reserves in RMB, including Australia. However, as a share of global reserves, holdings of RMB are low, at around 1 per cent. As a medium of exchange, the RMB is used to settle around 15 per cent of China's trade, though some of this reflects speculative factors.[2] The RMB is also used as a unit of account, with an 11 per cent weight in the International Monetary Fund's Special Drawing Right basket and as an international 'anchor currency', in particular for the Asian region.

Ready for lift off

One unique feature of China's internationalisation push has been the establishment of offshore RMB 'centres'. In the presence of capital controls in China the establishment of offshore RMB 'centres' have made it easier for foreign firms to use the RMB for trade and investment. These were established through the introduction of a number of initiatives – including official RMB swap facilities, RMB clearing banks, direct currency trading and RMB investment schemes – in recognition of the potential for the RMB to become a widely used international currency (see Appendix A).

However, to date, the offshore centres have not given rise to a substantial increase in RMB usage. For instance, the PBC's numerous RMB swap facilities with other central banks have remained mostly unused. It is also unclear how much business the offshore RMB clearing banks perform, given RMB clearing and settlement can be conducted through correspondent banking relationships.[3] Their purpose is also increasingly unclear as China rolls out its new international payments system (CIPS).[4] Take up of schemes granting foreigners access to Chinese financial assets using RMB obtained offshore also remain limited (Graph A1; Table A1). Instead, RMB usage by non-residents has mostly been concentrated in Hong Kong and has reflected behaviour related to currency speculation rather than a genuine need to transact in RMB.

RMB usage

To be sure, 'structural factors' are driving an increase in RMB usage in the offshore centres. Chinese firms naturally want to invoice their trade in RMB in order to manage their exchange rate risks, given their balance sheets tend to be in RMB. There is also a strong case for foreign firms to trade in RMB. Market estimates suggest that Chinese importers have added as much as 5 per cent to their foreign currency invoices to hedge against unfavourable exchange rate movements. By invoicing in RMB, international firms are also able to improve trading relationships and access new trading opportunities.

Graph 2
Australia's Trade Invoiced in RMB
Share of merchandise trade with China

Sources: ABS; RBA

In Australia, these structural factors have led to a steady increase in the share of our merchandise trade *invoiced* in RMB. Around 2.5 per cent ($1.5 billion) of our merchandise imports from China are invoiced in RMB and around 0.5 per cent ($0.6 billion) of our exports (Graph 2). The local pool of RMB deposits is broadly consistent with these numbers, fluctuating between $4–8 billion. As transactional demand for the RMB increases, these numbers will rise over time.

2 SWIFT data on the RMB's role as a payments currency also attracts a good deal of interest. However, caution should be adopted when interpreting these data. Importantly, these data capture bank-to-bank activity rather than underlying commercial flows and therefore double count some transactions. For example, commercial transactions between China and the rest of the world that are intermediated through Hong Kong would be recorded as two transactions.

3 Correspondent banking relies on a mainland Chinese bank's access to the Chinese interbank payments system. An offshore bank opens an account with its correspondent bank to access China's domestic payments system.

4 CIPS provides a central location for clearing RMB payments, allowing participation by both onshore and offshore banks via direct access to China's national payments system. This reduces the need for banks to navigate complicated payment pathways via offshore clearing banks or through correspondent banks.

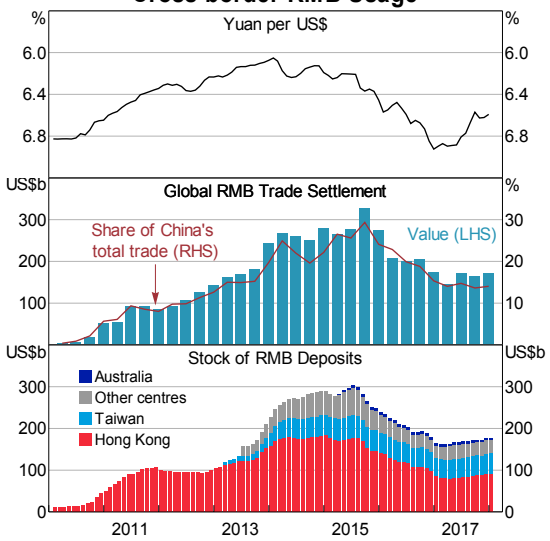
But globally, the ebb and flow of RMB offshore – most of which is held in Hong Kong – is still driven by 'transitive factors', in particular expectations for the path of the RMB. The amount of global trade settled in RMB and related changes in the stock of RMB deposits have shown a strong association with the value of the RMB against the US dollar (Graph 3). This pattern has been driven by Chinese firms' willingness to adjust their use of the RMB to settle trade in line with their expectations for the value of the RMB.

For instance, over the period 2010 to 2015, Chinese firms' RMB payments for imports were larger than their RMB receipts from exports. This led to a net outflow of RMB that ultimately supplied the offshore market with RMB deposits, which increased from virtually zero in 2010 to over US$300 billion by 2015. These trade-related flows were driven by expectations for the RMB to appreciate in value, which makes the value of the RMB in the freely-traded offshore (CNH) market more expensive than its value in the onshore (CNY) market. In particular:

- A more expensive offshore RMB incentivised onshore firms to *settle* imports in RMB, but *invoice* in US dollars.[5] As a result, these firms were able to effectively swap RMB for US dollars in the offshore market before paying their foreign counterparts, enabling them to profit from the CNH 'premium' over CNY.
- Expectations for the RMB to appreciate also naturally drove a net flow of RMB offshore to satisfy higher demand for RMB from foreign traders wanting to bet on the RMB's future appreciation.

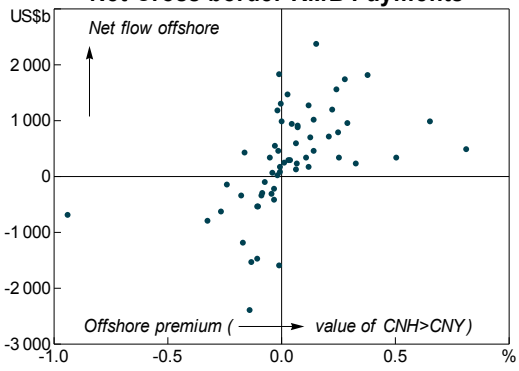
These market-driven relationships resulted in a strong positive association between the CNH premium over CNY (a measure of expectations for the RMB to appreciate) and the flow of RMB via trade from onshore to offshore (Graph 4).

Graph 3
Cross-border RMB Usage



Sources: Bloomberg; CEIC Data; RBA

Graph 4
Net Cross-border RMB Payments*



* 2010 to August 2015
Sources: Bloomberg; CEIC Data; RBA

By contrast, over the period 2015 to 2017, Chinese firms' use of the RMB to settle import payments declined. This occurred as expectations for the path of the RMB shifted markedly to a weakening bias after the PBC increased the role of the market in determining the value of the RMB in August 2015. As a result, the value of the RMB in the freely-traded offshore (CNH) market was now cheaper than its value in the onshore (CNY) market. Over this period, the stock of offshore RMB deposits halved in value. This reflected a combination of factors, including:

- The notable fall in the tendency for Chinese firms to settle import payments in RMB, reducing the flow of RMB offshore.[6]
- An increase in the tendency of Chinese exporters to convert their US dollar export receipts to RMB in Hong Kong (as the US dollar was worth more there than on the mainland) and then repatriate it home, directly reducing the stock of offshore RMB deposits.
- And, intervention by the PBC in Hong Kong's offshore market to support the value of the offshore RMB, further reducing the supply of RMB in Hong Kong.

5 Unfortunately, there is no data available on RMB trade invoicing by Chinese firms.

6 Chinese firms' RMB export receipts declined by even more than their use of the RMB to settle imports, reflecting their preference to receive US dollars amid expectations for the value of the RMB to fall. Ordinarily, this net outflow of RMB should have resulted in an increase in offshore RMB deposits. However, other factors (as discussed) combined to reduce the offshore stock of RMB deposits (see Tang *et al* 2015 for a deeper discussion).

More recently, as the value of the RMB began to appreciate over 2017, the value of China's RMB trade settlements has started to pick-up again as has the stock of RMB deposits. Looking to the future, the role of speculative factors in determining RMB usage patterns should recede, as the authorities seek to introduce more 'two-way' volatility into the RMB-dollar exchange rate. In this environment, the RMB is less likely to move in a steady and predictable way. Faced with this reality, Chinese firms as well as investors outside of China will be less inclined to adjust their RMB usage patterns in line with their expectations for the path of the exchange rate. Instead, increased currency volatility is likely to give rise to a rise in RMB usage among Chinese firms engaged in international trade for genuine risk management purposes (Chinn and Ito 2015).

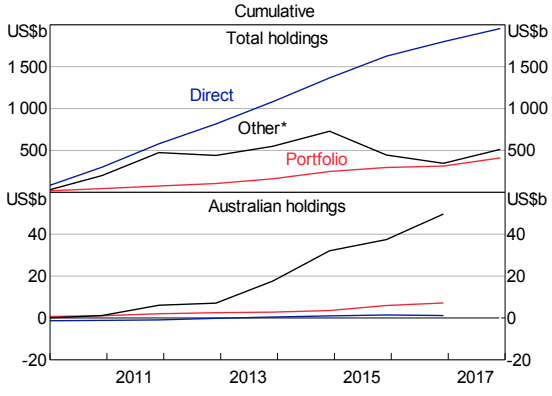
New investment channels

Encouraging domestic and foreign firms to use the RMB for trade settlements was the first step in China's strategy to internationalise the RMB. The next step has been to encourage foreign banks to put their offshore RMB deposits (obtained via firms' trade receipts) back to work in Chinese financial markets (in the absence of a large pool of investable RMB assets offshore).

Historically, foreign banks' holdings of Chinese portfolio assets have been small, reflecting the sequencing of China's internationalisation strategy (Graph 5). Foreign ownership in China's bond and equity markets is only around 1–2 per cent of the total amount outstanding, despite Chinese equities and bonds accounting for around 10 per cent of global equities and bonds outstanding.

In an effort to attract portfolio inflows, China's securities markets have significantly opened up to foreign investors over recent years. 'Two-way' investment schemes such as the Hong Kong stock connects have made it easier for international investors to invest in Chinese equity markets and vice versa.[7] China's bond market has also been significantly opened; most recently through the launch of China's bond connect. Over time, as Chinese financial markets become more dependable, foreign ownership of Chinese securities is likely to increase, including by Australian investors. One thing that is commonly cited as having the potential to increase the foreign ownership of Chinese securities in the near future is their inclusion in global benchmark indices, which would significantly increase flows from investors that passively track these benchmarks (names redacted x2 2017). That said, market surveys suggest there are ongoing concerns among investors around the convertibility of the RMB.

Graph 5
Foreign Investment Flows to China



* Mostly includes banking (loans and deposits) and trade-related flows
Sources: ABS; CEIC Data; RBA

Conclusion

Long-term trends all point towards a more international RMB, particularly in Asia. The internationalisation of the currency is likely to be gradual as Chinese firms naturally look to invoice more of their trade in RMB to minimise risks and reduce costs and as global investors become more comfortable investing in Chinese financial markets. Asia is a natural hub for RMB usage. China runs a trade deficit with the rest of the region, which will see Asian countries continue to naturally accumulate RMB deposits and look to invest these back into Chinese financial markets.

To date, however, global trends in RMB usage have tended to be driven by 'transitive' factors related to speculation about the future value of the RMB-dollar exchange rate. The role of these speculative factors in driving movements in the RMB across borders is likely to decline over time as the RMB becomes more market determined and volatility increases. This is likely to give rise to an increase in RMB usage for genuine risk management purposes.

7 The stock connects have not led to a reduction in offshore RMB deposits as 'southbound' flows (that is, Chinese residents investing in approved stocks listed on the Hong Kong Stock Exchange) have tended to be larger than northbound flows, at least until recently.

At the same time, as China's securities markets continue to open up to foreign investors we are also likely to see an increase in foreign portfolio flows into Chinese financial assets, including from Australian investors. This will increase China's direct financial linkages with the rest of the world and the outward spillovers its financial markets generate.

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Appendix A Enabling the use of the RMB in Australia and abroad

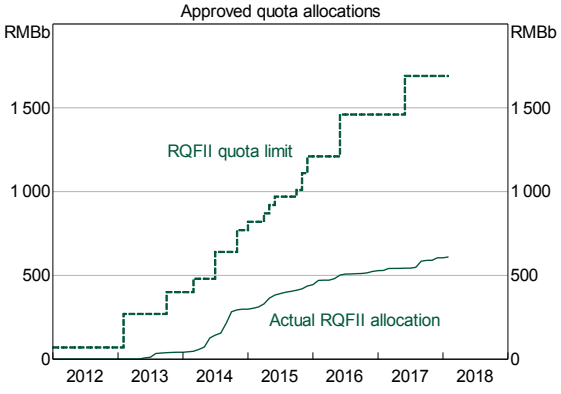
One unique feature of the push to make the RMB more widely available for use by non-residents in trade and investment has been the development of offshore RMB 'centres'. The idea was to foster an international market for the RMB with no restrictions on the use of the RMB within these centres.

The first and most important centre was established in Hong Kong in 2003 at the instigation of the People's Bank of China (PBC). By contrast, Australia's RMB centre was established at the instigation of the local authorities, given the RMB's growing role as an international currency. The Australian authorities facilitated the development of the local RMB market through a number of initiatives, including:

- The establishment of a **local currency swap arrangement** with the PBC to provide local businesses with confidence that the RMB would always be available in the local market to meet payment obligations.
- The commencement of **direct currency trading** between AUD–CNY in China's foreign exchange market, carrying with it the potential to bring down the cost of AUD–CNY trades relative to the cost of swapping AUD–CNY via the US dollar.
- The establishment of an **RMB clearing bank** to better facilitate cross-border transactions in RMB.
- The granting of an **RMB investment licence**, allowing investors located in Australia to transact in mainland financial assets using RMB obtained offshore – referred to as an RMB Qualified Foreign Institutional Investor (RQFII) licence.

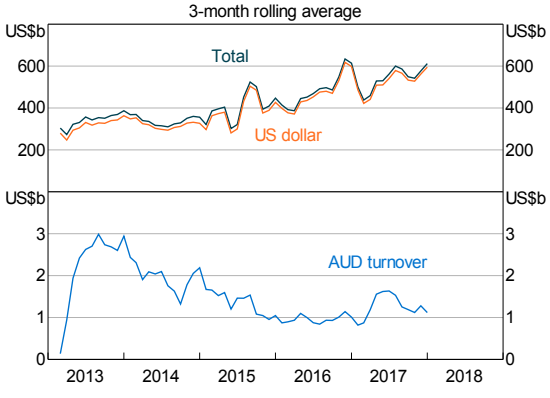
These steps have also been undertaken by several other overseas jurisdictions. For example, the PBC has signed almost **40 local currency swap arrangements** and has granted around **20 RQFII licences**, all in jurisdictions with official RMB clearing banks (Graph A1; Table A1). Direct FX–CNY trading also occurs in China's foreign exchange market for the **24 currencies** included in China's Foreign Exchange Trade System (CFETS) basket, but trading is mostly against the US dollar (Graph A2).

Graph A1
Foreign Investment in Chinese Financial Assets
Approved quota allocations



Sources: CEIC Data; RBA; SAFE

Graph A2
CNY-FX Spot Foreign Exchange Turnover
3-month rolling average



Sources: CEIC Data; RBA

Table A1: Selected RMB Offshore Centres

RMB billion

	RQFII quota	RQFII usage	RMB swap line
Hong Kong	500	306	400
United States	250	17	
South Korea	120	75	360
Singapore	100	75	300
United Kingdom	80	39	350[(a)]
France	80	24	350[(a)]
Germany	80	11	350[(a)]
Luxembourg	50	15	350[(a)]
Australia	50	32[(b)]	200
Canada	50	9	200
Malaysia	50	1	180
Switzerland	50	7	150
Thailand	50	0	70
UAE	50	0	35
Chile	50	0	22

(a) Euro area allocation
(b) RMB31 billion of this amount was used by Vanguard because the United States did not have a quota at the time
Sources: National sources; RBA; SAFE

References

names redacted x2 (2017), 'China's Inclusion in Global Benchmark Security Indices', RBA Internal Note, 19 September.

Chinn M and H Ito (2015), 'The Rise of the Redback: Evaluating the Prospects for Renminbi Use in Invoicing', in *Renminbi Internationalisation: Achievements, Prospects, and Challenges*, Barry Eichengreen and Masahiro Kawa (eds), Asian Development Bank and the Brookings Institution, pp 53–85.

Kroeber A (2013), 'China's Global Currency: Lever for Financial Reform', *Brookings-Tsinghua Centre for Public Policy Paper*, February.

Lowe P (2014), 'Some Implications of the Internationalisation of the Renminbi', Opening Remarks to the Centre for International Finance and Regulation Conference on the Internationalisation of the Renminbi, Sydney 26 March.

Lowe P (2017), 'Renminbi Internationalisation', Remarks to the RMB Global Cities Dialogue Dinner, Sydney, 27 April.

Schipke A (2016), 'Capital Account Liberalisation and China's Effect on Global Capital Flows', in *Structural Change in China: Implications for Australia and the World*, Iris Day and John Simon (eds), RBA Conference Volume, pp 163--172

Tang MK, M Wei, Y Song, Z Li and A Tilton (2016), 'How Cross-border RMB Flow Might Mask Outflow Pressures' Goldman Sachs Note, 4 July 2016

name redacted (2018), 'The Political Economy of Renminbi Internationalisation', RBA Internal Note, 30 April

THE POLITICAL ECONOMY OF RENMINBI INTERNATIONALISATION

China's push to make the renminbi (RMB) more widely available for use by non-residents was unusual. No other country had introduced policies directly aimed at the 'internationalisation' of its own currency while maintaining extensive controls on capital flows. Without any clear official guidance, several explanations for the policy push have emerged. One convincing explanation outlined in this note is that reform-minded policymakers used the internationalisation of the RMB as a vehicle for further opening the capital account and advancing domestic reforms. This 'domestic reform experiment' has now largely run its course, having mostly achieved its aims and as the Chinese authorities shift focus to addressing concerns about domestic financial stability. It is possible that the next round of RMB reforms are more focused on strengthening the RMB's natural role as a regional currency in Asia. China's strong trade ties with its Asian neighbours combined with its flagship Belt and Road Initiative have the potential to become important drivers of RMB usage in the region.

Introduction

'Domestic drive often needs to be activated by external pressure' | Vice Premier Liu He (2010)[1]

The push to internationalise the renminbi (RMB) '*defied the logic of political economy*' (Frankel 2012). In 2009 the Chinese authorities stepped up their efforts to develop an offshore market for the local currency while maintaining extensive controls on capital flows and a tightly regulated financial market. No other country had done that (McCauley 2011a). Historically, the widespread adoption of a currency for use by non-residents had depended on fundamentals, not a policy push. Three fundamentals in particular seem to matter: economic size; confidence in the currency; and open and dependable financial markets underpinned by strong institutions.

Despite the unusual policy push to internationalise the RMB, it was never the subject of an official policy document outlining its broad aims and objectives.[2] Instead, official statements have tended to focus on the introduction of various schemes put in place to enable the use of the RMB by non-residents for trade and investment. Without any clear official guidance, several political-economy perspectives have emerged to explain the motivation for internationalising the RMB.

In this note, I outline the 'domestic reform' perspective, which offers a convincing explanation (among many) for the push to make the RMB an international currency. Proponents of this view argue that the push to internationalise the RMB by the People's Bank of China (PBC) was tied to domestic development goals – namely, further opening of the capital account and the liberalisation of the domestic financial system.[3] This has parallels to the way the Chinese authorities used China's entry into the World Trade Organisation in 2001 as a vehicle for some domestic market reforms, which otherwise would have been politically difficult to achieve (Haihong 2016). This 'domestic reform experiment' has now largely run its course, having mostly achieved its aims and as the Chinese authorities shift focus to other priorities.

Other more practical motivations no doubt also played a role in the push to make the RMB more widely used outside of China. An important channel through which the global financial crisis affected the Chinese economy was via a reduction in US dollar letters of credit to Chinese exporters due to a reduction in US dollar liquidity. This contributed to a substantial fall in Chinese exports (IMF 2009 and CGFS 2014). Greater use of the RMB for trade would limit these risks in the future. More broadly, greater use of the RMB would reduce exchange rate risks and provide greater convenience for Chinese exporters and importers whose balance sheets are mostly denominated in local currency. It also had the potential to reduce borrowing costs by increasing access to offshore RMB funding markets.

1 See Davis and Wei (2013).

2 He (2015) refers to this as the '*do-without-saying*' approach to RMB internationalisation. The topic received very little attention in the 12th and 13th Five-Year Plans and more recently in Xi's report to Congress following the 19th National Congress (Boulter *et al* 2017). By contrast, the opening up of the capital account has been listed as an explicit policy priority since the early 1990s.

3 Another perspective ties the internationalisation of the RMB to 'global reform': the Chinese authorities viewed the international monetary system as fundamentally unstable as long as it was dominated by the US dollar. This view is grounded in a critique of the international monetary system published by former PBC Governor Zhou (2009). However, Zhou's critique was largely theoretical and not tied to the internationalisation of the RMB. This view also seems to place too much weight on the benefits of having a dominant global currency, which are arguably small (Bernanke 2016).

The domestic reform argument

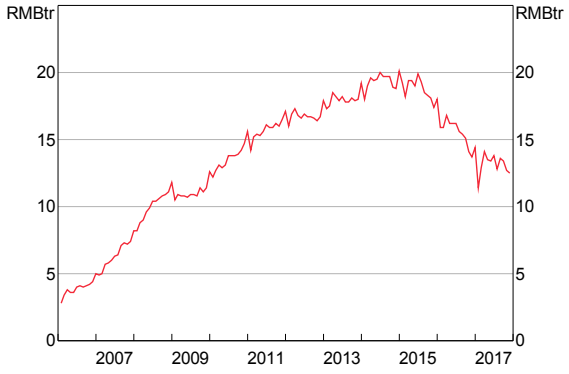
The core of this argument is that RMB internationalisation was used to accelerate China's capital account opening, which would in turn build pressure to introduce further financial reforms.[4] Reformers also used the symbolism and prestige associated with having a global currency to create a sense of urgency that could be used to promote reforms.[5] In particular, reformers used the prospect of the RMB's inclusion in the IMF's Special Drawing Right basket (reviewed every five years) to promote domestic reforms that the Fund viewed as necessary for inclusion in the SDR basket.

By 2009 reform momentum in China had slowed due to political resistance and reformers needed a vehicle for pushing ahead with further liberalisation of the financial system. Reforms were seen as essential for producing a better allocation of capital and more sustainable growth. The liberalisation of the capital account, domestic interest rates and the exchange rate had been on the PBC's formal policy agenda since the early 2000s and were listed as priorities by the government in the 11th and 12th Five-Year Plans (*Ballantyne et al* 2014).

But, despite being on the formal policy agenda, these reforms had become politically difficult to progress. For instance, Chinese exporters were opposed to further opening the capital account and liberalising the exchange rate because of concerns it would lead to currency appreciation. The coastal provinces in which export industries accounted for a large share of economic activity and employment – together with the National Development and Reform Commission – also formed a powerful interest group that opposed a more freely-floating exchange rate (He 2016).

More critically, the majority state-owned banking sector opposed the liberalisation of deposit rates because of the impact it would have on their profitability. The banks' concerns stemmed from the PBC's sterilisation activities. To contain the appreciation of the RMB, the PBC had been requiring banks to hold an increasingly larger proportion of their deposits at the central bank and to purchase central bank bills (Graph 1). Both of these claims on the PBC offered returns well below other alternatives available to banks. To compensate them, the PBC kept deposit rates at artificially low levels and allowed the banks to charge higher interest rates on their loans. Against this backdrop, the banks naturally opposed the liberalisation of deposit rates.

Graph 1
Chinese Banks' Net Claims on the PBC*



* Equal to financial institutions' PBC reserve balances and bond holdings less PBC claims on financial institutions

Sources: CEIC Data; RBA

To overcome this opposition, policymakers needed a mechanism to liberalise the exchange rate and domestic interest rates. Proponents of this view suggest the PBC used RMB internationalisation – and the international prestige of a global RMB – as a vehicle to accelerate China's capital account opening and in turn promote domestic reforms. The logic was that the creation of a large pool of offshore RMB would create pressure to open the capital account because of demand for these funds to be recycled back to the mainland in the absence of investable RMB assets offshore. Indeed, the PBC had noted that '*without channels for recycling, no one will be interested in using RMB for trade settlement*' (Wu 2011 cited in Yu 2015).

A more open capital account would then catalyse other reforms. For example, it would theoretically make it easier to invest abroad, forcing the ceiling on bank deposit rates to be lifted so that domestic banks could compete for deposits to avoid capital flight. Even with caps on RMB outflows, interest rate arbitrage (via trade channels) between market-determined interest rates in Hong Kong and regulated deposit rates in mainland China had the potential to make it quite costly to maintain the ceiling on deposit rates. The lending of offshore RMB to borrowers on the mainland would also present challenges to benchmark lending rates (McCauley 2011b).

4 This section draws heavily on the material in Prasad (2017a and 2017b); Yu (2015); Kroeber (2013) and Thornton (2012).
5 This is commonly referred to as the PBC's 'Trojan Horse' strategy, first used by Davis (2011) and Prasad (2012c).

By lifting the ceiling on deposit rates, the PBC would be forced to step away from its foreign currency intervention and associated sterilisation activities to protect the profitability of the banking sector. The exchange rate could instead be gradually liberalised and act as a buffer for increased capital flow volatility.

Progress

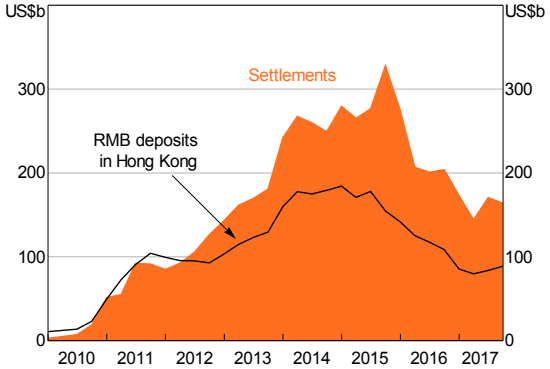
The sequence of reforms undertaken by Chinese policymakers over the period 2009 to 2015 is broadly consistent with the 'domestic reform' perspective. The stock of RMB held offshore increased markedly as did banking-related capital flows to China, reflecting the recycling of RMB back onshore. The PBC also introduced important domestic financial market reforms that culminated in the liberalisation of domestic interest rates. As a result, the IMF decided in late 2015 to include the RMB in its Special Drawing Right basket, with the decision coming into effect in late 2016.

The offshore pool of RMB

Two early reforms were critical for the establishment of an offshore pool of RMB:

- First, in mid 2009 the PBC launched a pilot scheme (completed in 2010) where selected importers were permitted to pay for their imports in RMB using banks in Hong Kong. These banks were in turn permitted to open direct correspondent accounts with mainland banks.
- Second, in mid 2010 all restrictions on establishing corporate RMB deposit accounts in Hong Kong were removed. This allowed foreigners to accumulate offshore RMB deposits obtained through export receipts.

Graph 2
RMB-denominated Trade Settlements



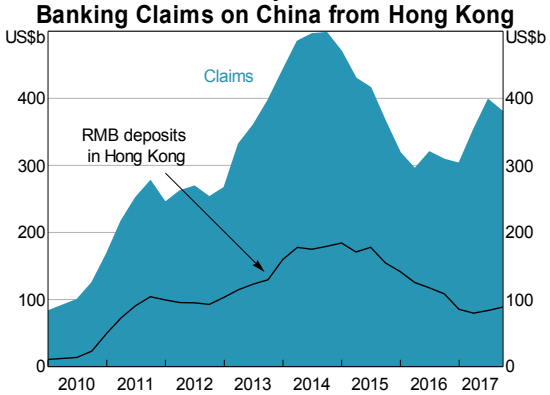
Sources: Bloomberg; RBA

As a result, the offshore pool of RMB increased rapidly over 2010 to 2015, driven by RMB trade settlements (Graph 2; see Windsor 2018 for a discussion). At its peak, the offshore pool of RMB amounted to over US$300 billion supplied by an increasing share of Chinese imports being settled in RMB.

Capital account opening and RMB recycling

The establishment of this offshore pool of RMB was effective in further opening China's capital account. Channels were opened to make RMB repatriation easier for banks looking to transfer their RMB deposits held outside of China to their domestic branches.[6] The authorities also sought to build connections between the onshore and offshore RMB markets through various pilot schemes that permitted lending between mainland cities or regions and Hong Kong and vice versa. Bond proceeds from issuance in the RMB market of Hong Kong ('dim-sum' bonds) were also permitted to be repatriated to the mainland with approval from the PBC. As a result, total banking-related claims on China increased significantly with trends in RMB deposits in Hong Kong moving closely with cross-border claims on the mainland via Hong Kong (Graph 3; Walker 2015). Banking-related capital inflows as recorded in the balance of payments also increased notably (Hatzvi, Nixon and Wright 2014).

Graph 3
Banking Claims on China from Hong Kong



Sources: BIS Locational Statistics (by residence); RBA

The authorities also opened up a number of new channels for foreigners looking to put their offshore RMB holdings to work in Chinese financial markets. These included the RMB Qualified Foreign Institutional

6 As noted by McCauley 2011b this is similar to the way the Eurodollar market has served as a source of funds for US banks.

Investor program (RQFII) and direct access to the onshore bond market for selected foreign investors. Schemes were also put in place to allow RMB outflows, including the RMB Qualified Direct Institutional Investor Program (QDII). A number of two-way investment schemes were also initiated, such as the stock connect programs (and later the bond connect program) linking Hong Kong and mainland markets and the Mutual Recognition of Funds scheme, allowing fund managers in the mainland to offer approved products in Hong Kong and vice versa.

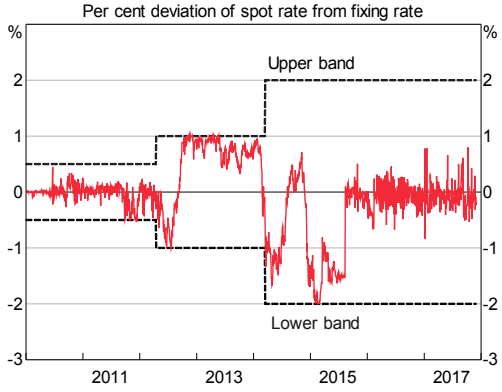
Rate reform

Hand-in-hand with these reforms, domestic interest rates were gradually liberalised. The freer movement of RMB across borders posed competitive challenges to both benchmark lending and deposit rates. This added impetus to other financial market developments that were putting pressure on China's rigid interest rate policy. For example, the development of saving instruments that offered higher returns than traditional bank deposits – for example, Wealth Management Products – had become a popular way of circumventing deposit rate ceilings and were tacitly supported by the government to overcome the big banks' opposition to deposit rate liberalisation (Prasad 2017a). The authorities also allowed banks to issue negotiable certificates of deposit, which had prices that were market determined. An increase in shadow bank lending was also enabling the banks to bypass formal lending restrictions.

To allow banks more scope to compete on lending rates, the bank lending rate floor was removed in mid 2013. And to add flexibility to the controlled deposit ceiling, the authorities gradually eased the cap on deposit rates. By late 2015 the cap was removed entirely, freeing up interest rates on both loans and bank deposits, though reference rates remain a binding pricing anchor.

The exchange rate was also slowly liberalised (Graph 4). In theory, this provided space for the PBC to reduce the extent of its foreign currency intervention and subsequent sterilisation activities. In early 2012, the RMB's trading band against the US dollar was widened to ±1 per cent and to ±2 per cent in early 2014. In August 2015 the PBC also increased the transparency of the RMB's daily fixing rate around which the RMB can trade within the ±2 per cent band.

Graph 4
RMB Trading Band against US Dollar*
Per cent deviation of spot rate from fixing rate



* Positive deviation indicates RMB appreciated relative to fix
Sources: Bloomberg; China Foreign Exchange Trade System

Outlook

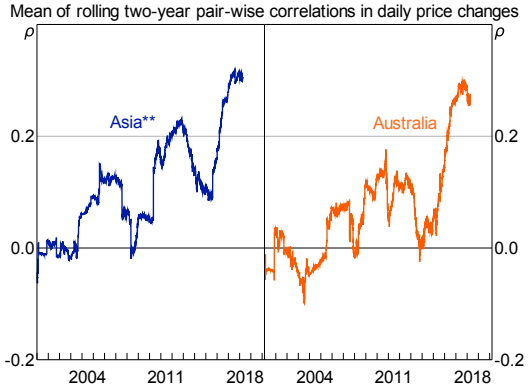
As a policy designed to accelerate China's capital account opening and build pressure to introduce further domestic reforms, RMB internationalisation was arguably quite successful. This notwithstanding, expectations for the RMB to appreciate and associated private capital inflows made the external environment conducive to the implementation of these reforms. When expectations for the value of the RMB were for depreciation, reform momentum stalled.

From mid 2014 to end 2016, the RMB depreciated by 10 per cent against the US dollar; private capital outflows were around US$1 trillion; and active PBC reserve sales to support the value of the currency were around US$0.8 trillion. Of note, in early 2016 the PBC intervened in the offshore market by buying RMB in the Hong Kong spot foreign exchange market. This led to a large reduction in the supply of RMB in this market and the overnight interest rate for interbank RMB loans in Hong Kong briefly spiked to almost 70 per cent. To many commentators this intervention represented the end of the RMB internationalisation experiment with the PBC willing to 'sacrifice' the offshore market in order to manage expectations for the value of the RMB (Kroeber and Long 2016). Since that time, the authorities have increased their enforcement of existing controls on capital outflows, introduced new capital flow measures and developed a mechanism to increase discretion over the management of the exchange rate (though this mechanism was recently suspended).

The reform agenda also shifted noticeably in late 2016 as the Chinese authorities turned their attention to addressing concerns about financial system stability, particularly the extent of leverage within the financial system. In October 2017, President Xi made no reference to capital account liberalisation in his work report to the 19th National Congress, signalling the authorities had stepped away from broad-based capital account liberalisation as a near-term policy objective. Instead, President Xi signalled that restrictions on outbound investment would be relaxed in directions that accord with the leadership's national priorities.

Looking to the future, RMB 'internationalisation' could shift to a policy of 'regionalisation'. Indeed, there are some signs of the RMB's growing influence on the currencies of the Asian region (Graph 5; this is the subject of future work).

Graph 5
Exchange Rate Correlations with China*
Mean of rolling two-year pair-wise correlations in daily price changes



* Against US dollar
** Includes Australia, India, Indonesia, Malaysia, New Zealand, South Korea, Taiwan and Thailand
Sources: Bloomberg; RBA; Thomson Reuters

China has strong trade ties with its Asian neighbours and has a trade deficit with the rest of the region (excluding Hong Kong). As a result, the region will naturally accumulate RMB deposits over time. The recycling of these deposits back into Chinese financial markets – which are becoming more open to foreign investment – will increase the region's exposure to developments in Chinese financial markets. At the same time, China's Belt and Road Initiative (BRI) is likely to become an important driver of RMB usage in Asia. Strong participation by Chinese companies in the construction of BRI projects will increase demand for RMB trade settlements, further promoting two-way RMB flows through the current account. The initiative could also increase RMB flows from China through the capital account. The huge amount of future funding required for the ambitious initiative will see the RMB join the US dollar as an important funding currency for BRI projects (Garcia-Herrero 2017). Indeed, the Chinese authorities are actively promoting the use of the RMB for BRI project financing. This will further increase the regional role of the RMB in Asia and the region's real and financial linkages to China.

Callan Windsor | International Department | 30 April 2018

References

Ballantyne A, J Hambur, I Roberts and M Wright (2014), 'Financial Reform in Australia and China', RBA Research Discussion Paper No 2014–10.

Bernanke B (2016), 'The Dollar's International Role: An Exorbitant Privilege?', www.brookings.edu/blog, 7 January.

names redacted x3 (2017), 'The 19th National Congress of the Chinese Communist Party', RBA Internal Note, 27 October.

Committee on the Global Financial System (2014), 'Trade Finance: Developments and Issues', CGFS Papers No 50, January.

Davis B (2011), 'Were China's Leaders Conned?', *The Wall Street Journal*, 2 June

Davis B and L Wei (2013), 'Meet Liu He, Xi Jinping's Choice to Fix a Faltering Chinese Economy', *The Wall Street Journal*, 6 June

Frankel (2012), 'Internationalization of the RMB and Historical Precedents', *Journal of Economic Integration*, 27(3), pp 329–365.

Haihong G (2016), 'RMB Internationalisation', *The New Palgrave Dictionary of Economics*.

Hatzvi E, W Nixon, M Wright (2014), 'Chinese Capital Flows and Capital Account Liberalisation', *RBA Bulletin*, December.

He A (2015), 'Domestic Sources and RMB Internationalisation: A Unique Journey to a Major Global Currency', *CIGI Papers*, No. 67, May.

He A (2016), 'The Dragon's Footprints: China in the Global Economic Governance System under the G20 Framework', Centre for International Governance Innovation, Canada

Garcia-Herrero A (2017), 'China Cannot Finance the Belt and Road Alone', http://bruegel.org/blog/, 12 May

IMF (2009), 'Survey of Private Sector Trade Credit Developments', IMF Policy Paper, 27 February.

Kroeber A (2013), 'China's Global Currency: Lever for Financial Reform', *Brookings-Tsinghua Centre for Public Policy Paper*, February.

Kroeber A and C Long (2016), 'Retreating From an International Renminbi', *GavekalDragonnomics*, 14 January.

McCauley R (2011a), 'The Internationalisation of the Renminbi.' Speech to the Second Annual International Conference on the Chinese Economy 'Macroeconomic management in China', Hong Kong Institute for Monetary Research, Hong Kong SAR, 14 January.

McCauley R (2011b), 'Internationalising the Renminbi and China's Financial Development Model', Council on Foreign Relations, November.

Prasad E (2017a), '*Gaining Currency: The Rise of the Renminbi*', Oxford University Press, New York.

Prasad E (2017b), 'A Middle Ground: The Renminbi is Rising, But Will Not Rule', *International Monetary Fund Finance & Development Magazine*, 54(1).

Prasad E (2012c), 'China's Sensible Yuan Policy', *The Wall Street Journal*, 9 February

Thornton A (2012), 'Anemic Ascent: Why China's Currency is Far From Going Global', Lowy Institute Analyses, 14 August.

name redacted **(2015)**, 'Foreign Bank Lending To Mainland China: The Role of Hong Kong Banks', RBA Internal Note, 4 February.

name redacted (2018), 'The Ebb and Flow of Renminbi Usage Abroad', RBA Internal Note, 30 April

Yu Y (2015), 'How Far Can Renminbi Internationalization Go?', in *Renminbi Internationalisation: Achievements, Prospects, and Challenges*, Barry Eichengreen and Masahiro Kawa (eds), Asian Development Bank and the Brookings Institution, pp 53–85.

Zhou X (2009), 'Reform the International Monetary System', Essay published in BIS Review 41/2009, 23 March

THE RENMINBI BLOC IN ASIA*

I find the renminbi (RMB) has become more important in the implicit exchange rate baskets of Asian economies, including Australia. This suggests the RMB might be on its way to fulfilling its natural role as a regional anchor currency in Asia, though the US dollar is still the most important currency in the region.

Introduction

In this note I address whether the renminbi (RMB) has become an important currency in the implicit exchange rate baskets of Asian economies. I do this by measuring the co-movement of Asian exchange rates with a basket of major reserve currencies, including the RMB (Appendix B). The measured co-movement could reflect a decision to manage the exchange rate with reference to a basket (e.g. Singapore) or be driven by the market (e.g. Australia). To put it differently, I examine the extent to which Asian exchange rates are 'anchored' to the RMB as well as other major reserve currencies. Table A1 lists the 11 economies I focus on and their exchange rate and monetary policy regimes.

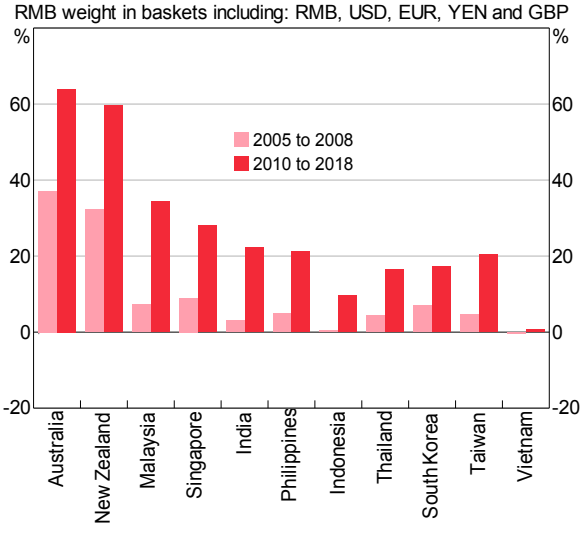
Implicit exchange rate baskets are commonly estimated to examine the role of different reserve currencies in the international monetary system. They differ from constructed trade-weighted baskets, which are often used to measure an economy's international competitiveness.[1]

Examining the RMB's role as an anchor for other currencies in Asia is one way to assess how widely the RMB is used in the region. Asia is arguably a natural habitat for the RMB to grow as an anchor currency (Eichengreen and Lombardi 2017). China has strong and growing trade ties with its Asian neighbours and the region is the recipient of an increasing amount of Chinese direct investment. Moreover, a significant share of these flows is denominated in RMB. This means that movements in the RMB should become more relevant for Asian exchange rate markets and creates an incentive for those with managed exchange rates to stabilise the local currency against the RMB. This should in turn encourage central banks in the region to hold more foreign exchange reserves denominated in RMB and underscores the importance of the region's numerous RMB swap facilities with the People's Bank of China.

Findings

I find the RMB has become more important in the implicit exchange rate baskets of a number of Asian economies since 2005. It now has a large weight in the implicit exchange rate baskets of Australia and New Zealand and has taken on more importance in the baskets of other Asian economies. This is shown in Graph 1, which plots the estimated weight of the RMB in each economy's exchange rate basket over two periods when the RMB was not fixed to the US dollar.

Graph 1
The Rise of the RMB in Asia*



* For periods when the RMB was not fixed
Sources: Bloomberg; RBA

The longer-term trend suggests the Asian monetary system is becoming bi-polar, consisting of both the US dollar and the RMB. For most economies in the region, the RMB has become more relevant at the expense of the US dollar (Graph 2). Nevertheless, the US dollar is still by far the most important anchor currency in the region. For Australia and New Zealand – with the most

* Thanks to names redacted x3 for useful comments and suggestions.

1 If an economy adopted a system where the actual exchange rate moved in line with the trade-weighted rate, the two baskets would be the same. This would help to avoid a loss of competitiveness associated with exchange rate misalignments. However, implicit exchange rate baskets have tended to consist of either the US dollar or the euro as anchors. This is because of strong persistence in anchor currency choice and the existence of 'network externalities' (Meissner and Oomes 2008).

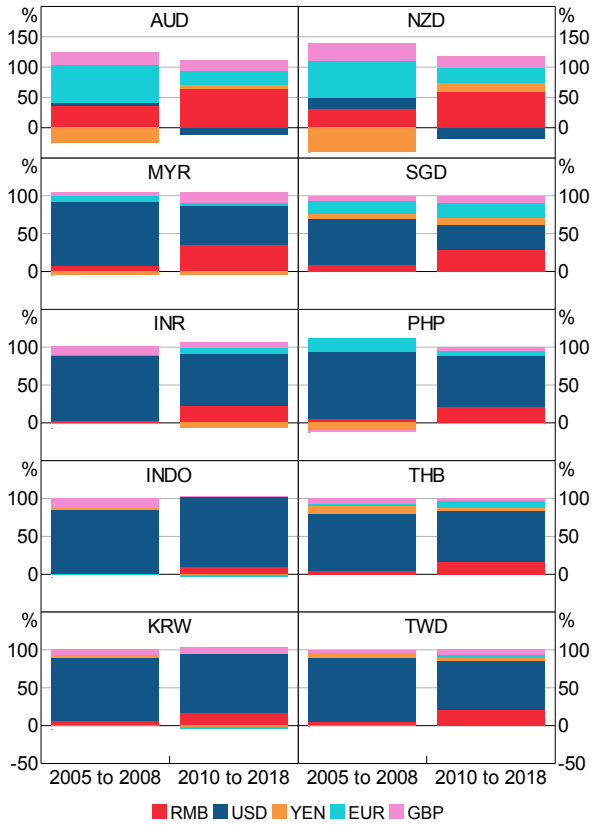
diffuse currency baskets in the region – the increase in the weight of the RMB has been accompanied by a decline in the weight of the euro.

These estimates are regression based (Kawai and Pontines 2016). Importantly, they are constructed in two steps to control for the high correlation between the US dollar and the RMB (Appendix B; full regression output is in Table B2). Not addressing this 'multicollinearity' has led others to substantially overstate the role of the RMB in Asia. Still, the assumptions made in the two-step estimation procedure mean the estimates of the weight of the RMB in this note should be treated as an **upper bound.**

Implications

While the weight of the RMB has increased over the longer term, it has declined almost uniformly over recent years. This is shown in Graph 3, which plots the daily evolution of the RMB's weight in each basket. These trends are similar to other indicators of the international use of the RMB (name redacted 2018). For example, the value of China's trade settled in RMB increased from virtually zero in 2010 to over US$300 billion by mid 2015, before halving in value by the end of 2016.

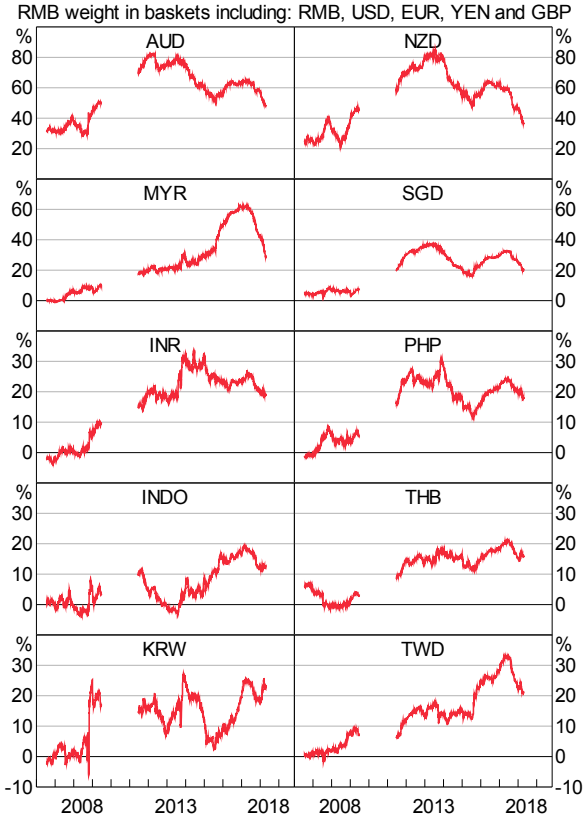
Graph 2
The Implicit Currency Baskets of Asian Economies



Sources: Bloomberg; RBA

Graph 3
The Rise of the RMB in Asia*

RMB weight in baskets including: RMB, USD, EUR, YEN and GBP



* Estimated from daily rolling two-year regressions; adjusted for the period when the RMB was pegged to the USD

Sources: Bloomberg; RBA

Trade is a key determinant of anchor currency choice (Meissner and Oomes 2008). This is because the benefits of using a particular anchor increase as the amount of trade with countries that use the same anchor increases. These 'trade network externalities' partly explain the rise and subsequent moderation in the size of the RMB bloc in Asia. It also provides a neat framework for thinking about the future path of the RMB bloc.

China's flagship Belt and Road Initiative (BRI) has the potential to drive further demand for **RMB trade settlements** in the region. Chinese companies are undertaking a large number of BRI projects, which is likely to boost trade between China and its BRI partners, increasing demand for RMB trade settlements. The BRI could also increase outbound **funding flows in RMB**. The huge amount of funding required for the ambitious initiative could see the RMB join the US dollar as an important funding currency for BRI projects (Garcia-Herrero 2017). Meissner and Oomes (2008) find that the currency denomination of liabilities is another important determinant of anchor currency choice.

Trends in the size of the RMB bloc in Asia could also reflect the way China manages its exchange rate. For instance, since the peg to the US dollar was dropped in 2010 there has been more two-way flexibility in the value of the RMB, which has coincided with an increase in the RMB's weight in Asia. Consistent with this, the recent fall in the weight of the RMB could be due to the increased control the Chinese authorities exercised over the exchange rate in 2017.

Looking ahead, if RMB trade and investment flows in Asia continue to increase the shift to a dominant RMB bloc could be quite fast. For example, if only a handful of economies in the region move to a dominant RMB anchor, their trade partners may be encouraged to quickly do the same because of the associated network externalities. The adoption of the RMB as an anchor currency in Asia will also depend on the Chinese authorities' commitment to moving towards a more market-based exchange rate regime.

Callan Windsor | International Department | 18 May 2018

Appendix A

Table A1: Foreign Exchange and Monetary Regimes in Asia

Economy	Exchange rate regime(s)[a]	Current monetary policy regime[a]	Chinn-Ito openness index[b]
Australia	Freely floating	Inflation targeting (2–3%)	1.0
New Zealand	Freely floating	Inflation targeting (2% ± 1ppt)	1.0
Malaysia	• 2012–current: managed float • 2005–12: managed float (basket) • 1998–05: peg	Other	0.4
Singapore	Stabilised arrangement (basket)	Exchange rate anchor	1.0
India	Managed float	Inflation targeting (4% ± 2ppts)	0.2
Philippines	Managed float	Inflation targeting (3% ± 1ppt)	0.4
Indonesia	Managed float	Inflation targeting (4% ± 1ppt)	0.4
Thailand	Managed float	Inflation targeting (2.5% ± 1.5ppts)	0.2
South Korea	Managed float	Inflation targeting 2%	0.7
Taiwan	Managed float	M2 growth 2.5–6.5%	n.a
Vietnam	Stabilised arrangement (basket)	Exchange rate anchor	0.4

(a) As defined in the IMF's (2017) Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)
(b) An index measuring a country's degree of capital account openness using the IMF's AREAER
Sources: IMF (2017); Chinn and Ito 2017

Appendix B

The standard equation used to estimate the influence of major international currencies in the implicit currency basket of individual economies is the equation by Frankel and Wei (1994) expressed below:

$$\Delta\left(\frac{x}{n}\right)_t = \theta_0 + \theta_{USD}\Delta\left(\frac{\boldsymbol{USD}}{n}\right)_t + \theta_{RMB}\left(\frac{\boldsymbol{RMB}}{n}\right)_t + \theta_{EURO}\Delta\left(\frac{EUR}{n}\right)_t + \theta_{JPY}\Delta\left(\frac{JPY}{n}\right)_t + \theta_{GBP}\left(\frac{GBP}{n}\right)_t + u_{t.} \quad (1)$$

Here, (x) denotes an individual Asian currency in terms of a common numeraire currency (n). I use daily data denoted by time period (t). As such, $\Delta\left(\frac{x}{n}\right)_t$ captures the daily percentage change of an Asian currency against the common numeraire currency. The weights on each reserve currency are given by the coefficient estimates $(\theta_{USD\ \ldots}\theta_{GBP})$. I choose the **Canadian dollar (CAD) as the numeraire** as it is a floating currency and not considered to have a major importance or weight in the implicit currency baskets of the Asian economies examined. The results are **robust to using the Chilean peso as an alternative numeraire**.

The problem with estimating Equation (1) is that the correlation between the change in the US dollar and the RMB is very high, particularly during periods in which China pursued a US dollar peg. To overcome this, I use the two-step regression method of Kawai and Pontines (2016).

In the **first step**, movements in the RMB that are independent from movements in other major reserve currencies are obtained as the residuals from the following regression:

$$\Delta\left(\frac{RMB}{CAD}\right)_t = \beta_0 + \beta_{USD}\Delta\left(\frac{USD}{CAD}\right)_t + \beta_{EUR}\Delta\left(\frac{EUR}{CAD}\right)_t + \beta_{JPY}\Delta\left(\frac{JPY}{CAD}\right)_t + \beta_{GBP}\Delta\left(\frac{GBP}{CAD}\right)_t + \boldsymbol{w_t}. \quad (2)$$

These residuals ($\hat{\boldsymbol{w}}_{\boldsymbol{t}}$) are then included on the right-hand side of a standard Frankel-Wei regression instead of actual movements in the RMB:

$$\Delta\left(\frac{x}{CAD}\right)_t = \alpha_0 + \alpha_{USD}\Delta\left(\frac{USD}{CAD}\right)_t + \alpha_{EUR}\Delta\left(\frac{EUR}{CAD}\right)_t + \alpha_{JPY}\Delta\left(\frac{JPY}{CAD}\right)_t + \alpha_{GBP}\Delta\left(\frac{GBP}{CAD}\right)_t + \alpha_{RMB}\hat{\boldsymbol{w}}_{\boldsymbol{t}} + e_t. \quad (3)$$

Next, I subtract the residuals ($\hat{\boldsymbol{w}}_{\boldsymbol{t}}$) from both sides of Equation (3) and impose the condition that the weights on the currencies on the right-hand side of Equation (3) add to one, that is: ($\alpha_{USD} + \alpha_{EUR} + \alpha_{JPY} + \alpha_{GBP} + \alpha_{RMB} = 1$). Doing so produces **the second step** regression:

$$\Delta\left(\frac{x}{CAD}\right)_t - \hat{\boldsymbol{w}}_t = \alpha_0 + \alpha_{USD}\left[\Delta\left(\frac{USD}{CAD}\right)_t - \hat{\boldsymbol{w}}_t\right] + \alpha_{EUR}\left[\Delta\left(\frac{EUR}{CAD}\right)_t - \hat{\boldsymbol{w}}_t\right] + \alpha_{JPY}\left[\Delta\left(\frac{JPY}{CAD}\right)_t - \hat{\boldsymbol{w}}_t\right] + \alpha_{GBP}\left[\Delta\left(\frac{GBP}{CAD}\right)_t - \hat{\boldsymbol{w}}_t\right]_t + v_t. \quad (4)$$

Estimation of this modified Frankel Wei regression for each Asian currency yields the **RMB weight** as ($\alpha_{RMB} = 1 - \alpha_{USD} - \alpha_{EUR} - \alpha_{JPY} - \alpha_{GBP}$). Results for the two periods when the RMB was not fixed to the US dollar are in Table B2. To produce Graph 3, I estimate rolling daily regressions using a two-year window (520 days) for each economy.

All results for the weight of the RMB are best interpreted as an upper bound. This is because the methodology assumes that all coefficients on the right-hand side of Equation (3) add to one. If this does not hold, any unexplained movements in reserve currency baskets are attributed to the RMB.

Table B2: The Estimated Weight of Reserve Currencies in Asia[(a)]

	USD	RMB	EUR	YEN	GBP	R^2
			21 July 2005 to 1 January 2008			
Australia	0.04	0.37	0.63	–0.25	0.21	0.37
New Zealand	0.17	0.32	0.62	–0.40	0.29	0.30
Malaysia	0.85	0.07	0.07	–0.04	0.05	0.77
Singapore	0.61	0.09	0.18	0.06	0.06	0.84
India	0.85	0.03	0.01	–0.01	0.12	0.73
Philippines	0.90	0.05	0.17	–0.09	–0.02	0.64
Indonesia	0.84	0.00	–0.01	0.03	0.13	0.53
Thailand	0.76	0.04	0.02	0.11	0.07	0.75
South Korea	0.83	0.07	–0.01	0.03	0.08	0.62
Taiwan	0.85	0.05	0.00	0.07	0.04	0.82
Vietnam	1.01	0.00	0.00	0.00	–0.01	0.96
Hong Kong	0.98	0.00	0.00	0.01	0.01	1.00
			17 June 2010 to 1 May 2018			
Australia	–0.11	0.65	0.22	0.07	0.17	0.14
New Zealand	–0.18	0.60	0.23	0.15	0.20	0.16
Malaysia	0.52	0.35	0.04	–0.05	0.14	0.35
Singapore	0.33	0.28	0.20	0.09	0.09	0.66
India	0.68	0.23	0.09	–0.07	0.07	0.41
Philippines	0.67	0.21	0.07	–0.01	0.05	0.62
Indonesia	0.93	0.10	–0.02	–0.01	0.01	0.64
Thailand	0.67	0.17	0.09	0.05	0.03	0.73
South Korea	0.77	0.17	–0.02	–0.02	0.09	0.45
Taiwan	0.65	0.21	0.03	0.05	0.07	0.70
Vietnam	0.99	0.01	–0.01	–0.01	0.01	0.83
Hong Kong	0.99	0.01	0.00	0.00	0.00	1.00

Sources: Bloomberg; RBA

(a) Red cells indicate the estimated weight is insignificant at conventional levels

Stata program and data: here

References

Chinn M and H Ito (2006), 'What Matters for Financial Development? Capital Controls, Institutions, and Interactions', *Journal of Development Economics*, 81(1), pp 163–192.

Garcia-Herrero A (2017), 'China Cannot Finance the Belt and Road Alone', http://bruegel.org/blog/, 12 May

Kawai M and V Pontines (2016), 'Is there really a renminbi bloc in Asia?: A modified Frankel-Wei approach', *Journal of International Money and Finance*, 62, pp. 72–97.

Meissner C and N Oomes (2008), 'Why do countries peg the way they peg? The determinants of anchor currency choice', *Journal of International Money and Finance*, 28(3), pp. 522–547.

name redacted (2018), 'The Ebb and Flow of RMB Usage Abroad', RBA Internal Note, 30 April.

Frankel J and S Wei (1994), 'Yen bloc or dollar bloc? Exchange rate policies of the East Asian economies. In: Ito T and A Krueger (Eds.), Macroeconomic Linkages: Savings, Exchange Rates and Capital Flows. University of Chicago Press, Chicago.

Eichengreen B and D Lombardi (2017), 'RMBI or RMBR? Is the RMB Destined to Become a Global or Regional Currency?', *Asian Economic Papers*, 16(1), pp 1–31.