

# 1. The Global Financial Environment

International financial developments can affect financial stability in Australia through financial and economic channels. Close attention is therefore paid to economies that have significant direct or indirect financial or trade links with Australia. These include the United States, Europe, China, Japan and New Zealand. Some risks are idiosyncratic to those economies, while others are more global.

Global financial vulnerabilities remain elevated, reflecting high asset prices, high debt levels and a range of country-specific factors. Most of these vulnerabilities are little changed since the previous *Review*.

Rising asset prices have been underpinned by historically low risk-free interest rates, which have fallen further since the previous *Review*. Investors are also demanding relatively little compensation to bear credit, liquidity and interest rate risks. Around one quarter of the total stock of government bonds on issue now trades at negative yields. A sharp correction in asset prices could be amplified if debt-funded investors were forced to deleverage. The extended low interest rate environment has encouraged investors to take on more risk, raising the possibility of financial stress if a sharp reversal in asset prices should occur.

A rise in global debt has accompanied the rise in asset prices over the past decade. This leaves a range of household and corporate sectors, and sovereigns, vulnerable to adverse shocks. Corporate debt is especially high in China relative to income, with a large share financed through non-bank channels. The possibility of

debt-servicing problems in China has risen due to slower economic growth and tighter credit conditions. While Chinese authorities have implemented various policy responses, these are encouraging a further increase in debt. Corporate debt has also risen to historically high levels in some advanced economies, including the United States and Canada. This has been accompanied by weaker credit quality, particularly in the leveraged loan market.

Banks in some jurisdictions remain a source of vulnerability. Bank profitability is low in Europe and Japan, with many banks facing declining margins and some European banks also still grappling with high non-performing loans (NPLs). Signs of stress have also emerged among some smaller banks in China, and a few have needed government support in recent months.

While vulnerabilities are generally little changed, a number of factors that could act on them to cause a financial disruption have become more prominent. In particular, global economic growth has slowed further and downside risks to growth have increased. This reflects the heightened risk of policy-related shocks, including the intensification of trade and technology disputes between the United States and China or a disruptive Brexit. A range of geopolitical shocks, for example from tensions in Hong Kong, the Middle East or on the Korean Peninsula, could also set off a chain of events that act on global financial vulnerabilities. The downside risks to growth are amplified by the limited global capacity for further counter-cyclical fiscal and monetary stimulus in many

economies, given high sovereign debt and already low policy interest rates.

While the overall risk of financial disruption appears to have increased in recent months, this has occurred against a backdrop of increased global financial system resilience. Since the financial crisis, banks have increased their levels of capital and liquid assets, and they are subject to more intensive supervision, including through supervisory stress testing. While some banking systems have fragilities, most should be better placed to continue to facilitate economic activity during a major downturn.

### Downside risks to global growth have increased ...

Economic growth has slowed, but is still close to trend in many advanced economies, which is supporting global financial stability. However, downside risks to growth remain prominent, including those stemming from trade tensions, geopolitical tensions and a potential disruptive Brexit. The likelihood of some of these risks being realised in the near term has increased, particularly following escalations in US–China trade and technology disputes over the past six months. A sharp slowdown in growth could undermine global financial stability, including by reducing the capacity of highly leveraged borrowers to service their debts.

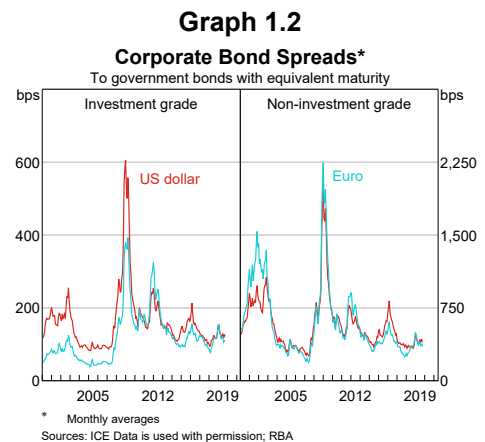
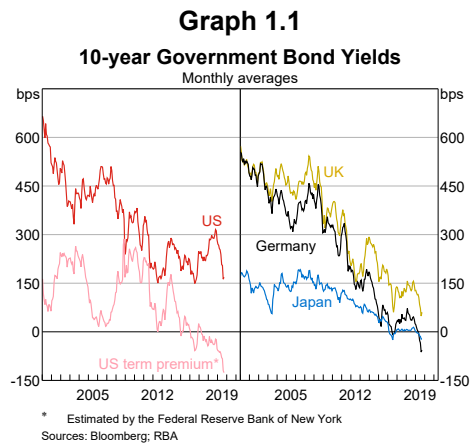
### ... yet asset prices remain high and compensation for risk remains low

Despite slower growth and prominent downside risks, many asset prices remain elevated and have risen further since the previous *Review*. A key driver of rising asset prices in recent months has been easier monetary policy, with expectations of more easing to come. This has contributed to a further decline in government bond yields, which reached all-time lows in some countries (Graph 1.1). Low government bond yields appear to reflect expectations that real risk-free interest rates and inflation will

remain low for many years. Further, investors are demanding very little, if any, compensation for bearing the risk that real risk-free interest rates or inflation rise unexpectedly.

Similarly, even though downside risks to growth have increased, investors do not appear to be demanding additional compensation for bearing credit and liquidity risks. For example, investment and non-investment grade corporate bond spreads remain relatively low (Graph 1.2).

With the decline in risk-free interest rates and risk premiums over the past year, around one quarter of the total stock of government bonds on issue now trade at negative yields. Such high nominal valuations for fixed income assets are



unprecedented historically. Prices for some other assets have also increased further, including commercial real estate, where price increases have outpaced rents in various markets (including in the United States and some countries in Europe). By contrast, equity risk premiums are not especially low.

Asset prices are vulnerable to a destabilising correction if risk premiums were to rise suddenly. This could be triggered by a negative growth shock, geopolitical event, major credit event, or a normalisation in term premiums. Large asset price falls could also be caused by an increase in risk-free rates from their very low levels, in a scenario where higher realised or expected inflation is not accompanied by stronger growth. Some asset holders may not be well prepared for such repricing, given a general increase in risk-taking in the low interest rate environment. This raises the prospect of large losses and reactive sales of assets, including by leveraged investors facing margin calls.

Other procyclical behaviour and changed market characteristics could also exacerbate price falls during a broad and sudden sell-off. For example, corporate bond market liquidity has declined post-crisis as banks have reduced their market-making activities, increasing the potential for price volatility. Open-ended investment funds have grown significantly in size since the global financial crisis. These funds often offer on-demand redemptions, even though their underlying assets may be illiquid. This liquidity mismatch can exacerbate price falls if managers need to sell assets into an illiquid market to meet redemptions.

These liquidity risks were recently highlighted by high-profile runs on some UK funds. One fund manager was unable to sell illiquid securities fast enough to meet redemptions and instead imposed redemption gates, which limit withdrawals. Measures that limit or prevent redemptions can reduce the risk of open-ended funds exacerbating asset price falls, by giving

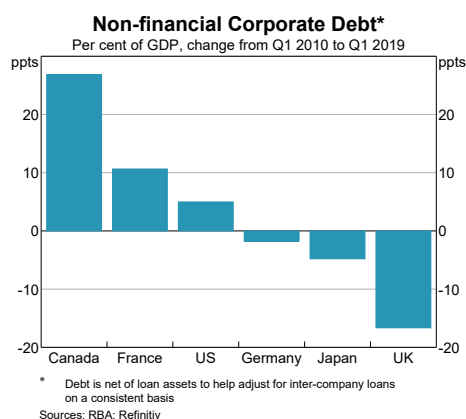
funds more time to sell illiquid assets. While these backstops are available in many jurisdictions, they remain largely untested in broader market stress events. They may, for example, result in contagion as investors in other funds seek to redeem while they can, or lead to reduced liquidity and price falls in other markets.<sup>[1]</sup>

## Non-financial corporate debt has been rising

Vulnerabilities associated with corporate leverage have been building across a number of advanced economies (Graph 1.3). Corporate debt is now around historic highs as a share of GDP in the United States, France and Canada. High levels of corporate debt can reduce borrowers' resilience to adverse income, interest rate and funding shocks. Heavily indebted corporations are also more likely to sharply reduce investment and other spending in the event of a negative shock.

However, several factors mitigate the extent of this vulnerability, at least in the current environment. Low interest rates are supporting firms' ability to service their debt. In the United States, corporate debt is not as high from a historical perspective when measured relative to earnings. The share of debt held by the most

**Graph 1.3**



vulnerable listed US firms – those with high leverage, low profitability or low interest coverage ratios – is also not high by historical standards (Graph 1.4). Some corporations also have significant liquid assets, which can be sold and the proceeds used to help make debt repayments, if their earnings were to decline.

Nonetheless, vulnerabilities do appear elevated in some parts of the corporate debt market. Within the investment grade bond market, debt has become more concentrated among riskier borrowers. This increases the risk that even small ratings downgrades could force investors with constrained mandates to sell. Leveraged loans, which are loans extended to speculative grade or already highly leveraged firms, have also expanded rapidly in recent years (though issuance has slowed this year). Further, credit quality has weakened in the leveraged loan market. In particular, investor protections from covenants have weakened considerably, the share of debt held by firms with very high leverage has increased, and buffers within borrowers’ capital structures have declined (Graph 1.5).

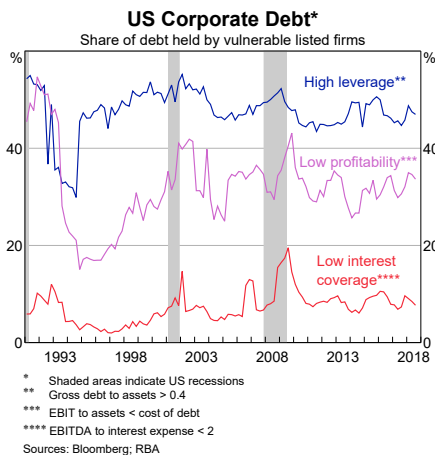
However a significant proportion of leveraged loans are sold to institutional investors (including through collateralised loan

obligations (CLOs)). These investors typically have much lower leverage and more stable funding bases than banks, and they reduce the concentration of exposures in the banking system. For leveraged loan investors, another mitigating factor is that leveraged loans are secured obligations and senior to unsecured bonds.

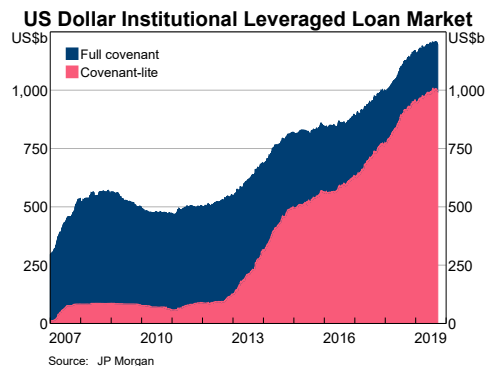
### Debt and derivative markets risk disruption from the shift away from LIBOR

The transition away from use of the London Inter-Bank Offered Rate (LIBOR) (with publication likely to cease from the end of 2021) poses challenges for many financial market participants. The number of contracts referencing LIBOR is very large. Market participants have made some progress in transitioning to new benchmark rates in derivatives and securities markets, but adoption in consumer and business loan contracts has been slower.<sup>[2]</sup> Also, since the new rates are (near) risk free and often overnight rather than for longer terms, they are not perfect substitutes for the existing LIBOR. This introduces risks, such as imperfect hedging. Authorities continue to encourage the private sector to transition away from LIBOR and develop contractual fall-back clauses for legacy contracts. If the transition is not finished before the end of 2021, significant

**Graph 1.4**



**Graph 1.5**



reputational, operational and legal risks to financial institutions could be realised.

## Household debt growth continues to slow in some smaller advanced economies

Household debt remains a key vulnerability in some smaller open advanced economies. Highly indebted households are more vulnerable to financial stress, posing a risk to financial stability and the macroeconomy. Growth in household debt has continued to slow in early 2019, following earlier tightening of macroprudential policies and reduced expectations of future housing price growth, but the level remains high (Graph 1.6). Housing prices had stabilised or declined in recent years alongside slower growth in debt, though prices have recently started to rise again in some economies. Slower debt and housing price growth, coupled with tighter lending standards, have helped to lessen the build-up of vulnerabilities, though they remain elevated overall.

## Advanced economy banks generally remain strong ...

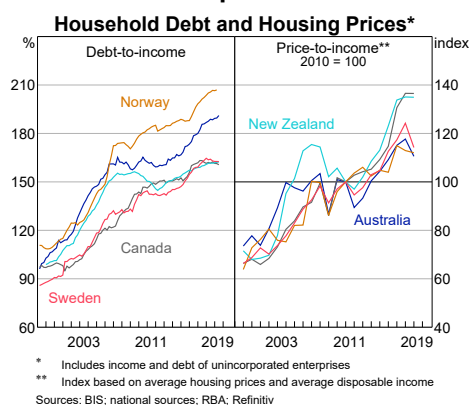
Advanced economy banks have become more resilient since the financial crisis, especially those that are systemically important. Banks are meeting more stringent capital and liquidity

rules and large banks are regularly stress-tested by supervisors. Global systemically important banks (G-SIBs) are also now meeting their initial total loss absorbing capacity (TLAC) requirements (with final requirements becoming effective in all advanced economies in early 2022). Implementation of other post-crisis reforms continues to advance, including the final revisions to the Basel III standards.<sup>[3]</sup>

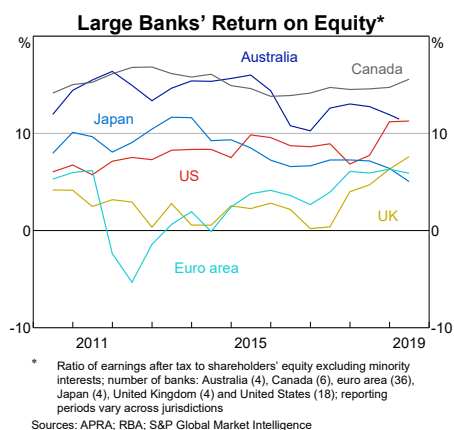
Bank profitability and asset quality have generally been maintained or improved over the past year or so (Graph 1.7). Reductions in asset write-downs and restructuring and litigation costs have led to some improvement in European banks' profitability. More generally, advanced economy banks' profits have been supported by low or declining loan-loss expenses in recent years. However, banks' loan-loss reserves are now relatively low in a range of countries, including Canada, Japan, the United Kingdom and United States (Graph 1.8). As a result, there is limited potential for further falls in loan-loss expenses to boost profits and earnings may be more vulnerable to a material decline in asset performance.

Bank valuations have continued to diverge between the major advanced economies (Graph 1.9). European and Japanese banks face a range of challenges that are impeding their

**Graph 1.6**



**Graph 1.7**



ability to generate returns above their cost of capital (discussed further below). Bank share prices in Europe have been particularly sensitive to declines in long-term government bond yields in recent months; very low risk-free interest rates can put pressure on banks' net interest margins, if banks are less able to lower their deposit costs in line with lower asset yields. By contrast, share prices in the United States and Canada generally remain at or above book value, and the largest US banks are now distributing very high proportions of their earnings to shareholders. Despite differences in profitability and equity valuations, credit default swap (CDS) premiums suggest that investors generally perceive bank credit risks to be low across advanced economies.

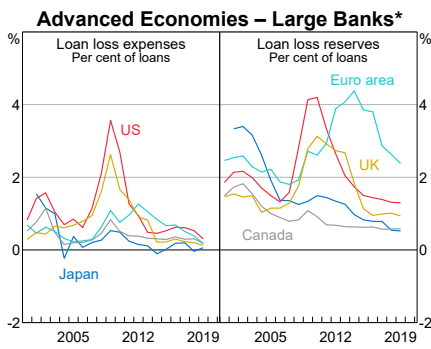
The US dollar liabilities of non-US banks have grown over the last decade and have returned to around their peak level during the financial crisis. Banks headquartered in Japan, the United Kingdom, France and Canada have particularly large US dollar exposures.<sup>[4]</sup> A sharp tightening in US dollar funding conditions could make it difficult for non-US banks to obtain short-term dollar funding because they lack access to stable dollar deposits; in turn, this could force non-US banks to sell assets or curtail lending. Around half of non-US banks' dollar funds are raised cross-border, which can be a less stable

source during periods of volatility or stress. Liquidity in US money markets has also reduced in recent years, partly reflecting lower interbank activity due to strengthened risk management and tighter financial regulations. This was illustrated most recently in September when repo markets in the United States experienced heightened volatility, prompting the US Federal Reserve to provide liquidity to stabilise conditions.

**... although structural challenges persist at Japanese and European banks**

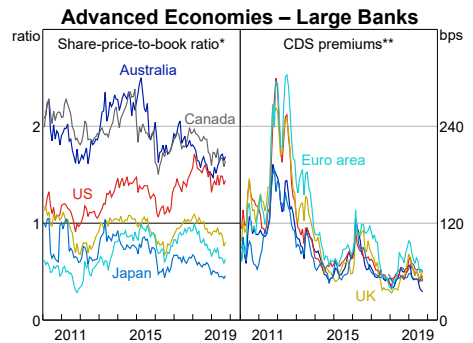
Japanese banks continue to face significant profitability headwinds due to very low interest rates and demographic factors, particularly for smaller regional lenders. Japan's ageing and declining population has resulted in falling loan demand and heightened competition between lenders. These factors have reduced domestic asset yields, with Japanese banks' net interest margins having consistently declined in recent years. To help offset these profitability pressures, banks have taken on more risk through securities investments and lending to riskier domestic firms. The large Japanese banks have also increased their exposure to higher-yielding overseas assets, including CLOs.

**Graph 1.8**



\* Number of banks: Canada (6), euro area (36), Japan (4), United Kingdom (4), United States (18); reporting periods vary across jurisdictions  
Sources: RBA; S&P Global Market Intelligence

**Graph 1.9**



\* Number of banks: Australia (4), Canada (6), euro area (25), Japan (4), United Kingdom (4) and United States (18)  
\*\* 5-year senior CDS premiums; number of banks: Australia (4), Canada (5), euro area (8), Japan (3), United Kingdom (4) and United States (6)  
Sources: APRA; RBA; S&P Global Market Intelligence

NPLs in the euro area have continued to decline, mainly through asset sales and write-offs. However, they remain high in some jurisdictions, leaving some European banks vulnerable to negative shocks. Regulators have been encouraging banks to reduce their NPL stocks and increase their provisions for new NPLs. High NPLs weigh on profitability and cast doubt on the size of banks' capital buffers, due to uncertainty about the size of eventual credit losses. Structural challenges associated with low cost-efficiency, subdued revenue generation and overcapacity in some countries also continue to weigh on the profitability of many European banks (Graph 1.10). Looking ahead, it may be more challenging to lower NPLs and generate revenue given the weaker growth outlook and fall in long-term interest rates.

### Sovereign debt remains a vulnerability in Europe

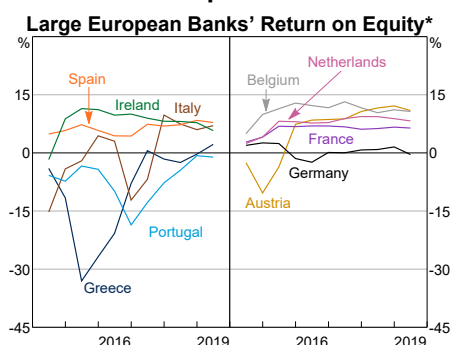
Sovereign debt levels remain high in some European countries (Graph 1.11). While markets for this debt are well supported currently, concerns about debt sustainability could quickly re-emerge with slower growth or increased political uncertainty. Funding costs would increase and governments would find it more difficult to roll over or raise new debt. Euro area banks hold large amounts of domestic sovereign

debt and so could experience significant losses. This could further amplify the sovereign stress due to the potential need for bank bailouts.

Sovereign spreads have narrowed to be around their post-crisis lows in most periphery euro area countries, partly due to growing perceptions that the European Central Bank would re-open its public sector purchase program (Graph 1.12). Italian sovereign spreads spiked in mid 2018 and remained elevated for an extended period, reflecting concerns about the fiscal policies and Eurosceptic views of the new government. However, spreads have narrowed considerably recently, after an agreement with the European Commission to reduce the 2019 budget deficit, and the formation of a less Eurosceptic coalition government in September.

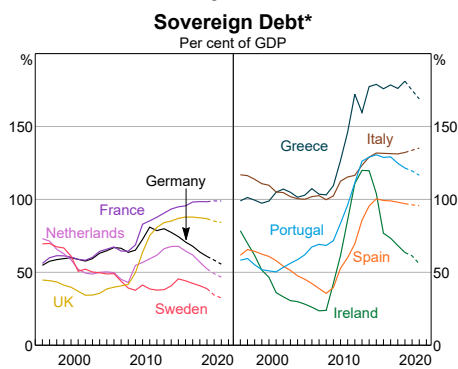
The United Kingdom's exit from the European Union (Brexit) continues to pose some risks to financial stability in Europe. The exit date has been postponed to 31 October to allow more time to reach agreement on the withdrawal terms, but uncertainty has increased following the change of Prime Minister and Cabinet in the United Kingdom. A 'no-deal' or disruptive Brexit could have a large negative effect on financial conditions and output growth in the United Kingdom and Europe more broadly. However, the authorities have put in place extensive contingency plans to mitigate the immediate

**Graph 1.10**



\* Ratio of earnings after tax to shareholders' equity excluding minority interests  
Source: S&P Global Market Intelligence

**Graph 1.11**



\* 2019 and 2020 data are European Commission forecasts  
Source: European Commission



risks to financial stability. The postponement of the exit date has also given private sector firms more time to prepare. Nonetheless, the risk of economic disruption, sharp asset repricing and other unforeseen challenges remains significant.

## Household and dairy sector debt remain high in New Zealand

Financial stability risks in New Zealand are of key interest given each of the Australian major banks owns a large New Zealand bank. Overall, New Zealand banking subsidiaries' assets account for 12 per cent of major Australian banks' total assets. In its latest *Financial Stability Report*, the Reserve Bank of New Zealand (RBNZ) assessed that the risks to New Zealand's financial system are largely unchanged, with household and dairy sector debt remaining key vulnerabilities.

Growth in housing prices and credit has stabilised at lower levels than in recent years (Graph 1.13). Nonetheless, indebted households remain vulnerable to adverse shocks given the previous sharp run-up in housing debt and prices. Dairy farm revenues have improved in recent years, but indebtedness in the dairy sector remains high and concentrated, leaving some farms vulnerable to a downturn in dairy prices or lower production.

Actions are being taken to strengthen New Zealand's financial stability framework. The New

Zealand Government is continuing its review of the *Reserve Bank of New Zealand Act 1989*, with final decisions on legislative changes expected by 2020. Some key elements include:

- giving the RBNZ an explicit overarching financial stability objective
- developing a formal deposit insurance scheme
- reviewing the RBNZ's prudential policy toolkit (including macroprudential tools), approach to supervision and resolution powers.

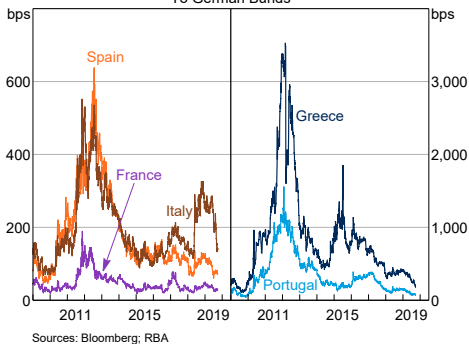
The RBNZ is also continuing to consult on proposals to increase capital requirements for New Zealand banks as part of a broader review of bank capital. The proposals would increase the required Tier 1 capital ratio to 16 per cent of risk-weighted assets for systemically important domestic banks (up from 8.5 per cent). This will affect the major Australian banks through their subsidiaries and will likely require an increase to their group capital ratios (see 'Chapter 3: The Australian Financial System'). Final decisions are expected to be announced later this year.

## Chinese authorities are balancing financial vulnerabilities and growth

Authorities in China continue to face a difficult trade-off between addressing financial vulnera-

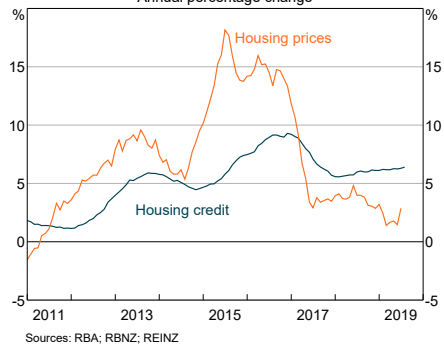
**Graph 1.12**

**Euro Area 10-year Government Bond Spreads To German Bunds**



**Graph 1.13**

**New Zealand Housing**  
Annual percentage change

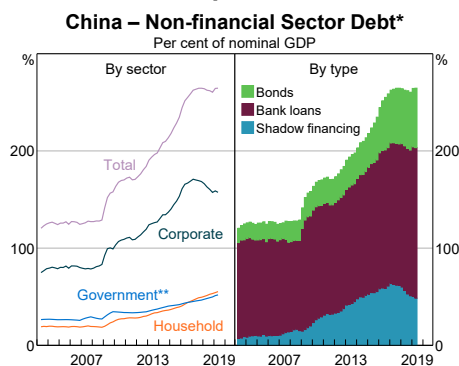




bilities and avoiding a slowing in credit that constrains economic growth. This is more challenging with slower economic growth, including from the trade and technology dispute. They have made progress in reducing corporate leverage and curtailing the activities of non-bank financial institutions (NBFIs). But slowing economic growth and reduced credit supply from NBFIs could make it harder for firms to service their debts and remain liquid. The various measures to improve financial stability are, however, offset by others to support credit provision. Policymakers have announced measures to stimulate economic growth and the supply of credit to micro and small enterprises (MSEs), which currently make up around 25 per cent of bank lending.<sup>[5]</sup> This may mitigate short-term risks to financial stability, but is leading to higher debt (Graph 1.14).

A major financial vulnerability in China is the high level of non-financial corporate debt relative to GDP, which exceeds that in other emerging market economies (EMEs) and most advanced economies. The speed and scale of the post-crisis increase suggests that some lending is likely to have been of poor quality. Implicit guarantees – including for banks and state owned enterprises (SOEs) – probably also contributed to an erosion of lending standards.

**Graph 1.14**



\* 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

Growth of corporate debt has slowed sharply over recent years amid policy measures to promote deleveraging. The ongoing increase in local government debt also poses risks. Generous access to finance and political incentives to support economic growth have likely led to some poor investment decisions. Off-balance sheet borrowing by local governments, which lack transparency, remains significant.

Much of the increase in corporate debt has been sourced through lightly regulated and opaque NBFIs. However, much of the risk of this lending falls back on the banks that have largely funded or otherwise facilitated lending by NBFIs, often through repurchase agreements and their purchase of investment products issued by NBFIs. Should the liquidity and credit risks that have built up in NBFIs crystallise, the effects could easily spill over to the wider financial sector via complex interconnections within and across the NBFIs and banking sectors. This would be amplified if perceptions of implicit guarantees on NBFIs products were to suddenly weaken.

Chinese authorities have sought to reduce these vulnerabilities through various reforms and policy actions over recent years.<sup>[6]</sup> As a result, financing provided through NBFIs channels has slowed a lot, and interconnections between banks and NBFIs have shrunk (Graph 1.15). However, reduced lending by NBFIs has tightened the availability of finance in China, with private sector firms, including MSEs, particularly affected. This has contributed to the slowdown in economic activity and could lead to financial distress.

Household debt in China has also grown rapidly over recent years, although the risks to financial stability do not seem large at this stage (for more details see 'Box A: Household Sector Risks in China'). The run-up in household debt has been mostly driven by mortgages, and has been associated with strong growth in housing prices,

fuelled in part by speculative activity. While households generally seem resilient, a fall in housing prices and activity would increase financial pressure on property developers and local governments (which are reliant on property-related taxes and land sales as sources of revenue). However, the authorities have shown that they are willing to manage the housing cycle actively using a variety of tools, ranging from loan-to-value ratio caps to restrictions on purchases or resales. This lessens the risk of a sharp housing correction in the short run.

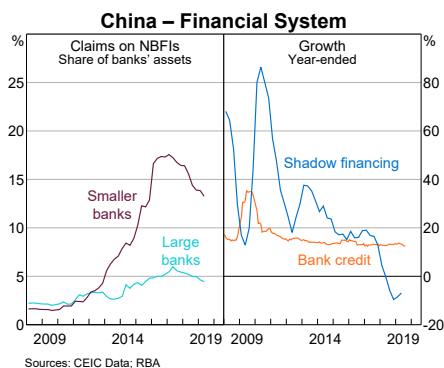
Despite slower economic growth, Chinese banks remain profitable overall, and reported capital positions are generally above regulatory minimums (Graph 1.16). However, liquidity and solvency strains have recently emerged at some smaller banks that rely heavily on short-term wholesale funding and have large holdings of risky investment securities issued by NBFIs.<sup>[7]</sup> In May, Chinese authorities took over Baoshang Bank – the first reported takeover of a private bank since 1998 – due to solvency concerns, with some large creditors of the bank bearing losses. Two other banks have since needed capital investments from state-owned financial institutions. The Baoshang takeover weakened widely held perceptions of implicit guarantees for banks, and led to tighter liquidity conditions for smaller banks as investors reassessed their

credit risk. This risked triggering further stress within this sector, so the authorities have taken numerous counteracting measures to stabilise funding conditions.

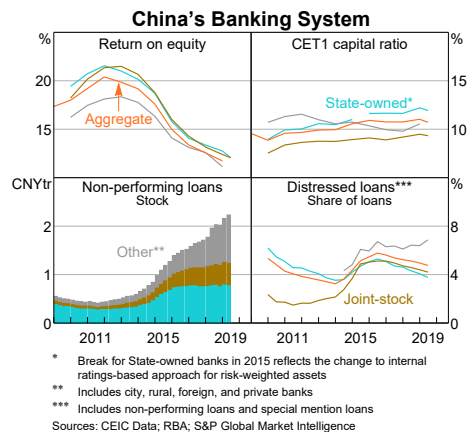
Banks with solvency problems likely account for only a small share of the Chinese banking system. Even so, capital ratios and profitability are generally facing considerable headwinds:

- financial regulatory reforms have encouraged banks to bring exposures onto their balance sheets and have increased the capital required for certain exposures, weighing on banks' capital ratios;
- NPLs, especially at city and rural banks, and corporate bond defaults have risen amid slower economic growth, with the rise in the NPL ratios dampened by banks aggressively writing off and selling bad loans;
- required provisioning has increased as NPL recognition standards have tightened, with financial assets other than loans (such as securities issued by NBFIs) also expected to be provisioned for;
- banks have been instructed to increase their lending to MSEs (which are generally riskier than large state-owned borrowers); and
- a decline in corporate lending rates, which could weigh on banks' interest margins, is

**Graph 1.15**



**Graph 1.16**



expected after Chinese authorities announced changes to the lending reference rate to better reflect banks' funding costs.

In response, some banks have been raising capital or have announced plans to do so. Chinese authorities have also taken a number of measures to help banks bolster their capital positions.

Chinese authorities retain a wide range of economic and financial policy tools to address financial disruptions. Nonetheless, systemic financial disruptions could have a substantial effect on China's economy, given the widespread vulnerabilities. Financial linkages between China and the rest of the world are small, but trade links – including with Australia – are large and would transmit any economic downturn or financial disruption. There would also likely be an impact on global financial market sentiment and conditions.<sup>[8]</sup>

### Some emerging markets remain vulnerable to capital outflows

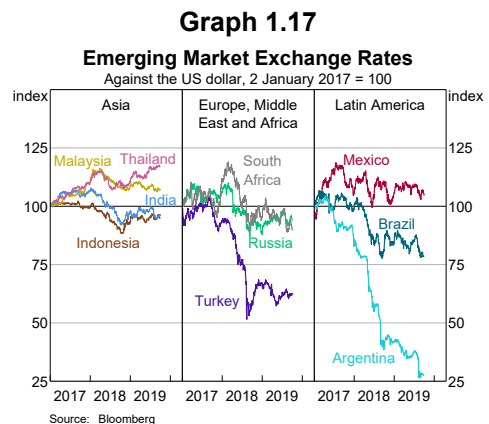
Investor sentiment towards other EMEs has generally stabilised this year, following a period of heightened volatility in 2018. Emerging market currencies and asset prices have mostly remained in a narrow range since the previous *Review*, though some have declined. Capital inflows have generally continued, supported in particular by expectations of monetary policy easing by major central banks (Graph 1.17). However, the escalation of trade tensions between the United States and China, as well as domestic political uncertainties, have contributed to bouts of volatility, which could intensify.

Accordingly, a retreat from vulnerable EMEs' assets remains a risk, triggered, for example, by increased investor risk aversion. Tighter financial conditions would exacerbate vulnerabilities in some EMEs, further undermining investor

sentiment. High corporate debt in some EMEs and unhedged foreign currency debt are notable vulnerabilities.

Financial stability risks remain high in Argentina and Turkey. In Argentina, an increased likelihood of the current president losing the upcoming election raised doubts about future reform and commitment to the IMF bailout program. This prompted a sharp fall in the Argentinean peso, which substantially increased the cost of servicing the country's foreign currency-denominated debt. In response, the government announced plans to delay payments on US\$101 billion of debt in August and tightened capital controls. However, spillovers to other countries have been limited. In Turkey, earlier increases in policy rates have slowed inflation and helped to reduce the current account deficit. However, Turkey remains vulnerable to sudden shifts in investor sentiment due to its large stock of external debt denominated in foreign currency, weak growth, and policy uncertainty.

Financial distress has intensified in South Africa. Economic growth has slowed, and unemployment has risen, amid severe power shortages (due to underinvestment in power infrastructure and financial mismanagement at the state-owned power company). Foreign capital outflows have recently increased amid growing



concerns that the country’s weak fiscal position could deteriorate further, due to the prospect of increasing financial support to state-owned firms.

Banking systems in EMEs appear mostly resilient, although asset quality has deteriorated over the past year or so in Turkey and South Africa (Graph 1.18). NPLs in Russian banks remain high, and the government is continuing its efforts to consolidate the banking sector. Indian banks’ NPLs also remain high, although asset performance is improving, with further public capital injections and a plan to merge state-owned banks recently announced. Following a high-profile NBF1 default last year, tighter funding conditions for Indian NBFIs have generally persisted, especially for those with significant liquidity mismatches or asset quality issues.<sup>[9]</sup> There have also been strains at some small banks in recent weeks.

The potential for EME financial distress to spill over to advanced economies has risen over time, due to EMEs’ increased size and integration into the global economy. Along with stronger trade links, advanced economies’ financial links to EMEs – while still relatively small – have grown. In particular, investments in EME corporate debt and equity (especially via mutual funds) have risen (Graph 1.19).

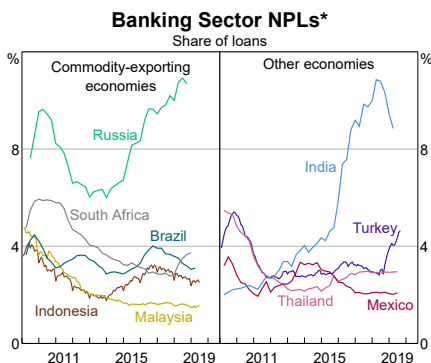
## A number of longer-term global challenges are emerging

A number of longer-term trends, with origins outside the financial system, are challenging financial institutions and regulators and will continue to do so into the future.

Information technology-related operational risks have become more prominent over time. This reflects the financial system having become more reliant on technology, more interconnected and more complex, with more frequent and sophisticated cyber attacks. Cyber attacks could undermine financial stability by causing financial losses, reputational damage and service disruptions – all of which can threaten the operations and viability of individual institutions, their counterparties and financial market infrastructures. Financial institutions and regulatory bodies are increasing their efforts to monitor and enhance cyber security.

The entry of financial technology (‘fintech’) firms and large technology companies (‘bigtech’) into financial services may also alter risks. While these firms can enhance financial inclusion and have other benefits, they may also increase risks to

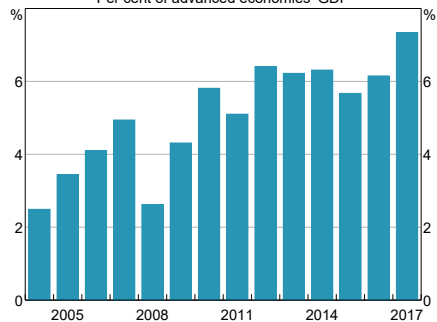
**Graph 1.18**



\* Definitions of non-performing loans can differ across jurisdictions  
Sources: Banking Regulation and Supervision Agency; CEIC Data; IMF; RBA

**Graph 1.19**

**Advanced Economies’ Portfolio Investment in Emerging Market Economies\***  
Per cent of advanced economies’ GDP



\* Advanced economies include Austria, Belgium, Canada, Denmark, France, Germany, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland, the United Kingdom and the United States; Emerging market economies include Argentina, Brazil, Chile, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa, Thailand and Turkey  
Sources: IMF; RBA

the system. The risk management of new entrants may be less well developed than existing regulated providers, and new techniques – such as alternative forms of credit assessment – have yet to be tested through a full cycle. Interlinkages with banks could introduce additional operational (including cyber) risks. Regulators have recently been considering whether ‘stablecoins’ and associated services might give rise to risks in a number of areas, including consumer and data protection, money laundering and terrorism financing, financial and operational risks, and interactions with the banking system (see ‘Chapter 4: Regulatory Developments’).

Finally, climate change poses risks to financial institutions. Individual firms can be exposed to the adverse effects of climate change through business disruption, counterparty default, asset price falls, insurance claims and legal risks. If events were to affect multiple asset classes or exposures were concentrated in systemically important institutions, this would increase the potential for losses at individual institutions to threaten financial stability. The risk of systemic financial disruption currently appears limited, but may increase if institutions fail to adequately understand and contain their exposure to climate change risks (see ‘Box C: Financial Stability Risks from Climate Change’). ❖

## Endnotes

- [1] A range of work has been undertaken internationally to better understand the risks. See for example IMF (2015) ‘Chapter 3: The Asset Management Industry and Financial Stability’, *Global Financial Stability Report*, April and Price F and C Schwartz (2015) ‘Recent Developments in Asset Management’, *RBA Bulletin*, June, pp 69–78.
- [2] Bailey A (2019), ‘LIBOR: preparing for the end’, Speech at the Securities Industry and Financial Markets Association’s LIBOR Transition Briefing in New York, 15 July.
- [3] Yuksel M (2019), ‘A Decade of Post-crisis G20 Financial Sector Reforms’, *RBA Bulletin*, June, viewed 30 September 2018. Available at <<https://www.rba.gov.au/publications/bulletin/2019/jun/a-decade-of-post-crisis-g20-financial-sector-reforms.html>>.
- [4] Aldasoro I and T Ehlers (2018) ‘The geography of dollar funding of non-US banks’, *BIS Quarterly Review*, December.
- [5] In Graph 1.14, around one-fifth of MSE loans are classified as household loans, while the remainder is classified as corporate loans.
- [6] For more details, see RBA (2018), ‘Box A: Ongoing Financial Regulatory Reform in China’, *Financial Stability Review*, October, pp 19–22.
- [7] For further details, see RBA (2019), ‘Box A: Small banks in China’, *Statement on Monetary Policy*, August, pp 21–24.
- [8] For more details, see Guttman R, K Hickie, P Rickards and I Roberts (2019), ‘Spillovers to Australia from the Chinese Economy’, *RBA Bulletin*, June, viewed 30 September 2019. Available at <<https://www.rba.gov.au/publications/bulletin/2019/jun/spillovers-to-australia-from-the-chinese-economy.html>>.
- [9] For further details, see RBA (2019), ‘Box A: Risks in Non-bank Lending in India’, *Financial Stability Review*, April, pp 19–22.

