

Financial Stability Review

APRIL 2021



RESERVE BANK OF AUSTRALIA

Financial Stability Review

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The material in this *Financial Stability Review* was finalised on 8 April 2021 and uses data through to 8 April 2021.

The *Review* is published semiannually and is available on the Reserve Bank's website (www.rba.gov.au). The next *Review* is due for release on 8 October 2021. For copyright and disclaimer notices relating to data in the *Review*, see the Bank's website.

The graphs in this publication were generated using Mathematica.

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ISSN 1449–3896 (Print)
ISSN 1449–5260 (Online)

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Overview

Financial systems globally have been resilient to a substantial shock

Financial systems in Australia and internationally have been resilient to the enormous COVID-19 health and economic shock. This has enabled them to cushion the economic impact of the pandemic, supporting the recovery through new lending and measures such as loan repayment deferrals. The financial sector reforms that followed the global financial crisis greatly contributed to this positive outcome. Banks hold substantially more high-quality liquid assets and have much higher levels of capital than a decade ago. Substantial policy support from governments, central banks and other regulators has also underpinned the resilience of the financial system over the past year. Fiscal support has sustained economic activity and improved the finances of borrowers, and so loan performance, and central banks have eased monetary policy and maintained market liquidity in key debt markets. Financial regulators have also employed flexibility in the regulatory framework, for example by providing temporary capital relief if banks extended payment deferrals to customers affected by the pandemic.

The Australian banks are in a strong financial position coming out of the pandemic. Their profitability recovered in the second half of 2020, after banks increased their provisioning for expected loan losses in the first half, and analysts expect profitability to strengthen further in 2021. Banks' non-performing loans have increased, but by less than expected, and their current

provision balances are expected to be sufficient to absorb the impact of future defaults.

Globally, ongoing fiscal stimulus, the rollout of COVID-19 vaccines and very accommodative financial conditions are contributing to the economic recovery that started in the second half of 2020. There is still substantial underemployed labour and capital, but the strong rebound in economic activity greatly reduces the risk of a sustained deep global recession that would be very damaging for financial institutions. Accommodative financial conditions, including policy interest rates that central banks have committed to keep very low for several years, and expectations of a sustained recovery in activity in most economies, have contributed to rising asset prices, and indebtedness in some sectors. If risk premiums were to rise from low levels, then long-term bond yields could jump higher, leading to falls in a broad range of asset prices that are underpinned by the low level of risk-free interest rates.

Key risks to financial stability are similar in Australia and internationally

An incomplete, or very uneven, economic recovery would present risks to financial stability

If incomes remain below pre-pandemic levels in some countries, as government support is wound back, it increases the likelihood that some borrowers will struggle to make their debt repayments, exhaust their financial buffers and consequently default. Slower growth would also

impede the ability of banks that had low profitability before the pandemic – in particular some in Europe and Japan – to generate new capital, and so weigh on their resilience to losses and willingness to lend. Delays in widespread vaccination, or a reduced efficacy of available vaccines, are a crucial factor that could stall the economic recovery. But even if the recovery in aggregate activity proceeds broadly as expected, an uneven recovery with some parts of the economy continuing to be constrained by the virus would still cause significant losses for lenders exposed to those sectors.

Some emerging market economies (EMEs) are exposed to risk from tightening in financial conditions in advanced economies, particularly if their own recovery is lagging. Historically, financial dislocation in EMEs has coincided with rising global interest rates. In addition, slower rollout of vaccines and pre-existing macroeconomic and financial imbalances are impeding the recovery in some EMEs, with output not expected to return to pre-pandemic levels for several years. These EMEs could then face sharp capital outflows, exchange rate depreciations or unhelpful increases in their domestic interest rates. Sharp financial adjustment and disruption in large EMEs could also result in losses for exposed investors and financial institutions in advanced economies.

Cyclically low interest rates and rising asset prices create a risk of excessive borrowing

A range of asset prices, both globally and in Australia, have been rising – a channel through which expansionary monetary policy stimulates economic activity – and some appear high relative to their expected future stream of income. However, for most financial and real assets, this lower rate of expected earnings relative to the asset price is broadly consistent with the very low level of interest rates. For example, for equities while the price-earnings ratio is high in some markets, the equity risk

premium is more in line with its value in recent years. Housing prices in many economies have been rising, at a faster pace from the second half of 2020, which has mitigated the risk earlier in the pandemic that falling prices would result in significant losses on mortgage lending. In Australia, housing prices have recorded strong growth in recent months. To date the growth in asset prices has not been associated with a significant increase in the growth of debt.

However, globally risks associated with asset prices and debt could build. A sustained period of rising asset prices may lead to over-exuberance and extrapolative expectations, with increased risk-taking and leverage in an environment of accommodative financial conditions. In this situation lending standards could weaken, with asset prices being pushed above their fundamental values. A correction in asset prices, if borrowers' income were to fall and so they defaulted on debt repayments, would expose lenders to large losses on the increased debt, particularly if the quality of that debt had been eroded.

The risks are higher from some specific leveraged assets. In a number of economies, including Australia, housing price growth (and to a lesser extent housing borrowing) has picked up notably in recent months and is being watched closely by regulatory authorities. Globally, the pandemic has accelerated structural change in the retail sector, including increasing online sales, leading to falling retail commercial property prices, while demand for office property is uncertain given changing work practices. The pandemic has also created more specific challenges for some types of assets. For example, in Australia, the decline in immigration and preference changes has introduced additional uncertainty for apartment prices, particularly in inner city areas.

In an environment of accommodative financial conditions with rising asset prices it is particularly important that there is not excessive

risk-taking by the financial sector. Increased risk-taking by lenders could take the form of looser lending standards for individual loan assessments, or a relaxation of internal limits on the share of riskier loans they make. Even if lenders do not weaken their own settings, increased risk-taking by optimistic borrowers could see a deterioration in the average quality of new lending. This would weaken the resilience of businesses and households, and so the financial system, to future shocks. Increased risk-taking would fuel rising debt, from already high levels, increasing the debt-related risks to the economy and financial system from a fall in asset prices and borrowers' income. The improvement in lending standards in Australia for property from the mid 2010s helped to ensure borrowers were well placed to weather the economic shock over the past year, demonstrating the benefits to the financial system and the economy of appropriately controlling risks.

Cyber attacks are a growing risk for financial stability

Over the past 6 months there have been several high-profile cyber attacks worldwide. While financial institutions were not specifically targeted by these attacks, some were affected. These attacks have demonstrated the increased sophistication of perpetrators. Financial institutions globally typically rate cyber as one of the most substantial risks they face. Large financial institutions, which are more systemically important, have the scale for substantial investment in cyber security. However, with a very large and increasing number of attacks, there remains the likelihood that even large financial institutions or critical financial market infrastructure will at some point be impacted, including via third-party providers. Substantial cyber attacks could risk financial stability if, for example, they corrupt significant data or if they affect large parts of the financial

system or critical nodes. Given this, it is crucial that financial institutions and systems not only take preventative actions, but enhance resilience by planning recovery actions to cyber security breaches. ❖

1. The Global Financial Environment

The global financial system has been resilient to the increased uncertainty and sharp economic contraction induced by COVID-19. Setbacks to the economic recovery, such as further virus outbreaks or delays in the rollout of effective vaccines, are a risk to global financial stability. The economic recovery is expected to be slower in some emerging market economies (EMEs), as a result of slower vaccine distribution and pre-existing economic and financial imbalances. A slower recovery in EMEs could expose them to sharp capital outflows and higher interest rates than the state of their economies warrant.

The prices of financial assets and housing have continued to increase and are at high levels in a number of economies, raising the potential for increased borrowing, including to take advantage of expected capital gains. Such activity can cause asset prices to overshoot fundamentals and increase vulnerabilities to any subsequent sharp asset price falls. A jump in long-term bond yields, for example from an abrupt reassessment of the risk of inflation, could lead to disruptive falls in asset prices. Most banks are well positioned for higher credit losses because they have strong capital and liquidity positions. However, large unexpected losses associated with a stalled recovery would test the ability of some banks to maintain credit supply.

Internationally, policymakers remain focused on assessing the ongoing effects of the pandemic, sharing information and coordinating actions to mitigate its impact. A renewed focus is addressing risks in the non-bank financial institution (NBFI) sector, including investment

funds. Global bodies, as well as national regulators, are also working on ensuring an orderly transition away from London Inter-bank Offered Rates (LIBOR), a key global interest rate benchmark that is being discontinued (see 'Box A: The Transition Away from LIBOR'). In addition, policymakers have resumed their work addressing longer-term risks to the financial system, including those associated with climate change.

Prolonged economic weakness and an uneven recovery are key risks to financial stability

The unprecedented policy response by governments, central banks and other policymakers is contributing to global economic activity recovering from the largest contraction since the immediate aftermath of the Second World War. Progress on vaccine development and rollout has also underpinned expectations for strong economic growth in the next 2 years. For now, however, employment is well below pre-pandemic levels in many economies.

The recovery and hence risks to financial stability remain dependent on the extent of any new virus outbreaks, and the timely and widespread distribution of effective vaccines. In the near term, financial stress for households and businesses would rise if the recovery were to falter. Financial institutions would also face larger credit losses than currently expected, which could hinder the recovery through tighter financial conditions. In addition, a setback to the recovery could also trigger disruptive falls in

asset prices. Over the medium term, a sluggish recovery would keep financial stability risks elevated given the high level of debt in many economies and areas of fragility in some financial systems.

The economic recovery in some EMEs is projected to be slower than in advanced economies as a result of pre-existing economic and financial imbalances, more limited fiscal support and a slower rollout of COVID-19 vaccines. Financial stability risks associated with the pandemic will therefore be more persistent in EMEs. Rising government bond yields in advanced economies will then present a dilemma for some EME central banks between supporting their domestic economies with low policy rates, or raising policy rates to prevent capital outflows. This dilemma would be compounded if government bond yields were to rise substantially in advanced economies due to an increase in the risk of higher inflation. There are signs of some capital outflow pressure in South Africa, Turkey and some South American countries.

Financial conditions could even tighten in some advanced economies if their economic recovery and inflation expectations lag those in the United States, where there is a very large fiscal stimulus. This is because government bond yields in other economies tend to move with those in the United States, and so yields would likely rise in other advanced economies (absent a policy response).

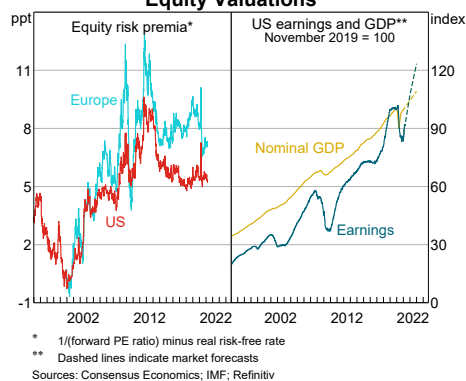
Equity and corporate bond prices indicate an optimistic outlook

Progress on vaccines, expectations of additional stimulus in the United States and sustained low interest rates have supported a further rise in financial asset prices. Major equity indices are on average about 15 per cent higher than their level before the pandemic. The rebound following large falls early in the pandemic has been particularly strong in the United States and

especially technology stocks. High equity prices reflect low long-term interest rates, with equity risk premiums around where they have been for much of the past decade (Graph 1.1). Also contributing to the high level of equity prices is that while corporate earnings fell sharply, by 20 per cent in the United States, they are expected to make a strong recovery. Nonetheless, there are a few segments with high valuations relative to traditional pricing metrics, including some technology companies and some smaller companies in the United States, where there has been a sharp increase in retail trading activity. While leverage among retail investors remains low, recent events around the hedge fund Archegos highlight that highly-leveraged and opaque investments in a small number of assets can lead to significant losses among financial market participants.

Spreads between yields on corporate bonds and sovereign bonds have narrowed to pre-pandemic levels, including for very low rated borrowers (Graph 1.2). Low interest rates are an important factor driving this, which was previously assisted by purchases of corporate bonds by some central banks. The compression in spreads is despite an increase in corporate bond defaults and credit downgrades, which are expected to increase further. Risks in corporate credit markets had already been increasing in

Graph 1.1
Equity Valuations



the lead-up to the pandemic. Credit ratings declined (particularly in the investment grade market) and lending standards in leveraged loan markets weakened.^[1] Issuance volumes have also been strong. Since March 2020, firms in the United States and euro area have issued almost US\$2 trillion of corporate bonds, about 30 per cent more than in the previous year.

The large rise in asset prices could encourage increased borrowing to take advantage of expected capital gains. This would increase the risk from disruptive corrections in prices. Such a correction could occur if government bond yields were to increase sharply, including if there is a sudden rebound in inflation expectations and if investors demand more compensation for uncertainty. This risk has been partly realised recently, as inflation expectations increased in the United States with the recent passage of an additional large stimulus package, though inflation expectations are not elevated. In late February, the increase in yields was exacerbated by low liquidity in government bond markets. The illiquidity was not as severe as in the turmoil of March 2020 and did not generally spill over to other asset markets.

Investment funds have the potential to amplify asset price declines given the leverage and liquidity risks at some funds, with these risks contributing to the market dislocation seen in

March 2020.^[2] International regulators, including through the Financial Stability Board (FSB), are working to address these vulnerabilities as part of a broader work program to address risks in NBFIs.^[3]

Housing prices and credit growth are also rising in many economies

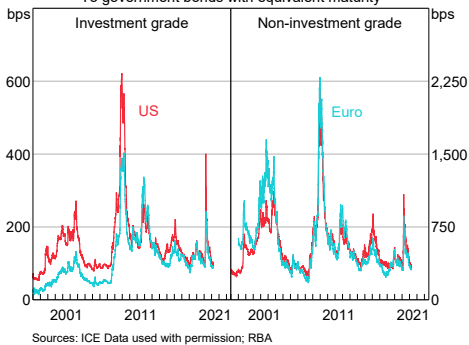
Housing price growth has increased in many economies since mid 2020, in part reflecting expectations that interest rates will remain very low for an extended period (Graph 1.3). Price growth accelerated in the latter part of 2020 and in recent months annualised rates of growth were 5 per cent in the United Kingdom, 15 per cent in Norway, 20 per cent in Sweden and the United States, 30 per cent in Canada, and 40 per cent in New Zealand. In addition to low interest rates, housing demand has been boosted by government policies that have supported household income and directly increased housing activity. Higher housing prices improve households' balance sheets, increase economic activity (via the wealth effect and activity associated with building and selling housing) and mitigate near-term risks that banks will incur significant losses on mortgage lending.

Increases in housing prices have been accompanied by stronger credit growth, resulting in rising household indebtedness,

Graph 1.2

Corporate Bond Spreads

To government bonds with equivalent maturity

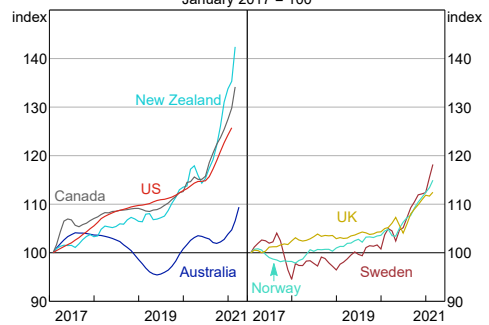


Sources: ICE Data used with permission; RBA

Graph 1.3

Housing Price Indices

January 2017 = 100



Sources: CoreLogic; CREA; Eiendom Norge; Nationwide; REINZ; S&P Global; Valueguard

including in economies where household debt was already high such as Canada, New Zealand and Sweden (Graph 1.4). Declines in lending standards would accentuate risks to financial stability from a fall in housing prices and household income.

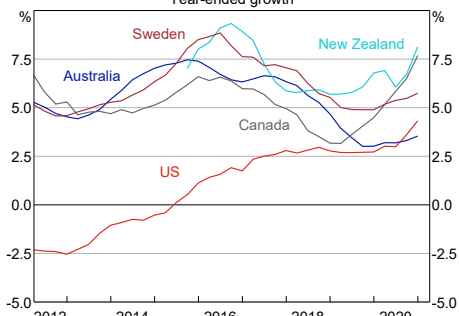
In New Zealand, housing price growth has been widespread across the country. Housing credit growth has also increased, reflecting higher growth in lending to both investors and owner occupiers, including first home buyers. Growth in investor credit increased sharply after the Reserve Bank of New Zealand (RBNZ) removed loan-to-valuation ratio (LVR) lending restrictions at the start of the pandemic. These restrictions had limited banks' high-LVR lending: for investors to 5 per cent of new lending at LVRs above 70 per cent and for owner occupiers to 20 per cent of new lending at LVRs above 80 per cent. The share of loans with LVRs between 70 and 80 per cent held by investors increased from 3 per cent before the loan restrictions were removed, to a peak of 10 per cent in October 2020, but then decreased to 7 per cent in January 2021. Rents have also been rising at a faster rate than overall inflation for several years, consistent with long-running housing supply constraints and demand for housing that was partly driven by an increase in population growth from mid 2019 to early 2020.

The New Zealand Government and the RBNZ have recently implemented several policies designed to deliver more 'sustainable' housing prices, including by dampening investor demand to help improve affordability for first home buyers. In March 2021, the RBNZ reinstated the LVR restrictions that had been in place prior to the pandemic. LVR restrictions will be further tightened from May so that no more than 5 per cent of banks' new mortgage lending to investors can be at LVRs above 60 per cent.

In addition, the New Zealand Government has directed the RBNZ to consider the impact on housing prices when making monetary and financial policy decisions. The RBNZ's financial policy will take into account the government's objectives. The Monetary Policy Committee's targets will remain unchanged, but the RBNZ will outline the effect of its monetary policy decisions on the government's objectives. The New Zealand Government has also implemented several other policies, including extending the period in which investors have to pay capital gains tax after selling a property to 10 years (from 5 years), the removal of interest deductibility for investors and measures to increase housing supply.

To date, few other jurisdictions have implemented policies to address risks in housing markets. Authorities in Korea announced several measures to increase housing supply, including building 1.5 million properties over the next 4 years, allowing housing to be built on government property (such as military sites) and relaxing building height limits. The Canadian government intends to implement a nationwide tax on foreign property purchases (British Columbia and Ontario have their own taxes) and the Bank of Canada Governor has stated there are preliminary signs of 'excess exuberance'.

Graph 1.4
Mortgage Credit
Year-ended growth



Sources: Federal Reserve Bank of St. Louis; RBA; Reserve Bank of New Zealand; Statistics Canada; Statistics Sweden

Risks are elevated in industries most affected by the pandemic and for small businesses

Corporate indebtedness increased over 2020 in advanced economies, including among the lowest rated borrowers, supported by accommodative financial conditions. Much of this borrowing was to increase firms' liquidity buffers, and some firms began to repay these funds over the second half of last year. Defaults in the corporate bond market and credit rating downgrades have increased over the past year, but remain below their global financial crisis (GFC) levels in both the United States and Europe (Graph 1.5). However, defaults are expected to increase further over 2021.

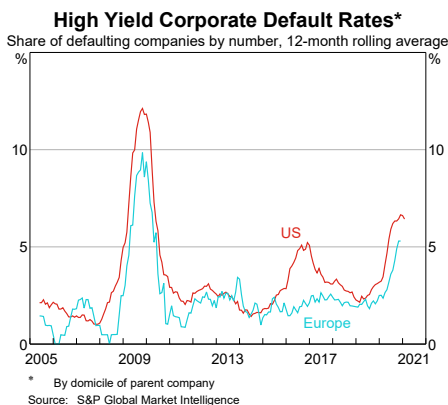
The increase in corporate stress that is evident in rising bond defaults is yet to be seen in banks' non-performing loans (NPLs) due to moratoriums on bank loan repayments and insolvencies, and other support for businesses. Business failures fell in 2020 despite large contractions in economic activity; in most OECD economies there were around 10 to 30 per cent fewer insolvencies in 2020 than in 2019. However, insolvencies started to pick up in the second half of 2020 in the euro area. Advanced economies that experienced rapid growth in corporate debt prior to the pandemic such as Canada, France, Switzerland, and the United

States, and those with a slower recovery in corporate earnings, are more vulnerable to significant rises in corporate defaults and insolvencies going forward.

While earnings in some industries picked up in the second half of 2020 in line with the economic recovery, earnings are expected to remain weak in the consumer discretionary and industrials (includes airlines and airport services) sectors. The energy sector has been supported by stronger oil prices recently, with prices around 60 per cent higher than their level in October 2020, but its earnings outlook remains uncertain and highly dependent on the pace of the economic recovery. These 3 sectors account for a considerable amount of debt at a higher risk of default as their ability to service debt deteriorated significantly over 2020 (Graph 1.6).

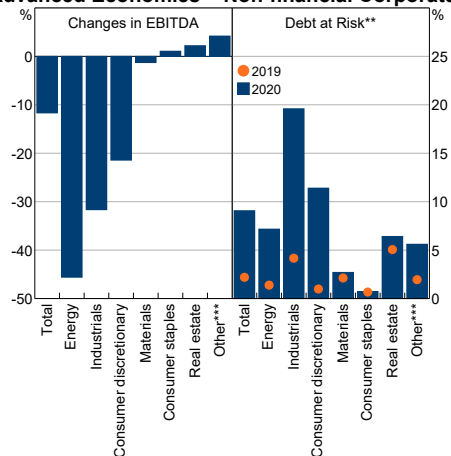
Parts of the commercial real estate (CRE) sector have also been especially hard-hit by the pandemic. Delinquency rates in the US commercial mortgage-backed securities market remain relatively high despite having fallen from their peak in June 2020. Delinquency rates are around 16 per cent for hotel loans and

Graph 1.5



Graph 1.6

Advanced Economies – Non-financial Corporates*



* Includes 10,528 companies from Australia, Canada, UK, US, and 15 developed European countries

** Share of total debt from companies with interest coverage ratio below 1

*** 'Other' includes utilities, information technology, health care, and communication services

Sources: RBA; S&P Global Market Intelligence

12 per cent for shopping mall loans. Market-based valuation indicators, including the prices of real estate investment trusts (REITs) and property indices, indicate that there have been falls in the value of retail, hotel and some office properties in a number of countries. This is especially so in countries dependent on tourism such as France, Italy and Spain. Some REITs face liquidity risks as they will be exposed to margin calls if CRE valuations decline and cause their gearing to breach covenant limits. Valuation metrics in Australia have also fallen for retail and office property (see 'Box B: Risks in Retail Commercial Property').

Globally, small and medium-sized enterprises (SMEs) appear more vulnerable in the near term than larger businesses. SMEs are disproportionately in service industries more constrained by the pandemic, and they also generally have lower liquidity buffers and more limited options for obtaining funding. This is particularly the case since lending standards have tightened for SMEs in many economies. As a result, SMEs have relied more on bank forbearance and government-guaranteed loans to assist them through the pandemic. Loan forbearance and some other temporary support measures have already been, or will soon be, unwound in many economies, which will lead to an increase in insolvencies and banks' reported SME NPLs if the recovery in activity is not rapid.

Globally, banks have been resilient to rising credit losses, but some would be tested by large rises in defaults

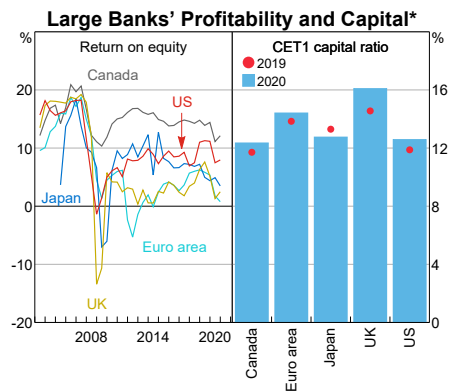
The regulatory reforms implemented following the GFC have been important in enhancing banks' resilience. The median of advanced economy banks' Common Equity Tier 1 (CET1) capital buffers increased by around 7.5 percentage points between the GFC and the start of the pandemic. The policy responses to the pandemic have also boosted household and business cash flow and so limited their financial

distress. Banks have therefore been able to continue to lend to households and businesses, although conditions for new lending to small businesses and some sectors most affected by the pandemic have tightened considerably.

Advanced economy banks' profitability generally increased in late 2020 (Graph 1.7). Provisions for expected losses decreased significantly in most jurisdictions as the likelihood of a very severe and persistent global economic contraction has moderated. In addition, regulatory stress tests in major jurisdictions continue to indicate that most banks will be able to withstand losses implied by severely adverse scenarios without breaching minimum regulatory capital requirements. Therefore, many banks have been able to resume, or announced plans to resume, payments to shareholders that were partly halted by regulators last year to strengthen banks' capital positions.

Banks' NPLs to date have not increased significantly because of the policy response, including loan repayment deferrals, loan guarantees and job support programs. But these support measures have started to unwind and most of those remaining are scheduled to wind back or expire this year. The share of loans with loan repayment deferrals has fallen from the peaks in mid 2020 in major jurisdictions,

Graph 1.7



* Number of banks: Canada (6), euro area (33), Japan (4), United Kingdom (4) and United States (12)
Sources: RBA; S&P Global Market Intelligence

particularly for housing loans. To date, the performance of loans that have come off repayment deferrals has generally been positive. Large Canadian, UK and US banks have reported that around 90 per cent of loans for which deferrals expired have been performing. However, delinquencies at small businesses remained elevated towards the end of 2020 in the United States.

Risks are higher among many euro area and Japanese banks. On average, banks in these jurisdictions have provisioned less for expected credit losses than their peers, and the European Central Bank has raised concerns about under provision (Graph 1.8). Euro area and Japanese banks' willingness to continue to lend would be tested if loan defaults rise by more than currently anticipated.

Banks in the euro area and Japan also tend to have low underlying profitability and equity valuations, partly because of overcapacity and the extended period of low domestic interest rates. The return on equity for euro area and Japanese banks prior to the pandemic was around 4–5 per cent, relative to 11 per cent in Australia and the United States. In addition, Japanese banks serve an ageing and shrinking domestic population, which reduces growth opportunities. Lower margins have induced

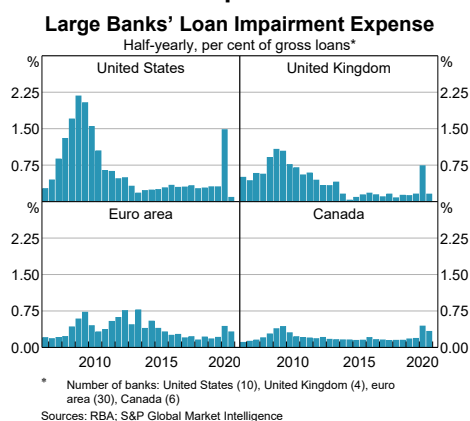
Japanese banks to take on substantial holdings of offshore leveraged loans and collateralised loan obligations (CLOs), which are vulnerable to price falls. However, most of the CLO tranches held by Japanese banks are AAA-rated and most banks intend to hold them through to maturity, mitigating the risk of trading losses.

Since the onset of the pandemic, euro area banks' holdings of their home government's bonds have increased on average by around 20 per cent. Deposits have increased given fiscal stimulus payments to households and businesses, reduced opportunities for spending and increased caution. With weak credit demand, banks have invested in the increased supply of sovereign bonds. Euro area corporations have also issued government-guaranteed bank loans, particularly in France and Spain. Both of these factors have increased euro area banks' vulnerabilities to any concerns about sovereign debt sustainability.

Financial stability risks in China remain elevated, despite the strong economic recovery

There are some long-running vulnerabilities in China's financial system that authorities have been working to address. These include elevated levels of corporate debt, weak capital positions among many smaller banks, an opaque and undercapitalised shadow banking system with strong links to the banking system, and widespread perceptions of implicit public sector guarantees. The strong policy response (starting with containing the virus), and the associated economic recovery, have largely contained financial risks for now. Several instances of stress among individual financial institutions (including prior to the pandemic) have not spread to the broader financial system. However, some of the measures taken by authorities to boost economic activity have increased medium-term vulnerabilities. Corporate debt increased over the past year to

Graph 1.8



around 165 per cent of GDP, as regulators encouraged corporate borrowing, in contrast to their pre-pandemic efforts to slow credit growth (Graph 1.9). While this borrowing was largely from banks and the bond market (rather than NBFIs, also known as ‘shadow banks’), risks of financial stress emerging from the corporate sector remain elevated. Defaults on corporate bonds have risen, including by some state-owned enterprises (SOEs). These SOE defaults partly reflect the weaker financial position of some local governments and attempts by authorities to wind back implicit guarantees.

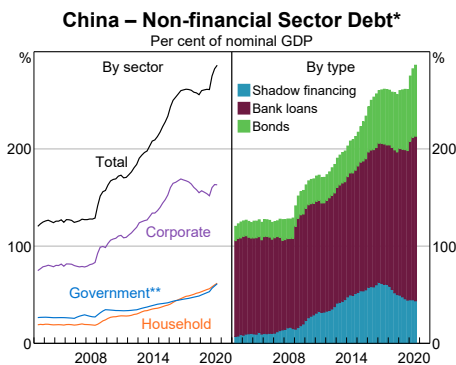
Local government debt has also risen, including among the more indebted provinces, with record bond issuance of CNY4.6 trillion (US\$700 billion) by provinces in 2020 to fund stimulus expenditure. Local governments’ use of bonds instead of off-balance sheet entities has increased transparency, but the stock of off-balance sheet debt remains high.

The economic recovery has allowed authorities to resume their focus on lowering financial stability risks. This includes reducing risks in the shadow banking system with measures such as tighter standards for trust investments and a widely expected targeted reduction of outstanding trust loans by CNY1 trillion (US\$150 billion) in 2021. Authorities are also

seeking to reduce risks in the real estate sector by instituting a ‘three red lines’ policy, which places increasingly strict restrictions on debt raising by property developers. However, real estate companies have proved adept in the past at circumventing new regulations designed to reduce risks.

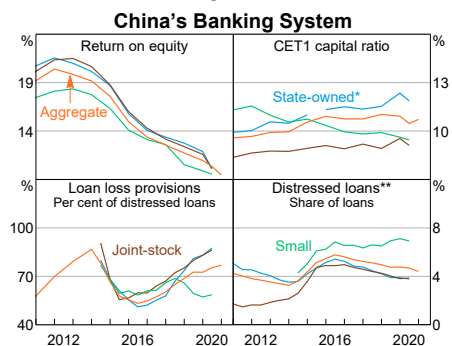
China’s large banks remain well capitalised and profitable – on average their CET1 capital ratios are around 12 per cent. Concerns continue to focus on smaller banks with low capital buffers, low provisions, poor asset quality and weaker governance and risk management (Graph 1.10). These vulnerabilities have been exacerbated by the response to the pandemic, including mandating an increase in bank lending to micro and small enterprises at favourable interest rates. Regulators have allowed 2 small banks to issue perpetual bonds to address their capital deficiencies, while in Liaoning authorities have announced that 12 of the province’s 15 commercial banks will be merged into a single bank following NPL issues. More generally, in keeping with the trends of recent years, Chinese banks are being encouraged to dispose of NPLs to improve the health of their balance sheets.

Graph 1.9



* 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; WIND Information

Graph 1.10



* Break for state-owned banks in 2015 reflects the change to internal ratings-based approach for risk-weighted assets
** Includes non-performing loans and special mention loans
Sources: CEIC Data; RBA; S&P Global Market Intelligence

Conditions in EMEs have generally improved but financial stability challenges remain

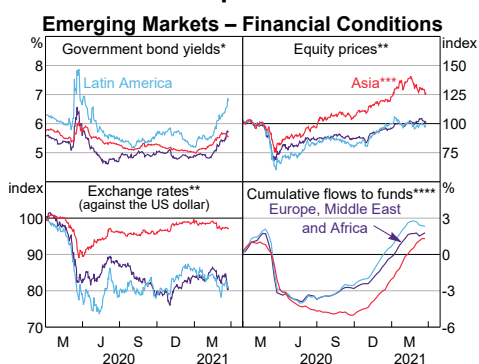
The improvement in EME financial conditions since mid 2020 has come alongside the recovery in economic activity and global trade. Yields on local currency government bonds remain low relative to pre-pandemic levels for most EMEs, despite rising in recent months, while spreads on US dollar-denominated bonds have generally continued to narrow towards pre-pandemic levels (Graph 1.11). In this low interest rate environment, EME sovereigns and corporations have issued significant amounts of local currency and US dollar-denominated debt. This has raised the level of indebtedness for EMEs and placed pressure on domestic banks, which have absorbed much of the local currency issuance. This increase in debt has also increased currency risk where the debt denominated in foreign currency is unhedged, and the risk of capital outflows where local currency or US dollar debt have been purchased by foreign investors.

The pandemic is continuing to pose challenges for EMEs, despite the improvement in financial conditions. The resurgence of COVID-19 at the end of 2020 has constrained economic activity,

while the slower rollout of vaccines and pre-existing financial and economic imbalances are likely to lead to a slower recovery in some EMEs than in advanced economies. Many EMEs are not expected to achieve widespread vaccination until at least the end of 2022. Several major EMEs, including Brazil, South Africa and Turkey, entered the crisis with macroeconomic and financial imbalances. Given these challenges, GDP in most EMEs will remain below pre-pandemic trajectories. With a faster recovery and so rising bond yields in advanced economies, more vulnerable EMEs will face pressures of capital outflows, exchange rate depreciation and rising domestic interest rates, which would hamper the domestic recovery. If capital outflows became disorderly, confidence in investments in EMEs could be undermined and result in broader contagion.

EMEs in east Asia are generally better placed to manage these risks. They entered the COVID-19 crisis with relatively strong macroeconomic fundamentals and banking systems, have generally had better health outcomes than other EMEs, and have since benefited from the recovery in global trade and industrial production. However, banks' ability to extend credit may become constrained as measures, such as the delayed recognition of NPLs, are unwound. In India, the Reserve Bank of India expects bank NPLs to rise from 7.5 per cent in September 2020 to 13–15 per cent by September 2021 (Graph 1.12). Indian banks are also exposed to deteriorating asset quality at NBFIs, which have increased their share of funding from banks (from 34 to 37 per cent) since the COVID-19 crisis began and have received 10 per cent of banks' non-food credit outstanding.

Graph 1.11



* Local currency bonds; weighted by market value

** 1 January 2020 = 100

*** Excludes China

**** Per cent of assets under management; includes flows to bond and equity funds

Sources: Bloomberg; EPFR Global; IMF; JPMorgan; MSCI; RBA

The global financial sector faces ongoing challenges, including from cyber risks and climate change

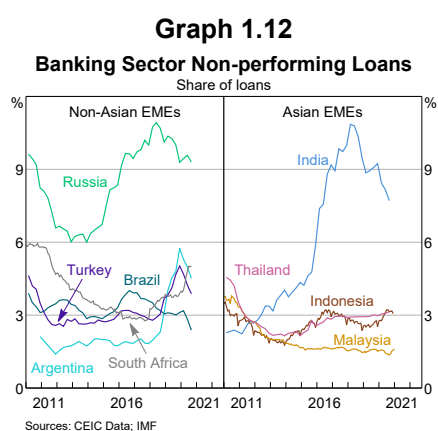
Cyber incidents pose a significant threat to the stability of the global financial system. The incidence and costs of cyber attacks are increasing. In the past 6 months there have been large-scale, high-profile attacks – including Accellion, Microsoft Exchange and SolarWinds – that have impacted financial institutions as well as other entities globally (domestic implications are discussed further in ‘Chapter 3: The Australian Financial System’). These events have highlighted the potential for large-scale sophisticated attacks. The International Monetary Fund has estimated that direct losses from cyber attacks could be as large as 9 per cent of total bank net income globally.^[4]

Efficient and effective responses to, and recovery from, a cyber incident are essential to limiting

these costs and any related financial stability risks. To aid this, the FSB recently published a toolkit of effective practices for financial institutions’ cyber incident responses.^[5] The FSB is currently assessing the scope for convergence in the regulatory reporting of cyber incidents.

Climate change and the transition toward a low-carbon economy pose longer-term risks to financial institutions.^[6] In November, the FSB published a report on these risks, finding that there are channels through which the effects of realised physical and transition risks for financial institutions could be transmitted and amplified, including across borders.^[7] These included asset fire sales, pro-cyclical reductions in bank lending and insurance provision, and reduced sovereign creditworthiness.

Globally, policy work on climate change is progressing in a number of areas, and support has broadened with the recent decision by the United States to re-join the Paris Agreement. The FSB and the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) are exploring ways to promote high quality climate based data and disclosure requirements. The FSB and NGFS have also planned work on assessing, and closing, data gaps to ensure that regulators and investors have sufficient data to evaluate climate risks. A recent Taskforce on Climate-related Financial Disclosures (TCFD) implementation report highlighted progress on TCFD-aligned disclosures by firms. ✎



Endnotes

- [1] FSB (Financial Stability Board) (2019), ‘Vulnerabilities associated with leveraged loans and collateralised loan obligations’, December. Available at <<https://www.fsb.org/2019/12/vulnerabilities-associated-with-leveraged-loans-and-collateralised-loan-obligations/>>.
- [2] For more information on the role of investment funds in the March 2020 market turmoil, see RBA (2020), ‘Box A: Risks from Investment Funds and the COVID-19 Pandemic’, *Financial Stability Review*, April, pp 14–19.
- [3] FSB (2020), ‘Holistic Review of the March Market Turmoil’, November. Available at <<https://www.fsb.org/2020/11/holistic-review-of-the-march-market-turmoil/>>.
- [4] Lagarde C (2018), ‘Estimating Cyber Risk for the Financial Sector’, *IMF Blog*, 22 June. Available at

<<https://blogs.imf.org/2018/06/22/estimating-cyber-risk-for-the-financial-sector/>>.

- [5] FSB (2020), 'Effective Practices for Cyber Incident Response and Recovery: Final Report', October. Available at <<https://www.fsb.org/2020/10/effective-practices-for-cyber-incident-response-and-recovery-final-report/>>.

- [6] See RBA (2019), 'Box C: Financial Stability Risks from Climate Change', *Financial Stability Review*, October, pp 57–61.

- [7] FSB (2020), 'The Implications of Climate Change for Financial Stability', November. Available at <<https://www.fsb.org/wp-content/uploads/P231120.pdf>>.

Box A

The Transition Away from LIBOR

For several decades, London Inter-bank Offered Rates (LIBOR) have been a widely used benchmark for global interest rates, underpinning derivatives, loans, bonds and other financial products. The UK Financial Conduct Authority (FCA) estimated in January 2021 that LIBOR underpinned around US\$260 trillion of derivatives contracts globally.^[1] However, LIBOR has notable deficiencies as a benchmark. Given this, regulators globally determined that LIBOR cannot be relied on beyond 2021 and markets need to transition to more robust and reliable market-determined interest rate benchmarks.

A smooth LIBOR transition is recognised by the G20 and the Financial Stability Board (FSB) as a key international regulatory priority. A disorderly transition would create significant risks for banks and other financial and non-financial firms, and for the financial system more widely. Market participants, with strong regulatory encouragement and support, are already transitioning to alternative benchmarks so that they are ready for the cessation of LIBOR by the end of 2021. Progress is greatest for larger financial institutions and derivatives markets. However, LIBOR transition is less advanced in other markets, such as loans, which affect a broader range of firms, including corporates, and where much remains to be done to be ready for the end of LIBOR.

LIBOR is not a viable benchmark for interest rates

LIBOR seeks to measure the interest rates that large banks offer to lend to each other on an unsecured basis in the London short-term money market.^[2] It is calculated as the average of submissions from a panel of banks and published by ICE Benchmark Administration (IBA), which is regulated by the FCA. LIBOR rates are calculated for 5 major currencies with tenors ranging from overnight to 12 months.

LIBOR has several weaknesses, which became more apparent with the global financial crisis of 2007-08. In particular, some market participants had, for many years, been manipulating LIBOR to benefit their financial institutions. Benchmark reforms and regulation have addressed this. However, concerns remained over the reliability and robustness of LIBOR. In 2017, the FCA expressed concern that wholesale funding markets were not sufficiently active or liquid for LIBOR to be calculated based on transactions. In the absence of transactions, panel banks can make submissions based on 'expert judgement'.^[3] However, banks became increasingly reluctant to make such submissions given the uncertainty around providing estimates when there is little or no market activity, owing to the risk of being associated with benchmark manipulation.

In 2017, the panel banks agreed with the FCA to voluntarily sustain LIBOR until end 2021 to limit the financial stability risks from a disorderly end to LIBOR. Over recent years,

banks, other market participants and regulators have been jointly working on transitioning away from LIBOR. The market turmoil at the onset of the COVID-19 pandemic in early 2020 added impetus to the transition. The already limited number of market transactions underpinning LIBOR fell even further so that these rates were almost entirely based on expert judgement.^[4]

Following an IBA consultation, the FCA announced on 5 March 2021 that all LIBOR settings will cease at the end of 2021, with the exception of several heavily used USD LIBOR tenors (overnight and one, 3, 6 and 12 month) which will cease at the end of June 2023.^[5] The extended dates for the USD LIBOR tenors aim to ‘allow most legacy USD LIBOR contracts to mature before LIBOR experiences disruptions’, as there are challenges associated with transitioning these contracts to alternative reference rates.^[6] Similarly, the FCA is considering whether there is a need to further extend the publication of a limited number of LIBOR settings in an amended form to support legacy contracts for which substituting another interest rate is exceptionally difficult (‘tough legacy’ contracts).^[7] Nonetheless, regulators globally have reiterated that the use of all LIBOR settings in new contracts must cease after 2021.

A disorderly transition away from LIBOR is a risk to financial stability

When publication of LIBOR ceases, firms that are parties to contracts still referencing LIBOR without robust fallbacks in place (discussed below) will face considerable risks. For these contracts, it may be unclear what the new interest rate should be, or one or more counterparties to a contract may view the chosen new rate as being unreasonable.

There would be a lengthy period of costly litigation to resolve ambiguities. If such contracts are widespread this would undermine confidence in some systemically important markets, and could affect the supply of credit to the real economy. There is also a risk that firms are not operationally ready for the transition away from LIBOR, even if they have agreed to alternative rates. This lack of readiness in systems and processes could mean that correct payments are not made, which would prove disruptive if many firms are facing operational difficulties.

In addition, there is a risk of unethical, inappropriate or unlawful behaviour, and resulting penalties, in the transition away from LIBOR. In particular, clients could be transferred to rates that disadvantage them or to inferior contractual terms, or their products may become unsuitable or not perform as expected. Regulators internationally have been providing guidance on conduct risk to support institutions in transitioning away from LIBOR. Appropriate mitigation strategies include a risk management framework that covers the LIBOR transition, as well as an effective and transparent communications policy. Domestically, the Australian Securities and Investments Commission (ASIC) released guidance in November 2020 on practices that Australian entities can adopt to manage conduct risk during the LIBOR transition.^[8]

Much remains to be done by the end 2021 deadline for LIBOR

LIBOR transition is a major focus of the G20’s financial reform efforts, involving the FSB, other international bodies, national regulators, benchmark administrators and market participants.^[9] The key elements of

Table A1: Alternative Reference Rates replacing LIBOR

Currency	Alternative rate
US dollar	Secured overnight financing rate (SOFR)
Euro	Euro short-term rate (€STR)
Japanese yen	Tokyo overnight average rate (TONA) or TIBOR
Sterling	Sterling overnight index average (SONIA)
Swiss franc	Swiss average rate overnight (SARON)

Source: FSB

this work have been to replace LIBOR with alternative reference rates in contracts, and in the case of existing contracts where it is not feasible to amend the reference rate, to include the fallback rates to apply when LIBOR is discontinued.

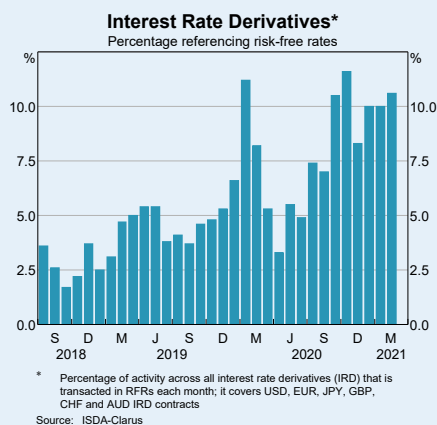
National bodies have identified (nearly) 'risk-free rates' (RFRs) to replace LIBOR in the 5 major currencies (Table A.1). Despite the significant transition efforts to date, LIBOR is still the dominant benchmark in new global contracts.^[10] A broad indicator of trading activity across derivatives markets in the 5 LIBOR currencies (plus the Australian dollar) shows increasing adoption of RFRs, but it remains at a low level (Graph A.1).

Where it is not feasible to replace LIBOR with an alternative reference rate in existing contracts (e.g. where multiple security holders would need to agree to the change), it is important that robust fallback provisions are included in the contract so that it is clear what rate will apply when LIBOR ends. Many contracts have fallback clauses, but these are often cumbersome to apply, involve significant discretion and could lead to substantial market disruption when LIBOR ends.

For derivatives, the International Swaps and Derivatives Association (ISDA) has developed robust fallbacks for LIBOR and other IBOR-referenced contracts, using the RFR benchmarks plus a spread.^[11] These new ISDA fallbacks for derivative contracts came into effect on 25 January 2021, meaning they have been included in all new contracts that reference ISDA's standard interest rate definitions from that date. Over 13,500 entities across more than 85 jurisdictions have adhered to the fallbacks protocol, meaning their existing contracts relying on ISDA definitions will also include the fallbacks, thereby facilitating a smooth transition when LIBOR ends.

However, there are coordination challenges in developing robust fallbacks for other LIBOR-referenced products outstanding, such as bonds and loans. Work is currently

Graph A.1



underway across industry to progress LIBOR transition in these markets, but much remains to be done. These markets, which involve a broad range of financial and non-financial firms, present financial stability risks with the end of LIBOR if they are not moved onto new reference rates.

Under the FSB's Global Transition Roadmap, firms should have been in a position to offer non-LIBOR linked loans to their customers at the end of 2020 and have adhered to the ISDA Fallbacks Protocol by its effective date of 25 January 2021. By mid 2021, firms should have established formalised plans to amend legacy LIBOR contracts to reference alternative rates where this can be done, and otherwise have discussed with counterparties the steps needed to prepare for the use of alternative RFRs for LIBOR-linked exposures that extend beyond 2021. Authorities are taking steps to support limited legacy contracts that are particularly difficult to transition from LIBOR.

Over coming months, the transition away from LIBOR to RFRs will need to accelerate with further adoption of ISDA fallback provisions so that the industry is ready for the cessation of LIBOR by the end of 2021. Globally, regulators are coordinating and monitoring progress closely, and taking action as required to ensure that risks are appropriately managed.

Australia has adopted a multiple-rate approach for domestic reference rates

The bank bill swap rate (BBSW) is the main domestic credit-based benchmark, and remains robust. This is because, unlike LIBOR, there are enough transactions in the local bank bill market. Australia has an active bank bill market as the 4 major banks issue and

hold bills as a source of funding and to manage their liquidity, and a wide range of wholesale investors purchase bills. Moreover, the methodology underlying the benchmark calculation has been strengthened in recent years. BBSW, unlike LIBOR, will not end and market participants will be able to choose to base contracts on BBSW or the cash rate (Australia's RFR). However, there is little issuance of one-month bank bills. At this tenor BBSW largely represents the repurchase by banks of their bills that have one month to maturity. Given this tenor is less liquid, users of one-month BBSW should consider using alternative benchmarks.

While BBSW remains a robust benchmark it was included in ISDA's Fallbacks Protocol for derivatives contracts as a matter of prudent risk management. Fallbacks provide an important contingency for financial contracts based on any reference rate. The fallback rate for BBSW is the overnight cash rate plus a spread based on the historical difference between BBSW and the cash rate. In the future, the Reserve Bank will be requiring contracts that reference BBSW to include robust fallback provisions in order to be eligible collateral in its open market operations. The implementation of this requirement is being determined with input from industry.

Notwithstanding the robustness of BBSW, LIBOR transition is nonetheless a key priority in Australia. LIBOR contracts are still a substantial component of banks' and other firms' exposures in Australia due to the international nature of their activities. At the end of 2020, the aggregate notional LIBOR exposures of major Australian financial institutions was around \$8 trillion. Progress is being made, however, with LIBOR exposures declining overall for the key Australian

financial institutions over the course of 2020. But exposures still rose at some individual institutions.

Given these sizeable exposures, financial regulators strongly encourage and support the transition away from LIBOR.^[12] The Australian Prudential Regulation Authority and ASIC are monitoring progress on LIBOR transition by the entities they regulate, and working with institutions as required to ensure adequate progress in transition and,

in particular, that they meet the LIBOR deadlines. ASIC and the Reserve Bank have strongly advised Australian institutions to adhere to the ISDA Fallbacks Protocol, and expect institutions to work towards meeting the timeline for LIBOR transition readiness set out in the global transition roadmap and ceasing the use of LIBOR in new contracts beyond the end of 2021.^[13] In the remaining months of this year, firms should work intensively on ensuring a smooth transition away from LIBOR by the end of 2021.^[14] ✎

Endnotes

- [1] See Schooling Latter E (2021), 'LIBOR – are you ready for life without LIBOR from end-2021?', Speech at City & Financial's Managing LIBOR Transition Event, 26 January. Available at <<https://www.fca.org.uk/news/speeches/libor-are-you-ready-life-without-libor-end-2021/>>
- [2] There are other IBORs besides those in the London market. For example, there are euro and Tokyo-based reference rates (EURIBOR and TIBOR, respectively). However, this box focuses on LIBOR given it is the most widely used benchmark globally.
- [3] There are 3 levels of LIBOR submissions. Level 1 is 'transaction-based' submissions – an average of transactions in unsecured deposits and primary issuances of commercial paper and certificates of deposit. Level 2 is 'transaction-derived' data, including information from historical transactions. Level 3 is 'expert judgement' – where a submitting bank has insufficient Level 1 or 2 transactions, it estimates the rate at which it could fund itself in the unsecured wholesale funding market.
- [4] See Bank of England (2020), Interim Financial Stability Report, May. Available at <<https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2020/may-2020.pdf>>
- [5] See FCA (Financial Conduct Authority) (2021) 'FCA Announcement on Future Cessation and Loss of Representativeness of the LIBOR Benchmarks', 5 March. Available at <<https://www.fca.org.uk/publication/documents/future-cessation-loss-representativeness-libor-benchmarks.pdf>>
- [6] See Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency (2020), 'Statement on LIBOR Transition', 30 November. Available at <<https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20201130a1.pdf>>
- [7] See FCA (2021), 'Announcements on The End of LIBOR', 5 March. Available at <<https://www.fca.org.uk/news/press-releases/announcements-end-libor/>>
- [8] See ASIC (Australian Securities and Investments Commission) (2020), 'Managing Conduct Risk during LIBOR Transition', 30 November. Available at <<https://asic.gov.au/about-asic/news-centre/find-a-media-release/2020-releases/20-304mr-asic-issues-information-sheet-on-managing-conduct-risk-during-libor-transition/>>
- [9] The FSB's work on benchmark reform has been coordinated at the international level by its Official Sector Steering Group, of which the Reserve Bank of Australia is a member.
- [10] For its most recent progress report on benchmark transition, see FSB (Financial Stability Board) (2020), 'Reforming Major Interest Rate Benchmarks: The Year of Transition Away from LIBOR', 20 November. Available at

<<https://www.fsb.org/wp-content/uploads/P191120.pdf>> For trends in the USD LIBOR market, also see Alternative Reference Rates Committee (2021), Progress Report: The Transition from U.S. Dollar LIBOR, March. Available at <<https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/USD-LIBOR-transition-progress-report-mar-21.pdf>>

[11] See ISDA (International Swaps and Derivatives Association) (2020), 'IBOR Fallbacks Protocol', 23 October. Available at <<https://www.isda.org/protocol/isda-2020-ibor-fallbacks-protocol/>>

[12] See APRA (Australian Prudential Regulation Authority), ASIC and Reserve Bank (2020), 'Regulators Release Feedback on Financial

Institutions' Preparation for LIBOR Transition', Media Release No 2020-12, 8 April.

[13] See APRA, ASIC and Reserve Bank (2020), 'Regulators Urge Australian Institutions to Adhere to the ISDA IBOR Fallbacks Protocol and Supplement', Media Release No 2020-25, 13 October.

[14] See Kent C (2021), 'The End of Libor and the Australian Market', Keynote Address to the ISDA Benchmark Strategies Forum Asia Pacific, online, 18 March.

2. Household and Business Finances in Australia

Concerns of widespread financial stress in the household and business sectors have eased as economic outcomes have exceeded expectations. Improving economic conditions and temporary policy measures have supported households' and businesses' cash flows, allowing almost all to make debt repayments and most to maintain or even grow their liquidity buffers. This has in turn reduced the risks of large scale defaults on housing and business debt.

The vast majority of households and businesses who had deferred loan repayments have now resumed full repayments. However, some increase in household and business financial stress is likely as temporary support measures progressively end and borrowers deplete financial buffers. Households and businesses that derive their incomes from sectors most heavily affected by the pandemic face an elevated risk of repayment difficulties if their buffers prove to be insufficient. Overall though, the share of heavily indebted households and businesses in this position is small. As a result, lenders' non-performing loan ratios are expected to rise modestly from low levels.

The nature of risks in housing markets has changed over the past six months. The economic recovery and policy stimulus have underpinned strong demand for housing, particularly from first home buyers. Housing prices in the largest cities have risen to be around 2017–18 levels. However, the price increases have not been uniform by region or dwelling type. Demand for inner city apartments fell over 2020 and is likely to be constrained in

the near term given changes in housing preferences and reduced immigration. The short-term risks of oversupply of apartments are limited by the relatively low volume of expected apartment completions in 2021.

Conditions in the office property market remain weak, with vacancy rates having increased considerably over the past year, particularly in Sydney and Melbourne. Risks from the retail property sector are elevated, given weak rental market conditions. However, the financial positions of the largest owners of retail property remain sound, and they appear well placed to cope with the ongoing structural change towards online retailing. In contrast, some smaller landlords might have greater difficulties in managing declines in earnings, and insolvencies are likely to rise (see 'Box B: Risks in Retail Commercial Property').

Overall, household finances have improved ...

Household disposable income increased by 5 per cent over 2020, boosted by temporary government income support. Improving labour market conditions contributed to income growth in the second half of the year. The program to allow households to access their superannuation early also provided a notable boost to household cash flow, with 3.5 million withdrawals totalling \$36 billion (3 per cent of aggregate annual household disposable income) until the program's conclusion at the end of 2020. The combination of higher household disposable income and a sharp

decline in household consumption saw the household saving ratio double to 12 per cent over 2020. This additional saving was used to pay down debt and/or build liquidity buffers, with the aggregate household mortgage debt-to-income ratio declining over 2020, and household deposit balances rising relative to household disposable income. (Graph 2.1). Part of the increase in household deposits has been in the mortgage offset accounts of indebted households.

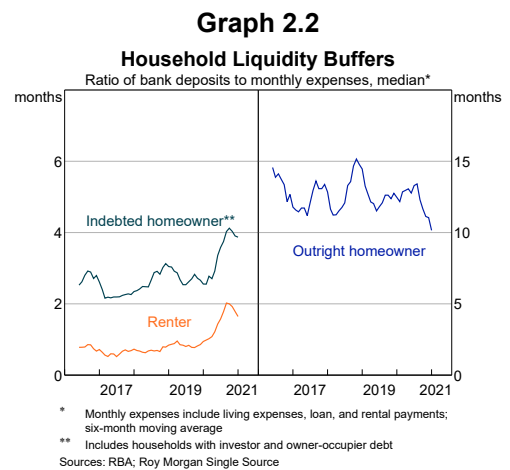
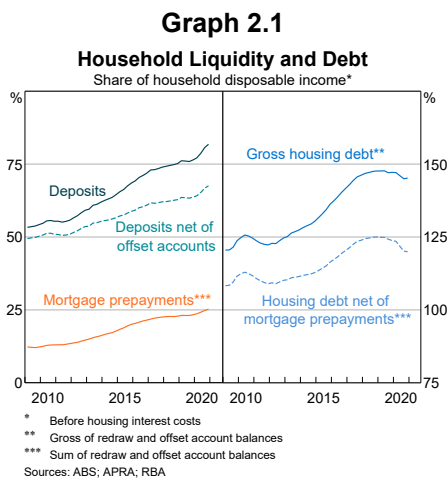
Survey data suggest that the increase in liquidity buffers (the ratio of bank deposits to expenses) has been evident for both renters and indebted homeowners (Graph 2.2). Households with members employed in a range of industries – including those that have been relatively heavily affected by the pandemic – have also increased their buffers. In contrast, outright homeowners – who are typically less likely to encounter financial stress than other types of households – have reduced their buffers, though they remain high relative to other households, who are potentially more vulnerable.

... but a small share of households are vulnerable

Most households remain in a good position to service their debt given low interest rates and

have the additional safety net of large mortgage prepayment buffers. Around half of all mortgages have prepayment buffers equivalent to more than 3 months' worth of repayments and, for more than one-quarter of loans, the buffer exceeds 2 years' worth of repayments (Graph 2.3). The share of loans with prepayment buffers of only one month or less fell very slightly over 2020 and remains close to its pre-pandemic level of 40 per cent. Most loans with low prepayments do not present large risks to lenders. Data from the Reserve Bank's Securitisation System suggest that just under two-thirds of these loans are held by investors and/or fixed-rate borrowers who have incentives to hold savings outside their mortgages. Of the remaining loans with low prepayments, some are new loans that have not yet built buffers, while others belong to borrowers with persistently small prepayment buffers. This latter group of relatively 'risky' borrowers has declined to around 10 per cent of all loans from around 15 per cent a year ago.

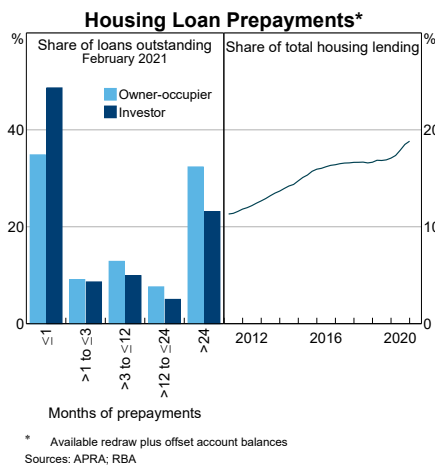
Timely survey data indicate that households who rented or had a mortgage were much more likely to access some form of (government or private) financial assistance in 2020 compared to outright owner-occupiers (Graph 2.4). Households with at least one member working



in industries that remain heavily affected by the pandemic (the recreation and personal, transport and storage, and retail sectors) were slightly overrepresented among those seeking assistance. Looking ahead, some of these households may need to draw on their prepayment buffers as support is unwound. The share of housing loans (by value) on repayment deferrals at the end of February 2021 had declined to 0.7 per cent, from a peak

of 11 per cent in May 2020. Almost all borrowers whose repayment deferral has come to an end – including many who chose to resume payments early – have resumed full repayments and are up to date with their loan schedule. The small number of loans still on deferred payments are slightly skewed towards borrowers with riskier characteristics, such as those with high loan-to-valuation ratios (LVRs) at origination and with prepayment buffers of less than 3 months' worth of repayments (Graph 2.5). Loans remaining on deferral are at greater risk of entering arrears than those that have already exited repayment deferral arrangements. A disproportionate share is in Victoria, where the recovery had been delayed. However, any rise in housing loan arrears rates over coming months is likely to be more modest than previously expected given better-than-expected economic conditions (see 'Chapter 3: The Australian Financial System').

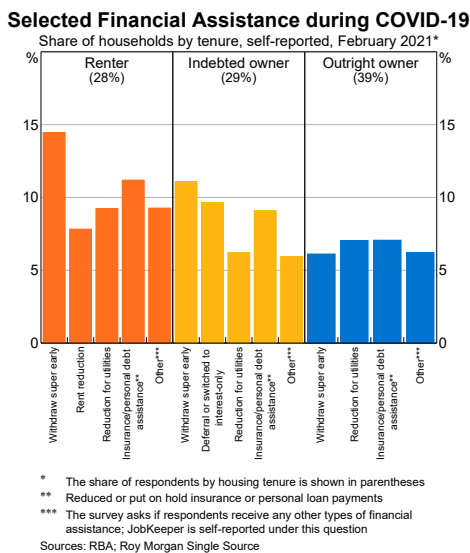
Graph 2.3



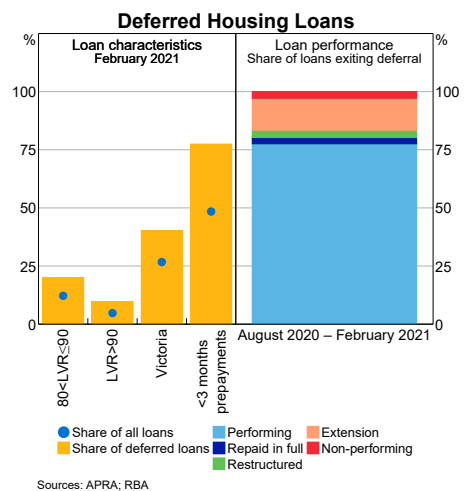
Housing market strength has reduced near-term risks to household balance sheets

Housing market conditions have strengthened as the economic recovery has continued (Graph 2.6). Accommodative monetary policy has supported the prices of housing and other

Graph 2.4



Graph 2.5



assets. After falling by almost 2 per cent between April and September 2020, nationwide housing prices have since more than recovered. In Perth and Darwin, prices have been increasing for the first time in several years, although they remain around 20 per cent below their peaks of 6–8 years ago. In Sydney and Melbourne, prices are now a little above the historical peaks they reached in 2017/18. Housing demand has been supported by low interest rates, stimulus payments boosting household income, temporary additional support for first home buyers and the HomeBuilder program. If housing prices continue to rise as the end of stimulus payments slows household income growth, this will present renewed challenges for housing affordability for lower income households.

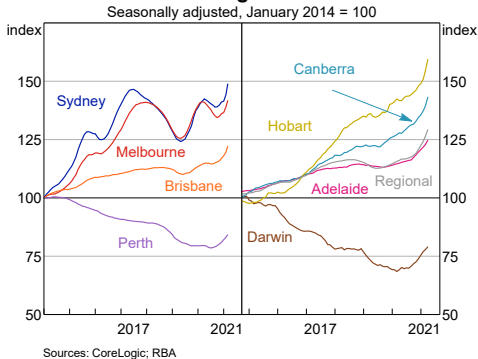
While prices have been rising nationally, there have been important compositional differences. These differences reflect changes in preferences, and the composition of demand, in response to the pandemic. Prices in regional areas have increased by 11 per cent over the past year, compared to 5 per cent in the capital cities. Price growth has also been stronger for detached houses than for units. Rental conditions have also been weak, particularly in Melbourne and in the inner and middle suburbs of Sydney where vacancy rates have increased sharply and rents for units have fallen (Graph 2.7). The closure of

Australia’s international borders is expected to cause population growth in 2021 to be around 1¼ percentage points lower than previously expected and has reduced demand for inner city rental housing by international students. A shift in preferences towards detached houses has also been weighing on demand for inner city apartments. However, near-term risks of oversupply – and therefore sharp price declines – are mitigated by the considerably smaller volume of higher-density inner city apartments due for completion in 2021 relative to previous years.

Rising housing prices have reduced the incidence of negative equity. The share of loans for which the value of the loan exceeds the value of the property has fallen to around 1¼ per cent, down from over 3 per cent a year ago (Graph 2.8). As a result, a larger share of borrowers could sell their property and extinguish their debt if they experienced repayment difficulties, reducing potential losses for lenders. The share of loans in negative equity has fallen in all states, but the incidence remains greater in Western Australia, the Northern Territory and Queensland. Loans that remain on repayment deferrals are no more likely to be in negative equity than those making full repayments.

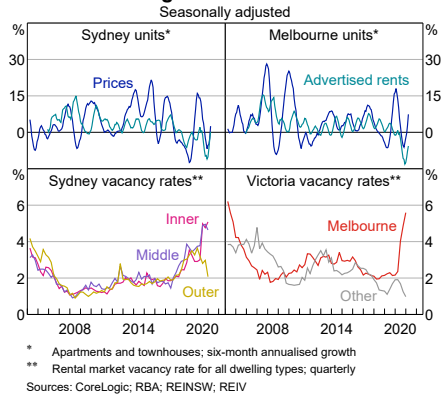
Graph 2.6

Housing Prices



Graph 2.7

Housing Market Conditions



Lending standards are largely unchanged and remain robust

The strengthening in lending standards since the mid 2010s has ensured that indebted households generally had sufficient income and equity buffers to cope with the COVID-19 economic downturn. Lending standards were initially tightened further at the onset of the pandemic in anticipation of deteriorating economic conditions, but with the subsequent improvement in the economic outlook, this has since been unwound. The share of high LVR lending increased over the second half of 2020 but remains low by historical standards, while the share of interest-only lending has been little changed at low levels (Graph 2.9). The share of lending at high debt-to-income ratios also increased over the second half of 2020 following earlier declines (Graph 2.10).

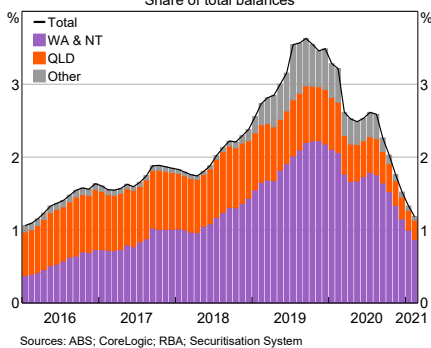
Some of the increase in high LVR lending to owner-occupiers reflects the greater share of first home buyers who have responded to government incentives and lower interest rates, which make purchasing housing more attractive relative to renting. Despite typically having higher initial LVRs than other borrowers, prior to the pandemic first home buyers tended to pay down their debt relatively quickly. In addition, Securitisation System data suggest that for loans less than 5 years old, first home buyer and other

loans have similar prepayment buffers and arrears rates. While new loans are generally at higher risk of facing repayment difficulties in the event of a shock to household income than older loans, there is little evidence to suggest that lending to first home buyers has been an especially risky form of lending.

Credit growth has increased but remains modest and has mostly been driven by lending to owner-occupiers (Graph 2.11). Some of the increase in owner-occupier loan commitments has been related to a pull-forward of demand for construction loans, which may ease with the expiry of the government's HomeBuilder program. Investor credit growth has increased in recent months but remains very low by

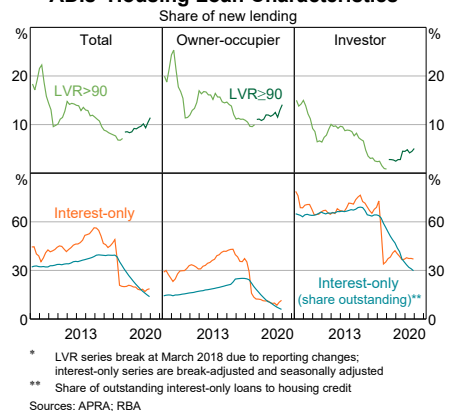
Graph 2.8

Housing Loans in Negative Equity



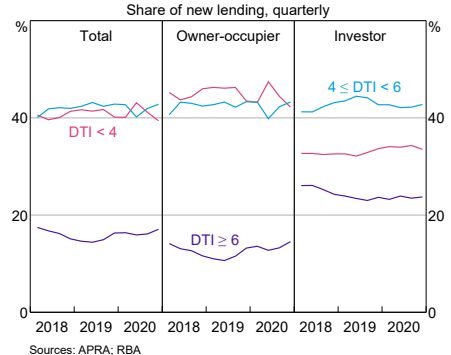
Graph 2.9

ADIs' Housing Loan Characteristics*



Graph 2.10

Debt-to-income Ratios



historical standards. Investor loan commitments, which are a leading indicator of investor credit growth, have started to rise, and lenders have reported renewed investor interest, particularly for detached houses.

Business profitability has improved as the economy has started to recover

In aggregate, business profitability has recovered strongly following the significant trading disruptions that occurred at the height of the pandemic, with temporary policy measures providing significant support (Graph 2.12). Aggregate business revenue remains weaker than a year ago, but this has been more than matched by reductions in operating expenses.

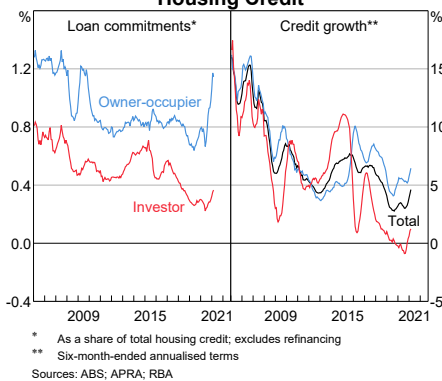
Improved trading conditions and policy support have helped businesses maintain the large cash buffers they accumulated in 2020 (Graph 2.13). By late 2020, companies' holdings of cash and deposits covered more than 5 months' worth of expenses on average, while unincorporated businesses had over 2 months' worth of buffers. While this partly represents firms reducing expenses, it is mostly accounted for by increased cash holdings. In addition, some businesses hold committed lending facilities with banks that they could draw on if needed. These savings are expected to support businesses through the recovery.

Despite improvements in the outlook, some businesses are vulnerable in the near term

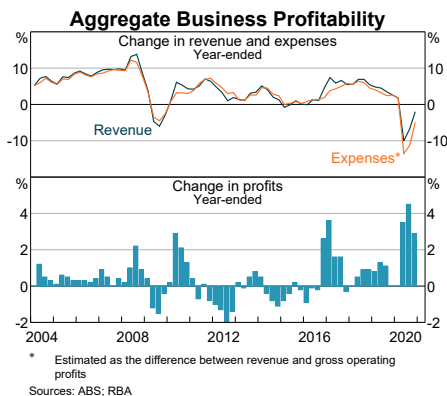
Businesses in the arts and recreation, accommodation and food, and transport sectors have experienced relatively large declines in revenue over the past year (Graph 2.14). Activity in these sectors remained at a low level in late 2020 even as aggregate economic conditions improved. A sizeable share of firms in these sectors have continued to receive a significant boost from temporary support measures in early 2021.

Some firms will find it challenging to continue to meet their existing expenses as the policy

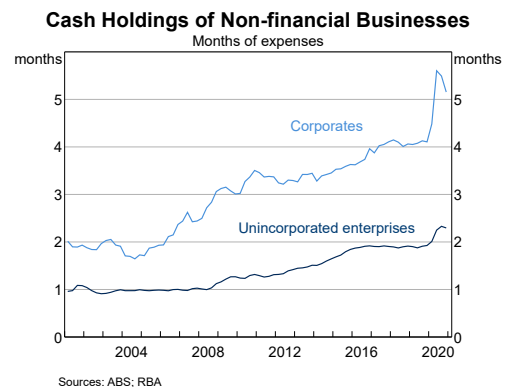
Graph 2.11
Housing Credit



Graph 2.12



Graph 2.13



support measures are withdrawn if their trading conditions do not improve. As at February 2021, the share of businesses still receiving JobKeeper payments was highest in Melbourne and in areas with a relatively high share of businesses operating in sectors more affected by the pandemic (Graph 2.15). Firms in these sectors also tend to be more highly geared and have lower levels of liquidity than those in other sectors, suggesting they face a higher risk of future difficulties in servicing their debts. Without a sustained pick-up in revenue, some businesses will be forced to reduce their current levels of employment. In turn, this will diminish the ability of some households to service their own debts.

In addition, many businesses provide, or rely on, trade credit (where a business purchases goods or services on account and pays the supplier at a later date). If some businesses have trouble making their payments, this would spill over to other businesses through trade credit networks. To date, these contagion risks remain contained,

with average trade credit payment times – an indicator of firms’ difficulty in making payments – slightly below pre-pandemic levels. The failure of trade finance investor Greensill Capital in March does not appear to reflect broader problems with the provision of trade credit in Australia or internationally.

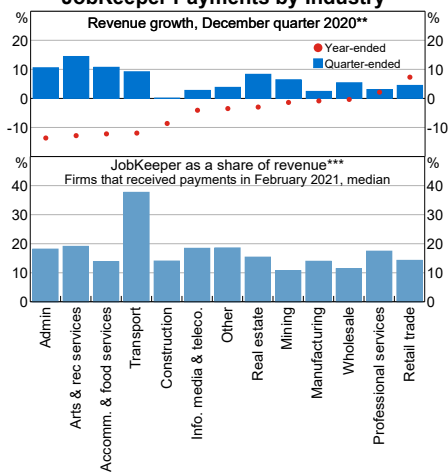
Overall, the risks of insolvency appear largest for SMEs operating in high risk industries, given they tend to have smaller cash buffers and have been more reliant on temporary support measures than larger firms. The share of SME loans with deferred repayments has fallen to just over one per cent (by number), from around 13 per cent in June 2020. The share of major banks’ SME lending with a relatively high probability of default has increased, suggesting that banks expect the performance of some SME loans to deteriorate.

Business insolvencies have begun to rise

Business insolvencies have risen from their mid-2020 lows, with the increase at the very end of the year coinciding with the end of the moratorium on director liability for insolvent trading (Graph 2.16). Looking ahead, it is likely that insolvencies will rise further for some months, notwithstanding the expected

Graph 2.14

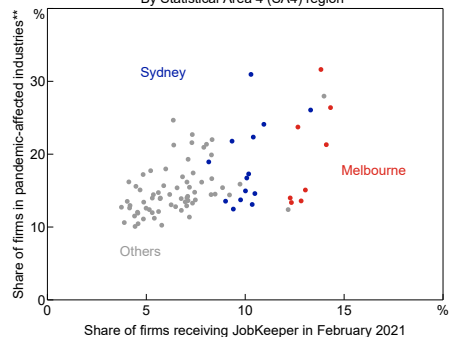
Business Revenue and JobKeeper Payments by Industry*



* Non-financial businesses in industries from the ABS Quarterly Business Indicators Survey
 ** Industry aggregates; quarter-ended growth rates are seasonally adjusted
 *** Annualised JobKeeper payments in February 2021 as a share of FY 2019/20 total revenues
 Sources: ABS; RBA

Graph 2.15

JobKeeper Payments By Statistical Area 4 (SA4) region*



* There are around 100 SA4 regions in Australia, each comprising between 100,000 and 500,000 residents; a small number of regions are excluded from this graph due to small sample sizes
 ** Pandemic-affected industries include accommodation & food services, arts & recreation services, education, and transport
 Sources: ABS; RBA

improvement in aggregate economic conditions. Vulnerable businesses may find it difficult to continue to operate and/or to meet their debt repayments if their revenues do not increase sufficiently to cover the withdrawal of government support.

There are a couple of factors that are likely to help moderate the rise in insolvencies following the end of the moratorium period. Support measures have prevented business insolvencies not only through cash support, but also by giving businesses more time to wind down operations without entering into insolvency. This suggests that a larger-than-usual share of firms ceased trading without becoming insolvent and so creditors incurring losses. Further, changes to the insolvency framework and the recently announced SME Recovery Loan Scheme are expected to provide better outcomes for some small business owners and their creditors (discussed further in 'Chapter 4: Domestic Regulatory Developments'). Businesses now have more options for debt restructuring and, in the case of insolvencies, new expedited processes will help to reduce costs.

Business insolvencies will have flow-on effects to households, both by reducing employment and because just under 30 per cent of loans to SMEs are secured by (most likely the business owners')

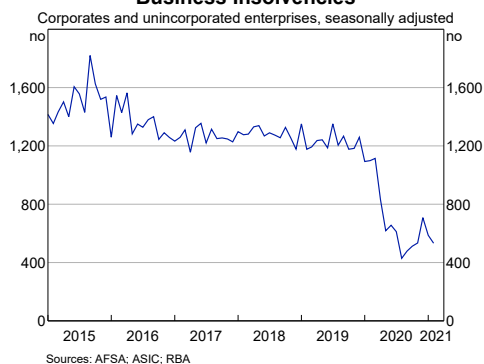
housing. Residentially secured loans benefit SMEs by allowing them to borrow larger amounts and at lower interest rates, but they also increase the probability that business insolvencies will result in defaults on loans secured by housing. While this risk of default on housing debt amplifies the financial stress experienced by small business owners and would negatively affect housing markets, it is unlikely to cause significant issues for banks, as most borrowers hold positive equity in their homes, and SME loans account for only 15 per cent of total outstanding credit. Moreover, around one-third of businesses that were still receiving JobKeeper payments at the beginning of 2021 were sole traders, suggesting that for these firms at least, the flow-on effects of any business insolvencies for households through a reduction in employment are likely to be fairly small.

Commercial property risks are greatest for retail and also offices

Banks are closely monitoring their commercial property exposures that have been most affected by the pandemic, in particular the office and retail property markets (see 'Box B: Risks in Retail Commercial Property'). Impairment rates on commercial property lending remain low, consistent with relatively low LVRs and strong debt covenants leading into pandemic, but are expected to rise. While banks' direct commercial property exposures account for only about 6 per cent of their total assets in aggregate, there is considerable variation across banks (for Australian-owned banks, the range is 0–16 per cent). Moreover, banks' effective exposures are higher than their direct exposures because, as noted above, some business lending is secured by commercial property. Non-bank lenders remain active in the sector and they can influence conditions for banks by competing on lending standards, and by financing deals which also involve banks.

Graph 2.16

Business Insolvencies



Vacancy rates continued to rise across most CBD office markets in the December quarter 2020, and in Sydney and Melbourne are currently around their highest levels in about 20 years (Graph 2.17). About one-quarter of reported CBD office vacancies in these cities are due to existing tenants seeking to sublet some space, which means owners have still been receiving at least some rent. The increase in vacancy rates has been similar across property grades to date, but secondary-grade office buildings tend to be more vulnerable when demand is falling as tenants take advantage of incentives to move to higher-quality premises.

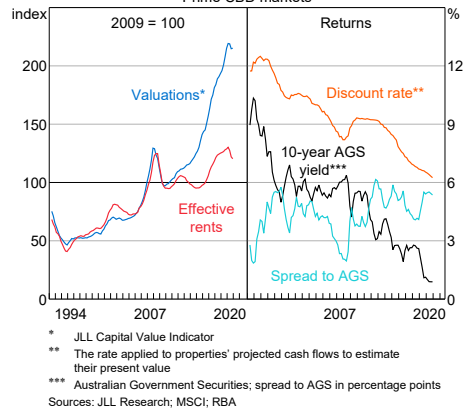
Tenant demand for offices is expected to remain weak in the early stages of the economic recovery, with some staff at many businesses continuing to work at least partly from home. Office supply will expand further this year as new office buildings are completed, albeit by less than last year, and most new office space has pre-committed tenants. Measures of office rents and valuations have declined only slightly since the pandemic, although the low number of sales transactions in 2020 increases the uncertainty about recent price trends (Graph 2.18).

Valuations and rents for industrial property have continued to grow, reflecting strong demand for

logistics and warehousing facilities partly due to the accelerated shift towards online retailing (Graph 2.19). Unlike in other sectors, sales transactions in the industrial property market did not decline in 2020. For diversified commercial property investors, strong conditions in the industrial property market are expected to cushion the impact of declining valuations and rental income in the retail and office sectors. Transactions data from 2015–19 suggest that about one-third of large office and retail property investors had also purchased industrial property. ✎

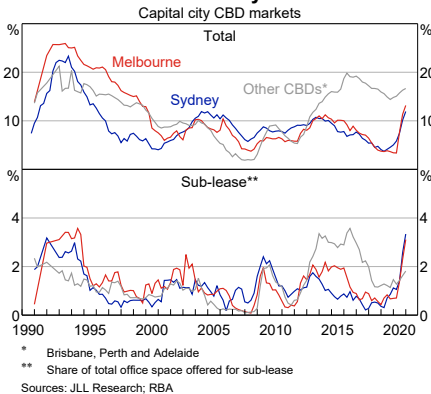
Graph 2.18

Office Property
Prime CBD markets



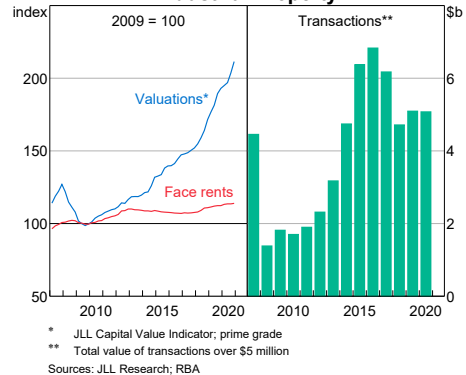
Graph 2.17

Office Vacancy Rates



Graph 2.19

Industrial Property



Box B

Risks in Retail Commercial Property

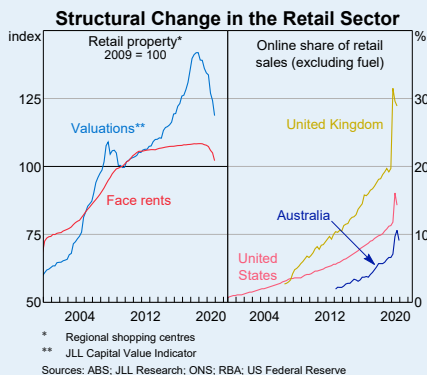
The pandemic has accelerated structural change and so has added to strains for retail commercial property

Retail commercial property in Australia was already facing a challenging environment prior to the pandemic. The margins of retailers, particularly bricks-and-mortar retailers for discretionary goods, were being compressed by intense competition from both large international and online retailers.^[1] In addition to this reducing retailers' ability to pay high rents, the shift to online retailing was decreasing the demand for retail commercial property premises. These forces had resulted in falling retail commercial property rents and prices (Graph B.1). The need for social distancing through the pandemic rapidly accelerated the trend towards online retailing in 2020. With Australia having a relatively low share of online retailing relative to other advanced economies, it is likely this shift will continue to depress demand for retail properties.

As demand for retail tenancies declined through 2020, retail vacancy rates increased sharply (Graph B.2). They are likely to increase further with some department stores and large retailers announcing plans to further reduce the size of their floor space over the next couple of years. This will place further downward pressure on rents and valuations, which have declined by 6 and 15 per cent since early 2019 respectively.

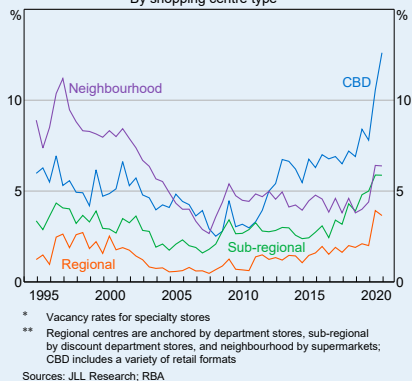
The outlook is particularly uncertain for regional and sub-regional shopping centres (those anchored by full-line or discount department stores anywhere in Australia, including in capital cities and CBDs). These centres rely on maintaining a breadth of tenants to sustain high levels of occupancy. Together these centres account for roughly two-thirds of gross lettable area of all shopping centres. In contrast, risks around earnings and profitability in 'neighbourhood centres', are somewhat lower. The anchor

Graph B.1



Graph B.2

Retail Vacancy Rates*
By shopping centre type**



tenant in these centres are supermarkets, which have fared better during the pandemic. While vacancy rates in CBD shopping centres are very high, they account for only around 4 per cent of gross lettable area.

While there are risks for commercial property investors the financial stability risks seem low

When vacancy rates increase and rents decline, indebted landlords need to use a larger share of their earnings to meet debt repayments. Although lower interest rates work to lower debt-servicing burdens, for a large enough decline in earnings some may find it difficult to service their debt. This raises the potential for asset fire sales, further depressing retail property prices. Large price falls would see a wider range of leveraged investors breach loan covenants, requiring a review of their situation with their lenders and possible further property sales.

Historically in Australia and internationally, losses on commercial real estate (CRE) have accounted for a large share of banks' losses in downturns.^[2] For this reason, lenders and financial regulators typically pay close attention to the exposure of the financial sector to CRE. The available information suggests that financial stability risks from retail CRE are currently lower than previous retail sector downturns. This reflects that CRE lending has experienced only moderate growth over recent years and has been subject to conservative lending practices. Moreover, the largest landlords have maintained conservative balance sheets, which will position them well to cope with the challenges posed by weakening rental demand.

The financial position of larger listed retail landlords remains sound

Large real estate investment trusts (REITs) own around three-quarters of regional and sub-regional shopping centres. Most of these large REITs are listed on the Australian Securities Exchange (A-REITs), and there is good information available to assess the financial stability risks from this part of the sector. A-REITs had total assets equivalent to about 10 per cent of GDP at the end of 2020 (most of which are CRE assets), or about 15 times the holdings of unlisted trusts. Nearly all A-REIT securities are held by institutional investors, with around two-thirds held by superannuation funds, and the bulk of the remainder held by insurance companies, other investment funds and offshore entities. There are also unlisted REITs of varying sizes that own retail commercial property. Some unlisted REITs are limited to only wholesale and institutional investors, though others are also available to retail investors.

Over one-fifth of all A-REITs have sizable exposures to shopping centres. Reflecting the decline in expected future earnings since the start of the pandemic, their share prices have under-performed relative to other A-REITs and the broader market (Graph B.3).

Retail A-REITs entered the pandemic in good financial health. As a result, they were well-placed to absorb the sharp temporary reduction in earnings as rental waivers were granted under a mandatory code of conduct established by the National Cabinet (to support tenants experiencing temporary financial stress during COVID-19). Retail A-REITs have relatively low leverage and have been easily able to make debt repayments despite some reduction in their profitability.

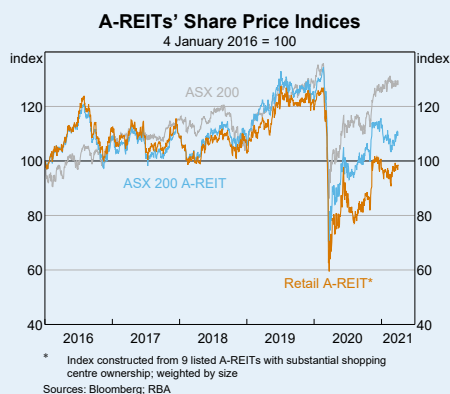
Profitability of retail A-REITs rebounded towards the end of 2020, as tenants resumed paying rent given trading improved, though it remains low relative to recent years (Graph B.4). There are ongoing risks to earnings, but a mitigating factor is that retail A-REITs have diversified portfolios with assets in various locations, and most have assets across a range of retail or broader commercial property segments. Retail A-REITs also have ample liquidity, which they generally increased in early 2020 in response to the more uncertain outlook.

Both listed and unlisted REITs typically have low leverage and debt service obligations. This reflects internal risk-management strategies as well as lenders' underwriting parameters in their policies, which are designed to protect lenders against losses in the event of sharp falls in income or asset prices. Over the past year, retail A-REITs have been easily able to cover their interest expenses with current earnings, with the low level of interest rates supporting their ability to do so. Leverage has also remained low, and declined for most A-REITs in the second half of 2020.

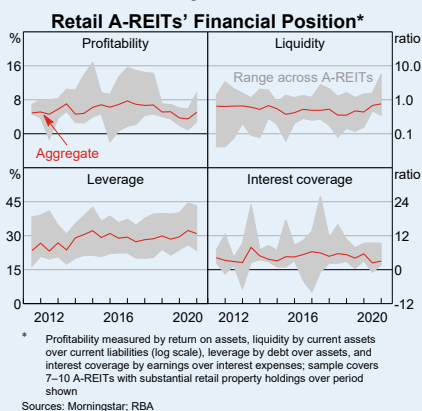
For the largest retail A-REITs, the vast majority of debt outstanding has been sourced from capital markets, both onshore and offshore. In addition to issuing senior bonds and commercial paper, some retail A-REITs have issued debt via private placement. Drawn bank debt accounts for just 7 per cent of total debt outstanding for the 6 largest retail A-REITs, although they also currently have much larger undrawn bank loan facilities (equivalent to over one-third of total debt currently outstanding). Smaller retail A-REITs rely more heavily on banks for their funding needs, though in aggregate retail A-REITs' bank debt outstanding accounts for less than 2 per cent of banks' overall commercial property exposures.

There was good access to debt funding in 2020 for at least large retail REITs. A number of entities issued equity, raised debt and refinanced existing facilities to help them cover upcoming maturities. The largest A-REIT by market capitalisation, SCENTRE, issued 60-year subordinated hybrid notes in 2020. Accordingly, funding pressures in the next few years appear well contained. Less than a quarter of outstanding bonds are due to mature by the middle of the decade.

Graph B.3



Graph B.4



Some smaller retail landlords, with less diversified portfolios, may find it difficult to manage declines in earnings

Neighbourhood and CBD centres are often owned by smaller investors, which reduces the information available on their financial resilience. The wider ownership base for these types of centres reflects that they are typically smaller and therefore require less capital to purchase or develop. Some are owned by REITs, but many others are owned by private companies, self-managed superannuation funds or high net worth individuals. Because of this diversified ownership by private entities there is little information on the financial health of these smaller landlords. However, given their small size most leverage presumably comes from banks and, to a far lesser extent, non-bank lenders, and so will conform to those lenders' risk controls.

Smaller landlords' greater exposure to neighbourhood centres, which have fared better during the pandemic, implies somewhat less risk of a loss in earnings. However, some smaller landlords may still be vulnerable to significant declines in earnings if their underlying balance sheet position is weak, if the quality of their assets is poor, or if their portfolio has little asset diversification.

Overall, risks to lenders from losses on retail property exposures appear low

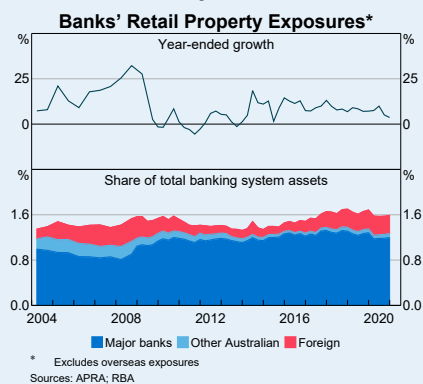
While some indebted landlords will find it difficult to meet their debt repayments, the near-term risks to financial stability from retail property appear to be low overall. Growth in banks' lending for retail commercial property has been moderate in recent years (Graph B.5). Retail commercial property

exposures are low as a share of total banking system assets. The 4 major banks account for the bulk of exposures, with a smaller share belonging to foreign-owned banks.

Individually, Australian-owned banks' direct retail CRE exposures are also low, ranging between 0 and 3½ per cent of their total assets. Further, banks' lending standards for commercial property have improved considerably in recent years. According to the Australian Prudential Regulation Authority's (APRA's) 2018 review on commercial property lending, the vast majority of CRE loans have been written with loan-to-valuation ratios (LVRs) well below 65 per cent and with earnings equal to 1.5 times interest expenses.^[3] The application of loan covenants – such as minimum ICRs and low LVRs – has become more nuanced over the past decade, and provide an early signal for landlords and their lenders if the capacity to repay debt looks to be deteriorating.

Banks also have indirect links to retail property through business loans that use smaller, standalone retail property as an underlying security. These are not included in data on banks' exposure to CRE and the overall size of these bank exposures is not known. While secured business lending

Graph B.5



accounts for a quarter of total credit, the share of these loans secured by retail property (rather than other assets) will be much smaller. There is a risk that business insolvencies could lead to distressed property sales of these assets, potentially leading to price declines in some areas and

perhaps even losses to lenders. However, the overall risk to banks seems low, given that collateralised loans typically incorporate a healthy positive equity buffer and that these are highly diversified across regions and owners. ✎

Endnotes

- [1] Carter M (2019), 'Competition and Profit Margins in the Retail Trade Sector', *RBA Bulletin*, June, viewed 1 April 2021.
- [2] Ellis L and C Naughtin (2010), 'Commercial Property and Financial Stability – An International Perspective', *RBA Bulletin*, June pp. 25–30.
- [3] APRA (Australian Prudential Regulation Authority) (2018), 'Strictly Business: An Update on Commercial Real Estate Lending', *APRA Insight*, Issue 4. Available at <<https://www.apra.gov.au/strictly-business-an-update-on-commercial-real-estate-lending>>

3. The Australian Financial System

The Australian financial system has remained resilient through a tumultuous year for the economy and financial markets.

After a substantial decline in the first half of 2020, banks' profitability recovered in the second half and analysts expect it to strengthen further in 2021. This has helped raise banks' capital positions from already strong levels. Banks have abundant liquidity and funding. Measures of banks' asset quality have deteriorated a little in recent months as loan repayment deferrals have come to an end and support for households and businesses has tapered. However, banks had increased their provision balances to absorb the impact of future defaults.

Available information also points to other financial institutions being resilient. The financial impacts of the pandemic tested the liquidity management of superannuation funds, but their systems proved effective in navigating this challenge (see 'Box C: What did 2020 Reveal about Liquidity Challenges Facing Superannuation Funds?'). General insurers remain well capitalised and have increased their provisions for potential business interruption claims arising from the pandemic. However, the life insurance industry has to address longstanding issues that continue to result in losses. Financial market infrastructures have recently experienced some operational disruptions, underscoring the importance of continually assessing and improving their resilience.

There are a number of other longer-term challenges for financial institutions to manage. The risks posed by information technology (IT) malfunctions and malicious cyber attacks are growing and a significant event could threaten financial stability. Another challenge will be to manage the broad range of risks arising from climate change. These do not currently pose a substantial risk to financial stability, but they could over time if climate change risks to Australian financial institutions grow and are left unaddressed. And financial institutions need to continue to maintain a focus on governance and embed a healthy culture to address the misconduct that has become apparent over the past few years.

Banks resilience is supported by their profitability ...

Profitability recovered over the second half of 2020 as banks raised provisions for credit impairments at a slower pace than in the initial stages of the pandemic (Graph 3.1). Bad debts will rise over 2021 as fiscal support is reduced and a small share of loans previously granted repayment deferrals move into arrears (see below). However, banks have bolstered their stock of provisions in anticipation of these losses. Current provisions are around 40 per cent above recent years, though still below the levels in the aftermath of the global financial crisis. Net interest income was broadly unchanged over 2020, while costs increased a little relative to income. Analysts expect banks' headline return

on equity (ROE) to continue to recover over the coming year, and be above their cost of equity.

As interest rates have fallen a larger share of bank deposits has paid low interest rates (between zero and 25 basis points). This can squeeze net interest margins (NIMs) because as rates fall, deposits that already receive zero or very low interest rates have not been repriced lower in line with lending rates or the return on liquid assets.

Despite this, the evidence for Australia is that lower rates do not have a meaningful impact on overall bank profitability. Lower rates are generally associated with a small reduction in banks' NIMs, but this effect is offset by a reduction in borrowers' debt-servicing burdens (lowering bad and doubtful debts) and an increase in aggregate demand. NIMs are also being supported in the current environment by the broad reduction in banks' funding costs. Funding costs are estimated to have fallen by a little more than the cash rate since the start of 2020 because of a shift in the composition of deposits (towards cheaper at-call deposits) and the Reserve Bank's package of policy measures (including availability of cheap funding provided by the Term Funding Facility (TFF)).^[1]

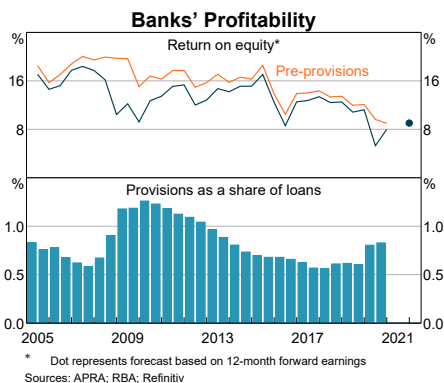
Financial market indicators also suggest investors are confident that banks' future earnings will remain resilient. Banks' share price-

to-earnings ratios have risen since the middle of last year and the implied cost of capital has declined relative to other listed companies (Graph 3.2). More generally, estimates of the equity risk premium for listed companies (the implied cost of equity minus the risk-free interest rate) indicate that increased risk-taking by investors has not unduly bid up the prices of equities over 2020, since the equity risk premium is marginally above its average of recent years.

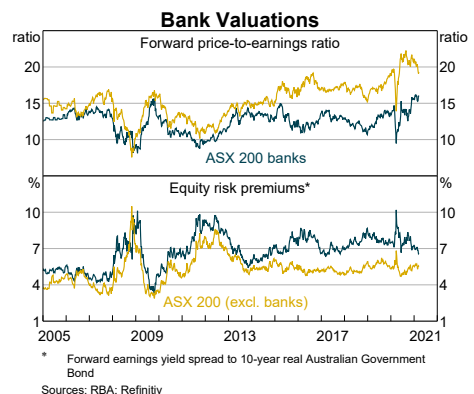
... and strong capital ratios

Australian banks' profitability over recent years has enabled them to build substantial capital buffers to absorb future losses. Their Common Equity Tier 1 (CET1) capital ratios are substantially above their prudential minimum requirements, giving them large management capital buffers in addition to 2½–3½ percentage points of regulatory capital buffers (Graph 3.3). Reflecting this, the 4 major banks' capital ratios on an internationally comparable basis are estimated to be towards the top of the range of similarly sized banks globally and at a level that has historically been sufficient to withstand almost all previous banking crises.^[2] Mid-sized and smaller banks are also well capitalised. Additional capital over regulatory minima for

Graph 3.1



Graph 3.2



these banks are generally similar to, or larger than, those of the major banks.

Banks have also been able to increase their capital ratios since the onset of the pandemic. CET1 capital ratios for the banking system as a whole rose by over 100 basis points over this time, with around \$16.9 billion in additional CET1 capital being generated. More than half of this came from retained earnings, reflecting continued profitability and reduced dividend payout ratios (in line with guidance from the Australian Prudential Regulation Authority (APRA)). The remainder mostly reflected NAB's \$4.25 billion in new issuance in the June quarter last year and new issuance associated with dividend reinvestment. Looking ahead, planned asset sales are expected to provide further support to banks' capital positions.

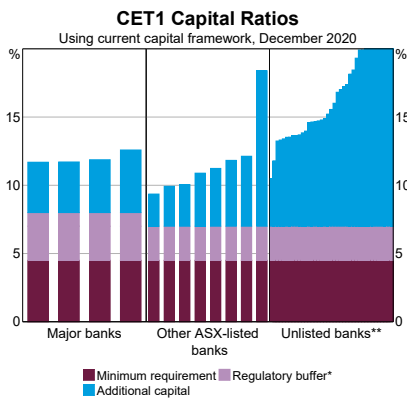
In recognition of banks' healthy capital positions, and the improved economic outlook, from December 2020 APRA relaxed its guidance on banks' dividends. However, banks will need to retain sufficient capital to ensure they have the capacity to continue to provide credit to the real economy and in doing so support the economic recovery from the COVID-19 recession.

Liquidity in the banking system is also high

Banks' holdings of high-quality liquid assets (HQLA) have increased over the past year, facilitated by ample access to low-cost funding (in part due to RBA bond purchases) and low demand for credit. This, in combination with the undrawn portion of the TFF (which is treated as a liquid asset), has caused banks' liquidity coverage ratios (LCRs) to rise substantially compared with late 2019 (Graph 3.4). The increase has been even more pronounced for smaller banks than for the 4 major banks. LCRs are currently above banks' targeted levels but could shift back to within targets over the next 12 months. Banks' LCRs could reduce when the window of taking up remaining TFF allowances expires on 30 June 2021. The size of this reduction will depend on the extent to which banks draw down on remaining allowances as well as how TFF funds are invested. Many banks have indicated in liaison that they plan to take up most or all of their remaining allowances ahead of the deadline.

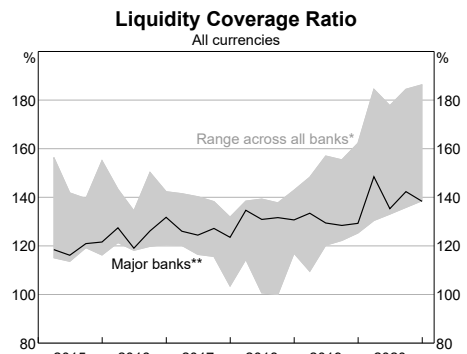
APRA recently approved requests from banks for a reduction in their allocations under the Reserve Bank Committed Liquidity Facility (CLF), reducing the total CLF available by \$84 billion to \$139 billion. The CLF is intended to be large

Graph 3.3



* Excludes confidential Pillar II requirements
 ** Some banks have capital ratios above 20 per cent (not shown)
 Sources: APRA; RBA

Graph 3.4



* From the 10th to 90th percentile of all banks' liquidity coverage ratios
 ** Weighted average of the major banks' ratios
 Sources: APRA; RBA

enough to offset the limited amount of HQLA available in Australia due to low levels of government debt. Over the past year, issuance of Australian Government Securities and semi-government bonds has increased significantly to fund the fiscal policy response to the pandemic. In its announcement APRA noted that if the amount of government securities outstanding continues to increase beyond 2021, the CLF may no longer be required in the foreseeable future.

Banks have ample access to low-cost deposit and other funding, and have reduced their funding from wholesale debt. Spreads on short-term and long-term wholesale debt have fallen to historically low levels, given reduced supply and market conditions. Strong demand for Australian banks' debt is highlighted by spreads declining for Tier 2 debt, even though the major banks need to raise more of this debt to satisfy APRA requirements for Total Loss Absorbing Capacity.

Banks will need to manage future refinancing requirements

The TFF has lowered banks' funding costs and provided them with ample liquidity. However, banks will face a sizeable refinancing task when these funds must be repaid in 2023/24. Banks have drawn \$81 billion that is due for repayment by around September 2023, and could draw an additional \$109 billion by June 2021 (of which \$16 billion has already been drawn) that would be due for repayment after 3 years. Together with bonds maturing, banks will need to refinance around \$120 billion in the 6 months around each of these dates (Graph 3.5). This will be banks' largest ever refinancing task, though there are many factors that will influence how challenging it proves to be (including demand for loans over coming years).

Banks have a number of options to manage these repayments. These include raising debt in wholesale markets at the time, spreading out the refinancing task before and/or after the TFF

expiration and managing the timing mismatch through holding excess liquid assets. Liaison with banks indicates that they are carefully planning for this task and will choose based on the relative cost and efficiency of these options closer to the time. In doing so, banks are also mindful of the potential impact of expiring TFF funds on their Net Stable Funding Ratios, which could fall by up to 4 percentage points (from a current level that is 24 percentage points above their minimum requirement).

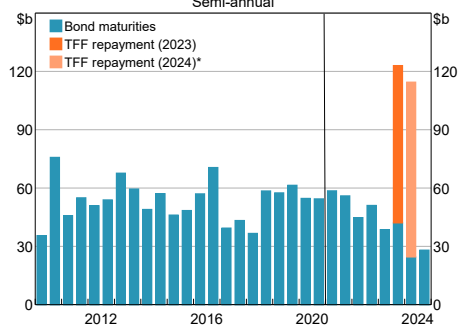
Banks' non-performing loans have risen

Measures of banks' asset quality have deteriorated somewhat in recent months (Graph 3.6). This trend is likely to continue over coming months given the unwinding of support measures such as JobKeeper (see 'Chapter 2: Household and Business Finances in Australia'). The end of APRA's concessional treatment for loan repayment deferrals in March will also lift loan arrears, as APRA's concession allowed most loans on deferral as part of a COVID-19 support package to be treated as 'performing'. The quality of Australian banks' New Zealand assets has also declined.

Current indications are that the increase in non-performing loans will be modest. The vast majority of borrowers that requested loan repayment deferrals in 2020 have subsequently

Graph 3.5

Banks' Refinancing Task
Semi-annual



* Assuming banks draw all remaining allowances by June 2021
Sources: Bloomberg; RBA

been able to resume repayments, and banks entered 2021 with a very low share of non-performing loans. Most loans, including those in arrears, are well secured and the resilience of property prices to date – particularly for residential property – should further limit potential losses for lenders (and enable borrowers struggling with repayments to sell without losing much of their previously accumulated equity). The government’s announcement of the SME Recovery Loan Scheme will also support credit quality by offering cheap loan refinancing to firms that have been heavily affected by the pandemic but are otherwise healthy.^[3] Banks have also raised substantial provisions in anticipation of expected credit losses (as noted above) and they have scope to raise further provisions (while remaining profitable) if the need arises.

Even if economic conditions were to deteriorate significantly, stress tests suggest that banks would remain sound. APRA recently assessed whether banks could withstand a severe economic contraction, in which GDP fell by 15 per cent, unemployment rose to over 13 per cent and national housing prices fell by over 30 per cent.^[4] This is much worse than any of the downside scenarios presented in the

Statement on Monetary Policy over the past year. APRA’s modelling showed that the aggregate CET1 capital ratio across all banks would decline materially under this scenario to 6.6 per cent but remain well above the prudential minimum of 4.5 per cent. The main driver of the declines is credit losses, of which losses on business credit contribute a bit less than half, while losses on residential mortgages contribute around one-third. Rising risk weights account for most of the remaining declines in capital ratios. Consistent with this, the RBA’s reverse stress testing model implies that it would take a recession comparable to the Great Depression for CET1 capital ratios to fall below 6 per cent.^[5] Nonetheless, both APRA’s and RBA’s results are subject to considerable uncertainty and it is possible that greater stress could arise from factors that are not well captured by the modelling.

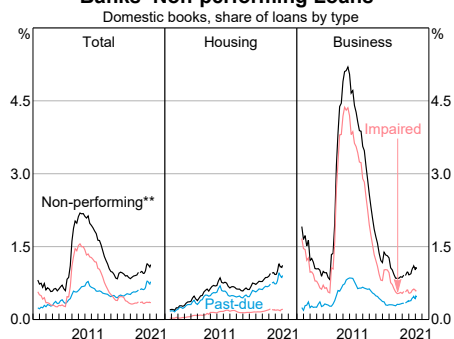
APRA is refining the regulatory framework for banks ...

In December, APRA released an update of its proposed revisions to the capital framework.^[6] These revisions will not require the banking system to raise additional capital, but will increase the flexibility of bank capital and improve the allocation of capital to risk. The reforms also embed the ‘unquestionably strong’ benchmark within the capital framework and more closely align the measurement of capital ratios with recently revised Basel III standards.

One of the aims of the proposed revisions is to build greater flexibility into the capital framework, so as to increase the ability of banks to use capital and continue to lend during periods of stress. This is addressed by banks having larger capital conservation buffers and raising the default level of the countercyclical capital buffer to 100 basis points (from zero). The non-zero countercyclical capital buffer will provide APRA with greater capacity to reduce

Graph 3.6

Banks’ Non-performing Loans*



* Break at June 2019 due to the introduction of the Economic and Financial Statistics; banks have generally been allowed to classify most loans under deferral as part of a COVID-19 support package as performing

** Sum of 'past-due' (i.e. 90+ days in arrears and well-secured) and impaired (i.e. in arrears or otherwise doubtful and not well-secured) loans

Sources: APRA; RBA

capital requirements in response to changes in systemic risks.

The reforms will also make the capital framework more risk sensitive, which will reinforce the incentive for sound lending practices. In particular, higher-risk types of housing loans such as investor, interest-only, and highly leveraged loans will require banks to hold more capital than equivalent owner-occupier principal & interest loans. The average risk weight on residential mortgages will also increase for the banking system as a whole, while there will be an offsetting decline in risk weights on business lending. APRA expects to finalise the framework in 2021 and implement it from January 2023.

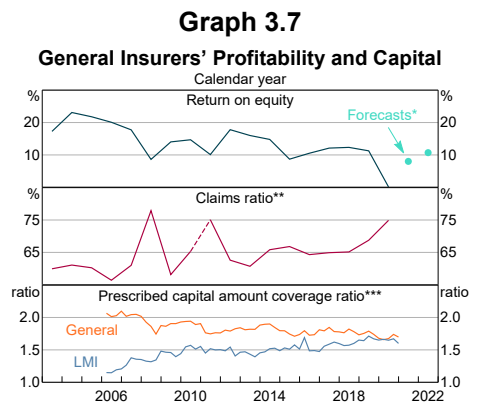
... and oversaw an orderly bank exit

Xinja, a small 'neobank' that received its full banking license in September 2019, announced in December 2020 that it would hand back its banking licence and return all deposits to customers. This decision was made in light of Xinja's inability to secure enough capital to offset its depletion of cash (resulting from paying more for deposits and operating expenses than it received on its assets, which did not yet include loans). APRA had been working with Xinja for some time prior to ensure that if an exit was required, it would be orderly. In the event, APRA's contingency planning arrangements worked broadly as anticipated and in the space of just a few weeks more than 99 per cent of deposits were returned directly to customers (with the remainder returned via new accounts at NAB). In light of this experience, and what it learnt from other new Australian banks that received their licence in recent years, APRA is strengthening its requirements for granting new banking licences. The revised expectations place a greater focus on the longer-term sustainability of business models.^[7]

Risks in non-bank financial institutions remain contained ...

General insurers' profitability declined to almost zero in 2020 (Graph 3.7). However, they remain well capitalised and analysts expect their profitability to recover in 2021. Analysts' forecasts for a recovery in profits in 2021 are underpinned by expectations that there will not be a repeat of the factors that reduced profits in 2020. In particular, profits were curtailed by substantial provisioning for potential business interruption (BI) claims arising from the pandemic. Recent floods have lifted claims, but analysts currently expect the impact of natural disaster claims to be less than last year (in part because of increased reinsurance cover following last year's catastrophic bushfires and severe storms). However, there is considerable uncertainty around these expectations. Sharp falls in asset prices in early 2020 also resulted in large investment losses that were only partially reversed as asset prices recovered.

The \$1.7 billion of provisions the major general insurers have raised for potential BI insurance payouts mostly came in response to a court ruling that many such policies did not effectively exclude cover for pandemics, despite that being the insurers' intent. The size of insurers'



* Analyst ROE forecasts from Bloomberg
 ** Ratio of net incurred claims to net premium; change in reporting basis after June 2010
 *** Eligible capital as a multiple of prescribed capital amount or minimum capital requirement (prior to March 2013)
 Sources: APRA; Bloomberg; RBA

exposures to BI claims remains uncertain, in part due to the continuation of legal proceedings on this matter (which are discussed further in ‘Chapter 4: Domestic Regulatory Developments’). APRA has closely monitored the potential impact BI could have on insurers and will continue to do so into 2021.

The low interest rate environment also presents some risk to general insurers if they do not reprice policies in response to expected lower investment returns. In addition, insurance policies that cover risks for many years after the policy expires (‘long-tailed’) face some risk since falling real interest rates increase the discounted value of insurers’ future liabilities. While most general insurance in Australia is short-tail (that is, policies where claims are identified and made within about a year), compulsory third party motor vehicle, product and public liability, professional indemnity and workers compensation insurance are all long-tail classes that are exposed to this risk. However, general insurers in Australia mostly mitigate this risk through asset-liability maturity matching.

Lenders’ mortgage insurers (LMIs) profitability has been affected by the COVID-19-induced economic downturn, but they retain a very strong capital position. The decline in profits in 2020 resulted from pandemic-related increases in the expected future value of mortgage insurance payouts and an associated increase in their reserves. However, the resilience of the economy, and particularly housing prices, has materially improved the outlook for LMI profits, as has increased demand from first home buyers.

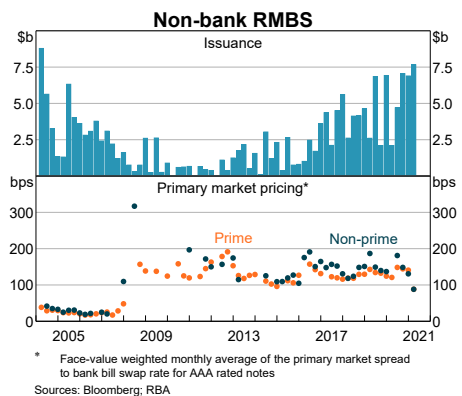
Non-banks have grown their housing lending since late last year, after curtailing it at the height of the pandemic. As funding conditions have improved, issuance of residential mortgage-backed securities (RMBS) by non-bank lenders has risen to high levels and spreads have declined to their lowest levels since 2007 (Graph 3.8). Liaison indicates that credit quality

at non-bank lenders has remained sound, both for lending to households and to businesses. One indication of the resilience of the sector has been its ability to manage loan repayment deferrals. Both the share of (prime) customers on deferral at non-banks and the credit quality of their deferred loans (during and after the deferral period) appears to be similar to those of banks.

... though life insurers have significant problems to address ...

The pandemic has had a limited impact on life insurers’ profits, other than by depressing returns on investment income. However, longstanding issues continue to result in them making losses (Graph 3.9). Individual disability income insurance has been a major contributor to these losses, reflecting a long period of substantial underpricing and overly generous product features and terms that have resulted in higher-than-expected claims. APRA intervened in late 2019, requiring firms to adjust their insurance policies to make them more sustainable and imposing capital charges until these measures were implemented. While this intervention was temporarily suspended in March 2020 owing to COVID-19, APRA reinstated it in October 2020. The adequacy of firms’ responses are currently being assessed by APRA. However, this issue is

Graph 3.8



expected to persist for some time given the long-term nature of these insurance contracts and the associated large book of legacy business, as well as the potential for increased mental health issues arising from the pandemic.

... and financial market infrastructures (FMIs) continue to focus on improving operational resilience

The operational resilience of FMIs, such as central counterparties (CCPs), securities settlement facilities and high-value payment systems, is important to enable financial system participants to prevent credit or liquidity risks building up. More broadly, this can help to underpin confidence in the operation of capital markets. Recent events have shown the importance of FMIs continually assessing and improving their operational resilience.

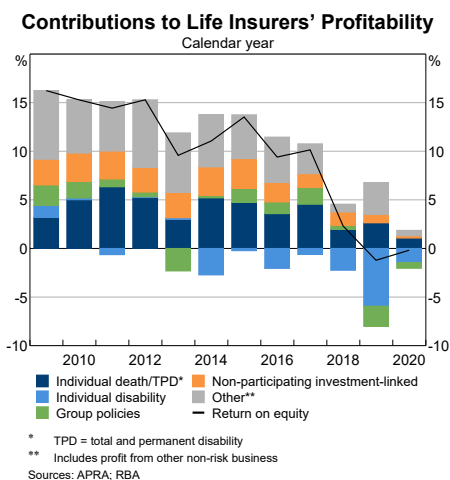
In late 2020, ASX experienced a number of significant operational incidents that affected the availability of systems used in trading and settlement of ASX equities and equity options. Problems following a major upgrade to ASX's core equity trading platform, ASX Trade, resulted in the closure of the ASX market for most of the day on 16 November, while ASX's Centre Point order matching service was partially unavailable

between 18 and 23 November. An unrelated issue also caused a delay of several hours in the settlement of equity trades on 17 November. The Australian Securities and Investments Commission (ASIC) has commenced an investigation into whether ASX met its obligations under its Australian Market Licence, including whether it has sufficient financial, technological and human resources to operate its markets. The Bank and ASIC have expressed significant concern regarding these incidents and have asked ASX to have an independent review of the incidents conducted in the first half of 2021.

While other FMIs in Australia have not experienced similar operational issues in recent months, they continue to pursue improvements. For example, the Bank is in the final stages of a multi-year project to refresh the core infrastructure for its high-value payment system, the Reserve Bank Information and Transfer System (RITS). It is also implementing a program of improvements to its IT operational practices that include a number of initiatives aimed at enhancing the operational stability of RITS.

Another requirement for financial participants to be able to manage risk appropriately is for FMIs to be operating when needed. In recognition of this, the London-based CCP LCH Limited (LCH Ltd), which provides clearing services to Australian participants in the over-the-counter interest rate derivatives market via its SwapClear service, has been working to better align its operating hours with the Asia-Pacific markets that it serves. Due to time zone differences, these services are typically unavailable for several hours at the start of the Australian business day and LCH Ltd's participants bear bilateral credit risk exposures to one another until the CCP is able to clear the trades that have been executed. LCH Ltd has brought forward its opening time incrementally in recent years. The Bank's 2020 Assessment of LCH Ltd's SwapClear Service sets a regulatory priority for LCH to

Graph 3.9



continue this work, while maintaining the resilience of its operations.

Financial institutions need to carefully manage technology risks ...

Risks to financial institutions' IT systems – from both malicious attacks and malfunction – require ongoing attention and robust management, both globally (see 'Chapter 1: The Global Financial Environment') and domestically. These risks have grown as digital platforms and service channels become more ingrained and more complex and as a result of the increased incidence of remote working arrangements. They have recently been highlighted by a data breach involving a legacy file sharing service run by Accellion, a third-party technology provider, which affected a wide range of entities including ASIC and the Reserve Bank of New Zealand. The operational disruptions experienced by ASX in November (discussed above) also demonstrate the risks associated with technology malfunction. The constantly evolving nature of cyber risks means it is critical that financial institutions regularly update and upgrade their defences. In recognition of this, Australian regulators have a number of initiatives to support financial institutions' efforts to strengthen cyber resilience (see 'Chapter 4: Domestic Regulatory Developments').

Cyber attacks and incidents are most likely to involve manageable financial losses for specific institutions, but they could have systemic implications in certain circumstances. To be systemic, the impact of cyber attacks and incidents would have to affect multiple institutions, either directly or indirectly. This could occur if they affect third-party providers or software used widely across the financial system. Similarly, if such an incident affected critical nodes, such as an FMI (including payment systems or CCPs) for a prolonged period it could directly impact the ability of firms and households to engage in economic activity and

manage risk. The integrity of data is particularly important since it dictates the ability of banks to disburse funds or collect on monies due and, in the extreme, if violated it could raise questions about the institution's solvency. More generally, any data breaches that cause consumers and creditors to lose confidence in the security of the financial system could see banks face liquidity challenges.

... and address the longer-term challenges of climate change

Climate change presents an ongoing challenge for the financial system, by exposing it to risks that will rise over time and, if not addressed, could become considerable.^[8] These financial risks are already beginning to become apparent in some cases. For example, investors in BP and Shell suffered losses as both heavily wrote down the value of their oil and gas assets in June 2020. This was partly in response to the drop in energy prices associated with the pandemic and global recession but also in expectation that the global economic recovery will be associated with an accelerated pace of transition to a lower carbon economy.

One way in which financial institutions are exposed to the physical risks of climate change is via the potentially negative impact it could have on the value of housing collateral in locations that are more affected by climate risk, particularly if these risks become uninsurable. Such regions include agricultural and farming regions in NSW and Queensland, as well as metropolitan areas adjacent to the ocean and waterways. Data show that the share of banks' current mortgage exposures that are in regions projected to experience a material increase in climate damage is around 6 per cent.^[9] Insurers are more exposed to physical risks from climate change through policies covering natural disaster damage to property, motor vehicles, crops and other assets. Banks also face risk from any policy and technological changes intended

to minimise climate change ('transition risk'). This is most likely to affect the quality of bank lending to carbon-intensive industries, which account for around 20 per cent of banks' total exposures. Banks and insurers need to measure and address these risks early to mitigate the future financial risk they pose to the institution, and so also to future financial stability.

Some work is starting to be done by industry to measure and address the financial risks of climate change. For example, the Climate Measurement Standards Initiative – an industry-led, collaborative framework that sets standards for more comprehensive and harmonised disclosure of data on risks posed by climate change – was launched last year. Around half of ASX100 listed financial firms are also disclosing climate risks following the global framework established by the industry-led Task Force on Climate-related Financial Disclosures. Meanwhile, APRA will release a draft of its cross-industry prudential practice guide on the management of climate-related financial risks for consultation later this month, with a view to finalising in the second half of this year. It is also undertaking work on measuring the risks that climate change could pose to banks by conducting a 'climate vulnerability assessment' in 2021, working together with banks and the Council of Financial Regulators. The work domestically is in line with the increasing focus globally by regulators on addressing climate risks in the financial sector.

Endnotes

- [1] See Garner M and A Suthakar (2021), 'Developments in Banks' Funding Costs and Lending Rates', *RBA Bulletin*, March.
- [2] See Dagher J, G Dell'Ariccia, L Laeven, L Ratnovski and H Tong (2016), 'Benefits and Costs of Bank Capital', *IMF Staff Discussion Note No 16/04*. Available at <<https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2016/12/31/Benefits-and-Costs-of-Bank-Capital-43710>>.
- [3] Details of the scheme can be found at the Treasury website. Available at <<https://treasury.gov.au/coronavirus/sme-recovery-loan-scheme>>.
- [4] APRA (2020), 'Stress Testing Banks During COVID-19', December. Available at <<https://www.apra.gov.au/stress-testing-banks-during-covid-19>>.
- [5] Further discussion of this can be found in RBA (2020), 'Chapter 3: The Australian Financial System', *Financial Stability Review*, October.

Culture and governance also need ongoing focus

Financial institutions also need to continue to focus on culture and governance issues that became apparent in recent years. If not addressed, cultural problems can significantly erode public trust in financial institutions. They can also reduce profitability through the payment of hefty remediation costs and penalties (such as those paid by CBA and Westpac for significant breaches of anti-money laundering and counter-terrorism financing laws) or the imposition of tighter restrictions on their operations (including increased capital charges, such as those imposed on the 4 major banks, Macquarie Bank and Allianz). Recent failures to correctly measure various banks' LCRs also show the risks associated with not prioritising the measurement of financial risk.

In recognition of the importance of these issues, APRA recently restarted work on ensuring that remuneration arrangements encourage good practice and culture. It also completed a review of ANZ, CBA and NAB's implementation of the Banking Executive Accountability Regime (BEAR). (Westpac was not included due to ongoing investigations, now complete, into potential breaches of the Banking Act.) APRA found that while each of these 3 major banks had designed adequate frameworks to implement BEAR, they all have further work to achieve acceptably clear and transparent accountability. ✎

- [6] See APRA (2020) 'A More Flexible and Resilient Capital Framework for ADIs', *Discussion Paper*, December. Available at <<https://www.apra.gov.au/sites/default/files/2020-12/Discussion%20paper%20-%20A%20more%20flexible%20and%20resilient%20capital%20framework%20for%20ADIs.pdf>>.
- [7] See APRA (2021), 'Information Paper – ADI: New Entrants – a Pathway to Sustainability', March. Available at <<https://www.apra.gov.au/licensing-for-authorized-deposit-taking-institutions>>.
- [8] See RBA (2019), 'Box C: Financial Stability Risks From Climate Change', *Financial Stability Review*, October.
- [9] High-risk regions are defined here as those in which the average annual loss for hazards is forecast to exceed 1 per cent of the replacement value of the asset. Climate forecasts are taken from XDI (2019), 'Climate Change Risk to Australia's Built Environment', *A Second Pass National Assessment*, October. Available at <<https://xdi.systems/wp-content/uploads/2019/10/Climate-Change-Risk-to-Australia%E2%80%99s-Built-Environment-V4-final-reduced-2.pdf>>.

Box C

What Did 2020 Reveal About Liquidity Challenges Facing Superannuation Funds?

The management of liquidity is essential for the superannuation industry. If liquidity is not managed well, superannuation funds may have to sell assets quickly, potentially for a value less than expected or, in extreme situations, refuse to honour member obligations, including requests for portfolio changes.^[1] The substantial size of the superannuation industry in Australia means that poor liquidity management could potentially have a systemic impact. Super funds regulated by the Australian Prudential Regulation Authority (APRA) manage \$2.0 trillion in assets or around 100 per cent of annual GDP. If super funds needed to sell assets on a large scale, it could amplify asset price declines during periods of stress. This could also have flow-on effects to the banking sector or particular banks as super funds (including self-managed funds) own one-quarter of Australian banks' short-term debt and equities and account for almost 10 per cent of banks' deposits. If funds (or their members) were to experience liquidity strains this could create deposit outflows at banks that manage super funds' investment (as opposed to transactional) savings accounts.

During 2020, the superannuation industry faced significant liquidity management challenges due to 3 factors that arose simultaneously:

1. increased propensity of members to switch out of more risky (and so generally less liquid) investment options;
2. funds' increased need for liquid assets to meet margin calls on hedges (held to reduce foreign currency risks); and
3. a temporary relaxation of the system's preservation rules, the Early Release Scheme (ERS), which enabled members to withdraw up to \$20,000 from their superannuation balance if they had been adversely impacted by the pandemic.^[2]

In response, super funds substantially increased their liquidity: aggregate cash balances increased by \$51 billion over just the March quarter 2020. A portion of this was subsequently unwound as funds made ERS payments. This accumulation of cash occurred in an environment of heightened demand for liquidity across the financial system and reduced depth in various markets. To fund the move into cash, super funds were sellers of bonds, foreign equities and equity units in investment funds (Graph C.1). While these events showed that funds were able to manage liquidity well in fairly extreme circumstances, some aspects of their liquidity management plans could be updated.

Member switching into cash was sizable in March 2020

Around half of the increase in super funds' cash holdings over the March quarter 2020 was due to members choosing to switch from higher-risk investments into cash. While this was equivalent to only

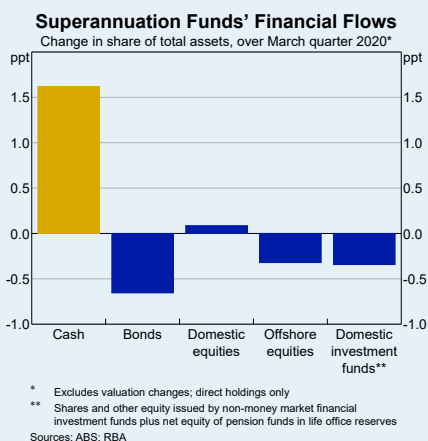
around 1½ per cent of funds under management (FUM) for the system as a whole, it was substantially larger for some super funds. Data collected from 30 funds show that these flows were as high as 3–4 per cent of FUM for several large funds and 8 per cent for one medium-sized fund (Graph C.2). The size of these flows were larger than previous market dislocations – including the global financial crisis.^[3]

Switching into cash was driven by a small pool of active members who switched large amounts. These members were generally closer to retirement with larger average

balances (Graph C.3). Most of the switching into cash came from diversified investment options, particularly balanced and growth options due to their high weightings to shares and other growth assets. By contrast, switches out of default *MySuper* products were small.

Super funds retained substantial liquidity positions in their diversified investment options despite the magnitude of switching. Funds sold their highly liquid assets (equities and fixed income securities; see Graph C.1) to meet switching requests. However, even after this, the majority of funds still had at least 40 per cent of their portfolio allocated to very liquid assets and a further one-third to moderately liquid assets (those that can be sold within 3 to 30 days).

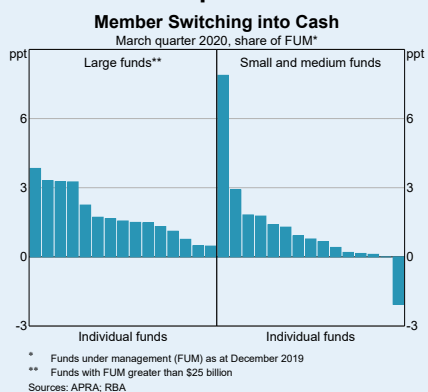
Graph C.1



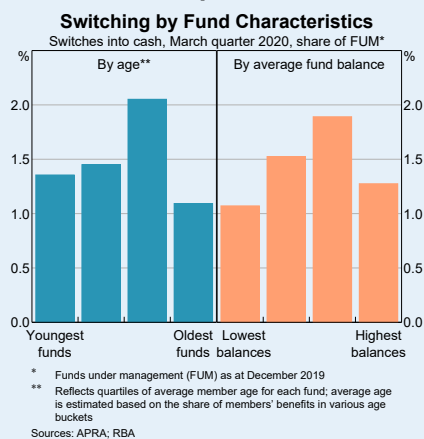
Funds also needed cash to cover large derivative margin calls ...

Funds also required cash to cover margin calls against currency (and other) derivatives. Super funds use currency derivatives to hedge foreign exchange (FX) rate risk on their investments that are denominated in foreign currencies. Australian-regulated super funds

Graph C.2



Graph C.3



invest around 35 per cent of members' funds offshore and survey data indicate that around 40 per cent of these offshore investments are hedged.^[4] When the Australian dollar depreciates, the value of these derivatives declines, requiring super funds to make payments to their counterparties to mitigate the risks arising from these mark-to-market losses.

During the first half of March 2020, the Australian dollar depreciated by 15 per cent. As a result, super funds had to pay in excess of \$17 billion of margin to their counterparties (Graph C.4). Around half of these payments flowed to the 4 Australian major banks, which, in contrast to super funds, have net US dollar liabilities. The remainder was primarily paid to foreign investment banks. These margin flows were mostly associated with funds' FX forward contracts. Some of this margin was returned to – and likely retained as cash by – super funds as the Australian dollar recovered in late March.

It appears that funds partly managed this requirement by selling some of their underlying foreign currency assets. Fund-level data show that funds with larger hedging ratios going into the pandemic

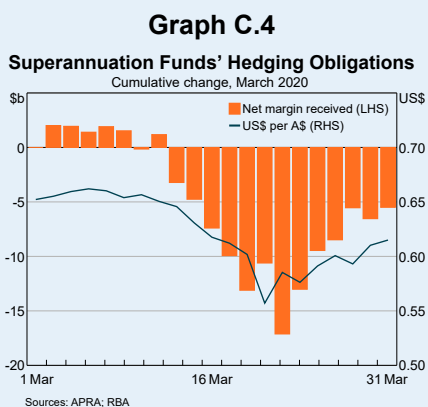
tended to sell larger shares of foreign equities than other funds. This illustrates that, in most circumstances, the liquidity risk involved with foreign currency hedging is at least partly mitigated by the depreciation of the Australian dollar also lifting the Australian dollar value of underlying foreign assets. This, in turn, supports funds' ability to sell some of these foreign assets and close part of their hedging contracts. Overall this indicates that super funds' hedging strategies are robust.

... and the early release scheme added to liquidity challenges

Superannuation 'preservation rules' require that member benefits are retained within the superannuation system until members reach retirement age, unless there are compassionate grounds or instances of severe financial hardship. Recognising the worsening economic environment, the Australian Government temporarily changed the eligibility criteria for early release of superannuation in April 2020 under the ERS. This resulted in \$36 billion of ERS withdrawals, equivalent to 2 per cent of FUM as at December 2019. Around half of that occurred during the June quarter.

A number of large funds paid out more than 5 per cent of FUM under the ERS (Graph C.5). As expected, funds most exposed to early release flows were those with a greater proportion of members that were young and worked in industries most affected by the pandemic.

At the time of the initial announcement of the ERS, funds with younger members and those in pandemic-affected industries cautioned that they could lose as much as one-fifth of their FUM or more within a matter of months. However, household incomes and employment fell by less than



anticipated and so withdrawals were smaller than expected. In addition, they were fairly evenly spread over time, which helped funds to manage the additional demand for liquidity. The improved functioning of markets after the market turbulence in March and early April also enabled funds to more easily sell fixed income securities and equities. Funds also moved quickly to prepare for the ERS, by selling equities ahead of the commencement of the scheme on 20 April 2020.

Events during 2020 showed that funds manage liquidity well, but can improve some aspects

The financial impacts of COVID-19 provided a significant test of super funds' liquidity management in March and April. However, their liquidity management practices proved to be effective in navigating through these challenging times.

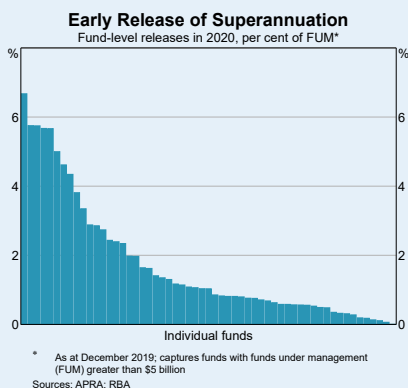
One reason that funds withstood the challenge of all 3 liquidity risks materialising at the same time was that each tended to have the greatest impact on different funds. In particular, member switching activity was driven by older investors with larger

superannuation balances, while early withdrawals were driven by younger members more exposed to the economic and financial impacts of the pandemic. This meant the liquidity risks were spread across members rather than being concentrated. Given this, and differences in the membership base of super funds, very few funds experienced both sizable member switching and ERS outflows.

Another reason funds successfully navigated the period was that members' behavioural switching responses were qualitatively consistent with funds' expectations – even if on a larger scale – which enabled them to quickly and pre-emptively rebalance their portfolios towards cash. However, the magnitude of switching activity exceeded funds' liquidity scenario analyses as it was much larger than historical episodes. As the population ages and the superannuation system matures, it is reasonable to expect the scale of member switching activity to increase in the future as members become more alert to the performance of their investments. This could add to the liquidity challenges associated with funds shifting from an accumulation phase – with total contributions exceeding benefit payments – to a drawdown phase as the superannuation system matures.

Finally, robust liquidity management practices and prudential oversight meant that the industry was well placed to accommodate this particular liquidity episode. APRA requires funds to maintain a 'Liquidity Management Plan' (LMP) for each investment option. These plans establish the procedures for monitoring and managing liquidity on an ongoing basis, including how funds will manage cash flow using liquid assets (particularly cash) in their default (and

Graph C.5



other) investment options. If liquidity stress arises to the extent that it cannot be met by a super fund's existing resources, they can also – as a last resort – refuse to honour member requests to switch investment allocations or (with APRA approval) member redemptions. The sophistication of LMPs has strengthened considerably since the 2008 financial crisis, as funds worked closely with APRA to ensure they had suitable plans for both normal times and when an idiosyncratic event affects a fund.^[5]

The events of 2020 have also revealed some areas where funds can update their liquidity

management practices. In particular, APRA has called on funds to re-examine their LMPs in light of the period, ensure they include these insights into planning for future events and embed the results of their stress tests into practice.^[6] In addition, funds need to consider the extent to which they rely on liquidity from certain assets (such as sovereign bonds) under stressed market conditions and whether there are alternative ways to transact when market depth is reduced. ✎

Endnotes

- [1] Over four-fifths of super fund assets in Australia are held in defined contribution funds, which do not offer guaranteed returns to members.
- [2] An additional factor that generates liquidity risk at the fund level is the ability of members to quickly rollover between funds.
- [3] While fund-level switching data do not date back to the global financial crisis, research indicates that the size of member switching flows was small during this period, and not enough to pose liquidity issues for funds (see Gerrans P (2012), 'Retirement Savings Investment Choices in Response to the Global Financial Crisis: Australian Evidence', *Australian Journal of Management*, vol 37(3), pp 415–39).
- [4] NAB (2019), 'NAB Superannuation FX Hedging Survey 2019', 27 August.
- [5] Funds use a number of liquidity management techniques, such as cash-flow monitoring procedures, relying on the liquid assets in the fund's default option, establishing liquidity valuation policies and incorporating expected liquidity in their business plans.
- [6] See APRA (2020), 'Managing Super Fund Liquidity in the Midst of COVID-19', *Insight*, Issue 3; and APRA (2020), 'The Superannuation Early Release Scheme: Insights from APRA's Pandemic Data Collection', *Insight*, Issue 4.

4. Domestic Regulatory Developments

Coordination between Australia's main financial regulatory agencies – the Australian Prudential Regulation Authority (APRA), the Australian Securities and Investments Commission (ASIC), the Australian Treasury and the Reserve Bank – occurs through the Council of Financial Regulators (CFR). The CFR is chaired by the Bank, which also provides the secretariat. The CFR remains strongly focused on the effects of the pandemic and how the member agencies and the financial sector can best support the economic recovery and financial stability. A related focus at recent meetings has been operational risk, in particular cyber risk. The improvement of health, economic and financial conditions in Australia in the second half of 2020 allowed the CFR to return to its regular quarterly meeting schedule, after meeting more frequently through much of 2020.

The key focus of the CFR has been recovery from the pandemic ...

Improved economic conditions in Australia have enabled a range of support measures designed to sustain households and businesses during social restrictions to be gradually withdrawn. This transition has widespread and interlinking effects on CFR agencies' respective areas of responsibility. As a result, the CFR has been closely monitoring developments, in particular as they relate to loan repayment deferrals, credit conditions and business insolvencies, and their implications for economic and financial conditions more broadly.

Financial institutions have played an important role in cushioning households and businesses from the impact of the pandemic, including by offering temporary loan repayment deferrals. A key focus of the CFR in the latter part of 2020 was the expiry of the majority of those deferrals in September and October, and borrowers' transition to normal loan repayment schedules. As noted in 'Chapter 2: Household and Business Finances in Australia', lenders and borrowers navigated this period successfully, with almost all borrowers resuming their scheduled repayments. The housing and business loans that continue to have deferred repayments account for a very small share of outstanding credit. However, they have a somewhat riskier profile than other loans, and careful management will be needed from lenders, including for any cases of hardship. CFR members are monitoring ongoing developments with loans with deferred repayments, along with the performance of household and business loans more generally, as support measures are further reduced.

Looking ahead, the CFR has noted that conditions for housing and business lending will be important for shaping the recovery. Moderate growth in housing credit has almost entirely been for owner-occupier housing and loan commitments have increased strongly, consistent with most other indicators of housing market activity. Mortgage lending standards are largely unchanged, but there has been some unwinding of the slight tightening in lending conditions early in the pandemic. The CFR

places a high emphasis on lending standards remaining sound, particularly in an environment of rising housing prices and low interest rates. The CFR will continue to closely monitor developments and has indicated that it will consider possible responses if financial risks increase.

Growth in lending to business has been weak since the initial drawdown of credit lines by some businesses in the early stages of the pandemic. Both demand and supply factors, including as a result of uncertainty about the health and economic outlook, have been at play. However, with signs that demand for lending is increasing with the improvement in the outlook for the economy, the CFR has emphasised the importance of businesses continuing to have access to finance on reasonable terms.

Another area of transition monitored by the CFR has been business insolvencies. Temporary insolvency relief measures operated between March and December 2020 to limit viable businesses falling into external administration during the pandemic. In conjunction with other business support measures, these resulted in business insolvencies throughout 2020 being markedly lower than in previous years. A moderate level of insolvencies is to be expected in a healthy, dynamic economy and so insolvencies are expected to pick up during 2021. A smooth and efficient insolvency process is therefore important to minimise the disruption of an insolvency to other businesses. With this in mind, permanent small business insolvency reforms came into effect from January 2021, including new debt restructuring and simplified liquidation processes. In addition, a new class of professional registered liquidator has been introduced to undertake the simplified small business debt-restructuring process. CFR members discussed the implementation of the new framework and will continue to track its operation closely in the period ahead.

Questions over the application of business interruption insurance policies to business shutdowns during the pandemic have been a source of uncertainty for both insurers and pandemic-affected businesses. The CFR has regularly discussed progress on clarifying the validity of claims on these policies. In November 2020, the New South Wales Court of Appeal ruled in favour of policyholders in a key test case related to exclusions that reference the repealed *Quarantine Act 1908*. The Insurance Council of Australia has sought special leave to appeal the decision to the High Court. In consultation with the Australian Financial Complaints Authority, five general insurers have now also filed a second test case in the Federal Court of Australia to test further pandemic coverage issues. As discussed in 'Chapter 3: The Australian Financial System', a number of insurers have increased provisions for potential payouts. The CFR has welcomed the commitment of general insurers to abide by the terms of agreed test case protocols. This includes not relying on any policy time limits for lodging claims and not avoiding liability where the policy holder is insolvent, where claims are affected by the need to await the outcome of the test cases. CFR members have encouraged the industry to promptly pay out valid claims.

The CFR regularly reviews developments in non-bank financial intermediation and discussed developments at its November meeting. The disruption to financial markets during the early stages of the pandemic meant that non-bank lenders, which rely heavily on securitisation, slowed their lending for a period. Funding has since improved, including through support from the government's Structured Finance Support Fund, operated by the Australian Office of Financial Management. The fund has made targeted investments in term securitisations and warehouse facilities to support funding markets used by non-bank lenders. More generally, the Reserve Bank's monetary policy actions have

reduced funding costs, including for non-bank lenders. Non-bank lending remains a relatively small share of the Australian financial sector, with debt-related assets of non-bank financial institutions representing around 7 per cent of overall financial system assets.

... but cyber and other operational risks remain very important

Outside pandemic-related developments, the major focus of the CFR has been operational risk, including cyber risk. In addition to the CFR's ongoing work program on cyber security, recent operational risk discussions have reflected two significant incidents affecting the financial sector over recent months. First, as noted in 'Chapter 3: The Australian Financial System', a series of outages affected ASX Limited in November 2020, disrupting trading and other functions. As co-regulators of ASX, ASIC and the Bank have requested that ASX commission an independent expert review of the ASX Trade outage. ASIC is also investigating whether ASX complied with its market licence obligations, and is undertaking a detailed analysis of the market impact of the incident, including participants' ability to access alternative trading venues.

Second, multiple entities experienced external breaches of file transfer software supplied by Accellion in December 2020 and January 2021. The affected entities included the Reserve Bank of New Zealand (RBNZ) and ASIC (though investigations have shown that there was no access to confidential information held by ASIC). CFR agencies have been in close contact with the affected entities, including the RBNZ, in order to understand the implications of the breach and any lessons for regulators and regulated entities in Australia.

CFR agencies have also been working closely with the Department of Home Affairs on the development of the government's proposal to broaden the scope of the 'critical infrastructure' regulatory regime. The reforms would place a

positive security obligation on financial sector entities and additional obligations on entities that are considered to be of national significance. The regime is intended to rely on existing regulatory frameworks to the extent possible, to reduce regulatory burden and minimise duplication of requirements. A bill that would enable the reforms is currently before the Australian Parliament.

The CFR endorsed a new cyber work plan in November. This has three elements: developing inter-agency incident communication and coordination protocols; standardising agencies' approaches to the regulation and supervision of cyber risks; and implementing the pilot Cyber Operational Resilience Intelligence-led Exercises (CORIE) testing framework. The CORIE framework was published by the CFR in December 2020. It will be used to assess cyber resilience by subjecting selected financial sector entities to 'ethical hacking' exercises that mimic the tactics, techniques and procedures of real-life adversaries. A key objective of CORIE is to inform regulators of any systemic or institution-specific cyber security risks. Similar exercises have been conducted in other jurisdictions, including the United Kingdom (under the CBEST framework), European Union (TIBER-EU) and Singapore (AASE).

The CFR has discussed a range of other topics, including stablecoins and e-conveyancing

The CFR has recently established a working group to consider the regulation of 'stablecoins'. Stablecoins are a type of cryptocurrency that aims to maintain a stable value against a specified asset or pool of assets. This may make them more attractive to hold as a means of payment than other cryptocurrencies. Stablecoins came to broader prominence in 2019 with a proposal for a global stablecoin (originally called Libra, but now rebranded as Diem) by a consortium of technology-focused

companies, including Facebook. The Swiss-based Diem Association has more recently announced plans to launch single-currency stablecoins intended for use in consumer digital wallets. It is applying to be licensed as a payment system by the Swiss Financial Market Supervisory Authority (FINMA). While stablecoins do not currently play a significant role in the Australian financial system, the new CFR working group will consider how they would be regulated in Australia and whether any gaps in regulation exist.

CFR agencies and the Australian Competition and Consumer Commission are also working with state and territory land titles offices to consider regulatory arrangements for electronic property conveyancing (e-conveyancing). Currently, regulation of e-conveyancing focuses on the preparation and lodgement of documents with land titles offices, but there are some gaps related to the payment and financial settlement aspects of e-conveyancing. The agencies are developing options to address these gaps in the regulatory framework, and will report back to the CFR with reform options later this year. In the meantime, the CFR has encouraged the e-conveyancing industry to explore the development of a self-regulatory model for the payment and financial settlement aspects of e-conveyancing.^[1]

Other activities of the CFR and its working groups since the last *Review* have included the following:

- In November, the CFR published the conclusions of its review of the regulation of stored-value facilities (SVFs). The CFR proposed the creation of a graduated approach to the regulation of providers, balancing innovation and consumer protection. In response, the government has announced that it will develop a SVF reform package.

- A working group will examine developments in crypto-assets and decentralised finance (DeFi), and their potential implications for the financial system.
- Following discussions earlier in 2020, the CFR established a group to engage with the government's Digital Transformation Agency and the private sector on digital identity initiatives.

CFR agencies continued their engagement with their New Zealand counterparts via the Trans-Tasman Council on Banking Supervision (TTBC). The heads and deputies of the seven TTBC agencies met in December 2020, discussing the Australian and New Zealand fiscal outlooks and strategies; international information sharing arrangements in relation to cyber incidents; and the forward work plan of the TTBC.

The government's Review of the Australian Payments System will help to shape the future approach to regulating payments

As part of its Digital Business Plan, announced in the 2020–21 Budget, the government has launched a review of the governance and regulatory arrangements for the Australian payments system. The aim of the review is to ensure that the payments system's regulatory architecture and governance structure remain capable of achieving their objectives and supporting continued innovation and competition in the market for payment services. In turn, this should benefit consumers, businesses and the broader economy. While the focus is on regulatory and governance structures, the review is also looking more broadly at ways to promote competition and innovation in the payments system. This includes the use and development of the New Payments Platform, as well as ways to encourage the adoption of alternative payment methods by government, businesses and consumers.

There were 46 public submissions to the review, which are available on the Treasury website.

In its submission, the Bank noted that the existing regulatory arrangements for the payments system in Australia have worked well; they have helped shape a payments system that in most regards is providing high-quality services for Australian consumers, businesses and government entities. However, key aspects of the regulatory architecture have been in place for more than two decades and numerous changes have occurred in the payments system over that time or are underway. In this context, the Bank's submission raised a number of issues, including in relation to:

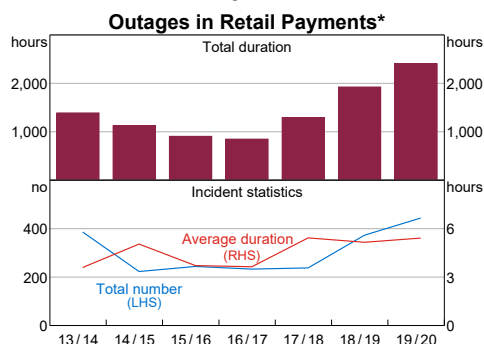
- overcoming the coordination challenges that can hold back systemic innovation in payment networks
- ensuring that the scope of regulation is appropriate to respond to the increasing range of entities that are now involved in the provision of payment services
- ensuring that industry self-regulatory arrangements support competition and innovation from new players, while appropriately dealing with the risks to other payments system participants and users
- exploring whether a specialised licensing and oversight regime for non-bank payment service providers could help promote access and competition while appropriately controlling risk
- clarifying the Bank's ability to set regulatory requirements to promote the financial and operational resilience of payment systems
- examining whether there are aspects of the regulatory regime and market practices that are currently limiting competition by non-bank participants in the market for cross-border payment services and international money transfers
- ensuring that the decline, and eventual closure, of legacy payment systems (such as cheques) is carefully managed to support the needs of users while promoting payments system efficiency.

Operational resilience of payment systems is of growing importance

The Bank's submission to the government's payments system review also highlighted an increasing focus on the operational resilience of retail payment systems given the growing use of electronic payments and the reduction in the use of cash. Operational outages in retail payments can cause significant disruption to households and businesses, and economic activity more broadly. Data collected by the Bank from financial institutions show a significant increase in the number and total duration of outages to retail payments in recent years (Graph 4.1).

To promote reliability in retail payments, the Bank has been working with the industry to enhance its data collection on incidents and to develop a standard set of statistics on the reliability of payment services. These statistics will be publicly disclosed by individual providers on a quarterly basis. Better and more transparent information about the reliability of payment services will raise the profile of this issue among

Graph 4.1



* Outages reported by banks and other financial institutions that settle retail payments

Source: RBA

financial institutions and their customers, and enable improved measurement and benchmarking of operational performance. These benefits should encourage improved reliability of retail payment services and support public confidence in these services over the longer term.

The Bank's submission nonetheless argued that in the future there could be a case for regulatory action to promote the operational resilience and security of retail payment systems, for example, if system complexity or cyber risks continued to

grow. It therefore proposed clarifying whether the regulatory framework would allow the Bank or another regulator to impose operational resilience or security standards on operators or participants in retail payment systems. Principles-based regulatory requirements for important retail payment systems have been introduced by central banks in a number of jurisdictions in recent years, including Canada, the European Union and the United Kingdom. ✎

Endnotes

- [1] For more on e-conveyancing, see De Freitas G and E Fitzgerald (2021), 'Property Settlement in RITS', RBA *Bulletin*, March, viewed 6 April 2021.

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The results of these studies are based, in part, on Australian Business Register (ABR) data supplied by the Registrar to the Australian Bureau of Statistics (ABS) under *A New Tax System (Australian Business Number) Act 1999* and tax data supplied by the Australian Taxation Office (ATO) to the ABS under the *Taxation Administration Act 1953*. These require that such data are only used for the purpose of carrying out functions of the ABS. No individual information collected under the *Census and Statistics Act 1905* is provided back to the Registrar or ATO for administrative or regulatory purposes. Any discussion of data limitations or weaknesses is in the context of using the data for statistical purposes, and is not related to the ability of the data to support the ABR or ATO's core operational requirements. Legislative requirements to ensure privacy and secrecy of this data have been followed. Only people authorised under the *Australian Bureau of Statistics Act 1975* have been allowed to view data about any particular firm in conducting these analyses. In accordance with the *Census and Statistics Act 1905*, results have been confidentialised to ensure that they are not likely to enable identification of a particular person or organisation. ❖

