

# Financial Stability Review

APRIL 2020



RESERVE BANK OF AUSTRALIA



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APRIL 2020

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# Overview

## The COVID-19 pandemic is causing significant strains in the global financial system

The COVID-19 pandemic brought to an end an extended period of stable (but only moderate) growth, low inflation, and low financial market volatility. Prior to the pandemic, the prices of a broad range of risky assets had been at high levels, underpinned by low risk-free interest rates and low risk premiums that presumed very little possibility of adverse outcomes. The outbreak of the virus, which was not even a feature in the outlook at the start of the year, has changed this.

The exceptional measures taken to contain COVID-19 are having a major effect on economic activity and the global financial system. The high level of uncertainty surrounding the size and duration of the economic downturn is accentuated by the uncertainty around the effectiveness of the various measures in containing the spread of the virus. Financial market uncertainty is also elevated because of the difficulty of pricing risk given the correlated effect of the virus on a broad range of assets globally. This heightened uncertainty related to the pandemic is compounding the usual volatility in financial markets that occurs as economic and financial conditions turn down.

The various regulatory reforms since the 2008 financial crisis have increased the resilience of the global financial system, with banks having more capital and liquidity than previously. Banks also have less complex business structures. Even so, the COVID-19 pandemic is putting the

spotlight on a number of pre-existing global financial vulnerabilities, including: areas of high leverage in some non-bank financial institutions; weak banking systems in Europe that are intertwined with high sovereign debt; high debt in some corporate and household sectors; and investment vehicles that offer a high level of liquidity, despite their underlying assets being illiquid. It is also noteworthy that the market for US Treasuries has been dislocated, partly due to leveraged accounts selling their most liquid assets in order to increase their cash holdings. Financial dislocation has also spread to emerging market economies, with a sharp reversal in capital flows.

Central banks have responded to the developments by rapidly easing monetary policy and implementing a range of policies designed to support the functioning of the financial system. But monetary policy cannot address the driver of the economic contraction. Rather it can only serve as a bridge, while substantial fiscal stimulus is being implemented to offset the economic contraction and, most importantly, authorities attempt to stop the spread of COVID-19 and respond to the health crisis. The economic policy actions seek to ensure businesses, households and financial institutions are well placed to resume activity when COVID-19 is contained.

## Australia's financial system faces increased risks, but is well placed to manage them

The economic downturn resulting from the pandemic is changing some of the risks facing the Australian financial sector.

In Australia, the spread of COVID-19 has slightly trailed other advanced economies, but financial markets have moved with their global counterparts. The Australian government debt market has at times been severely dislocated, reflecting the same forces affecting US Treasuries. Equity prices have fallen sharply and corporate term debt markets have been significantly impaired.

With many staff working from home and from different locations, financial institutions face increased operational risks and may have less capacity to take on and manage market risk. It has changed the nature of some IT and cyber risks.

As discussed in previous *Financial Stability Reviews*, the level of household debt and elevated housing prices are longstanding risks for the Australian financial system. In the period ahead, many households will find their finances under strain due to efforts to contain the virus. Some of these households will be able to draw on significant financial buffers, including large mortgage prepayments, although many highly indebted households have only small buffers and so are more vulnerable to lost income. Repayment deferrals ('holidays') being offered by the banks and the Government's recently announced wage subsidy should both help avoid large increases in arrears. More generally, tightened lending standards over the past five years or so have improved the quality of outstanding household debt while Government income support policies and access to superannuation balances for the worst-affected households will cushion falls in household income.

Australian businesses generally have low levels of gearing and most have significant liquid assets which will help them to weather the economic contraction. Government and bank support will assist those businesses with sharp reductions in revenue, particularly those for whom income has completely dried up and small businesses with few assets that would otherwise be in a perilous position. Commercial property prices have risen faster than rents in recent years given the decline in risk-free interest rates. Owners who are more highly leveraged could struggle if tenants are unable to pay rent, particularly in retail property given the very weak retail sector.

The turnaround in housing markets in the second half of last year reduced the risk that falling housing prices would result in widespread negative equity and larger potential losses for lenders. Most households now have substantial equity in their homes. The economic downturn, uncertainty and social distancing are likely to result in very little turnover in the housing market. It remains unclear how this will affect residential property prices.

The Australian financial system enters this challenging period in a strong starting position. Capital levels are high and the banks' liquidity position has improved considerably over recent times. This strong liquidity position combined with slow credit growth means that banks have limited need to issue debt in the period immediately ahead. The Australian banks also enter the downturn with high profitability and very good asset performance.

The regulatory authorities have been working closely together to minimise the economic harm caused by the pandemic, to avoid the impairment of household and business balance sheets and to support financial market functioning. These measures, along with the strong starting position of the banking system, increase the financial system's ability to absorb, rather than amplify, the effects of the pandemic.

It is important that financial institutions remain strong so that they are able to support households and businesses during this difficult period and during the recovery once the health crisis has passed. ❖





# 1. The Australian and Global Financial Systems

## The shock to global financial markets from the COVID-19 pandemic has been very large

The spread of the COVID-19 pandemic precipitated sharp falls in the prices of risky assets. Extreme volatility and poor liquidity in financial markets has been amplified by dysfunction in government bond markets, particularly for US government bonds, which play a crucial role as a pricing benchmark for other assets.

Major global sharemarkets have been extremely volatile, with falls of around 35 per cent from late February peaks before some recovery (Graph 1.1). The prices of corporate bonds and leveraged loans have also fallen, with yield spreads widening sharply to around the highest levels seen since the global financial crisis (GFC). Access to credit in a range of markets has at times been severely restricted, although market access has improved for high-quality borrowers with very large issuance used to bolster their liquidity positions.

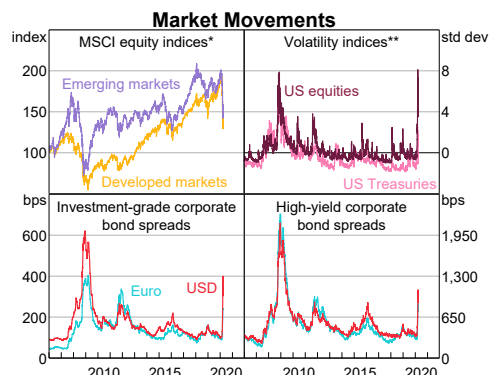
The significant repricing reflected expectations for a steep fall in corporate earnings, with larger price declines for industries most exposed to the economic slowdown (including aviation, energy and leisure). It also represented a reversal from previously very low compensation for credit, liquidity and interest rate risks.

Investors globally had taken on greater risk over recent years, driven in part by a search for yield in the low interest rate environment. As a result, most investors were not well placed to weather highly correlated price declines across multiple

asset classes. At times even advanced economy sovereign debt prices fell, with a large increase in demand for cash consistent with leveraged investors needing to meet margin calls, and funds needing to meet actual or expected redemptions.

Globally, funds that invest in bonds have experienced significant outflows driven by investors' rebalancing. The resulting demand for liquidity highlighted the vulnerability of funds that offered easy redemption terms while investing in illiquid assets. Large redemptions from prime money market funds in the United States – with assets under management falling by around US\$150 billion since early March – prompted the Federal Reserve (Fed) to set up the Money Market Mutual Fund Liquidity Facility to provide them with liquidity. A range of property funds in the United Kingdom, with assets totalling more than £20 billion, have

**Graph 1.1**



\* Index = 100 on 1 January 2006  
 \*\* Number of standard deviations away from historical median  
 Sources: Bloomberg; ICE Data used with permission; RBA

suspended redemptions because of uncertainty about the values of their illiquid property assets and their inability to quickly sell such assets.

Most financial markets experienced a significant widening of bid-ask spreads, with turnover also declining in most markets other than equities. Indeed, the functioning of the usually highly liquid and resilient market for US government bonds was even impaired, with bid-ask spreads for 10-year bonds reaching multiples of their usually low levels (of around 0.2 basis points). This mostly reflected large-scale investor selling to raise cash, which overwhelmed the usual increase in demand for safe assets during periods of high risk aversion. Selling pressure was driven in particular by the unwinding of leveraged relative-value funds. Market liquidity was also constrained by reduced dealer balance sheet capacity since the GFC and lower operational capacity due to firms operating split sites and working from home in response to the pandemic. Given US government bonds' role as a critical benchmark for the global financial system, this dysfunction exacerbated price volatility in a broad range of asset markets. In response, central banks around the world introduced or expanded programs for buying government bonds, which saw some improvement in market conditions.

Commercial paper markets, which are particularly important in supplying short-term funding to corporations in the United States and Europe, also seized up. There was a sharp rise in yields amid low liquidity. Initially this reflected liquidity risk (demand for cash) but increasingly this morphed into credit risks as output contracted. To restore the smooth functioning of these markets, central banks, including the Fed, Bank of England and European Central Bank (ECB), announced facilities to purchase commercial paper.

## **Lower business and household incomes are increasing financial stress**

While substantial policy stimulus measures have been announced, the COVID-19 pandemic will significantly reduce the incomes of many businesses and households. This will make it harder for them to service, roll over and repay their debts, raising the prospect of widespread defaults. The increase in financial stress may be more pronounced in jurisdictions that have experienced a large rise in household or business debt over recent years. Corporate debt, in particular, has risen in some advanced (and emerging) economies to historically high levels relative to GDP, most notably in the United States, France and Canada.

In the business sector, sharply lower incomes are being exacerbated by the pronounced tightening in financial conditions. Access to credit has become more costly and restricted, especially for riskier borrowers. For many large corporations, this is partly mitigated by their back-up lines of credit with banks, which have been rapidly drawn down in recent weeks, and large term issuance by higher-rated corporations. Central banks and fiscal authorities have taken a wide range of policy measures to support incomes and the provision of credit to businesses. These include purchases of corporate bonds, as well as term funding for banks with incentives to lend to smaller businesses.

## **While banks will be tested they are mostly more resilient**

Post-GFC reforms have ensured that large banks had much bigger capital and liquidity buffers before the onset of the pandemic than they did prior to the GFC. Regulators are encouraging banks to draw down these buffers rather than curtail lending and other activities. Other parts of the global financial system have also been strengthened over the past decade, including over-the-counter derivatives markets. Consistent

with this, there have been few signs of systemic stress to date among large banks in advanced economies. For example, the widening in bank credit spreads has been in line with those on comparable securities for non-financial firms, and banks can still access most forms of funding at reasonable rates.

Nevertheless, banks globally will be challenged by the pandemic. Credit losses will inevitably rise because of higher business and household defaults. And an extended period of very low interest rates could further weigh on banks' profitability. Reflecting this, prices of bank equity and debt have fallen sharply (Graph 1.2).

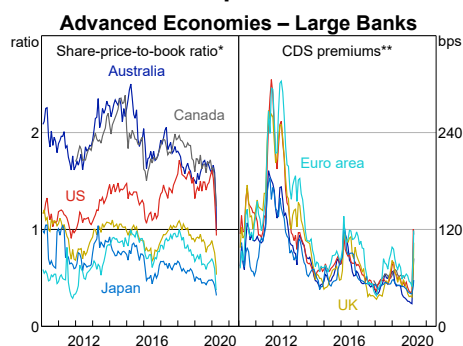
Financial institutions have rapidly adjusted their operating arrangements to respond to the pandemic and containment measures, including through staff working at split sites and remotely. While business continuity plans have needed rapid adaptation, they have generally worked well to date. The new arrangements will however test the operational resilience of banks, and financial institutions and infrastructure more broadly. Operational capacity has been reduced – which is already impacting market functioning – and the chance of technology failures or cyber attacks has increased.

## Existing vulnerabilities in several regions are exacerbating stress

The pandemic is threatening to expose financial vulnerabilities in Europe, particularly in Italy, given the large scale of the outbreak in the region. European banks have increased their capital and liquid asset holdings since the GFC, although they still have rather low profitability and high non-performing loan ratios. Government debt exceeded 90 per cent of GDP in seven euro area economies in 2019, including Italy, Spain and France, and is set to increase sharply as policies to help cushion the impact of the shock on economic activity increase fiscal deficits. This has raised debt sustainability concerns, leading to higher spreads on European government debt (relative to German Bunds). The resulting falls in the market value of European government bonds threaten to further undermine the health of European banks, as government debt accounts for a sizeable share of their assets (often around 10 per cent for large banks in countries with very high sovereign debt). This raises the prospect of an adverse feedback loop re-emerging, whereby deteriorating bank health reduces the creditworthiness of the sovereign (due to the potential need for bank bailouts), leading to further capital losses for banks. However, the increase in European government bond yields has been restrained by the ECB significantly expanding its euro area government bond buying program.

The COVID-19 pandemic affected China first and economic activity there is slowly recovering after a very sharp contraction in January and February, reflecting the lockdown of substantial parts of the country. Industrial production and fixed asset investment both fell by over 25 per cent in February. The financial system has been resilient to date, aided by a wide range of policy actions. However, financial vulnerabilities present before the onset of the virus remain elevated and near-term challenges are

**Graph 1.2**



\* Number of banks: Australia (4), Canada (6), euro area (25), Japan (4), United Kingdom (4) and United States (18)

\*\* 5-year senior CDS premiums; number of banks: Australia (4), Canada (5), euro area (8), Japan (3), United Kingdom (4) and United States (6)

Sources: Bloomberg; RBA; Refinitiv; S&P Global Market Intelligence

considerable. As in other economies, significantly lower business cashflow and income as a result of containment measures, combined with the very high level of corporate debt in China, raise the prospect of widespread defaults. Real estate firms in particular are facing acute pressures as they have high debt, including in US dollars, and their income and liquidity has been adversely impacted by lower sales. Local government finances are also likely to be further stretched. Stress tests by the People's Bank of China suggest that some larger banks would see substantial declines in their capital with weaker growth and higher defaults. Many smaller banks had seemed vulnerable before the COVID-19 pandemic, with thin capital buffers and already high levels of distressed debt. Extensive credit and liquidity risks in the non-bank financial sector could also crystallise and cascade through the financial system via a web of complex interconnections.

In other emerging market economies (EMEs), the weaker global economic outlook and reappraisal of risk in financial markets have triggered significant capital outflows. Currencies of the most affected economies depreciated by 15–25 per cent, equity prices fell by 35–45 per cent, and the price and availability of debt funding deteriorated. Oil-exporting EMEs have also been negatively affected by the sharp decline in oil prices, which fell by as much as two-thirds from levels at the start of the year. As a result, financial conditions have tightened abruptly. This is exacerbating the adverse effects of the pandemic on economic activity and is threatening financial stability. EMEs with high amounts of external financing or foreign currency debt are particularly vulnerable because they are more exposed to tighter financial conditions offshore, such as in US dollar funding markets. Reflecting these pressures, over 90 countries had requested emergency financial assistance from the International Monetary Fund (IMF) as of early April.

## Authorities globally have responded with a wide range of policy measures

A wide range of policy measures have been implemented to mitigate the effect of the pandemic on macroeconomic and financial stability. Central banks have eased monetary policy aggressively, including through policy rate reductions and large increases in asset purchases. Large fiscal stimulus packages have been announced in many countries to support incomes. An array of measures seek to support the provision of credit to businesses and households:

- Central banks have provided substantial funding to banks, including with incentives to expand lending to smaller businesses.
- Governments have offered guarantees on business loans, direct grants and tax relief.
- Authorities have encouraged banks to use their capital and liquidity buffers.

Businesses and households are also being supported by temporary freezes on loan repayments, foreclosures and evictions in some countries. Some policies aim to support market functioning, including central banks' purchases of government, and even corporate, bonds. Prudential regulators are closely monitoring financial institutions and reviewing their pandemic plans to ensure operational resilience. They have also postponed regulatory changes and other supervisory activities to reduce the operational burden on institutions.

## The Australian financial system has also been substantially disrupted by the COVID-19 pandemic

The Australian equity market also fell sharply and credit spreads widened significantly as investors found it difficult to price the anticipated shock to the economy, in particular firms' incomes. Reflecting the uncertainty and unwinding of various market positions, fixed income markets, including for government and corporate debt, at

times lacked liquidity. The weaker outlook and substantial rise in risk premiums in global equity markets have seen Australian banks trading at their lowest level (relative to book value) since the early 1990s.

Australian banks are well placed to withstand this current period of stress. Their liquidity positions are strong, and had strengthened over 2019 given growth in deposits and soft demand for credit. The Reserve Bank's Term Funding Facility (TFF), which commenced at the start of April, and strong deposit growth will provide enough funding for authorised deposit-taking institutions (ADIs) to offset almost all of their maturing bond funding for the next six months (see 'Annex: Selected Policy Responses to the COVID-19 Pandemic'). Major banks' capital ratios are estimated to be well within the top quartile of banks internationally and are also within the range that would have been sufficient to withstand historical bank crises. Bank profitability has been very healthy leading into this period, and bad debt charges have been historically low. As a result, banks can absorb a large increase in bad debts before making a loss. Stress tests suggest that Australian banks' strong capital positions and profitability should enable them to withstand a reasonably prolonged period of economic contraction without breaching their prudential minimums.

Other financial institutions have also been resilient to date. Financial market infrastructures (FMIs), such as central counterparties (CCPs), securities settlement facilities and payment systems, have maintained their operations despite a large share of staff working from home and sharply higher trading volumes. They have also effectively managed large fluctuations in variation margin. Managed and superannuation funds have required additional liquidity to fulfil member requests to redeem or reallocate assets and to make variation margin payments but they have, to date, been able to accommodate this. General and life insurance companies are

likely to have made losses on their investment portfolios at the same time as their liabilities have increased (because of lower discount rates). They are also likely to experience some increase in claims as a result of the pandemic. General insurers are highly profitable and have strong capital positions that make them resilient to these effects. And while life insurers' profitability has been significantly eroded over recent years by chronic underpricing of income protection insurance, their healthy capital positions should enable them to manage the current challenges.

### Financial markets in Australia have been dysfunctional at times ...

Risk premiums have increased sharply across a range of financial markets since the start of the year. Australian equity prices fell by one-third from their peaks and credit spreads on BBB-rated corporate bonds rose by almost 100 basis points. Volatility in the price of equities and fixed income securities also rose to similar or higher levels than recorded during the GFC (Graph 1.3). And bid-ask spreads in the Australian Government Securities (AGS) market were many times higher at their peak than they had been over 2019, as market depth evaporated at times. Conditions have since improved as a result of measures implemented by the Reserve Bank, particularly direct purchases of AGS and semi-government bonds.

The primary driver of dislocation in financial markets has been the substantial deterioration in the economic outlook, which triggered a material reduction in risk appetite. However, the impact on markets was amplified by various investment strategies that were predicated on being able to quickly liquidate AGS when needed; more generally, the discount applied to illiquid assets over recent years has been very low. This resulted in a wide range of investors simultaneously seeking to sell their AGS to meet client redemptions or margin calls on

derivatives, creating a one-sided market at times. The use of leverage also amplified selling pressure in the AGS market. In particular, leveraged funds were heavy sellers of AGS due to losses arising from volatility in the relative price of these derivatives and the underlying security, as well as a desire to rebalance their portfolios following sharp losses on equity holdings. Reserve Bank purchases of AGS addressed these issues by increasing available liquidity and ensuring the AGS market was no longer one-sided.

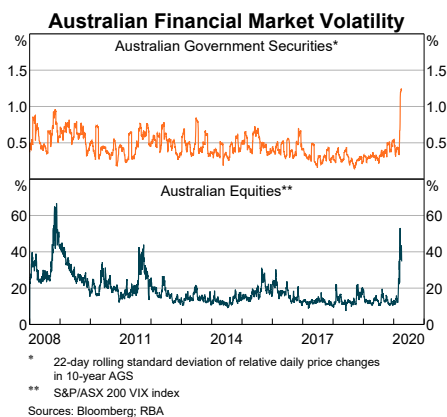
A rapid repricing of securities also occurred in bank funding markets. Spreads on Australian bank bonds (issued offshore) rose to levels last seen in the GFC (though yields remain much lower; Graph 1.4). This occurred amid a sharp reduction in turnover of bank bonds, especially domestically, as firms that normally invest in such debt refrained from buying in order to preserve liquidity. Domestic short-term debt funding markets have been more resilient; liquidity has still generally been present and, while spreads rose, they have not exceeded their trading range of recent years and fell back to very low levels. However, short-term debt markets in the United States, which Australian banks use in normal times to manage fluctuations in their liquidity needs, remain very stressed. This has caused the implied cost of

borrowing Australian dollars in offshore markets to increase significantly, despite the cost of swapping US dollars to Australian dollars falling slightly. In response, Australian banks have largely stopped issuing debt offshore.

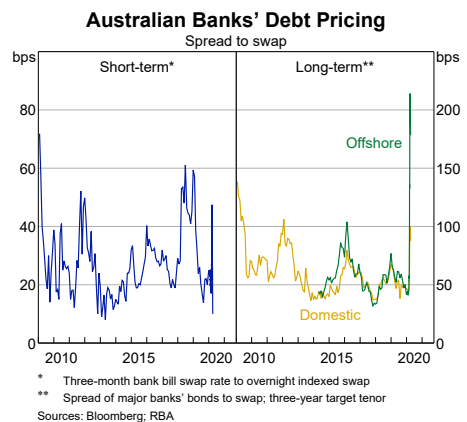
### ... but banks are well placed to navigate difficulties in funding markets ...

Australian banks have not needed to issue term funding since late February, given their strong liquidity positions leading into this period. In particular, strong deposit growth and limited asset growth over 2019 meant that several banks had increased their holdings of liquid assets in the months prior to the recent market turmoil and had little need to replace maturing bonds. Consistent with this, banks' Liquidity Coverage Ratios (LCRs) – which measure their holdings of liquid assets relative to the potential outflows of funding that could occur in a short-lived but severe stress scenario – were around 125–135 per cent at the end of 2019, well above the regulatory minimum of 100 per cent. Outflows of superannuation deposits have, in some cases, seen LCRs decline a little since the pandemic began, while in other cases retail deposit inflows have supported increases. The introduction of the Reserve Bank's TFF also significantly increased banks' LCRs very recently.

**Graph 1.3**



**Graph 1.4**



Over-the-counter withdrawals of cash from banks were elevated over the second half of March as some customers with large balances sought to hold precautionary funds. This included a small number of customers making very large withdrawals (more than \$100,000, and in some cases into the millions of dollars). The Reserve Bank worked closely with the large banks and cash-in-transit companies to ensure branches had sufficient cash supplies. The focus of this work was on the logistics of moving cash to the right places as there was adequate total supply. The elevated demand has since abated.

Around \$30 billion of Australian bank bonds will mature during the June quarter, with a further \$50 billion maturing over the second half of 2020 (Graph 1.5). This equates to less than 3 per cent of system-wide funding. The Reserve Bank's TFF will provide banks with enough low-cost funding to replace almost all of their maturing bond funding over the next six months if bond markets remain dysfunctional. Banks' funding allowance under this facility equates to at least \$90 billion (3 per cent of total credit). The facility also enables banks to access additional funding beyond this if they expand business lending, through either drawdowns on existing committed credit facilities or new commitments. For credit extended to small and medium-sized enterprise (SME) customers, this 'additional allowance' is five times the credit extended. If some banks experience higher-than-normal superannuation deposit outflows or drawdowns by households of their offset accounts or committed credit facilities, they have excess high-quality liquid assets to manage their liquidity flows.

### ... and have sufficient capital to withstand a prolonged period of stress

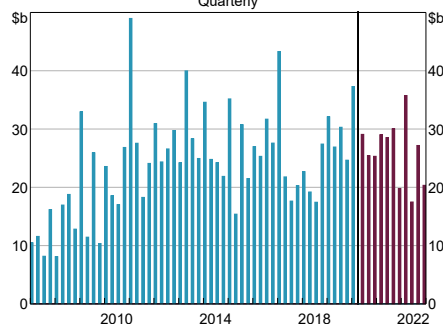
The four major banks' Common Equity Tier 1 (CET1) ratios are all above the level that the Australian Prudential Regulation Authority (APRA) considers 'unquestionably strong' and

well within the range that would have been sufficient to withstand historical bank crises (Graph 1.6).<sup>[1]</sup> Their capital ratios are also estimated to be within the top quartile of large banks internationally when measured on a comparable basis. Compared with the 2008/09 financial crisis, the major banks have entered this period with much stronger capital positions. Major banks' Tier 1 capital ratios are 6 percentage points higher than they were in 2007, and their leverage ratios (the ratio of Tier 1 capital to non-risk-weighted exposures) have increased to be well above proposed minimum requirements of 3½ per cent now starting in 2023 (Graph 1.7). Smaller ADIs also have healthy capital ratios that are comparable with, or higher than, those of the major banks.

Despite their strong positions, large falls in banks' share prices reflect the fact that investors expect the pandemic will have a substantial effect on banks' profits. Price-to-book ratios for Australian banks declined to their lowest levels since the early 1990s and are currently below one for most Australian banks (Graph 1.8). This reflects both a decline in the earnings outlook and a reduction in investors' risk appetite, given uncertainty around this outlook. The fall in banks' share prices also implies that the distance to default, which measures the implied size of a shock required to cause a bank to default, has

**Graph 1.5**

**Banks' Bond Maturities\***  
Quarterly



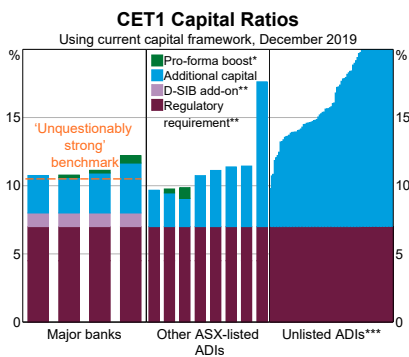
\* Includes unsecured, securitised, covered and Tier 2 bonds; maroon bars depict upcoming maturities  
Source: Bloomberg



reduced sharply.<sup>[2]</sup> However, during periods of heightened volatility and market dysfunction, the signal from equity pricing may be distorted. Stress tests of Australian banks show they have sufficient capital to withstand quite severe downturns. ‘Top-down’ stress tests indicate that even if there is no economic recovery in the second half of 2020 (so that asset quality issues grow) banks will remain above their minimum capital ratios, although they may need to make use of their capital conservation buffer.<sup>[3]</sup> This would be consistent with APRA’s recent emphasis that banks’ capital buffers are available

for use in times of stress, such as this, provided banks remain above their minimum prudential requirements. ‘Reverse stress tests’ – which estimate the magnitude and duration of stress that would result in banks breaching various capital thresholds – suggest that Australian banks would only breach their prudential minimums if a severe downturn lasts for at least 12 months, with the unemployment rate rising by more than 10 percentage points. There is always uncertainty about whether these models capture all elements of stress and even more so at present, given the unprecedented nature of the current situation. The nature of the substantial fiscal stimulus could reduce the impact on banks, even for a given contraction in GDP, because job and income support measures enhance households’ ability to continue repaying their debt. Banks’ willingness to defer customers’ loan repayments should also reduce defaults, but losses could still emerge quickly due to the recent move towards forward-looking provisioning (which could cause loan losses to be concentrated in the near term).

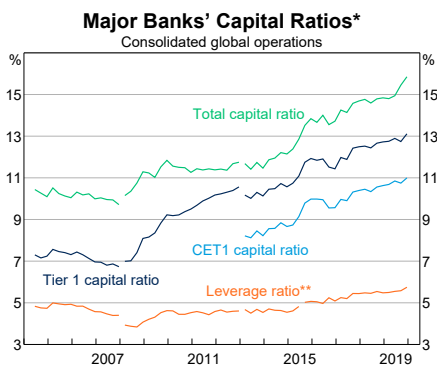
**Graph 1.6**



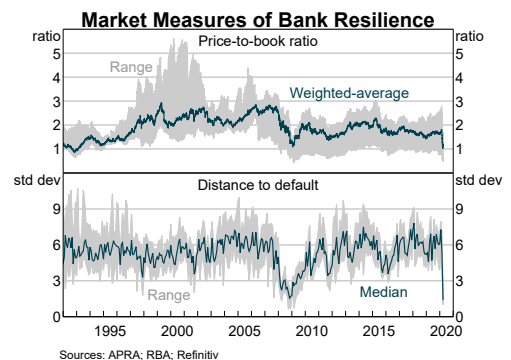
**Strong profitability also supports the resilience of banks**

Return on equity (ROE) for Australian banks leading into the pandemic was high by international standards. It was also significantly above their cost of equity (estimated to be

**Graph 1.7**



**Graph 1.8**





around 9–10 per cent), despite the gap between the two narrowing as ROE drifted down over the prior five years (Graph 1.9). Banks also entered the current period of financial market turmoil with bad debts that have been at historical lows. They are therefore well placed to withstand the inevitable deterioration of asset quality.

Lower interest rates have contributed to a narrowing of net interest margins (NIMs). This reflects that a portion of banks' deposits receive no or very low rates of interest, making them difficult to reprice lower when the cash rate declines. Larger banks hedge the interest rate risk on their non-interest bearing deposits (and capital), but these hedges expire after a few years and so only delay the effect. However, the effect of low interest rates on bank profitability has been less in Australia than in some other economies. In part this is because a large share of Australian banks' deposits pay above the cash rate (approximately two-thirds) and so interest rates on these have been able to fall with the cash rate. In addition, wholesale funding makes up a greater share of total funding for large Australian banks than many global peers, insulating them from a sustained period of low rates because wholesale interest rates are not constrained at zero. More generally, while low rates cause NIMs to narrow, the effect on profits is less clear because low interest rates also reduce credit losses and stimulate lending.

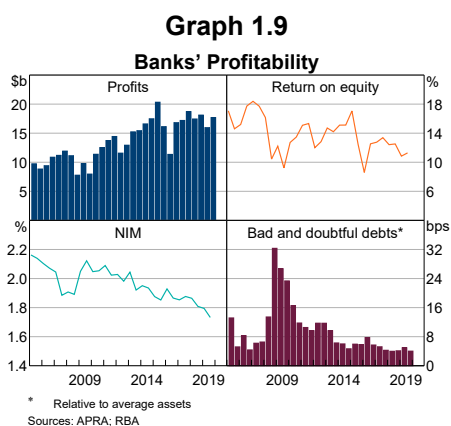
Additional policy announcements by the Reserve Bank will also reduce this pressure. In particular, the TFF will provide banks with term funding at a spread that is about 50 basis points lower than they had been accessing three-year funding late last year. The lift in the rate of remuneration of exchange settlement balances (relative to the cash rate target) will also add a little support to profits.

### The outlook for credit quality has weakened, but from a strong position

Asset quality is expected to deteriorate with the likely substantial economic downturn resulting from the COVID-19 pandemic. The closure of non-essential services will adversely affect the credit quality of a wide range of business loans. This will be alleviated to a significant extent by fiscal support for businesses; this support includes wage subsidies, credit guarantees for SMEs, assurance that responsible lending guidelines should not impede new lending, and temporary relief measures to support the management of insolvency risks (See 'Annex: Selected Policy Responses to the COVID-19 Pandemic'). Banks are also offering repayment moratoriums and other hardship arrangements for affected firms. The expected rise in unemployment will lower households' ability to service their debts, but government transfers to directly affected households and wage subsidies for affected employees will mitigate this to some extent. Moreover, loan performance for businesses had been very strong leading into this period and the performance of household loans had begun improving (Graph 1.10). Most housing loans remain well secured, limiting the share of non-performing loans that are impaired.

### Reduced liquidity has affected fund managers

Fund managers have faced reduced liquidity for some assets at the same time as many have had



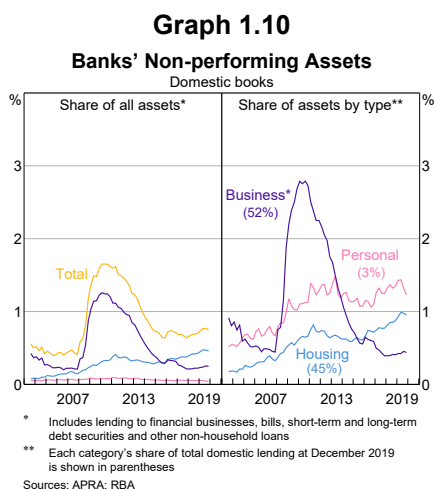
greater need for liquidity. The decline in liquidity of some assets held by fund managers has been most notable for fixed income, including even sovereign debt. Some other assets they hold are never liquid, such as property and infrastructure. This has made it difficult for managed funds that invest in loans and bonds ('credit funds') to rebalance and/or liquefy their assets. At the same time, fund managers have needed additional cash for a range of reasons. Redemption requests by investors in open-ended managed funds have been elevated as investors sought the additional safety and liquidity of cash. Several credit funds have responded to this situation by increasing the cost of redeeming. This, along with drawdowns on funds' cash reserves and sales of short-term debt, has so far enabled them to meet cash demands without having to suspend redemptions, as permitted under legislation. Superannuation funds have similarly required additional liquidity to cover higher member requests to switch from high- to low-risk investment options, in addition to needing to pay variation margin on the derivatives they use to hedge foreign currency assets. Superannuation funds hold liquidity buffers that have enabled them to manage these liquidity demands and have been redeeming term

deposits to increase their liquidity. Some trustees have also lowered the value of their unlisted assets to ensure that investors reducing their exposures now are not overcompensated at the expense of remaining members. However, superannuation funds have also had to prepare for members using the changed early release option, which was included in the Government's stimulus package. For some funds, in particular those with many young members working in industries heavily affected by the pandemic, this will represent a relatively large share of funds under management and therefore a large liquidity drain.

A substantial rise in the cost of issuing asset-backed securities has also limited the ability of non-ADI lenders to raise new funds. Some planned issues were subsequently deferred. Non-bank lenders have been able to do this because their warehouse funding facilities have been ample, having increased over recent years. However, the initial transactions from the Australian Government's \$15 billion fund for investing in asset-backed securities and warehouse facilities has already resulted in a significant easing in funding conditions for these lenders.

### Other parts of the financial system have been resilient to the effects of the pandemic ...

Providers of FMIs operating in Australia have maintained their critical functions during the COVID-19 pandemic, despite the operational challenge of a high number of staff working from home. There have been no material system outages affecting FMIs during this time. FMIs have also appropriately dealt with the risks arising from increased market volatility and trading volumes over this time. The CHES system used by the ASX to clear and settle cash equities experienced processing delays during record trading volumes in March, but more than 99 per cent of trades still settled on time. CCPs



have also required firms to regularly post large amounts of additional variation margin as market prices have moved erratically. They have also increased margin requirements to cover risks associated with further volatility. These margins calls have been met without apparent difficulty.

The financial effects of the COVID-19 pandemic are unlikely to be material for insurers, despite the severity of the pandemic. Claims for both general and life insurance are likely to rise somewhat, but various limitations and some specific exclusions mean that pandemic-related claims are not always covered by insurance policies. General insurers have potential exposure in workers' compensation to hospital or healthcare workers who are infected in the course of their employment, but the impact is likely to be small except in an extreme scenario. For life insurers, payouts may increase but the severity of the outbreak would have to be extreme to have a material impact on mortality insurance. There could also be income protection insurance payouts, but waiting times significantly limit the extent of these claims. Similarly, the implications for health insurers are likely to be limited because most of the cost will be borne by the public health sector. Both general and life insurers are likely to have revised up the present value of their future liabilities as risk-free rates have fallen, and to have experienced losses on their holdings of corporate bonds and equities. These effects

should be readily managed by general insurers, given their high ROE and strong capital position. However, life insurers' profits have been very weak over recent years, reflecting chronic underpricing in individual disability ('income protection') insurance.

### ... and institutions are so far managing the operational risks that have arisen

Australian banks, insurers and FMI providers have all successfully enacted pandemic plans which are designed to ensure they can continue operating even if COVID-19 spreads more widely in Australia. These plans address considerations such as how to enable critical functions to continue (and ensure they are appropriately resourced) while protecting staff from transmission (for example, by working remotely or in split-team arrangements). Despite this, the unprecedented nature of the pandemic has tested financial institutions' business continuity plans and has strained systems. One challenge has been how robust various IT systems are when a large share of employees are accessing them remotely from home and have slow or unreliable internet access. Many institutions have successfully rapidly increased the number of staff who can simultaneously work remotely. Institutions have also had to quickly bring some critical functions back onshore. The risk of cyber attack has also increased given institutions will be operating with reduced staffing and/or with more staff working remotely. ✎

## Endnotes

- [1] An IMF study found a Tier 1 capital ratio of 15 to 23 per cent is appropriate for many advanced economies (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). In comparison, the major banks' Tier 1 capital ratios are equivalent to at least 17½ per cent on an internationally comparable basis, accounting for APRA's stricter application of global bank standards.
- [2] The implied probability of default can be derived using a Merton-style 'distance-to-default' model, as done in MacDonald C, M van Oordt and R Scott (2016), 'Implementing Market-Based Indicators to Monitor Vulnerabilities of Financial Institutions', Bank of Canada Staff Analytical Note No 2016-05.
- [3] For further details on the model, see RBA (2017), 'Stress Testing at the Reserve Bank', *Financial Stability Review* Box D, October, pp 46-49.



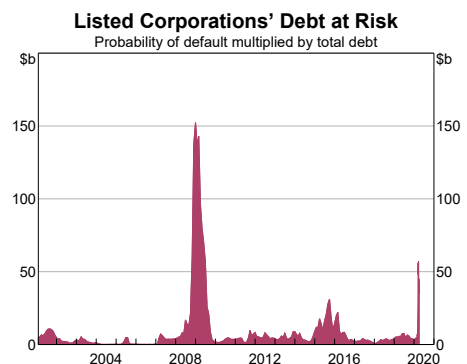
## 2. Household and Business Finances in Australia

Australian businesses and households are mostly well placed to face the large contraction in economic activity associated with the COVID-19 pandemic although it will test their financial resilience. As a result of the shock, many businesses have limited or no income, and many workers have been stood down, at least temporarily. But most businesses and households entered this difficult period in good financial health, with large cash and/or equity buffers to help withstand a temporary fall in income. Significant fiscal and monetary policy stimulus, as well as measures introduced to help affected households and businesses to manage their debt and rent obligations, will also support them. Preserving the financial positions of households and businesses will aid the ultimate economic recovery when the health crisis passes.

Most businesses were in good financial health before the pandemic. However, some pockets of vulnerability were evident in the retail trade, food and accommodation services, agricultural and construction sectors. Businesses in these industries typically have high levels of gearing and low levels of liquidity, making them especially vulnerable to significant declines in cash flow. The sharp decline in economic activity is placing additional stress on these already challenged sectors but will also test the resilience of some businesses that were previously in good health. There are signs of corporate vulnerability increasing, with financial market pricing of risk for publicly listed companies rising sharply (Graph 2.1).

Most households had sizeable cash and/or equity buffers going into the economic downturn. Many affected workers will have access to wage subsidies and superannuation balances to compensate for lost income, and repayment deferment will also provide a safety net for those households that would otherwise struggle to service their obligations. These factors will help households manage their debts during this difficult period. However, other households are not as well placed to withstand the downturn. To date, a large number of workers have been stood down, and many jobs have already been lost or are expected to be lost in the period ahead. The associated uncertainty is clearly weighing on household perceptions of their own financial situation (Graph 2.2).

**Graph 2.1**



\* Calculated up to 6 April 2020, using a sample of the 300 largest (by debt) non-financial domestically-domiciled firms listed on the ASX  
Sources: Bloomberg, Morningstar, RBA

## Business sector conditions are deteriorating

Business balance sheets were generally in a good state before the economic downturn driven by the temporary health crisis. Liquidity and profitability were at high levels, gearing ratios were low, and the ability to service debts had risen significantly alongside reductions in interest rates. However, the adverse shock to business conditions is already large and expected to grow substantially. Fiscal and banking support will help businesses, but many will struggle. Revenues for many firms servicing the household sector – including those in the retail trade, food and accommodation services, and tourism industries – have dried up. Some firms have already closed, at least temporarily. Many have stood down workers. Economic activity across a wider range of industries has subsequently fallen, as flow-on effects work through manufacturing supply chains and business services.

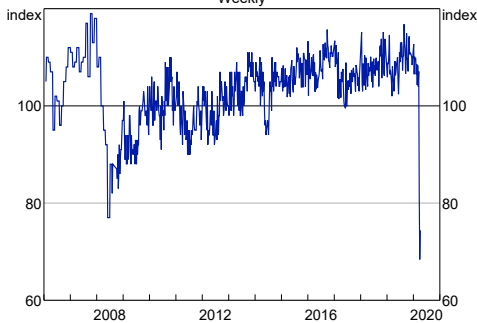
The impact of the COVID-19 pandemic in Australia was initially most pronounced for tourism and education-related industries. Demand had dropped, starting with restrictions on travel from mainland China at the start of February. Widespread restrictions in the domestic economy have progressively resulted

in a broader and more pronounced impact through March. Some retailers, such as supermarkets, have experienced high levels of demand, and this has raised their short-term cash flow. But many other businesses in industries such as cafes, restaurants and accommodation services, and arts and recreational services, have been severely affected, in many cases temporarily closing. Alongside the unexpected decline in cash flow, these businesses tend to be more geared and more illiquid than those in other industries (Graph 2.3). The challenges faced by businesses in regional communities are compounded by the effects of the drought and the recent bushfires.

Despite the healthy state of listed corporates' balance sheets ahead of the pandemic and substantial government support, the size of the shock will still test the financial resilience of many businesses. About one-quarter of businesses typically do not have enough liquid assets to cover one month of expenses (including wages) and closer to half could not pay for three months of expenses. Valuations for listed corporates have declined sharply from late

**Graph 2.2**

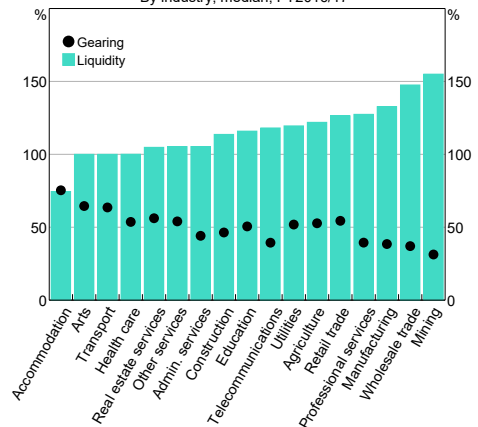
**Households' Financial Position Compared with a Year Ago**  
Weekly



Source: ANZ-Roy Morgan

**Graph 2.3**

**Businesses' Liquidity and Gearing Ratios**  
By industry, median, FY2016/17\*



\* Liquidity is calculated as the ratio of current assets to current liabilities, gearing is calculated as the ratio of debt to total assets (excludes firms with no debt)

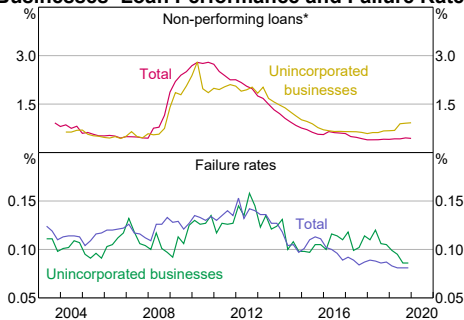
Sources: ABS; RBA

February, and a number of listed corporates have suspended forward earnings guidance due to the uncertainty around the outlook for economic activity.

Business failures had been at low levels (Graph 2.4). However, increases in business failures and loan arrears are likely over the coming months, even with the policy measures designed to minimise insolvencies and offset any tightening in credit availability and cost (see 'Annex: Selected Policy Responses to the COVID-19 Pandemic'). There is considerable uncertainty around the trajectory of the economic shock and subsequent recovery. Firm-level analysis suggests that a decline in annual sales of, for example, 20 per cent would lead to an increase in the annual business exit rate (failures as well as takeovers etc) from around 8 per cent to 9½ per cent. This would be an increase of around 35,000 business exits. However, this estimate is based on historical data and does not explicitly account for government policy measures designed to temporarily raise business cash flow.

Generally, a substantial rise in loan losses would be expected to result in a tightening in the supply of credit to businesses. There have therefore been significant policy measures implemented to avoid this effect. These measures will help to support businesses

**Graph 2.4**  
**Businesses' Loan Performance and Failure Rates**



\* Banks' domestic books, share of business assets  
Sources: AFSA; APRA; ASIC; RBA

through the coming months in terms of both liquidity and credit availability, and this will better position them for the recovery that will follow.

**Many households have enough liquid assets to manage temporary falls in income ...**

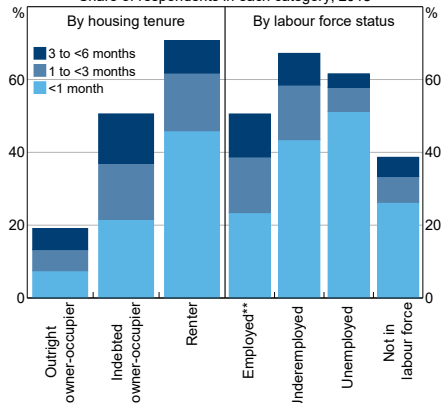
Most households entered this difficult period in good financial health. Surveys indicate that most households had enough liquid assets to cover basic living expenses and current obligations, such as mortgage and rent payments, for three months (Graph 2.5). Households with mortgage debt typically had sizeable liquidity and/or equity buffers. Among these borrowers, over half of these loans had enough prepayments to service their loan repayments for at least three months (Graph 2.6).

**... but some households have little savings and are vulnerable to financial stress**

There were some pockets of vulnerability prior to the pandemic, with some households having

**Graph 2.5**

**Household Liquidity Buffers\***  
Share of respondents in each category, 2018



\* Buffers measured as a ratio of liquid assets to monthly living expenses. Liquid assets include bank accounts, cash investments, equity investments, and housing loan prepayments; monthly expenses include minimum repayments on owner-occupier debt, rental payments, and living expenses

\*\* Does not include underemployed  
Sources: HILDA Release 18.0; RBA

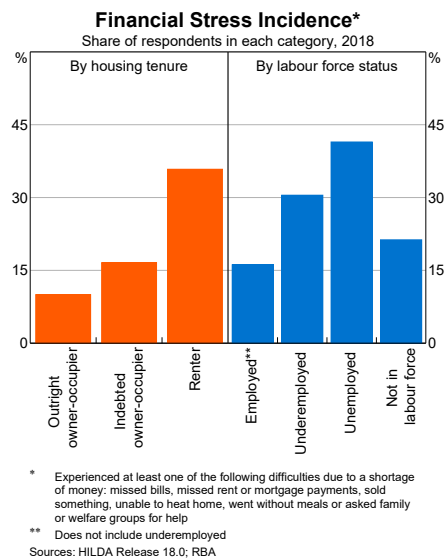
less liquidity to manage declines in income. Surveys indicate that about one in five households only have enough liquid assets to get from one pay period to the next. These liquidity constrained households are typically young, twice as likely to be renting and twice as vulnerable to unemployment compared with other households. Amongst households with mortgage debt, just under one-third of mortgages have less than one month of prepayments, and about half of these appear particularly vulnerable to a sharp decline in income.

These households with small liquidity buffers are much more likely to report being in financial stress, regardless of their age, income or labour force status. More than one-third of renting households typically report in surveys that they have experienced financial stress in a given year (such as difficulty paying bills or having to go without meals) (Graph 2.7). The most vulnerable include those working in jobs more exposed to unemployment risk, such as casual workers, and those in industries most affected by the COVID-19 containment measures, such as accommodation and food services. Workers in these most exposed industries are both more likely to rent and more likely to be liquidity constrained (Graph 2.8). Additional income

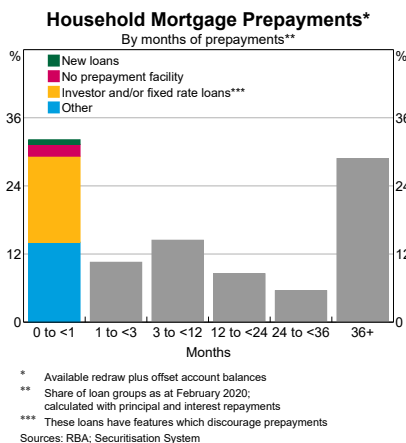
support and wage subsidies provided by the Australian Government will help many of these affected workers.

Increasing financial stress among renting households does not pose direct risks to the banking sector because these households typically hold little debt. But they pose indirect risks if they have trouble paying rent, and their landlords in turn have trouble making their own debt repayments. Mortgage repayment

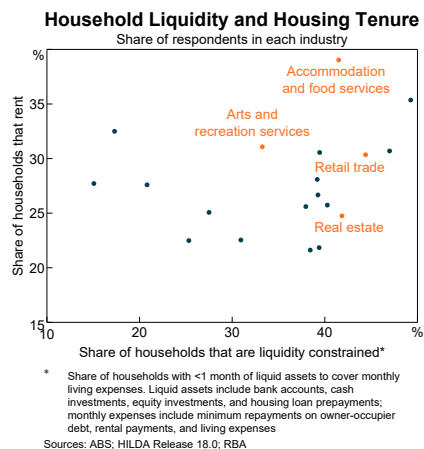
**Graph 2.7**



**Graph 2.6**



**Graph 2.8**





deferment by lenders should reduce these risks for now. To assist tenants, governments have also agreed to a moratorium on evictions for those tenants unable to pay rent due to a loss of income resulting from the COVID-19 pandemic.

For those with mortgage debt, a household member losing their job or having their working hours reduced is typically associated with greater financial stress. If labour market dislocations and associated debt serviceability problems persist, this could translate into more mortgage loans entering arrears. Analysis based on loan-level data and historical relationships indicates that, for every one percentage point increase in the unemployment rate, the mortgage arrears rate increases by about 0.8 percentage points. In response, the major banks have announced they will allow loan repayments to be deferred for up to six months to help homeowners having difficulty meeting repayments (see 'Annex: Selected Policy Responses to the COVID-19 Pandemic').

### There are some risks from property markets

A key financial stability risk is the extent to which the weakness in economic activity spills over to the housing and commercial property markets. The prospect of large declines in property prices presents significant balance sheet risks for households, businesses and lenders.

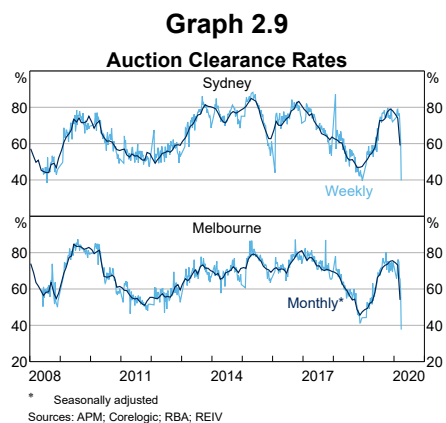
The shock to economic activity, and associated uncertainty, has caused a decline in demand in the residential property market, and this will increase the incidence of negative equity if prices decline. The containment measures, including government restrictions on auctions and open inspections, will lower housing turnover. In turn, the significant reduction in housing turnover will make it difficult to accurately assess changes in housing prices in the period ahead. Auction volumes and clearance rates have declined sharply in Sydney and Melbourne in recent weeks (Graph 2.9).

Consistent with this, liaison with banks suggests housing loan applications are falling and information from housing contacts in the Bank's liaison program also report much lower foot traffic through display homes.

For households behind on their repayments and with little equity in their homes, very low turnover and declines in housing prices will make it harder to resolve their situation by selling their properties. Scenario analysis based on loan-level data and historical relationships suggests that a decline in housing prices of 10 per cent would raise the share of loans in negative equity by 3½ percentage points, to 6½ per cent. This is shown by an increase in the share of loans with loan-to-valuation (LVR) ratios exceeding 100 per cent (Graph 2.10). The share of loans in negative equity would increase by proportionately more for larger price declines. A higher incidence of negative equity increases the risks of losses ultimately incurred by lenders in the event of foreclosure.

### Conditions in commercial property markets are deteriorating

Prior to the pandemic, the retail commercial property market was facing challenging conditions due to weak consumer spending and heightened competition. The outlook for tenant demand for retail property has deteriorated



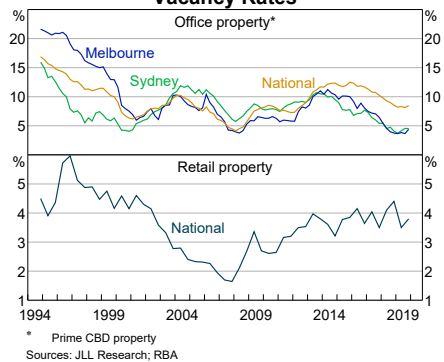
given the downturn in trading conditions, with declines in rents and increases in vacancy rates now likely (Graph 2.11). Conditions in office markets were previously strong, but these are also expected to deteriorate in the period ahead. Of note, an above-average volume of office supply is due to be delivered into the Sydney and Melbourne CBD markets this year and demand will be unlikely to keep pace with this stronger supply (Graph 2.12).

In light of the disruption to trading conditions in the commercial property market, and the potential impact on rental income flows, a mandatory Code of Conduct has been set up that outlines leasing principles for eligible tenants and landlords in the period ahead (see 'Annex: Selected Policy Responses to the COVID-19 Pandemic'). Temporary measures include prohibiting the termination of leases for non-payment of rent, and introducing guidelines for rental waivers and deferrals (to be negotiated by landlords and tenants on a case-by-case basis and based on the reduction of the tenant's trade). These measures will help support many small business tenants that will experience financial stress as a result of COVID-19.

Asset valuations in property markets had increased to very high levels over recent years, both in Australia and overseas (Graph 2.13). In

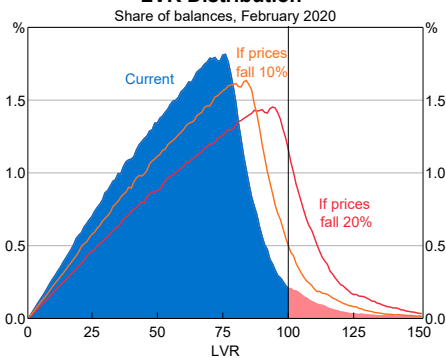
the period ahead, declines in both sales volumes and valuations are likely, reflecting the weakness in the rental market and a repricing of risk by institutional investors. For some geared investors, falling valuations will see them breach loan covenants, which will need to be worked through with lenders. For developers with projects still under construction but with currently unsold properties, it could be difficult to finalise sales at a profitable price. Developers will then be left holding inventory – and debt – on their balance sheets with little or no revenue. This is a key risk for lenders. Banks have incurred substantial losses from construction loans in

**Graph 2.11**  
**Vacancy Rates**



**Graph 2.10**

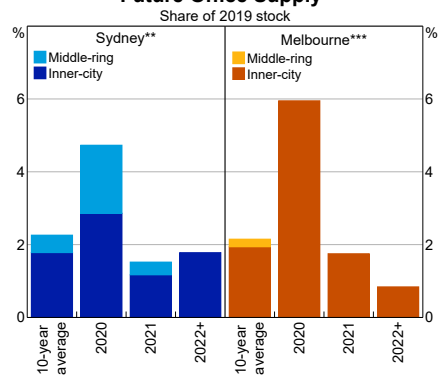
**LVR Distribution\***



\* Loan balances adjusted for redraw and offset account balances; property prices estimated using SA3 price indices  
Sources: ABS; CoreLogic; RBA; Securitisation System

**Graph 2.12**

**Future Office Supply\***



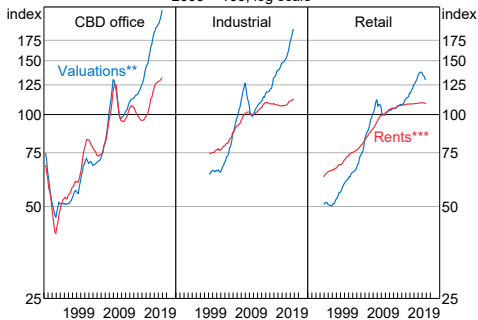
\* Completed projects and projects under construction  
\*\* Inner-city is Sydney CBD and North Sydney; Middle-ring is Bondi Junction, Chatswood, Macquarie Park, Parramatta and St Leonards  
\*\*\* Inner-city is Docklands and Melbourne CBD; Middle-ring is East Melbourne, Southbank and St Kilda Road  
Sources: Property Council of Australia; RBA

past downturns, and while construction lending accounts for a small share of business lending, it has grown rapidly recently. Overall, banks' commercial property exposures as a share of total bank assets are around 6 per cent. Non-bank lenders are particularly active in lending for the construction of commercial property, including apartments. ✎

**Graph 2.13**

**Commercial Property\***

2009 = 100, log scale



\* CBD office and industrial are prime property; retail is regional (non-CBD) centres

\*\* JLL Capital Value Indicator

\*\*\* CBD office is effective rents; industrial and retail are face rents

Sources: ABS; JLL Research; RBA



# Annex: Selected Policy Responses to the COVID-19 Pandemic<sup>(a)</sup>

Date	Agency	Measure	Timeframe	Target
3 Mar	RBA	Cash rate: -25bps to 0.50%	From 4 Mar 20	Macroeconomy
12 Mar	Govt.	One-off \$750 to persons receiving social assistance (second payment offered on 22 Mar for those eligible), see below	31 Mar 20 (1st round) 13 Jul 20 (2nd round)	Households
	Govt.	Cash flow assistance to SMEs (<=\$25k; expanded to <=\$100k and not-for-profits on 22 Mar)	From 28 Apr 20	Businesses
	Govt.	Subsidy for trainee and apprentice wages	1 Jan 20 to 30 Sep 20	Households
	Govt.	Increased scope and size of instant asset write-offs; earlier deduction of depreciation	Until 30 Jun 20 (assets) Until 30 Jun 21 (depreciation)	Businesses
15 Mar	ASIC	Limits on number of equity market trades (publicly announced 16 Mar)	Immediate	Market resilience
16 Mar	RBA	RBA open market operations (added 1-month and 3-month repos daily and 6-month (or longer) at least weekly)	Immediate	Market illiquidity
	CFR	Statement: <i>'Australia's financial system is resilient'</i> . Noted actions by the RBA; APRA (regulatory relief/waivers); and ASIC		Policy coordination
19 Mar	RBA	Cash rate: -25bps to 0.25%	From 20 Mar 20	Macroeconomy
	RBA	Govt. bond purchase program (targeting three-year yield of ~25bps)	Immediate	Macroeconomy & market illiquidity
	RBA	Term Funding Facility established (can borrow up to 3% of total credit outstanding for three years at 25bps, allocation to rise if increase lending to business, especially SMEs)	From 30 Mar 20 to ~31 Mar 21	Cost & availability of finance
	RBA	ES balances remunerated at 10bps	From 20 Mar 20	Cost of finance
	APRA	Temporary change to expectations for capital ratios	Immediate	Availability of finance
20 Mar	RBA	Temporary US\$60b swap line with the US Federal Reserve	Immediate	Market illiquidity
	Banks	Defer SME & household repayments for those affected, by up to six months	From ~23 Mar 20	Businesses & households
	Govt.	Assure responsible lending laws won't constrain new lending	Immediate for new credit	Businesses
22 Mar	Govt.	Fortnightly payments to recipients of income support (\$550)	From 27 Apr 20 for six months	Households
	Govt.	Early release of superannuation up to \$20k; reduction in superannuation drawdown	FY 2020 and 2021 (super)	Households

Date	Agency	Measure	Timeframe	Target
		rates	immediate (drawdown)	
	Govt.	SME Guarantee Scheme of 50% (up to \$20b) to support \$40b in new SME loans	From ~01 Apr 20 to 30 Sep 20	Availability of finance
	Govt.	\$15b investment by AOFM in structured finance	From 27 Mar 20	Market support
	Govt.	Increasing bankruptcy and insolvency thresholds and response time for creditor action; ATO withholding enforcement actions; temporary relief from insolvent trading provisions	From 25 Mar 20 for six months	Businesses & households
23 Mar	APRA	COVID-19 repayment moratoriums not regarded as 'arrear' or 'restructured'	Immediate	Availability of finance
	CFR	Statement: <i>'Crucial that financial system remains stable and resilient and that markets are open and orderly; working hard to achieve this and will continue to do so'</i>		Policy coordination
29 Mar–7 Apr	Govt.	National Cabinet announces moratorium on evictions for residential tenancies, and common SME leasing principles forming a 'Mandatory Code of Conduct' during COVID-19. Applies to SMEs with annual turnover up to \$50m which are eligible for the Commonwealth JobKeeper program.	SME leasing principles to be defined by each State and Territory Government and apply from 3 Apr 20 for the period that the JobKeeper program remains operational.	Businesses & households
30 Mar	Govt.	JobKeeper wage subsidy of \$1,500 per fortnight per eligible employee for up to six months.	From 31 Mar 20 (payments received from early May)	Businesses & households

(a) Fiscal responses outline initiatives announced by the Australian Government only

Sources: APRA; ASIC; media reports; RBA

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## HILDA

### Disclaimer

This publication uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The unit record data from the HILDA Survey were obtained from the Australian Data Archive, which is hosted by The Australian National University. The HILDA Survey was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views based on the data, however, are those of the author(s) and should not be attributed to the Australian Government, DSS, the Melbourne Institute, the Australian Data Archive or The Australian National University and none of those entities bear any responsibility for the analysis or interpretation of the unit record data from the HILDA Survey provided by the author(s).

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