2. The Australian Financial System

Summary

The Australian financial system is strong. There are several features that leave it well placed to support economic activity through the current challenging economic and financial environment.

- Australia has a resilient, well-capitalised and profitable banking system that has strong liquidity coverage. During the recent period of stress in parts of the global banking system, the Australian Prudential Regulation Authority (APRA) has stepped up its supervision of banks in Australia and, together with other agencies on the Council of Financial Regulators (CFR), is closely monitoring the broader financial system. Prudential requirements for banks operating in Australia are equivalent to, and in some instances stronger than, Basel III requirements; the banking system holds levels of capital and liquidity that are well in excess of these requirements.[1] Over the period ahead, banks anticipate an increase in non-performing loans (from historically low levels) in response to pressure on household budgets from higher interest rates and inflation. Banks are well placed to manage this while continuing to lend to households and businesses.
- Other large financial institutions in Australia also remain resilient. Superannuation funds have navigated periods of volatility in asset markets without inducing disruptions of the like seen in the United Kingdom bond market late last year. Nevertheless, recent events have continued to highlight the importance of Australian superannuation and investment funds maintaining robust liquidity management practices; this issue remains a key area of focus for regulators domestically and abroad. Insurers' capital levels also remain well above regulatory requirements, but the cost of claims has increased due to inflation and higher-than-expected natural disaster claims.
- Cyber resilience continues to be a key focus area for financial institutions and regulators. Recent high-profile cyber-attacks demonstrate the potential for these attacks to not only harm the individuals affected but to spill over to other organisations and the financial system more broadly.

Banks have high levels of capital, and the 'unquestionably strong' capital framework further enhances banks' resilience

Prudential requirements for banks operating in Australia are at least equivalent to, and in many instances stronger than, Basel III requirements.[2] Banks' capital ratios remain well above regulatory minimum requirements (Graph 2.1). Over the six months to December 2022, banks' capital increased further as growth in retained profits more than offset an increase in risk-weighted assets. Regulation in Australia requires banks to hold capital against interest rate risk in the banking book, which also incentivises banks to hedge residual interest rate exposures, leaving little interest rate risk on their balance sheets. As a result, capital levels in the Australian banking system have been less vulnerable to rising interest rates compared with some other jurisdictions.

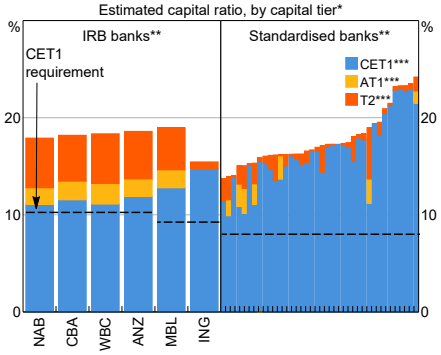
APRA's 'unquestionably strong' capital framework took effect in January 2023 with two main aims: to further strengthen the resilience of banks; and to more closely align Australia's regulatory regime with Basel III standards. It includes a larger capital conservation buffer (CCB) for large banks (over the minimum prudential capital requirement) and a 1 per cent countercyclical capital buffer (CCyB) that can be reduced by APRA in periods of stress.[3] Under the new framework, banks' Common Equity Tier 1 (CET1) ratios are expected to increase slightly, due to a lower average risk weight (banks' capital positions under the new standards are due to be published by APRA in May). To better calibrate capital charges with underlying risk profiles, risk weights for some loans to small and medium-sized enterprises (SMEs) have declined, while risk weights for higher risk mortgages (such as investor, interest-only and highly leveraged loans) have increased.

Under APRA's 2026 loss-absorbing capacity requirement, large banks are required to hold at least 18.25 per cent in total capital against risk-weighted assets. Consistent with this, large banks have been raising non-equity capital over recent years, mainly through Tier 2 instruments; these rank higher in the capital structure than CET1 and Additional Tier 1 (AT1) hybrid instruments, and so are issued by banks at lower cost. Banks have front-loaded their issuance of loss-absorbing capital to the extent that they are already slightly ahead of their 2026 requirements. Australian banks are unlikely to need to raise significant amounts of AT1 given issuance to date and due to the perpetual structure of these instruments. Secondary market prices for Australian banks' AT1 instruments fell by less than those abroad following the write-down of Credit Suisse's AT1 securities, which had a different conversion structure to the securities that tend to be issued in Australia (see 'Box A: Recent International Bank Failures – Causes, Regulatory Responses and Implications').

Graph 2.1

Capital Ratios

Estimated capital ratio, by capital tier*



* Dashed line refers to APRA's 'Unquestionably Strong' Framework for CET1 (10.25 per cent for major banks, 9.25 per cent for other IRB banks; 8 per cent for standardised banks).

** Internal ratings based (IRB) banks compute risk-weights internally; standardised banks set risk-weights in accordance with APRA's risk-weight schedules.

*** Common Equity Tier 1 (CET1) is ordinary share capital and retained earnings; Additional Tier 1 (AT1) is perpetual subordinated debt; Tier 2 (T2) is dated subordinated debt.

Sources: APRA; RBA

Banks appear resilient to more challenging conditions

Retained earnings have contributed to strengthening the capital base of Australian banks over recent years. Bank profitability over the past couple of years has been supported by growth in lending, low levels of non-performing loans (NPLs) and, more recently, an uptick in net interest margins (NIMs) (Graph 2.2). The increase in NIMs over the past year has been modest in the context of the preceding decline and has reflected the effect of higher interest rates on non-loan interest-earning assets, such as earnings on banks' interest rate hedges and holdings of high-quality liquid assets (HQLA). At the same time, strong competition among banks for high-quality borrowers has weighed on NIMs.[4]

Market analysts expect bank profitability to decrease a little over the coming year. This reflects expectations of a further slowing in credit growth, particularly for housing, and an increase in credit losses as unemployment rises in response to higher interest rates. Slower loan growth is also leading to greater competition among lenders, which, if sustained, could put further pressure on NIMs.

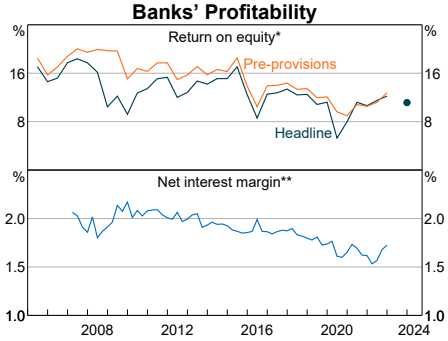
Stress-testing simulations suggest that banks would be able to continue extending credit to households and businesses even if economic conditions were to be materially worse than expected. Banks' current profitability and high initial capital levels would support capital ratios in an economic downturn. While exercises of this type contain considerable uncertainty, they give an indication of the impact on banks of a severe economic downturn. In a scenario where the level of GDP falls by around 5 per cent, the unemployment rate rises to 5½ per cent and property prices fall by around another 10 per cent by December 2023, large and mid-sized banks' CET1 ratios would fall by around 160 basis points but would still be above minimum capital requirements (Graph 2.3).[5] Smaller banks are also expected to be resilient to the deteriorating economic conditions in this scenario. While smaller banks' exposures are typically more concentrated in mortgages, high initial capital levels indicate that smaller banks in general could absorb losses associated with weaker macroeconomic conditions for a time while maintaining CET1 ratios above minimum requirements.

Loan arrears remain low but are expected to increase

NPLs as a share of outstanding loans remain around the lowest level over the past decade,

Graph 2.2

Banks' Profitability

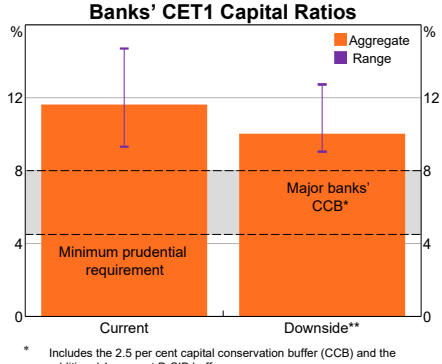


* Dot represents forecast based on 12-month forward earnings.
** Interest income received less interest expenses paid, expressed as a percentage of assets.

Sources: APRA; RBA; Refinitiv

Graph 2.3

Banks' CET1 Capital Ratios



* Includes the 2.5 per cent capital conservation buffer (CCB) and the additional 1 per cent D-SIB buffer.
** Scenario assumes that GDP falls around 5 per cent, the unemployment rate increases to 5.5 per cent, and property prices fall around 10 per cent by December 2023.

Sources: APRA; RBA

and no banks are reporting a material increase in NPLs (Graph 2.4). The share of mortgages with repayments that are 30–89 days past due has, however, increased slightly from a low base. Liaison with banks indicates that part of the increase could be seasonal given the holiday period over December and January.

Banks' strong asset quality has been supported by low unemployment, high levels of saving and prepayment buffers, and sound lending standards over recent years. The share of banks' loans in, or close to, negative equity is very low and well below pre-pandemic levels, which supports both borrower and bank resilience by limiting losses in the case of a loan default. However, liaison with banks indicates that financial stress is increasing for some households, consistent with higher interest rates and inflation putting pressure on borrowers' budgets (see 'Chapter 3: Household and Business Finances in Australia' and 'Box B: Scenario Analysis on Indebted Households' Spare Cash Flows and Prepayment Buffers'). As such, NPLs are expected to increase over the coming year. While banks have increased provisions for loan losses, the stock of provisions is still below the historical average and much lower than the provisions held during the pandemic (Graph 2.5).

Banks have high levels of liquidity

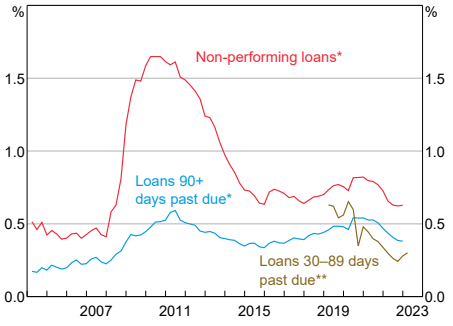
Banks have high levels of liquid assets that are well above regulatory minimums to support them through adverse liquidity conditions. The recent experience in the United States highlights the importance of banks having strong risk-management processes and maintaining ample liquidity to meet cash outflows (see 'Box A: Recent International Bank Failures – Causes, Regulatory Responses and Implications'). APRA requires 13 large and complex Australian banks to meet a Liquidity Coverage Ratio (LCR), which under the Basel III reforms requires that banks have sufficient HQLA to meet cash outflows in a severe stress scenario. All of these banks have maintained LCRs comfortably above regulatory requirements for some time (Graph 2.6). Furthermore, these banks' holdings of HQLA are valued at market rates, meaning mark-to-market gains or losses are recognised on bank balance sheets in a timely fashion. As discussed above, APRA also requires banks to hold capital against interest rate risk.

Smaller and less complex banks in Australia are also subject to a strong regulatory regime and are required to maintain ample liquidity

Graph 2.4

Banks' Non-performing Loans

Domestic books



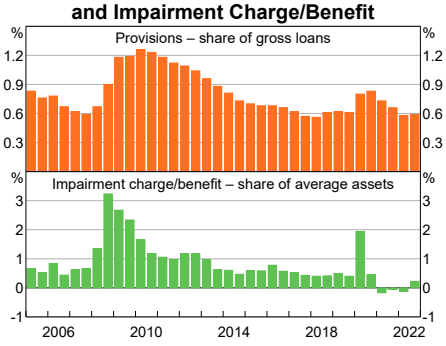
* A loan is classed as non-performing if an outstanding repayment is more than 90 days past due, or the loan is insufficiently collateralised.

** Loans with an outstanding repayment 30-89 days past due. February 2023 data is used for the most recent observation for loans 30–89 days past due.

Sources: APRA; RBA

Graph 2.5

Australian Banks' Provisions and Impairment Charge/Benefit



Sources: APRA; RBA

positions. APRA requires such banks to have in place a robust liquidity risk-management framework and to maintain a large portfolio of liquid assets (to meet a minimum liquidity holding ratio (MLH)) that can be easily and quickly converted to cash should the need arise. These banks must maintain a minimum holding of 9 per cent of their liabilities in specified liquid assets. Banks' MLH remain comfortably above regulatory requirements (Graph 2.7).

Exchange Settlement (ES) balances will decline as the Reserve Bank's Term Funding Facility (TFF) and Bond Purchase Program wind down, requiring banks to increase their holdings of other forms of HQLA to maintain their stock of liquid assets. While replacing amounts borrowed under the TFF represents a sizeable funding task for banks over the next 15 months, they have been making related preparations for some time (see below).

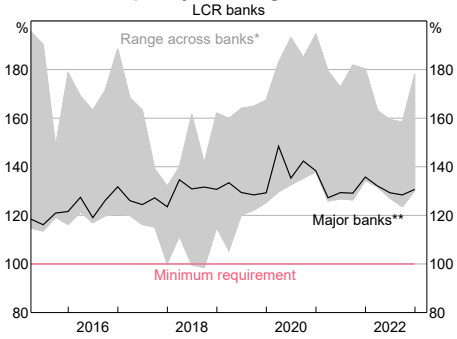
A previous element of Australia's liquidity framework – the Committed Liquidity Facility (CLF) – was phased out over 2022. This followed a decision by APRA and the Reserve Bank in late 2021 that the CLF was no longer required to support so-called 'LCR banks' to meet their liquidity requirements, given the increased availability of HQLA in Australia.[6] Bank CLF allocations were reduced from $136 billion at the end of 2021 to zero on 1 January 2023, and mostly replaced with additional holdings of Australian Government Securities (AGS), securities issued by the state and territory borrowing authorities ('semis') and ES balances. This process went smoothly.

Larger banks are also required to meet a Net Stable Funding Ratio (NSFR) requirement, which enhances banks' longer term funding resilience. This ensures they have stable long-term funding profiles, which support their resilience to prolonged liquidity pressures. Banks' NSFRs comfortably meet regulatory requirements.

Graph 2.6

Liquidity Coverage Ratio

LCR banks

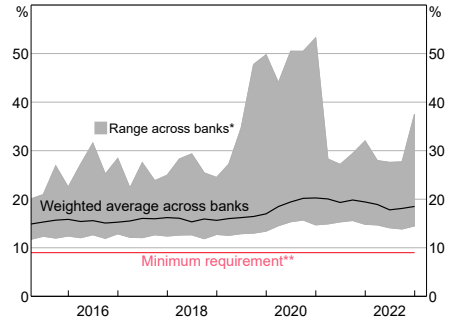


* From the 10th to 90th percentile of banks' liquidity coverage ratios.
** Weighted average of the major banks' ratios.
Sources: APRA; RBA

Graph 2.7

Minimum Liquidity Holding Ratio

MLH banks

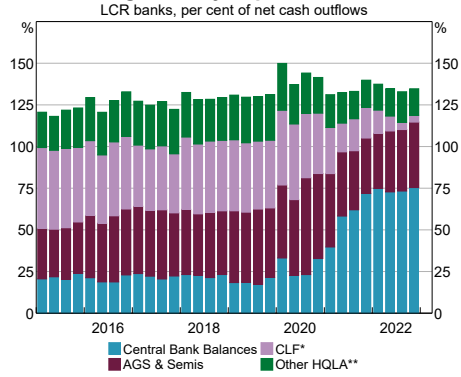


* From the 10th to 90th percentile of banks' minimum liquidity holding ratios.
** Minimum requirements are higher for some banks.
Sources: APRA; RBA

Graph 2.8

High Quality Liquid Assets

LCR banks, per cent of net cash outflows



* Refers to eligible amount for LCR calculation.
** Includes HQLA type 2, coins and notes, RBNZ securities and other.
Sources: APRA; RBA

Banks are well advanced in preparing for their sizeable funding task

Over the next 15 months, Australian banks will need to repay a larger-than-usual amount of funding as funds borrowed from the Reserve Bank's TFF mature (Graph 2.9). The TFF was part of a monetary policy package designed to reduce funding costs across the economy and to support lending, especially to SMEs, during the pandemic.[7] Banks borrowed $188 billion of low-cost, three-year term funding from the TFF; as of December 2022, this funding accounted for 4 per cent of banks' overall funding. Much of this funding will need to be refinanced because banks will need to obtain other HQLA to replace ES balances (discussed above).[8] This refinancing task is manageable, provided banks continue to adequately prepare and ensure their funding requirements are met well in advance to reduce their vulnerability to a prolonged period of dislocation in wholesale funding markets.

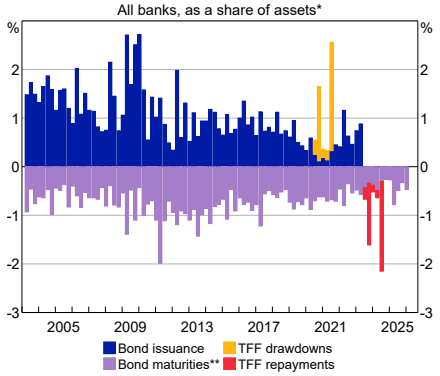
Indeed, Australian banks are generally comfortably ahead in their funding plans, which affords them flexibility to defer bond issuance for a period if there are renewed strains in global funding markets. Prior to the failure of some banks in the United States in early March, Australian banks had already raised a large amount of wholesale debt funding; this amounted to net bond issuance of $20 billion over the preceding six months (Graph 2.10). This large volume of bank bond issuance was comfortably absorbed by domestic and offshore bond markets. However, the cost of issuance increased alongside the widening in bond spreads internationally. Australian banks have long been viewed as attractive by domestic and international bond investors as a result of the strong regulatory environment in which they operate, their strong balance sheets, high credit ratings and record of investor engagement. Smaller Australian banks tend to issue domestically only, though conditions in offshore markets can affect these banks indirectly; if larger banks choose to step up issuance offshore instead of domestically, smaller banks benefit from the lower supply of bank bonds into the domestic market.

Over many years, Australian banks have demonstrated their ability to adjust their funding sources as conditions evolve. For example, in response to the market volatility associated with COVID-19 and Russia's invasion of Ukraine, banks issued bonds with shortened tenors in line with investors' preferences for reduced duration exposure; they also shifted towards issuing covered bonds (Graph 2.11).

Graph 2.9

Bank Bonds and the TFF

All banks, as a share of assets*

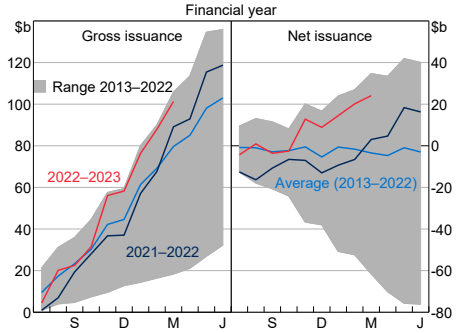


* Assumes 4 per cent annual asset growth.
** Excludes buybacks.
Sources: APRA; Bloomberg; RBA

Graph 2.10

Cumulative Australian Bank Bond Issuance*

Financial year



* Includes senior unsecured and covered issuance.
Sources: Bloomberg; Private Placement Monitor; RBA

While there is a regulatory limit to the amount of funding that banks can raise through covered bonds, there is still capacity to issue these instruments should conditions warrant.

Non-bank housing credit growth has slowed …

Non-bank housing credit contracted slightly in early 2023 after reaching growth of 21 per cent (on a six-month-ended annualised basis) in mid-2022 (Graph 2.12). The slowdown is in part due to the broader slowdown in the housing market, which has reduced demand for housing credit. In addition, strong pricing competition for borrowers from banks and rising funding costs for non-banks (which do not have access to low-rate deposit funding) have weighed on non-banks' ability and appetite to originate new loans.

Non-banks, relative to banks, tend to lend more to borrowers that are self-employed, work in industries more sensitive to economic conditions and at higher loan-to-income ratios. However, risks to financial stability arising from non-bank lending for housing are low.[9] Non-banks' share of total housing lending remains small at less than 5 per cent. Additionally, lending standards appear to have been maintained by non-bank lenders during the earlier period of rapid credit growth between 2020 and mid-2022, including because of the discipline imposed by their warehouse funders (which are often banks) and investors in residential mortgage-backed securities. The recent slowing of non-bank credit growth also suggests that non-banks have not unduly lowered their lending standards in an effort to maintain housing market share. Non-banks' 90-day loan arrears are around historical lows and are similar to arrears rates at banks, in part due to the strong labour market. As with banks, though, loan arrears are likely to gradually pick up over the period ahead given the more challenging economic environment.

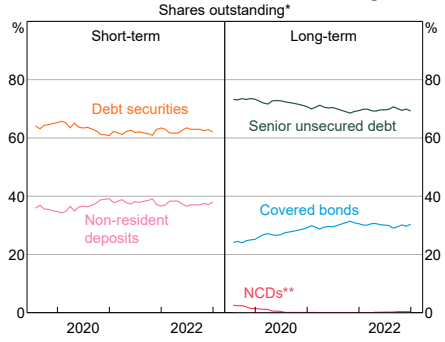
… while non-bank business credit growth has increased sharply

While non-banks' housing credit growth has slowed, business credit growth has increased sharply, reaching 25 per cent (on a six-month-ended annualised basis) in early 2023 (Graph 2.12). Growth in non-banks' business lending has been particularly strong for property lending, which is recorded separately from housing credit and includes loans to self-managed superannuation funds. Over recent years, banks have been pulling away from some forms of higher risk business lending – such as construction, property and vehicles – while non-banks have increased their market share in these

Graph 2.11

Banks' Wholesale Debt Funding

Shares outstanding*

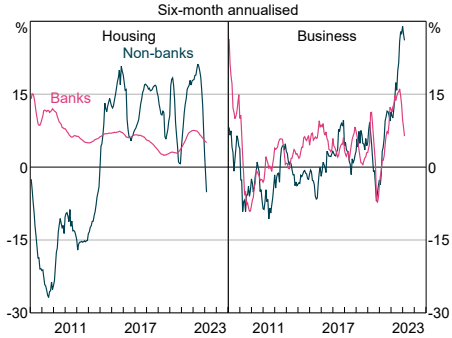


* Original maturity basis, excluding hybrids.
** Negotiable certificates of deposit.
Sources: ABS; APRA; Bloomberg; RBA; Refinitiv

Graph 2.12

Credit Growth

Six-month annualised



Sources: APRA; RBA

sectors. The relative riskiness of non-banks' business lending is reflected in the interest rate charged by non-banks being 270 basis points higher on average than that charged by banks.

Non-banks' share of total business credit is small at about 8 per cent, which helps to limit risks to financial stability. However, there is limited data on the credit quality of these loans and on broader non-bank business lending activity and their funding models, given this activity occurs largely outside the prudential regulatory perimeter. While some business lending is funded through securitisation, where credit quality is closely scrutinised by investors and credit rating agencies, some is funded by private equity or via specialist funds where lending practices are less transparent.

In general, non-bank lending can be more concentrated, riskier and more procyclical than bank lending, which can amplify credit and price cycles, particularly for property. Non-banks have the potential to contribute to systemic risk because their business models tend to involve liquidity and maturity mismatches and the use of leverage, which can amplify liquidity risks from large movements in asset prices (see 'Chapter 1: The Global Financial Environment'). Since the global financial crisis, when so-called 'shadow banking' activity severely disrupted the financial system, work has continued across many economies to increase regulators' visibility and understanding of non-bank lending activity. Compared with some other jurisdictions, however, this activity does not account for a large share of overall financing in the Australian economy.

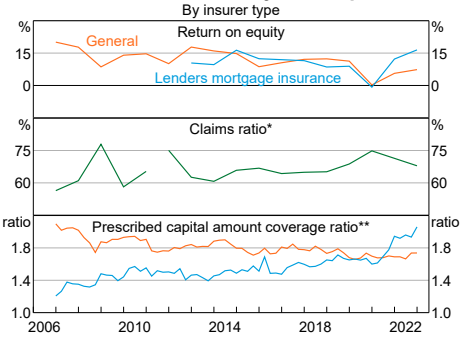
Insurers' capital remains strong despite claims related to climate events

Insurers' capital positions remain well above APRA's prescribed capital amount and profits have continued to recover over the past six months (Graph 2.13). Insurers' profits have been supported by a recovery in investment income, driven by higher interest earnings on fixed-income securities, while increases in premiums have only partly offset the rise in costs associated with claims. Meanwhile, low unemployment has continued to support profits for lenders mortgage insurers (LMI).

Claims from natural disasters remain at a high level; the NSW floods in 2022 are estimated to be Australia's most expensive natural disaster on record (in inflation-adjusted dollars). This pattern has continued into 2023, with Australian-based insurers facing large claims from flooding and cyclone-related damage in New Zealand. The cost of reinsurance – which domestic insurers use to protect themselves against large events – has increased sharply, reflecting larger payouts in Australia and globally. Insurers have passed these costs on to customers via increased premiums, raising concerns about the availability and affordability of insurance in some locations. Reduced insurance coverage exposes borrowers in the event of a natural disaster and may also expose lenders in cases where affected assets are used as collateral.

Graph 2.13

Insurers' Profitability and Capital



* Claims ratio is calculated by net claims divided by net premiums. This represents a loss ratio for insurers.

** Eligible capital as a multiple of prescribed capital amount or minimum capital requirement (prior to March 2013).

Sources: APRA; RBA

Superannuation funds have navigated a period of asset price volatility

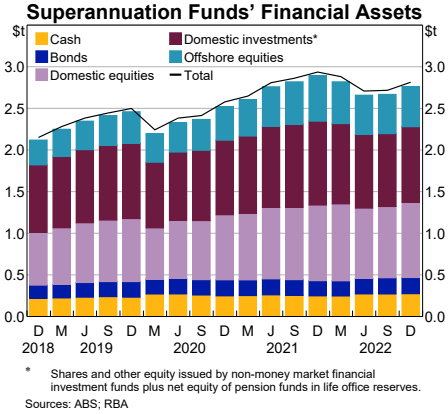
Superannuation funds' assets and returns stabilised over the second half of 2022, after falling sharply earlier in the year (Graph 2.14). The modest recovery in equity prices and positive net contributions supported growth in funds' assets, though this was mostly offset by declining property valuations. Quarterly returns were positive in December 2022 for the first time since 2021; five-year annualised returns for the industry are around 5 per cent.

Disruptions in the UK bond market emanating from the pension fund sector in September 2022 highlighted how leverage from derivatives can amplify liquidity risks coinciding with large movements in asset prices.[10] The episode also demonstrated the importance of robust liquidity management practices. There are key differences between the UK pension fund industry and the Australian superannuation industry:

- Australian funds are mostly defined contribution (80 per cent of assets), where investment risk is directly passed through to members. By contrast, UK funds are predominantly defined benefit (90 per cent of assets), where member payments are guaranteed. This requires UK funds to align the interest rate sensitivity of their assets and liabilities, which is typically done through the use of interest rate swaps and results in embedded leverage.
- While Australian superannuation funds use derivatives for risk-management purposes, they do so in a more moderate fashion compared with UK funds (21 per cent of assets compared with 62 per cent in the United Kingdom). This tempers the risk of margin calls causing a liquidity shock for superannuation funds, which could otherwise result in a need to engage in asset fire sales to urgently raise liquidity.
- Australian funds' cash holdings (12 per cent of assets) are much larger than UK funds' (2 per cent of assets). This also supports their ability to meet margin calls in an orderly fashion (Graph 2.15).

Nevertheless, Australian funds' use of foreign exchange derivatives to hedge foreign asset holdings requires them to provision for margin calls in the event of large exchange rate movements; investments that are denominated in foreign currencies account for over 35 per cent of total superannuation fund assets (Graph 2.16). The sector's ability to handle liquidity shocks was tested during the pandemic, when a 14 per cent depreciation in

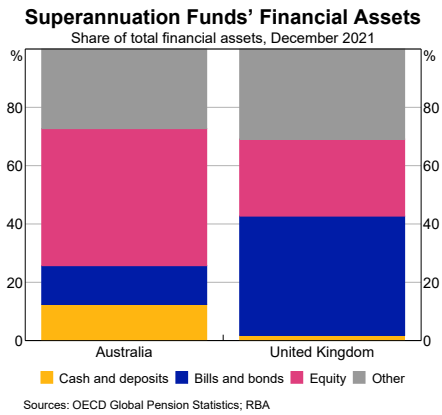
Graph 2.14



* Shares and other equity issued by non-money market financial investment funds plus net equity of pension funds in life office reserves.

Sources: ABS; RBA

Graph 2.15



Sources: OECD Global Pension Statistics; RBA

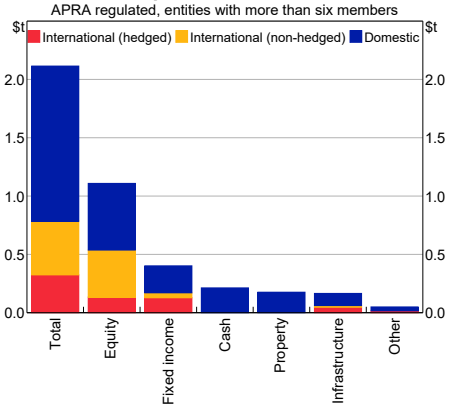
the value of the Australia dollar in a single week prompted margin calls on foreign exchange derivative positions of $17 billion.[11] In addition, some superannuation funds were required to sell liquid assets during the pandemic to meet increased member switching towards safer assets and sizeable member withdrawals following the government's COVID-19 early release of superannuation scheme. While these periods presented a challenge to the liquidity risk-management practices of superannuation funds, they were navigated without disrupting underlying asset markets.

APRA's updated investment governance standards, which came into effect in early 2023, are designed to further increase the robustness of funds' investment stress testing, liquidity risk-management practices and asset valuations by ensuring internal processes are well defined, regularly reviewed and performed with adequate frequency. Liquidity stress tests are also required under the new standards. More broadly, this effort is in keeping with moves by regulators internationally, where investment funds are being subjected to more onerous liquidity stress-testing requirements.

Graph 2.16

Australian Superannuation Funds' Assets

APRA regulated, entities with more than six members



Sources: APRA; RBA

Operational resiliency and security of financial market infrastructures remains in focus

Recent operational and cyber incidents, both domestically and internationally, highlight the importance of financial market infrastructures continually assessing and improving their operational resilience and security. This is critical to underpinning stability in the financial system and remains a key area of supervisory focus (see 'Chapter 4: Domestic Regulatory Developments').

On 12 October 2022, the Reserve Bank Information and Transfer System (RITS) experienced a technology outage that disrupted the settlement services for New Payments Platform payments and for some other low-value payments systems. This caused significant delays for a large number of payments. The Bank has commissioned an external review of the incident and the operational risk environment for RITS. The Bank is also undertaking a targeted self-assessment of RITS to determine whether further actions may be required to improve observance of the relevant global standard – the 'Principles for Financial Market Infrastructures'.

The Bank has continued to place particular emphasis on the operational resilience of clearing and settlement facilities. In November, ASX (Australia's major stock exchange) announced its decision to pause and reassess all aspects of the replacement solution for CHESS, the system that has supported clearing and settlement for Australia's cash equities markets since 1994. The Bank and the Australian Securities and Investments Commission (ASIC) have publicly stated their expectations that ASX must continue to support and maintain CHESS until the system can be safely replaced by ASX and its users. As a result, ASX has committed to maintain the resources and capabilities to ensure the ongoing stable and reliable operation and security of CHESS. This will remain a regulatory focus for the Bank and ASIC as co-

supervisors of ASX's clearing and settlement facilities.

Cyber risk remains elevated

Cyber risk is one of the key risks facing the global financial system. A number of high-profile cyber-attacks have occurred in Australia recently, including the attack this year on Latitude Financial. The cyber-attacks on Optus and Medibank Private in late 2022 demonstrated the potential for spillovers to the broader financial system, even when the incident originates outside the financial system. This is in addition to the harm that can be caused to affected individuals. Similarly, the cyber-attack on ION Trading UK demonstrated how an attack on common third-party infrastructure can have widespread impacts across markets and jurisdictions.

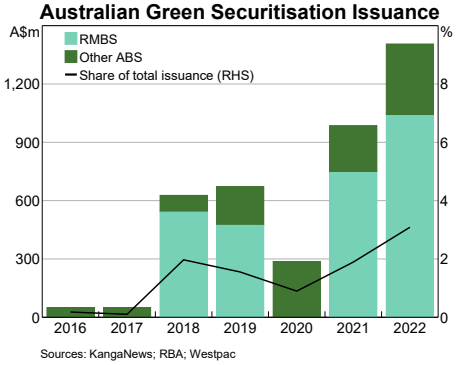
Banks in Australia continue to report a heightened level of fraud and scams, and information from liaison indicates that cybercriminal activity continues to increase in sophistication. Financial institutions are continuing to invest in their cybersecurity and response capabilities, aligning their systems and procedures with best practices to mitigate cyber risks. The government and regulators are also continuing to work with financial institutions to further develop the resilience of the financial system (see 'Chapter 4: Domestic Regulatory Developments').

Management of climate change financial risk continues to evolve

Climate change is another key long-term risk to the financial system that will need to be carefully managed by financial institutions and monitored by regulatory agencies. The financial system is affected through the direct physical risks to assets from climate events, as well as through the transition risks that arise from policies and technologies implemented to address climate change and assist in the transition to a lower emissions economy. The major Australian banks continue to invest in their internal climate-risk monitoring capabilities, and all have now released reports outlining their climate strategies and detailing progress on meeting their climate targets. Australia's 'green' financial markets continued to develop in 2022 with record issuance of 'green' asset-backed securities, where the underlying loans are used for activities such as purchasing properties with high energy ratings or installing solar panels (Graph 2.17).[12] Australia uses a market-based classification system in which investors assess the 'green' criteria of the underlying loans as disclosed by issuers. This is often provided by third-party certification of green securities, which is also common practice in the United States. By contrast, in Europe the taxonomy of 'green activities' is prescribed.

Public and private sector organisations around the world are working to better measure, monitor and manage the significant risks arising from climate change. For example, the recent Climate Vulnerability Assessment conducted by APRA on behalf of the CFR estimated the impact of two potential climate scenarios on Australia's five largest banks. The results suggest that neither climate scenario was likely to result in severe stress to banks, although pockets of stress did emerge for both mortgage and business exposures. In addition, the potential for higher

Graph 2.17



Sources: KangaNews; RBA; Westpac

losses arising from climate change could lead to the banking sector being more vulnerable to future economic downturns. The Reserve Bank has published complementary top-down analysis that yielded similar conclusions and has also highlighted the need for further work in this area.[13] See 'Chapter 4: Domestic Regulatory Developments' for work underway by CFR agencies.

Endnotes

[1] See APRA (2021), 'Response to Submissions: Finalising Bank Capital Reforms', November.

[2] See Lonsdale J (2023), 'APRA Chair John Lonsdale – Speech to AFR Banking Summit 2023', Sydney, 28 March.

[3] The CCB is an additional reserve of capital (ranging from 2.5–4.75 percentage points) required to be held above the minimum prudential capital ratio of 4.5 per cent for all banks. The CCyB is a releasable reserve of capital with a baseline setting of 1 per cent, which may be varied by APRA in the range of 0–350 basis points.

[4] See Carse V, A Faferko and R Fitzpatrick (2023), 'Developments in Banks Funding Costs and Lending Rates', RBA *Bulletin*, March.

[5] For more details on the Reserve Bank stress-testing model, see Garvin N, S Kurian, M Major and D Norman (2022), 'Macrofinancial Stress Testing on Australian Banks', RBA Research Discussion Paper No 2022-03.

[6] See APRA (2023), 'APRA Phases Out Aggregate Committed Liquidity Facility', News Release, 9 January. The CLF complemented available HQLA to ensure banks had sufficient access to liquid assets during a period of stress. Banks were able to use CLF allocations towards meeting their LCR requirements. The CLF had been required in Australia given the historically limited supply of HQLA due to low levels of HQLA securities (AGS and semis) on issue. See Brischetto A and L Jurkovic (2021), 'The Committed Liquidity Facility', RBA *Bulletin*, June.

[7] See Alston M, S Black, B Jackman and C Schwartz (2020), 'The Term Funding Facility', RBA *Bulletin*, December.

[8] See Kent C (2023), 'Long and Variable Monetary Policy Lags', Speech to the KangaNews DCM Summit, Sydney, 20 March.

[9] See Hudson C, S Kurian and M Lewis (2023), 'Non-bank Lending in Australia and the Implications for Financial Stability', RBA *Bulletin*, March.

[10] The sharp increase in UK Government bond yields after the government's mini-budget in September 2022 led to large margin calls on UK funds' interest rate derivatives. UK funds were forced to sell assets to meet the margin calls, which caused market dislocation and resulted in the Bank of England intervening. See Breeden S (2022), 'Risks from Leverage: How Did a Small Corner of the Pensions Industry Threaten Financial Stability?', Speech to ISDA and AIMA, 7 November.

[11] For more information on Australian superannuation funds during the onset of the pandemic, see RBA (2021), 'Box C: What Did 2020 Reveal about Liquidity Challenges Facing Superannuation Funds?', *Financial Stability Review*, April.

[12] See Kearns J (2022), 'Securitisation: Past, Present and Future', Speech to the Australian Securitisation Conference, Sydney, 30 November.

[13] See Kurian S, G Reid and M Sutton (2023), 'Climate Change and Financial Risk', RBA *Bulletin*, June.