Financial Stability Risks from Non-bank Financial Intermediation in Australia

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Abstract

Risks to financial stability posed by the non-bank financial intermediation (NBFI) sector in Australia remain relatively contained. In comparison to overseas, the size of the NBFI sector (excluding superannuation) is relatively small, and its interconnectedness with the traditional banking sector has continued to decline. However, as has been shown in recent periods of stress in overseas markets, vulnerabilities in the NBFI sector can have implications for financial stability. In particular, there remains a risk of disorderly movements in some international asset markets, which could be exacerbated by the role of overseas NBFIs and spill over into Australian markets. Lending by Australian non-banks remains small as a share of outstanding credit, but has recently shifted towards riskier market segments and there is less detailed information about this lending than that done by prudentially regulated banks. As part of its monitoring of evolving risks in the NBFI sector, Australia's Council of Financial Regulators has sought to improve visibility over domestic NBFIs' activities, including in commercial real estate and the growing use of over-the-counter derivatives. This article provides an analysis of recent developments and evolving risks posed by NBFIs in Australia.

Introduction

Non-bank financial intermediation firms, or NBFIs, provide financial services but do not hold a banking licence. They complement or provide competition to banks by offering a wide range of important and often highly specialised financial services, including managing investments (in the case of superannuation funds, investment funds and insurers), credit intermediation (in the case of non-bank lenders), facilitating financial market trading (in the case of market-makers and prime brokers) and providing services that are critical to the smooth functioning of financial markets (such as central counterparties).[1]

NBFIs can pose risks to financial stability due to their size, complexity and interconnectedness with the domestic and global financial systems. Some NBFI activities can also involve considerable use of leverage or give rise to liquidity mismatches, where investor redemptions in stressed market conditions have the potential to amplify volatility and result in fire sales of underlying assets (particularly in fixed income and real estate markets). While non-bank lending can have an important role in providing certain borrowers with access to financing, it tends to be more concentrated, pro-cyclical and risky than bank lending, partly reflecting less onerous regulatory obligations as these institutions cannot accept deposits for funding. This, in turn, can amplify credit and asset price cycles, and put pressure on banks to weaken their lending standards. Through interconnections with the banking system, stresses in the non-bank sector can also spread to banks, as was observed internationally during the global financial crisis (GFC).

In recent years, a number of vulnerabilities in NBFIs in advanced economies have crystallised and contributed to periods of market dysfunction. Hidden leverage and liquidity mismatches have amplified shocks and propagated strains through the financial system. This includes the dysfunction in the US Treasury market caused by the 'dash for cash' in March 2020; the Archegos collapse that caused material losses for prime brokers in 2021; the liquidity stress and resulting dysfunction in commodities markets in 2022; and the volatility in the UK gilt market emanating from UK pension funds in late 2022 (Choudhary, Mathur and Wallis 2023). Australia's financial system was largely resilient in those episodes. However, there remains a risk of disorderly movements in overseas asset markets, which could be exacerbated by NBFIs' activities and spill over into Australian markets.

The Council of Financial Regulators (CFR) monitors developments in the NBFI sector and considers any associated systemic risks for the Australian financial system. The analysis in this article was provided to the CFR ahead of its extended annual discussion of these issues at the December 2023 CFR meeting. Given the central role of the NBFI sector in recent global episodes of market volatility, the analysis includes a deep dive on the use of over-the-counter (OTC) derivatives by NBFIs in Australia. The analysis also covers NBFIs' activities in relation to commercial real estate (CRE) given the challenging conditions in this sector globally.

Size and interconnectedness of NBFI activities

Australia's NBFI sector is broadly comparable in size to other advanced economies at almost half of domestic financial assets. However, superannuation funds account for around half of NBFI assets in Australia, compared with around one-fifth in other advanced economies. Moreover, Australian superannuation funds are predominantly prudentially regulated defined contribution funds (i.e. investment risk is passed through to the fund members) and are constrained in their ability to take on leverage. Superannuation funds therefore pose fewer direct risks to financial stability (compared with other jurisdictions) as they play a small role in credit intermediation, have a preference for longer dated assets, enjoy stable funding and maintain large cash holdings (Choudhary, Mathur and Wallis 2023).

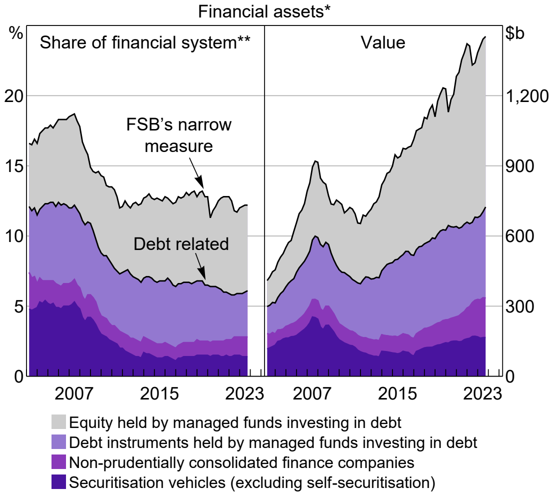
In contrast, the activities of those NBFIs that operate with higher leverage, or hold assets that are less liquid and longer dated than their liabilities (and are therefore more prone to liquidity and maturity risk), are considered more likely to present systemic vulnerabilities. The Financial Stability Board's (FSB) 'narrow' measure of NBFIs captures entities assessed as being involved in credit intermediation activities that may pose 'bank-like' financial stability risks (e.g. liquidity/maturity transformation, leverage or imperfect credit risk transfer) and/or regulatory arbitrage (FSB 2023c). In Australia, this includes non-bank lenders such as finance companies, securitisation vehicles and managed funds investing in credit products. These NBFIs' assets were around 12 per cent of financial system assets in Australia in mid-2023, which is a little below pre-pandemic levels and well below the peak of 19 per cent reached prior to the GFC (Graph 1). Securitisation vehicles have accounted for much of this decline in the post-GFC era.

The interconnectedness of riskier NBFI activities with banks and the broader financial system through funding and credit channels has also declined over the past 15 years to around historical lows (Graph 2). A large share of the financial system's exposures to NBFIs is accounted for by the equity exposures of superannuation funds that are outsourced to (third-party) investment managers. Compared with other types of funding vehicles, including those for short-term debt funding, these types of arrangements have fewer direct implications for financial stability.

Graph 1

Non-bank Financial Intermediation

Financial assets*

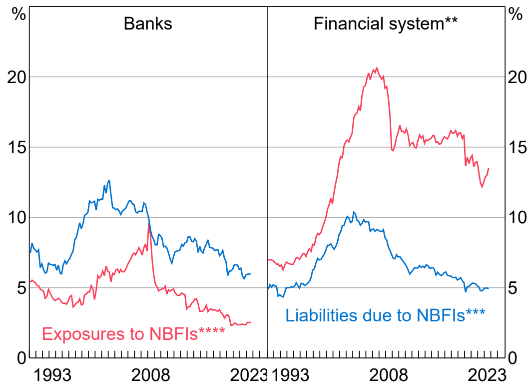


* Total assets where financial assets data are unavailable.
** Financial system excludes the RBA.
Sources: ABS; APRA; ASIC; RBA.

Graph 2

NBFI Interconnectedness*

Share of financial assets



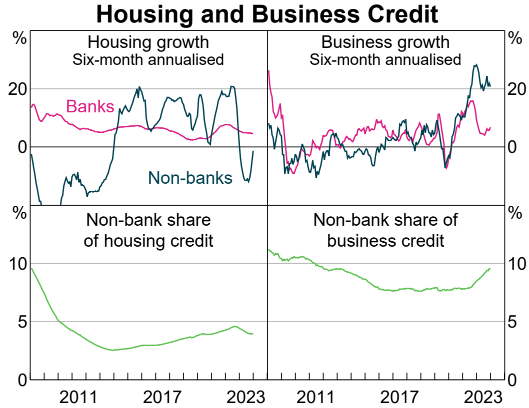
* The definition of NBFIs in this chart excludes superannuation funds and insurers.
** Excludes the RBA.
*** Includes equity funding.
**** Excludes self-securitisation.
Sources: ABS; APRA; RBA.

Shifts in Australian non-bank lending

Rapid growth in Australian non-bank housing credit in the years prior to and during the COVID-19 pandemic had seen it increase to be a little less than 5 per cent of total housing credit, before this trend reversed in 2023 (Graph 3). The reversal largely reflected the increase in interest rates having a larger impact on the funding costs of non-banks compared with banks that benefit from (low- and non-interest-bearing) deposit funding. Weaker demand for non-investment grade residential mortgage-backed securities (RMBS) over 2022 and the first half of 2023 also led to an increase in funding costs for non-bank lenders. Heightened competition from large banks, particularly for higher quality non-bank borrowers, also weighed on growth in non-bank housing credit.

Graph 3

Housing and Business Credit



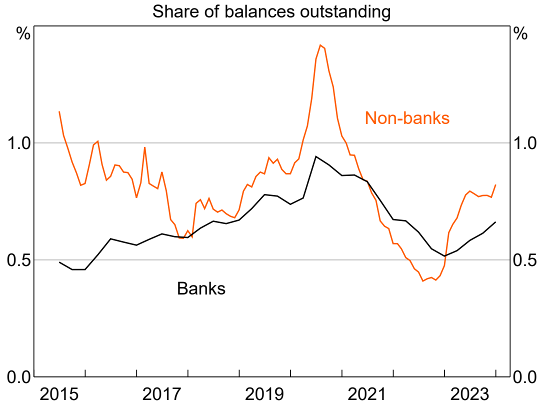
Sources: APRA; RBA.

Non-bank mortgage arrears tend to be higher than bank arrears and have risen more sharply over the past year than for banks (Graph 4). In part, this is because a higher proportion of non-bank lending is to borrowers who are more sensitive to economic conditions (e.g. self-employed workers). Non-bank lenders also lend predominantly on variable-rate terms, and so serviceability pressures will pass through their loan books more quickly than for banks who have a higher share of fixed-rate borrowers. Competition from large banks has also seen non-banks lose some high-quality borrowers who refinanced with banks on more favourable terms.

Graph 4

Housing Loans in 90-day Arrears*

Share of balances outstanding



* Latest observation is December 2023. Data on non-banks from Securitisation System; prudential collections for banks.

Sources: APRA; RBA; Securitisation System.

The RBA's liaison with non-bank lenders suggests some non-banks have relaxed underwriting and serviceability assessment standards for new loans. For instance, some non-bank lenders reduced their serviceability assessment buffer from 3 per cent to 2 or 1 per cent for refinancings on similar loan terms (i.e. no increase in total debt exposure) or loans assessed to have low credit risk.

Information from liaison also suggests some non-bank lenders have increased their share of new lending to some higher risk mortgage borrowers over 2023 (e.g. self-managed superannuation funds (SMSFs), low-doc, interest-only and investor loans). However, there are important mitigants that prevent systemic risks from non-banks' mortgage lending. Loan warehouse limits for securitisations and RMBS reporting requirements enforce discipline on loan quality. Furthermore, non-banks account for around half the share of total housing credit that they had during the GFC (Graph 3).

Non-banks have also increased their lending to businesses over recent years, with non-bank business credit growth elevated both historically and relative to banks (Graph 3). Non-banks' increase in business lending has been broad-based and encompasses forms of lending that banks have recently pulled back from such as property and construction lending. Non-banks have also increased some other higher risk forms of business lending, including auto loans, and lending to SMSFs. Unlike mortgage lending, only a very small share of non-banks' business loans are securitised and subject to warehousing limits on lending standards. As a result, loan quality is less transparent, making it more difficult to monitor the build-up of risks.

Qualitative evidence from the RBA's liaison program has highlighted instances of looser lending standards such as lending at higher loan-to-valuations and lower interest-coverage ratios. However, this is consistent with non-banks targeting certain segments of the market that are less attractive for banks, with the additional risk typically priced into lending rates. The Australian Prudential Regulation Authority (APRA) has reserve powers available to increase oversight if risks posed are deemed to be material. However, systemic risks posed by non-bank business lenders are currently limited by their size; these lenders account for only 9 per cent of total business lending in Australia.

NBFI risks in Australian commercial real estate

Conditions in CRE markets globally have deteriorated, with declines in rental income and asset valuations as a result of weaker tenant demand and higher interest rates. The deterioration has been particularly acute for lower grade offices. However, at this stage, there have been few signs of stress among owners of (or lenders to) CRE in Australia, although there is limited information on some owners (RBA 2024). While Australian banks' exposures to CRE are relatively low, historical downturns in CRE, such as during the GFC and the early 1990s recession, have illustrated that NBFIs in the CRE market can have significant negative effects on the stability of the financial system due to their connection to the banking sector and role in amplifying credit and CRE price cycles. To identify areas of potential build-up in systemic risk from NBFI activity in the Australian CRE market, the size, vulnerabilities and interlinkages of NBFIs with domestic banks and foreign markets are examined below. The role of NBFI lenders and owners in CRE is discussed separately as they propagate financial stability risks through different channels.

Non-bank lenders

Non-bank lenders typically service segments of the CRE market where banks are constrained by regulation or risk appetite. While this lending activity can help to complete markets, it can also give rise to financial stability risks if it is associated with higher leverage, weaker underwriting standards and if lenders have concentrated asset holdings and funding sources. NBFI lenders include registered financial corporations (RFCs) and private sources of credit (i.e. debt funds). The RBA estimates that they account for less than one-fifth of direct CRE lending in Australia, with banks accounting for the rest.[2] Given the size of their CRE lending and limited borrowings from the banking system, these NBFIs do not appear to pose systemic risks in Australia.

NBFI owners

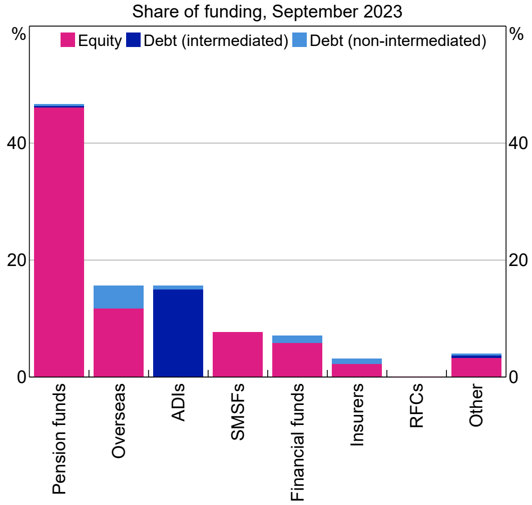
CRE owners can amplify credit and asset price cycles, and liquidity strains in times of stress. An estimate of the aggregate value of CRE assets in Australia is not readily available, though the relative ownership shares can be estimated for some asset classes by owner type, including unlisted trusts, listed Australian Real Estate Investment Trusts (A-REITs), foreign and domestic pension funds, non-financial corporations, sovereign funds and private investors. For example, it is estimated that unlisted trusts and foreign listed trusts are the largest owners of office assets (over one-third of outstanding stock), while a small number of listed A-REITs own around 60 per cent of retail space in Australia (Lim *et al* 2023).

The balance sheets of these participants are particularly important to assess as leverage and liquidity mismatches can transmit or amplify shocks in the CRE market (Graph 5).[3] For example, open-ended unlisted property trusts have exacerbated asset price declines in prior downturns, both domestically and abroad. However, most retail funds now have limits on redemptions (which can reduce the risk of asset fire sales in disorderly market conditions), and unlisted property trusts in aggregate appear to have relatively low leverage and stable equity funding.[4] The A-REIT sector has also reduced leverage since the GFC.

Graph 5

Property Trusts' Funding Sources*

Share of funding, September 2023



* Consolidated liabilities of listed and unlisted REITs, property common funds and infrastructure funds.

Sources: ABS; RBA.

Key NBFI-related vulnerabilities

In the context of a severe global and domestic downturn in CRE, NBFI-related vulnerabilities that could crystallise in the Australian financial system include the following:

- Unlisted property trusts that have high levels of leverage could amplify stress in CRE markets by engaging in asset fire sales. In aggregate, unlisted property trusts are estimated to have leverage of less than 25 per cent and source over 75 per cent of their equity funding from large superannuation funds with long-term investment mandates.[5] This aggregate combines a range of different leverage and funding profiles. The RBA's liaison has highlighted some instances of unlisted property trusts operating with high levels of leverage that could be problematic at the time of refinancing. However, information on the distribution and size of highly leveraged unlisted funds is not available.

- SMSFs with concentrated investments in CRE assets and high leverage could also contribute to procyclicality in CRE markets. SMSFs hold a material share of CRE assets, either directly or through property trusts (Graph 5). Funds that are leveraged and highly concentrated in CRE assets could amplify stress by abruptly shifting assets out of the CRE sector in a downturn.
- As conditions in global CRE markets continue to deteriorate, there is a risk that stress in overseas CRE markets could spill over to Australian market conditions. For example, foreign bank lenders have exposure to the Australian CRE market, and a material share of CRE assets is owned by foreign investors (either directly or through pension funds), with one-third of Australian office assets estimated to be foreign-owned. Foreign owners also account for a material share of property trusts' funding (Graph 5). Domestic banks, who provide most of the intermediated debt funding for domestic CRE assets, could be exposed to credit losses if overseas stresses spill over to the domestic CRE market.
- Listed A-REITs' reliance on market-issued debt, including from overseas, could create some refinancing challenges. A-REITs are funded predominantly through non-intermediated debt, around half of which is from the United States and other offshore markets. If these offshore investors experience losses or liquidity shortfalls due to stresses in foreign CRE markets, they could withdraw or severely restrict their funding of A-REITs; this, in turn, could lead to forced asset sales. However, A-REITs are well placed to absorb refinancing risks for the time being, with less than one-fifth of funding due to mature over the next two years.

More generally, synchronised distressed sales of CRE assets in the Australian market, whether through abrupt portfolio shifts or forced deleveraging, could threaten the viability of some NBFIs and spill over into the real economy through developers and other non-financial participants.

Based on the available information, the RBA assesses that these vulnerabilities in the CRE market are unlikely to pose risks to financial stability, particularly due to the relatively small linkages between NBFIs and the core banking system. However, the significant data gaps surrounding the activities of NBFIs in the Australian CRE market are prompting close ongoing monitoring by the RBA and CFR.

Data gaps

Information is limited for many unlisted participants, including property trusts, developers and property companies.[6] In particular, the distribution of exposures and leverage within the less-transparent NBFI models (e.g. unlisted trusts) and non-financial participants is opaque.

Data on non-bank CRE lenders are also incomplete. Some RFC lenders in CRE do not report their holdings (e.g. due to being below size thresholds for APRA reporting). Other private credit lenders (i.e. debt funds) are not captured in regulatory reporting. Non-bank lenders also do not currently report on CRE lending quality. Given a small share of NBFI CRE lending is securitised, insights on lending quality in the RBA's Securitisation dataset are limited.

The CFR agencies continue to explore what other data and information could provide further insights on NBFI activity in the CRE sector.

NBFI use of OTC derivatives

A number of stress episodes in global financial markets over recent years has highlighted the role that OTC derivatives can play in the build-up of financial system vulnerabilities (Choudhary, Mathur and Wallis 2023).[7] NBFIs operating in the Australian financial system were resilient through these disruptions. Data from trade repositories, along with APRA data and analysis by the Australian Securities and Investments Commission (ASIC) and the RBA, allow a mapping of NBFIs' OTC derivatives exposures, counterparties and practices, to assess the potential for a similar event here.

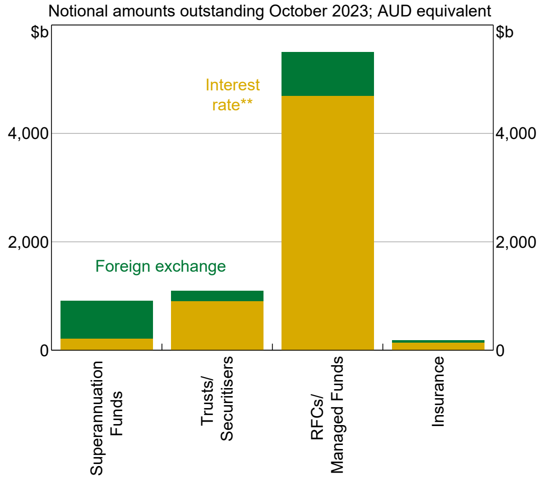
In the Australian market, the growing use of OTC derivatives by NBFIs appears primarily driven by hedging and market-making activities and is unlikely to pose financial stability risks:

- NBFI positions were close to $7.8 trillion in notional value as of end October 2023, or over 10 per cent of the market.[8] The largest NBFI exposures have typically been from superannuation funds, managed funds, securitisation trusts and life insurance. Over the past five years, the notional value of all outstanding superannuation fund derivative contracts has increased by 50 per cent to close to $900 billion. More recent growth in activity by RFCs largely reflects that a domestic non-bank financial corporation has started offering market-making services for interest rate swaps; its contracts are all centrally cleared and include offsetting positions leading to considerable netting at the central counterparty and small residual directional market risk.
- Most NBFIs appear to use OTC derivatives primarily to hedge risks from their underlying activities, rather than for leveraged risk-taking.[9] Hedging positions are inherently less risky as losses on derivative contracts are offset by gains on underlying positions; they are also more stable than actively traded ones. However, they are not risk-free. There is still the potential for losses from counterparty credit risk and liquidity mismatches from large margin calls. NBFIs have many links with the real economy and banking system, which could exacerbate potential losses and make them more opaque. The exposures of most NBFIs are bilateral, through the intermediation of dealers, which provides limited netting opportunities and lacks the risk management benefits of central clearing.
- Foreign banks, and finance corporations affiliated with global banking groups, are among the most common counterparties in NBFI OTC derivative transactions. Australian banks also act as central nodes facilitating bilateral derivative transactions with NBFIs and non-financial corporations, including concentrated relationships with securitisers that typically use one bank to access interest rate hedges. The nature of bilateral markets can expose domestic banks to counterparty and market risks in the event that a large customer were to fail, and impair market access for customers if a domestic or global bank ceased offering these services.
- Interest rate swaps and FX products are the derivative types most used by NBFIs (Graph 6), with FX products the main source of market-risk exposure, partly reflecting the growth in foreign asset holdings by superannuation funds. During recent periods of volatility, FX contracts drove the largest mark-to-market fluctuations and related margin flows; however, superannuation funds mostly proved resilient to the large and sudden liquidity shock in March 2020, when the AUD depreciated resulting in $17 billion in margin calls.[10]

Graph 6

NBFI OTC Derivatives Positions*

Notional amounts outstanding October 2023; AUD equivalent



* Discrepancies can arise as a result of data transformation and allocation of reporting entities to different groups.

** Includes cross-currency swaps.

Sources: DDRS; RBA.

- NBFIs hold smaller notional outstanding amounts in other contract types, to generate returns rather than for hedging. NBFIs use equity swaps to build stock market exposure; superannuation funds hold some of the largest individual positions, but fully collateralise these with cash. NBFI positions in the smaller credit derivatives market are predominantly with foreign counterparties, with domestic banks less active in this segment. The commodity derivatives market appears very concentrated with few dealers offering services, but visibility of related NBFI activity through available data is limited.

Continued monitoring of use of OTC derivatives

While there does not appear to be a material build-up of risks, several potential vulnerabilities in derivatives markets warrant continued monitoring. This includes the potential for:

- contagion from an interconnected network of bilateral exposures between NBFIs and banks
- liquidity mismatches from margin calls on large hedging positions (e.g. AUD hedges) or leveraged positions by certain NBFIs (e.g. hedge funds) leading to possible distressed sales of collateral
- severe consequences from macro-financial linkages between derivative products and underlying economic activity (e.g. commodity markets).

Ongoing monitoring of vulnerabilities in these markets is difficult, and work is planned to address visibility gaps. CFR agencies will continue to develop their internal analytical capabilities, and to strengthen and streamline data-sharing arrangements on OTC derivatives.

Work of regulatory bodies on addressing NBFI risks

Vulnerabilities at NBFIs, including leverage and liquidity mismatch, are viewed as a key risk to the global financial system, with NBFIs now accounting for around half of global financial system assets. The FSB continues to progress initiatives to improve NBFI resilience in association with international standard setting bodies, such as the Basel Committee on Banking Supervision and the International Organization of Securities Commissions (IOSCO). In September 2023, the FSB set out its policy priorities to address key amplifiers that may contribute to liquidity imbalances (FSB 2023a). These policies aim to enhance the resilience of liquidity supply in periods of stress and risk monitoring and preparedness by NBFIs and supervisors.

The FSB also released a report in September 2023 examining the financial stability implications of leverage in non-bank financial intermediation (FSB 2023b). The report identifies pockets of high leverage in the NBFI sector, including an increase in non-bank investors' off-balance sheet financial leverage. However, significant data gaps prevent a full assessment of vulnerabilities associated with NBFI leverage. This lack of visibility can contribute to the build-up of large, concentrated positions.

In the latest round of monitoring on NBFI vulnerabilities by the FSB's Non-bank Monitoring Expert Group, fintech and peer-to-peer (P2P) lending were the most reported innovations in the NBFI sector, though remain a small share of credit overall. In Australia, fintech credit is estimated to account for around 6 per cent of finance company credit assets. The FSB has committed to expand its annual collection to assess fintech vulnerabilities from 2024.

Over 2024 a key focus for the FSB is non-bank leverage. The FSB, working with IOSCO and FSB member jurisdictions, will undertake and coordinate policy work to monitor and address financial stability risks from leverage in NBFIs. The relevant CFR agencies, including the RBA, will contribute to this work program as appropriate. As already noted, NBFI risks in Australia are more contained. However, work continues by the CFR agencies to improve visibility of NBFI activity in Australia as part of their ongoing monitoring of developments in NBFIs and any potential systemic risks for the Australian financial system.

Conclusion

Overall risks to financial stability posed by the NBFI sector in Australia remain contained. The size of riskier NBFI activities in the Australian financial system remains modest and their interconnectedness with the core banking system has continued to decline. Australian non-banks' lending has shifted towards riskier market segments, but remains small as a share of outstanding credit. There have been limited signs of financial stress among NBFI owners of Australian CRE. However, there remains a risk that stress in overseas CRE markets could spill over into the domestic market. Further, the use of OTC derivatives by NBFIs is sizeable and growing, but appears primarily driven by hedging needs and market-making activities. CFR agencies, alongside regulatory bodies around the world, are continuing to monitor the vulnerabilities posed by NBFIs and progress work to address information gaps where possible.

Endnotes

[*] The authors are from Financial Stability Department. They would like to thank colleagues at CFR agencies for their helpful contributions.

[1] Payment systems are important providers of financial services but were out of scope for the analysis in this article.

[2] This refers to foreign and domestic intermediated debt funding. Some participants also issue debt in capital markets.

[3] Non-financial owners, while outside the scope of NBFIs, are also important to consider given their interlinkages with the banking system. For example, developers and property companies comprise a material share of the market and have the capacity to transmit stress to the banking system.

[4] Although most retail funds now have discretion to suspend redemptions, sustained requests for redemption could ultimately result in trusts disposing of assets at fire-sale prices.

[5] Aggregate gearing and funding sources for unlisted property trusts are estimated using data from the Australian Bureau of Statistics (ABS) and data from Morningstar on listed property trusts. Following recent consultation, the ABS has advised that the content, scope and coverage of data collected on investment funds will be reviewed to address data limitations. For further information, see ABS (2024).

[6] To address existing data limitations, ASIC (2023) has recommended introducing a legislative framework for the recurrent collection of data on managed investment schemes in its submission to Treasury on the review of the regulatory framework for managed investment schemes consultation, released on 4 August 2023.

[7] NBFIs use OTC derivatives to hedge risks from their primary activities, provide market-making services or build exposure to specific markets including interest rate, foreign exchange (FX), equity, commodity and energy markets. These contracts (e.g. swaps, forwards and options) cover periods ranging from a few days to over 30 years. Over the life of a contract, the counterparties to the contract are exposed to risks that need to be managed; among these, the risk that either counterparty defaults on its obligations (credit risk), large margin payments (liquidity risk), price volatility affecting the value of the contract (market risk) and potential failures in related processes (operational risk). For additional background on features and developments in the Australian OTC derivatives market, see Armour and Beardsley (2023) and Cole and Ji (2018).

[8] The Australian OTC derivatives market exceeded $60 trillion in October 2023 when measured as the notional value of all outstanding contracts. Domestic and foreign banks are the dominant players in all these markets, taking 'one side of the trade' in the vast majority of outstanding positions.

[9] While individual hedging contracts cannot be identified, analysis of available data suggests that, at a high level, the derivative portfolios of most NBFIs are consistent with hedging strategies. For example, superannuation funds hedge a portion of their exchange rate risk on foreign asset holdings, securitisers hedge interest rate mismatches between their assets and liabilities, and managed funds offer fixed income and overseas investment products with hedged options.

[10] APRA's updated investment governance prudential standard, which came into effect in January 2023, further strengthens the resilience and liquidity management of APRA-regulated Australian superannuation funds. The updated standard increases the robustness of funds' investment stress testing, liquidity management practices and asset valuations by ensuring internal processes are well defined, regularly reviewed and performed more frequently. Liquidity stress tests are also required under the updated standard. For information about APRA's consultation on the standard and the release of a supporting practice guide on 20 July 2023, see APRA (2023).

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