Non-bank Lending in Australia and the Implications for Financial Stability

Callum Hudson, Samuel Kurian and Michelle Lewis[*]

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Abstract

Non-bank lenders help to finance some forms of economic activity that might otherwise go unfinanced by traditional banks. However, as the global financial crisis demonstrated, non-bank lending activities have the potential to undermine financial stability, in part because they are less constrained by regulation. Risks to financial stability can include the amplification of credit and asset price cycles, increased competition for borrowers that prompts banks to weaken their own lending standards, and the potential of stress spilling over into the prudentially regulated financial system. Unlike in some other economies, non-bank lending accounts for a small share of total credit in the Australian economy and banks have relatively limited exposure to non-bank lenders. Non-bank lending therefore poses little systemic risk to financial stability in Australia at present. However, it has grown strongly in recent years, particularly for housing. Regulators and policymakers therefore need to continue monitoring developments in this space. This article provides a primer on non-bank lending in Australia, focusing on lending for housing and the potential risks to financial stability.

Introduction

Lending by non-banks can play an important role in financing some forms of economic activity that might not otherwise be financed by the traditional banking system, without putting customer deposits at risk. However, as much of the lending activity of non-banks occurs outside of the prudential regulatory perimeter, policymakers and regulators need to monitor developments in the sector for risks posed to financial stability.[1] As events leading up to and during the global financial crisis (GFC) showed, such risks can include:

- the potential for non-bank lending to be more concentrated, riskier and more pro-cyclical than bank lending as a result of lighter regulation, which can amplify credit and asset price cycles
- competition from non-banks that might encourage banks to weaken their lending standards in order to protect or grow market share
- linkages between non-banks and banks that could result in stress in the non-bank sector spreading to banks.

As non-bank lenders operate with fewer regulatory constraints than banks, market discipline acts as a key mechanism that helps to limit how far non-bank lenders can ease lending standards and how far along the risk spectrum they can operate. This is particularly the case for non-bank lenders that securitise loans, especially for housing, as visibility of these lenders' activities has improved with increased reporting requirements following the GFC (Debelle 2012; Aylmer 2016); by contrast, other segments of non-bank lending remain more opaque. Regardless of these improvements, non-bank lending can still lead to a build-up of systemic risk because non-banks' business models tend to involve liquidity and maturity mismatches and the use of leverage.

Internationally, non-banks are viewed as a key vulnerability in the global financial system. For example, during the GFC, the early stages of the COVID-19 pandemic and the periods of asset price volatility in 2022, the non-bank sector amplified financial market stress. Some of these events resulted in central banks and/or governments, including in Australia, intervening to restore orderly functioning of financial markets – the disruptions in the UK pension fund sector in late 2022 being the most recent example. Given the inherent vulnerabilities and the growing size of the global non-bank sector, international bodies – such as the Financial Stability Board (FSB), the Bank for International Settlements and national regulators – are working to improve their visibility and understanding of non-banks so as to increase the resilience of the sector (Carstens 2021; FSB 2022).

The small size of Australia's non-bank sector, and in some respects its different structure, mitigates some of the vulnerabilities posed by non-banks internationally – but these vulnerabilities are still present. Australian superannuation funds, although not a focus of this article because their investment focus is more on equities and they do not lend much outside of holding bonds, provide a helpful example of differences in structure. Compared with the UK pension sector, Australian superannuation funds are mostly defined contribution rather than defined benefit, have larger cash holdings and have more limited use of leverage. This leaves Australian superannuation funds well placed to manage liquidity shocks, as was demonstrated in the early stages of the pandemic (RBA 2021).[2] In order to examine the role of non-bank lending in Australia and its implications for financial stability, this article focuses on credit intermediation by non-banks that are not regulated by the Australian Prudential Regulation Authority (APRA).

A variety of non-bank lenders operate in Australia, accounting for around 5 per cent of the financial system

Non-bank lenders account for a small share of the financial system in Australia, at around 5 per cent of total financial system assets (Graph 1). Non-bank lending is undertaken by registered financial corporations (RFCs) and some types of managed investment funds, including hedge funds. RFCs utilise a business structure that is similar to banks, in that they obtain short-term debt funding and extend longer term credit to households and businesses. RFCs predominantly provide credit for residential housing and automobiles (autos), although lending to businesses and commercial property developers also features in their portfolios. The business model of managed investment funds differs to banks and RFCs; they are mostly delegated asset managers that act as pass-through vehicles for other investors, such as superannuation funds.

RFCs account for about half of non-bank lenders' assets in Australia. RFCs can be split into two broad groups – securitisers and non-securitisers. Securitisers originate loans and then package these loans into asset-backed securities (ABS). Residential mortgage and auto lending account for the largest share of the non-bank securitisation market. By contrast, non-securitisers retain loans on their balance sheets. These lenders focus mostly on non-housing credit, such as lending for construction, non-auto personal finance and some business loans.

Managed investment funds, including hedge funds, account for the other half of non-bank lenders' assets. Managed funds' debt instruments as a share of the financial system has declined since 2016, as funds switched more of their portfolios to equities (and equity-like exposure) in search of higher returns in a low-interest rate environment. The size of the Australian-domiciled hedge fund sector cannot be deduced from existing data sources.

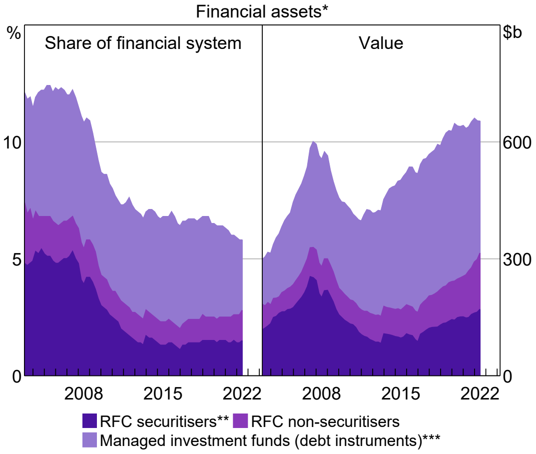
There are limited data covering non-bank credit intermediation more broadly, particularly outside of housing lending. In part, this is because non-bank lenders have less extensive reporting requirements than prudentially regulated banks.

Non-bank corporations that extend credit and have debt assets greater than $50 million are required to register with APRA to be an RFC and to regularly report data on their financial position and lending activity. APRA's data provide good coverage of lending for housing and some business activities, but less so for other types, such as commercial

Graph 1

Non-bank Credit Intermediation

Financial assets*



* This measure is based on FSB's non-bank credit intermediation measure for Australia, which excludes superannuation funds, insurers, and entities consolidated within a banking group. Managed funds' non-debt instruments are removed for simplicity.

** Includes some securitisers that are not registered as RFCs.

*** Includes hedge funds.

Sources: ABS; APRA; RBA

property, where some lenders operate as trusts, rather than corporations, and thus are not required to register as an RFC. Data gaps also exist because entities must self-identify to report with APRA. To help supplement available data and to understand market developments, the Reserve Bank uses liaison with businesses, banks and non-bank lenders (Dwyer, McLoughlin and Walker 2022).[3] Work is underway to increase the visibility of other non-bank activities. Most of this article focuses on RFCs.

Non-bank lending for housing has grown rapidly

In Australia, as elsewhere, non-bank lenders tend to focus on borrowers and market segments that have been underserved by banks. They also compete with banks for borrowers based on loan turn-around times and the level of service provided. Most lending is for housing, but over recent years non-banks have increasingly moved into financing vehicles, lending to self-managed super funds (SMSF), and lending for residential and commercial construction as banks exit these sectors or where access to finance through banks can be more challenging.

The interest rates on loans offered by non-banks are typically higher than those offered by banks, which is consistent with non-banks lending to riskier borrowers on average. Between 2019 and 2021, non-bank housing lending rates were about 60 basis points above those offered by the major banks (Graph 2). However, the spread increased to around 100 basis points in 2022, consistent with a larger increase in funding costs in the securitisation market compared with banks' funding costs (which include low-rate deposits) and competition from banks for high-quality borrowers (Carse, Faferko and Fitzpatrick 2023). For business lending, the spread between non-bank and bank lending rates is larger than for housing on average; however, this is primarily because non-banks are lending to businesses in different sectors, with greater risk profiles.

Non-bank lending in Australia has grown rapidly since 2015, driven mostly by mortgage lending where growth has averaged almost 15 per cent on a six-month annualised basis – more than twice the rate recorded by banks (Graph 3). Despite this growth, the share of non-bank credit remains small at a little under 5 per cent, which is about half its share before the GFC. While the small size of the non-bank lending market attenuates the systemic risks to financial stability in Australia, strong credit growth in the sector could lead to financial stability risks if it induced a broad-based weakening in lending standards.

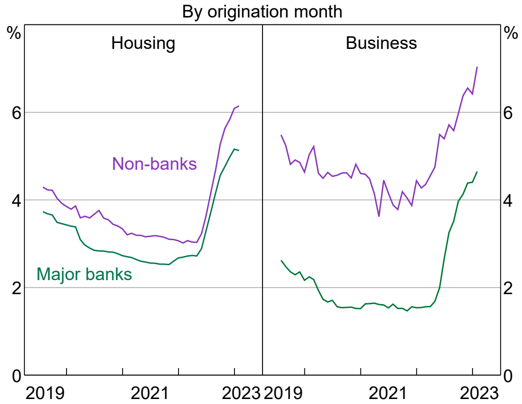
Non-bank lending is riskier than bank lending, on average …

The Reserve Bank's Securitisation Dataset provides detailed data on mortgages underlying Australian residential mortgage-backed securities (RMBS).[4] The Reserve Bank uses these data, along with APRA data and liaison, to monitor developments in the mortgage market and the quality of lending.

Graph 2

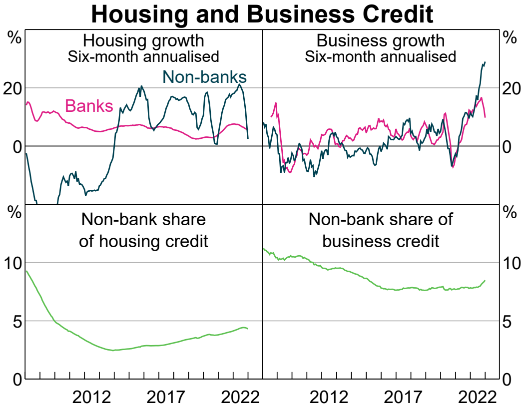
Average Lending Rates

By origination month



Graph 3

Housing and Business Credit



Non-bank lending is riskier than bank lending on average, as a greater share of non-banks' lending is to borrowers who are self-employed or employed in industries more sensitive to economic conditions, and who have low levels of documentation. Despite this, non-bank mortgages have performed well over recent years and loss rates have been at low levels (Moody's 2022).

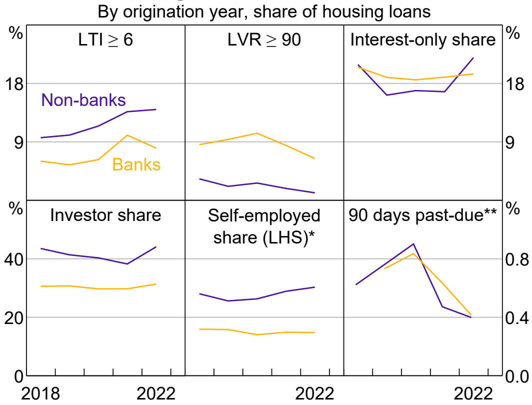
Non-banks' lending standards do not appear to have weakened materially alongside the rapid credit growth seen between 2020 and mid-2022 (Graph 4). The share of new non-bank housing lending with high loan-to-valuation ratios (LVRs) has declined and is currently below that observed at banks. Loan arrears are at historically low levels, in part because, like banks, non-bank lenders proactively managed loan deferrals during the pandemic and because unemployment has been low.[5] At the same time, non-banks' high loan-to-income (LTI) lending has increased slightly, while it has decreased for banks. The increase in high-LTI lending is consistent with the rise in housing prices over recent years; however, it might also reflect some shift of higher LTI borrowers to non-banks following the increase in APRA's serviceability buffer in October 2021 (discussed further below).

Outside of housing, there are less data available to monitor lending standards. However, liaison indicates that non-bank standards for non-housing lending are generally looser than at banks, particularly after banks tightened some lending standards. For example, non-banks require lower

Graph 4

Housing Loan Characteristics

By origination year, share of housing loans



rates of pre-sales for construction and typically have more appetite to lend at higher LVRs for construction loans.

… but is influenced by bank lending standards and macroprudential policies

During periods when aspects of bank lending have posed risks to the stability of the financial system, APRA has implemented macroprudential policies. Given that banks and non-bank lenders compete in some market segments, particularly for housing loans, a concern is that such policies may lead to risky lending shifting from banks to non-banks, which are subject to lighter regulation. International research has found some evidence of this occurring.[6] It is important to note, however, that if non-bank lending in Australia were to pose a risk to financial stability, APRA could avail its reserve powers to regulate the sector.[7]

The effects of APRA's macroprudential policies on broader credit trends in recent years are discussed below. The full impact of APRA's 2021 macroprudential policy changes on non-bank lending will take time to ascertain.[8] However, using the Reserve Bank's Securitisation Dataset, we find evidence that non-banks' housing loan quality did not deteriorate overall – and in some aspects improved – following the implementation of APRA's 2017 macroprudential policies.

APRA's 2021 increase in the loan serviceability buffer

In October 2021, APRA increased the minimum residential mortgage serviceability buffer from 2.5 per cent to 3 per cent.[9] This has the effect of reducing maximum loan sizes, which decreases the amount of credit extended to borrowers who seek a loan close to their maximum borrowing capacity. If such a policy were to cause a spillover to non-bank lending, we would expect non-banks' share of high-LTI lending to increase as these constrained borrowers shift to non-banks to restore their previous borrowing capacity.

Early evidence suggests that the share of high-LTI lending by non-banks increased somewhat following the change to the serviceability buffer (Graph 5). However, this result should be treated with caution. It will take time to fully assess the impact of the increase in the serviceability buffer on non-banks because there is a lag between when a loan is originated and when it is securitised (typically six months to a year). Liaison with non-bank lenders suggests that some adopted the increased serviceability buffer, while others opted to use their internal serviceability criteria to assess borrowers.

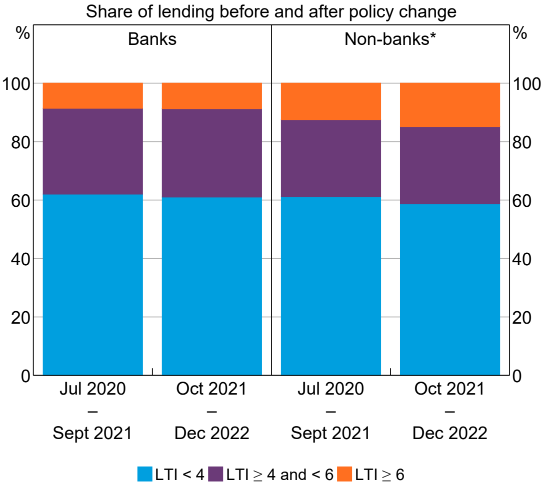
APRA's 2017–2018 limits on interest-only lending

In 2017, APRA imposed limits on interest-only (IO) mortgages and some additional scrutiny on high-LVR lending, in addition to earlier restrictions on lending to investors that were introduced in 2014.[10] Following this, interest rates on both bank and non-bank IO mortgages increased, although the initial increase at non-banks was smaller (Graph 6). In addition, the share of IO housing loans declined in both sectors reflecting a decrease in the share of new lending that was IO, although the reduction in the share of IO lending was smaller for non-banks. The share of IO lending continued to decline following the removal of the macroprudential requirement at the end of 2018. At this time, APRA proposed changes to bank capital requirements, whereby banks would hold more capital for riskier loans (APRA 2018). APRA finalised an updated version of this proposed capital

Graph 5

Loan-to-income Ratios

Share of lending before and after policy change



* Outstanding mortgages in the securitisation system as at December 2022.

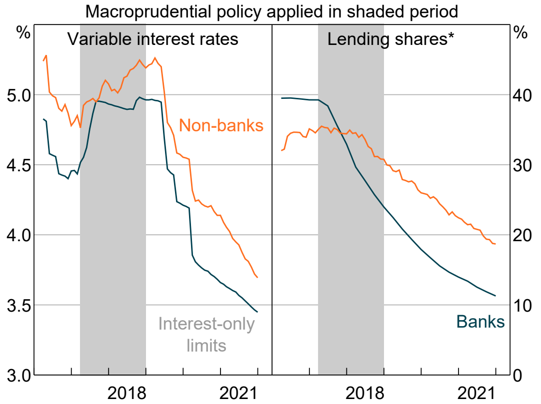
Sources: APRA; RBA; Securitisation System framework in 2021, which was implemented in 2023 (APRA 2021).[11]

During this period, non-banks reduced the share of their IO lending that was originated with a high LTI, which was mostly attributable to investor borrowing (Graph 7). They also reduced their share of lending originated with high LVRs, with the largest decline attributable to principal-and-interest (P&I) loans (Graph 8). The regression analysis presented in Appendix A suggests that lending standards for non-banks did not deteriorate overall while the macroprudential measures were in place.

Graph 6

Interest-only Lending

Macroprudential policy applied in shaded period



* For non-banks, share of interest-only lending to outstanding mortgages in the securitisation system; and for banks, share of outstanding interest-only lending to housing credit.

Sources: APRA; RBA; Securitisation System

Non-bank lenders rely on market-based finance or private investors for funding

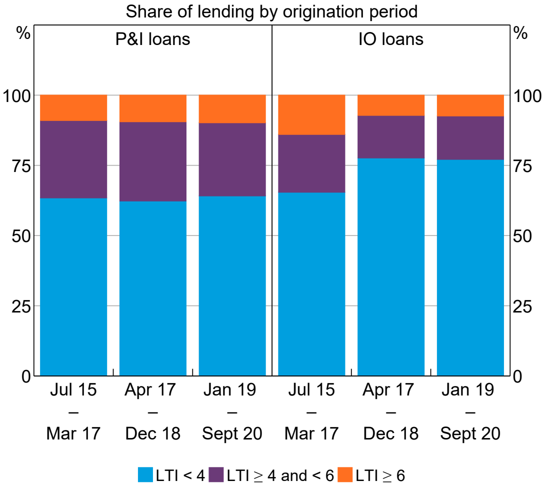
The funding structure of non-bank lenders varies based on the adopted business model (Graph 9). Securitisers' funding comes mostly through warehouse facilities during the loan origination phase, and then from the securitisation market once loans are packaged and sold to investors. Warehouse facilities act like a line of credit and are collateralised by the securitisers' originated loans. Securitisers have little equity as most loans are sold to investors and only a small share of loans are retained on the securitiser's balance sheet.

Non-banks' warehouse facilities are mostly provided by banks, including Australian banks. As such, these warehouse and other funding facilities are one of the direct channels through which problems in the non-bank sector can flow through to banks. However, Australian banks' exposure to non-banks via these facilities is small at around 1 per cent of banks' assets (Graph 10). Furthermore, banks impose lending standards for loans originated through their warehouse facilities, such as limits on LVRs. Banks are incentivised to do this by APRA's capital requirements; in 2018, APRA increased the required capital banks must hold against loans in warehouse facilities to be similar to that required if the bank directly held the loan. This helps to limit the scope for deterioration in lending standards and deviations from APRA's prudential requirements.

Graph 7

Non-bank Loan-to-income Ratios*

Share of lending by origination period



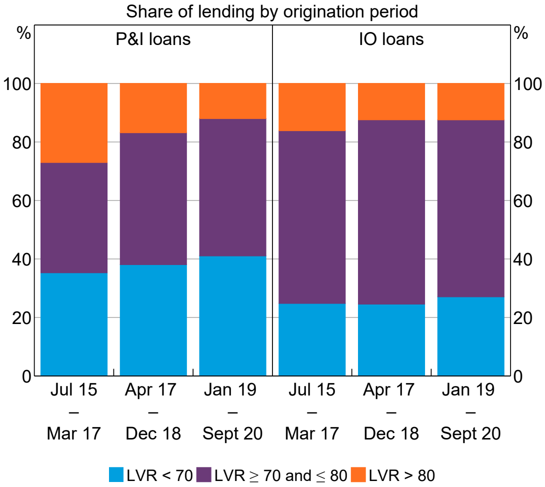
* Outstanding mortgages in the securitisation system one year from the relevant period.

Sources: RBA; Securitisation System

Graph 8

Non-bank LVRs*

Share of lending by origination period



* Outstanding mortgages in the securitisation system one year from the relevant period.

Sources: RBA; Securitisation System

Further market discipline is imposed by virtue of rating agencies and investors closely scrutinising the quality of loans underlying a securitisation; longer term RMBS investors typically expect 'prime' loans to broadly conform to APRA standards.

Non-bank RMBS and other ABS issuance has significantly increased over recent years (Graph 11; Graph 12). Non-banks now account for the majority of issuance, most of which is higher quality 'prime' loans. Issuance has been supported by demand from both domestic and international investors; as noted above, the preferences of these investors play a key role in determining how far along the credit risk spectrum non-bank lenders operate.

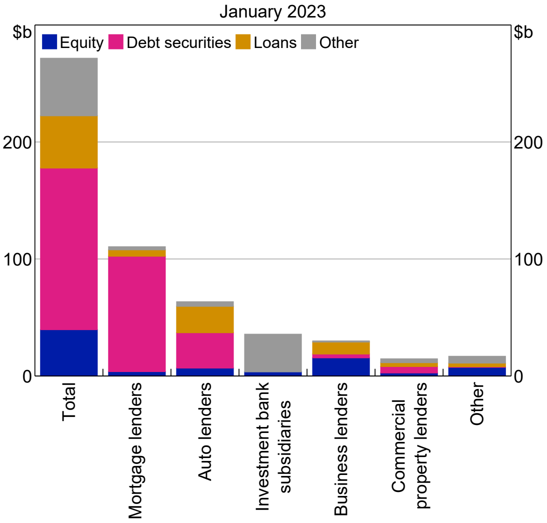
The securitisation market is a further channel by which stress among non-bank lenders could potentially be transmitted to banks. While Australian banks' direct exposure through holdings of non-bank RMBS and other ABS is low, banks – particularly smaller banks – use the securitisation market to diversify their funding. This market is vulnerable to disruptions during periods of stress in financial markets, such as during the GFC and the pandemic. To support small lenders during these periods, the Australian Government implemented programs that helped restore confidence among investors and return orderly functioning.[12]

Non-securitisers fund themselves mostly through loans and equity (primarily from specialist lenders, which are typically funded by investor equity, and

Graph 9

Non-bank Funding Sources*

January 2023

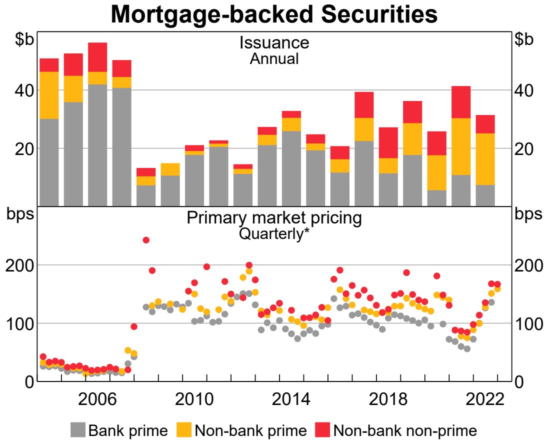


* Excludes managed investment funds.

Sources: APRA; RBA

Graph 11

Australian Residential Mortgage-backed Securities

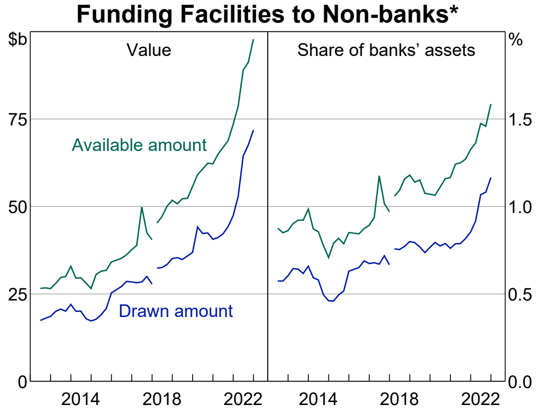


* Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes.

Sources: Bloomberg; KangaNews; RBA

Graph 10

Bank Liquidity, Warehouse and Funding Facilities to Non-banks*

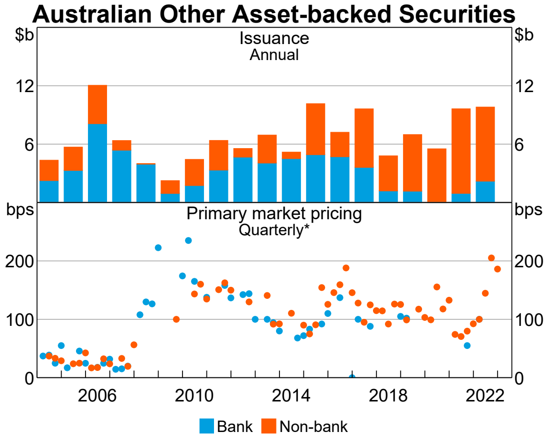


* Series break end-2017.

Sources: APRA; RBA

Graph 12

Australian Other Asset-backed Securities



* Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes.

Sources: Bloomberg; KangaNews; RBA

high net worth individuals and family offices). The higher level of equity is consistent with the greater risk associated with the nature of lending by non-securitisers, such as for property development and personal spending. The reduced connection to banks and the greater use of equity funding helps to limit the risks to the wider financial system from non-securitisers' financing activities.

Non-bank lenders' capital levels vary widely

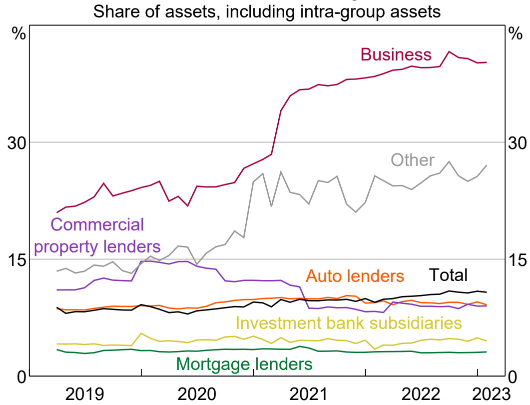
Financial institutions require capital to absorb losses that arise from their lending and investment activities. For non-bank lenders, the level of capital held varies greatly by business model (Graph 13). As a whole, non-banks' equity as a share of assets is around 10 per cent. This is higher than the equity held by banks (which averages at 5 per cent), reflecting in part the higher risk involved in some non-bank financing.

Non-bank securitisers (such as auto and mortgage lenders) tend to hold lower levels of capital than non-securitisers (such as commercial property lenders and some business lenders), which reflects the fact that most loans do not remain on their balance sheet. Securitisers retain a portion of their warehouse and securitisation deals to have 'skin-in-the-game'. This typically includes some of the most junior tranche; the amount held depends on the riskiness of the lending and the preferences of investors. The practice of the securitiser retaining a portion of the deal was introduced following the GFC as a way to align the securitiser's incentives

Graph 13

Non-bank Equity

Share of assets, including intra-group assets



Sources: APRA; RBA

with those of the investor. While there is no formal requirement in Australia for securitisers to hold a portion of their deals, it is required in international jurisdictions such as the euro area and the United States, which acts as an incentive for Australian securitisers to do likewise.

Securitisation structures contain a number of loss-absorbing features that must be exhausted before a securitiser's capital is required to absorb losses. Protections include (in typical order): the value of the underlying collateral above the loan amount; lenders mortgage insurance if the security is backed by mortgages; and the excess spread on the security (i.e. the spread above what is required for the security's interest and management payments) (Arsov, Kim and Stacey 2015). Only where these sources are exhausted will a defaulted loan cause a loss to the securitiser.

Non-securitising lenders, including commercial property and some business lenders, have a wide range of capital levels. Non-bank business lenders are largely funded by equity or via specialist funds that understand the risks associated with financing activity in the sector. Capital levels for commercial property lenders are above those of securitisers because loans often remain on their balance sheets. With the pullback of bank lending for property developments, non-banks are financing more senior tranches of developments, which are less likely to incur losses. Historically, banks that funded senior tranches of developments would carry out due diligence on the project. Less involvement in development deals by banks means that non-banks and other investors are increasingly becoming responsible for carrying out due diligence on borrowers.

Managed investment funds mostly lend to governments and banks

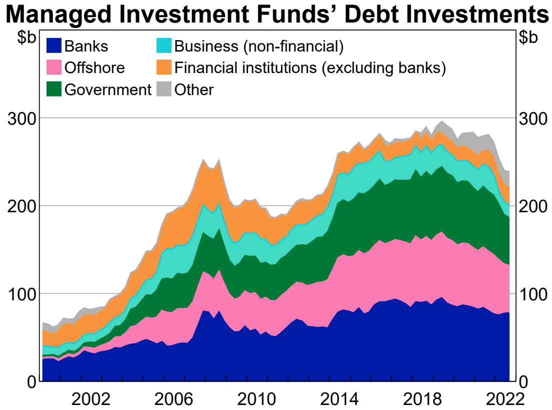
Managed investment funds, including hedge funds, provide credit mostly through investments in listed and unlisted fixed-income securities. As noted above, data on their funding base, lending activities and capital levels is limited. This makes it difficult to ascertain their interconnections, liquidity mismatches and use of 'hidden leverage' through derivatives. However, the overall size of this sector as a share of Australia's financial system is estimated to be small – much smaller than in some international jurisdictions, such as the euro area and the United States, where non-bank activity is a key source of vulnerability for the financial system (FSB 2022). In Australia, credit provided by managed investment funds was $240 billion in 2022, which is less than 3 per cent of total credit (Graph 14). Of the credit provided, most is funding for banks and Australian, state and territory governments, which have minimal default risk and good liquidity in normal market conditions. As of 2022, only $14 billion of exposure was related to the debt of non-financial businesses.

Conclusion

Non-bank lending accounts for a relatively small proportion of overall credit in Australia, and non-bank lending standards for mortgages do not appear to have materially deteriorated over recent years despite the imposition of tighter macroprudential policies for banks. There are also more constraints on how far non-bank lenders can move along the risk spectrum, compared with the period before the GFC. Together, these factors suggest that the risks posed by the non-bank lending sector to financial stability in Australia are low. Nevertheless, the rapid growth in housing lending by non-banks, and data limitations over the full scope of non-bank financing activity, call for ongoing vigilance by regulators and policymakers. Further, as has been recognised by international and domestic policy authorities, the closure of data gaps relating to non-bank lending remains an important priority to ensure that the associated risks to financial stability are well understood.

Graph 14

Managed Investment Funds' Debt Investments



Sources: ABS; RBA

Appendix A: Regression analysis of the impact of the 2017–2018 macroprudential policy on non-bank lending

A more formal way to evaluate how lending standards evolved when APRA introduced its macroprudential policies in 2017 is by running regressions that compare LTI ratios and LVRs of loans originated during the macroprudential policy period and non-policy periods. The following regression results use a sample of loans from the Securitisation Dataset with loans originated before, during and after the macroprudential policy was in place. For loan (i) originated in quarter (t) by non-bank institution (j), the regression specification is given by:

$$(1)\quad LTI_{itj} = \alpha_j + \beta_1 \mathrm{I}(MacroPru)_t + \beta_2\left[\mathrm{I}(MacroPru)_t \times \mathrm{I}(IO)_i\right] + LoanControls_i\phi + MacroControls_t\theta + \epsilon_{itj}$$

$$(2)\quad LVR_{itj} = \alpha_j + \beta_1 \mathrm{I}(MacroPru)_t + \beta_2\left[\mathrm{I}(MacroPru)_t \times \mathrm{I}(IO)_i\right] + LoanControls_i\phi + MacroControls_t\theta + \epsilon_{itj}$$

Where:

- α_j is a set of non-bank financial institution fixed effects
- $\mathrm{I}(MacroPru)_t$ is an indicator variable for the quarters where the macroprudential policy was in effect
- $\mathrm{I}(IO)_i$ is an indicator variable for loans that are interest-only or not
- $LoanControls_i$ are a set of loan-level controls including whether the loan is to an investor or not, whether a loan is interest-only or not, whether the loan is to a first home buyer or not, the interest rate charged on the loan, and the type of property purchased such as a house or apartment
- $MacroControls_t$ is a set of macro-controls including quarterly GDP growth, the change in the cash rate over the quarter, and the growth in dwelling prices over the quarter.

Table A.1: Effects of 2017 Macroprudential Policy on Non-Bank Lending

Regression coefficients, standard errors in parentheses

Regression	LTI	LVR
$\mathrm{I}(MacroPru)_t$	0.018 (0.021)	–0.193 (0.152)
$\mathrm{I}(MacroPru)_t \times \mathrm{I}(IO)_i$	–0.312*** (0.038)	0.837*** (0.273)
Controls	Yes	Yes
Sample size	100,340	100,340

(a) ***, ** and * denote statistical significance at the 1, 5 and 10 per cent levels, respectively.

Sources: ABS; Corelogic; RBA; Securitisation System

The estimated marginal effect from the macroprudential policy on IO loans is the sum of the coefficients on the macroprudential indicator variable β_1 and the interaction between the macroprudential indicator and the IO indicator variables β_2. These coefficients indicate that IO loans originated during the macroprudential policy tended to have lower LTI ratios, but slightly higher LVRs compared to non-policy periods. However, the marginal effects are economically small for the estimated increase in LVRs, with the coefficients suggesting an additional borrowing of around $6,400 on a property valued at $1,000,000. Overall, the evidence suggests there was no material deterioration in lending standards for non-banks and therefore no spillover of risks during the macroprudential policy period.

Endnotes

[*] The authors are from Financial Stability Department.

[1] For a comprehensive discussion of non-bank activity, see Adrian and Jones (2018).

[2] The resilience of Australian superannuation funds will be further strengthened by APRA's enhanced requirements for investment stress tests, liquidity management (including liquidity stress tests) and asset valuations (APRA 2022).

[3] For further detail on data limitations for non-bank activity, particularly for property development, see Gishkariany, Norman and Rosewall (2017); RBA (2019).

[4] For a discussion of the dataset and coverage of the RMBS market, see Fernandes and Jones (2018).

[5] Liaison with non-banks during the pandemic indicated that most non-banks offered payment deferrals to borrowers in need. However, unlike some banks that offered blanket deferrals, non-banks had stricter criteria and assessed each referral request on a case-by-case basis.

[6] For example, Claessens *et al* (2021) found in a sample of 24 countries (including Australia) that a tightening of macroprudential policy can lead to an increase in non-bank activities and a reduction in bank assets.

[7] Part IIB of the *Banking Act 1959* gives APRA the power to extend macroprudential policy to non-bank lenders where the provision of non-bank finance is materially contributing to instability in the financial system.

[8] APRA (2023) assessed that the combination of rising interest rates and the higher serviceability buffer coincided with a decline in high debt-to-income lending over 2022.

[9] In other words, banks are now required to assess a borrowers' capacity to service a mortgage at an interest rate that is at least 3 percentage points above the product loan rate compared with the 2.5 percentage points that was commonly applied by banks at the time of this policy announcement.

[10] APRA expected banks to limit new IO lending to 30 per cent of total new residential mortgage lending and within that place strict limits on IO lending taking place at LVRs above 80 per cent. In addition, banks were expected to manage lending to investors to remain within the previously announced investor limits. Finally, banks needed to ensure serviceability metrics were appropriate for the given conditions and limit loans to high-risk segments of the portfolio. See APRA (2017). Garvin, Alex and Rosé (2021) analysed the effects of APRA's 2014 and 2017 policies on the banking system and found that banks increased advertised rates by around 10–30 basis points and that lending growth in targeted mortgages declined by around 20–40 percentage points within a year of the policy announcements.

[11] The new capital framework is more risk sensitive, whereby riskier lending (e.g. investor and IO loans) is subject to higher risk weights under the new framework.

[12] For further discussion, see Johnson, Lane and McClure (2022); Kearns (2022).

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