Speech

The Financial System and Monetary Policy in Australia

RESERVE BANK OF AUSTRALIA

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Sir Leslie Melville Lecture

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I thank Simon Grant and the Australian National University for the kind invitation to be here today. It is an honour to present the annual Sir Leslie Melville Lecture at my alma mater.

Melville was the first economist at the Reserve Bank of Australia. He established the precursor for Economic Group, which is responsible for macroeconomic analysis, forecasting and policy advice. I spent much of my career there, including as the RBA's chief economist. I also helped set up the Financial Stability Department, and for some years now, I have been overseeing Financial Markets Group.

Today I will cover some key issues that have garnered my attention in those roles.

I will start with the observation that despite significant structural differences across economies, including some relatively unique features of the Australian financial system, there is no evidence that monetary policy is stronger in Australia than in other advanced economies. This finding may appear to be at odds with the comparatively large stock of variable rate mortgage debt carried by Australian households and thus their exposure to significant interest rate risk. But this apparent conflict can be reconciled when one considers the various ways that interest rate risk is managed in Australia, as well as the effects of the other important channels of the transmission of monetary policy. After stepping through the arguments in more detail, I will finish with some observations on forward guidance and some reasons why it has been used somewhat differently by the RBA than many other central banks.

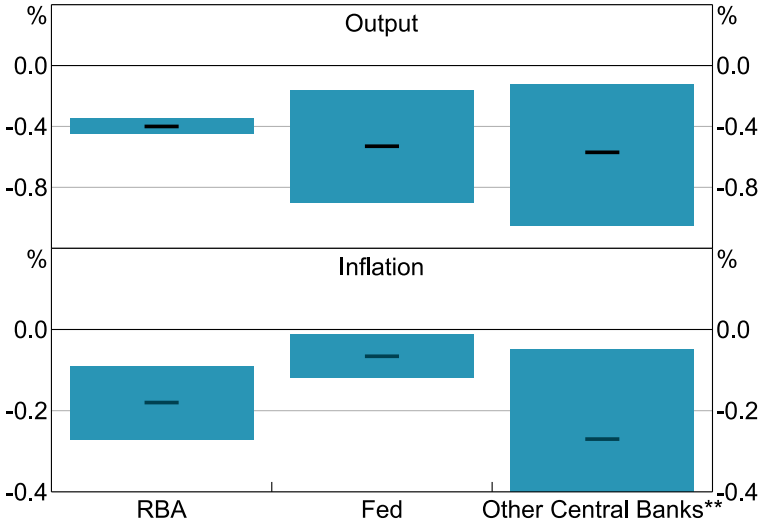
The aggregate transmission of monetary policy in various economies

One way to judge the overall potency of monetary policy is to compare its effects across different economies on aggregates like GDP and inflation using macroeconomic models. Doing so for a range of models for several advanced economies suggests that the effect of monetary policy is neither faster nor more potent in Australia than elsewhere. Central estimates from RBA models of how much GDP and inflation decline in response to an unanticipated increase in policy rates sit near estimates generated by models used by central banks in the United States, euro area, United Kingdom, Canada and Sweden (Graph 1).[1] While the central estimates of the effect on inflation are lower for some models of the United States compared with estimates from other economies, these modest differences should be considered within the context of the wide confidence intervals around each estimate (not shown).

Graph 1

Estimated Effect From Monetary Policy Tightening*

Central bank models, 100bp policy rate increase



* Blue bars show the range of central estimates from central bank macroeconomic models (semi-structural and DSGE). Black lines show the average across models. Policy rate shocks last one quarter, except for the BoC where it lasts approximately four.

** Other central banks are the ECB, BoE, BoC and Riksbank.

Sources: Central banks; RBA.

At the same time, however, key structural differences are likely to underpin some variation in the nature and strength of specific channels of transmission across economies. One key structural feature that sets Australia apart is the prominence of variable-rate debt.

The prominence of variable-rate debt in the Australian financial system

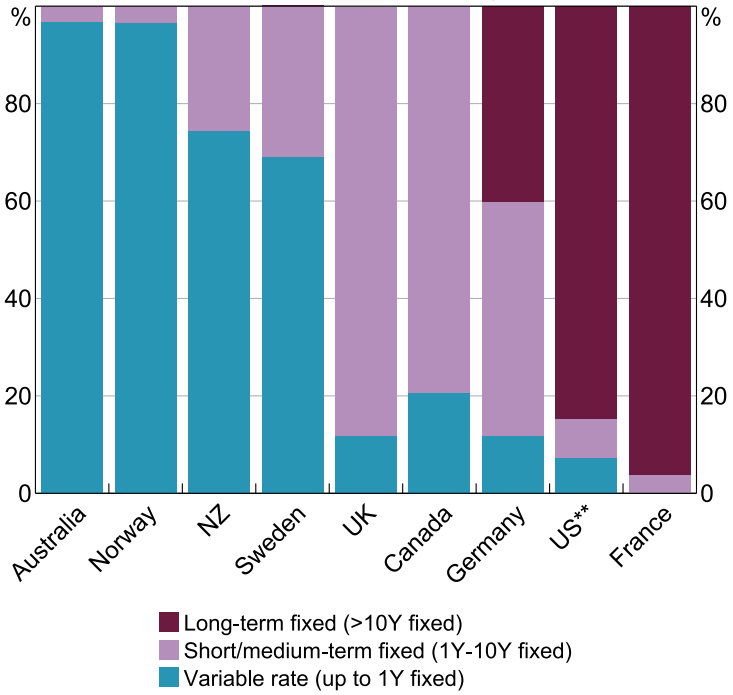
In Australia, most private sector debt is subject to variable interest rates. Even fixed-rate debt tends to be fixed for short periods compared with other economies. At the other extreme, most mortgage debt in the United States is fixed for 30-year terms and large corporations issue a lot of fixed-rate bonds.

The share of Australian mortgages at fixed rates has averaged around 20 per cent over the past two decades. Most of this is fixed for two years or less (Graph 2).[2]

Graph 2

Mortgage Lending Terms

Share of total outstanding*



* Canada and France as of end-2021, all others as of June 2024; France and Germany based on share of new lending.

** Short/medium-term fixed includes fixed-rate mortgages of up to 15 years maturity; long-term includes fixed-rate mortgages of greater than 15 years maturity.

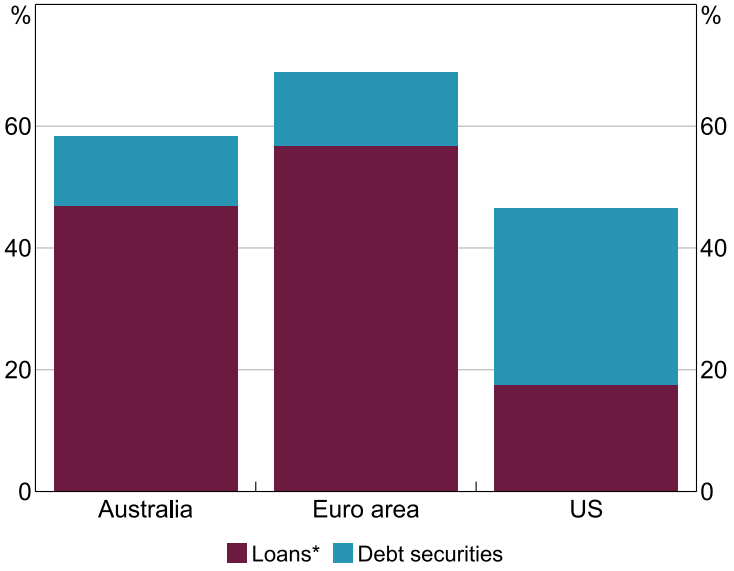
Sources: Bank of Canada; Banque de France; European Mortgage Federation; FHFA; RBA; RBNZ; Statistics Norway.

Similarly, a larger share of business debt in Australia is at variable rates than in the United States. In common with most advanced economies, Australian firms borrow mostly from banks, and around 90 per cent of these loans are at variable rates.[3] While this is comparable to the share of variable rate business loans provided by large US banks,[4] bank loans are only a small share of US corporate debt. Large US firms obtain much of their debt by issuing bonds, typically at fixed rates and with an average tenor of 11 years (Graph 3).[5] In comparison, since 2022 large Australian businesses issued fixed rate bonds with a slightly shorter average tenor, of around nine years.

Graph 3

Non-Financial Corporate Debt

Share of GDP, amounts outstanding as of June quarter 2024



* Includes loans from banks and other financial entities.

Sources: ABS; ECB; Federal Reserve; LSEG; RBA.

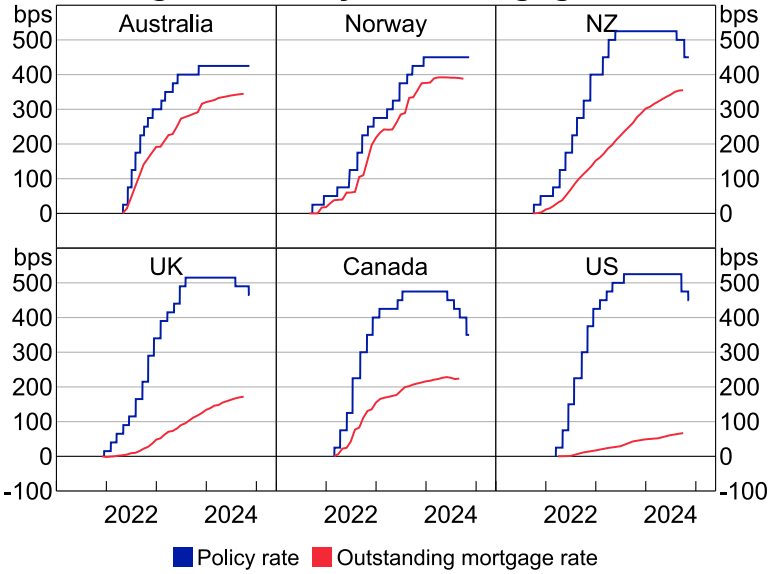
Interest rate risk

Households with sizeable variable rate debts face significant interest rate risk compared with other households.[6] A rise in interest rates quickly reduces the disposable incomes of such households and their capacity to consume, invest and save. This creates budget pressures and can lead some households into financial distress and, in the extreme, leave them unable to service their debts. The same is true for businesses with sizeable variable rate debts, but in what follows I will focus my attention on household mortgages, which constitute a larger share of total debt than most other economies and set Australia's financial system apart from many others.

The prominence of mortgages at variable rates in Australia suggests that interest rate risk can manifest itself much more quickly than in most other advanced economies. Indeed, over recent years, some of the most rapid increases in average outstanding mortgage rates occurred in Australia and Norway, which also has a high share of variable rate mortgage debt.[7] This is despite policy rates rising by less in these economies compared with many other advanced economies (Graph 4).

Graph 4

Changes in Policy and Mortgage Rates*



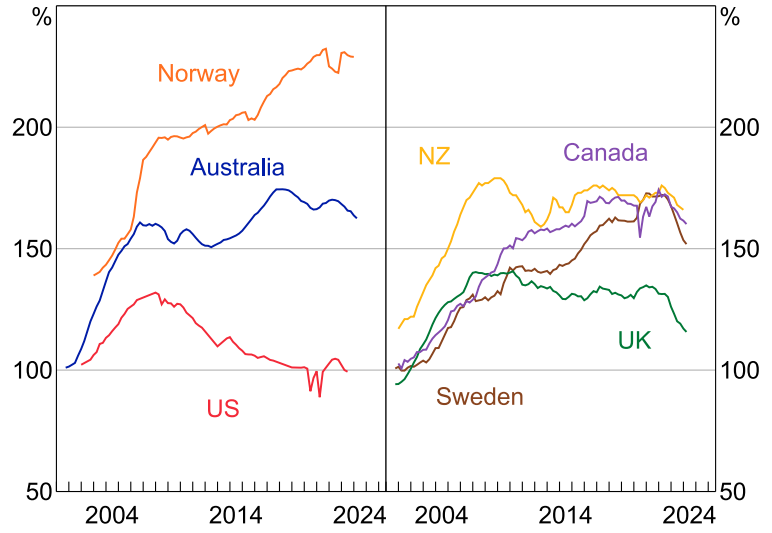
* Cumulative basis point increase in the policy rate and average outstanding mortgage rate relative to the month immediately preceding first policy rate increase since the onset of the pandemic.

Sources: APRA; Bloomberg; central banks; RBA; Statistics Norway.

Debt levels for households are also relatively high in Australia (as a proportion of incomes) (Graph 5). Combined with the significant rise in outstanding mortgage rates, this has led required mortgage payments – interest plus principal – to increase by 2.5 percentage points of *total* household disposable income since May 2022; the increase as a share of mortgage holders' incomes is much larger still. These mortgage payments have reached record highs in Australia (Graph 6).[8]

Graph 5

Household Debt-to-income*



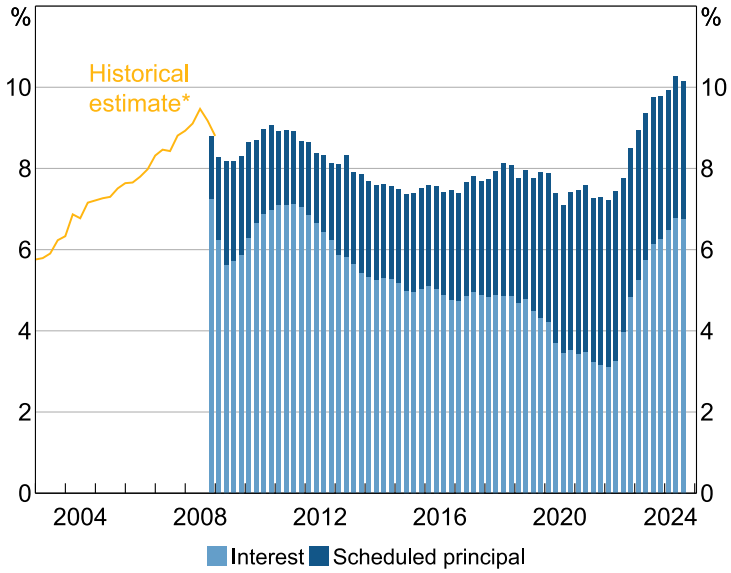
* Household debt as a share of net disposable income. Includes income and debt of unincorporated enterprises.

Sources: FRED; LSEG; national sources; RBA.

Graph 6

Housing Mortgage Payments

Quarterly; share of household disposable income



* Estimated scheduled payments using credit foncier model.

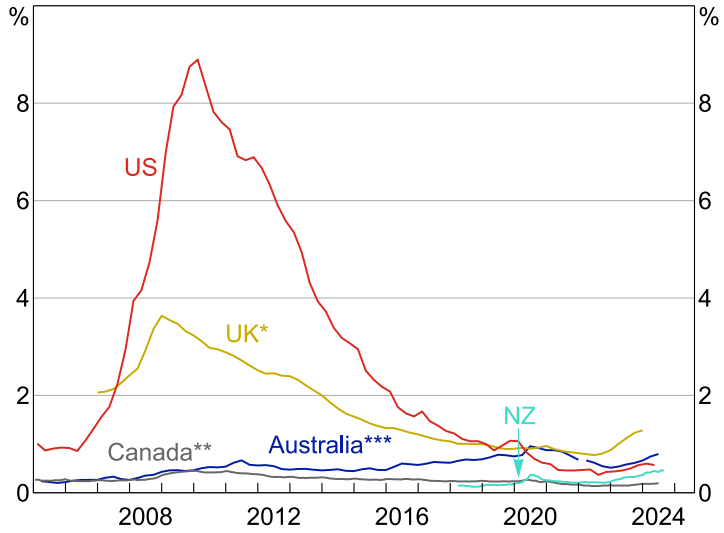
Sources: ABS; APRA; RBA.

Despite the substantial increase in mortgage payments, there has been little increase in acute financial distress among borrowers. Mortgage arrears rates have risen, but they remain low and at similar levels in Australia and the United States (Graph 7). This is despite the significant rise in required mortgage payments in Australia.[9] The low levels of defaults in both economies partly reflects the large savings buffers many households built up during the pandemic as well as benign labour market conditions, since unemployment tends to be a strong predictor of mortgage arrears.[10]

Graph 7

Mortgages in Arrears

Share of loan balances in 90+ day arrears



* Loans with arrears greater than 1.5 per cent of the current loan balance, and of any length, as a share of the total value of outstanding loans. Latest observations January 2024 (United Kingdom), May 2024 (United States), June 2024 (Australia), July 2024 (Canada) and August 2024 (New Zealand).

** Number of loans in 90+ day arrears as a share of the number of outstanding loans.

*** Well-secured loans prior to March 2022; both well-secured and not well-secured loans thereafter.

Sources: APRA; national sources; RBA.

Financial distress has also been contained, in part, by the way that interest rate exposure of Australian mortgage holders is managed by banks (overseen by the regulators) as well as by the borrowers themselves. In short, these contribute to borrowers having buffers that can lessen the burden of adjustment in the face of a rise in interest rates.

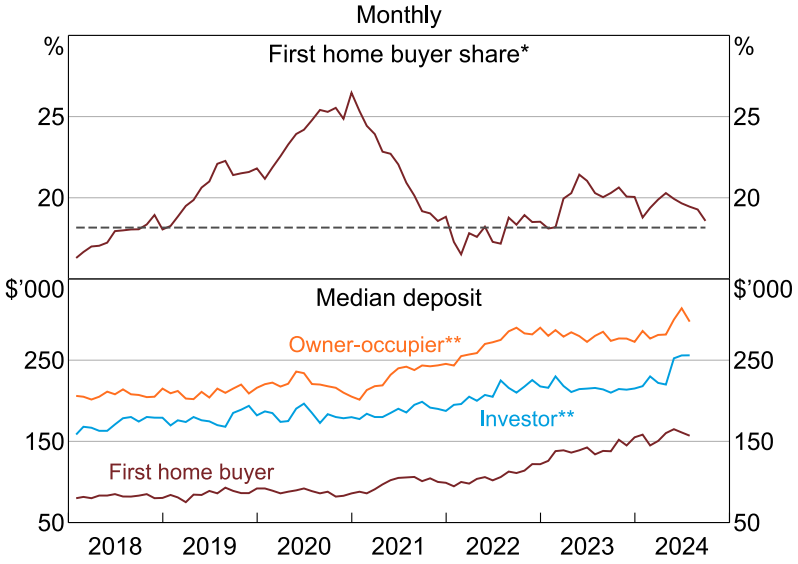
Banks account for interest rate risk when setting their lending policies and the Australian Prudential Regulation Authority (APRA) ensures that banks maintain prudent lending standards. When a bank determines how much to lend a prospective borrower, they must assess the borrower's ability to service their mortgage at an interest rate 300 basis points above the current rate while still meeting basic living expenses.[11] This buffer recognises the risk associated with rates increasing as well as other risks – such as to income or unexpected spending needs.[12]

Borrowers play a key role in managing their own interest rate risk. This starts with their decision on how much to borrow. Historically, only a small share of new borrowers took out loans close to the value of the maximums on offer. In 2022, only around 15 per cent of new owner-occupiers borrowed more than 80 per cent of their maximum assessed capacity. This share is likely to have increased since then due to increases in interest rates and housing prices and declines in real incomes. For the same reasons, more borrowers are struggling to get a mortgage. Indeed, the median deposit has increased noticeably for all types of borrowers over recent years, particularly for first home buyers (Graph 8). And while the first home buyer share of new loans has been a bit above average of late, the so-called bank of mum and dad may have increasingly helped many first home buyers.

Graph 8

Characteristics of New Loans

Monthly



* Dashed line represents long-run average.

** Excluding first home buyers.

Sources: ABS; APRA; RBA; Securitisation System.

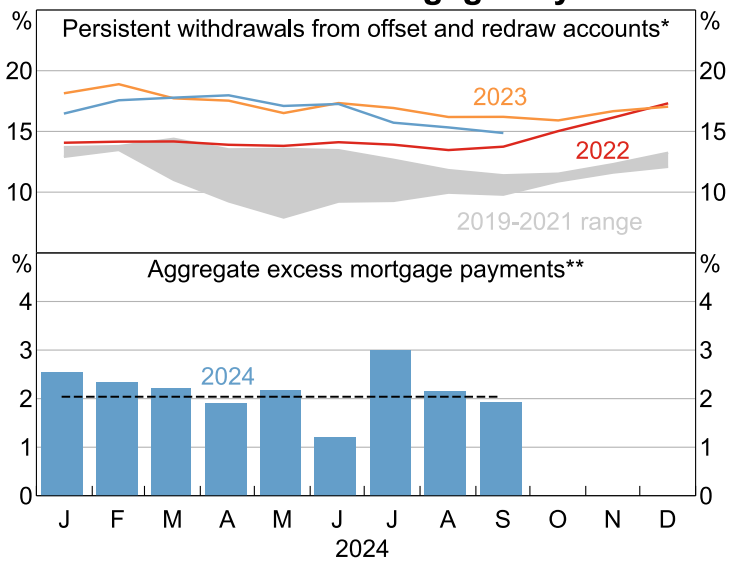
Once Australians have a mortgage, they tend to reduce their interest rate risk by paying down their loans more quickly than required. They do this by accumulating funds in offset and redraw accounts. These accounts, which are readily available in Australia for variable-rate loans, provide a highly liquid form of saving and a favourable rate of return since the interest saved on balances in these accounts is tax free. Currently, these extra payments are a bit above 20 per cent of the total value of outstanding housing credit.[13]

Existing borrowers can respond to rising interest rates and the associated increases in required mortgage payments in several ways:

- Some borrowers may tap into existing savings. Indeed, the share of borrowers making persistent withdrawals from their offset and redraw accounts increased noticeably as interest rates rose (Graph 9).[14] Despite this, borrowers overall have continued to add to these accounts at a similar rate to before the pandemic. As a result, the distribution of these savings buffers (expressed as a share of borrowers' minimum scheduled payments) has not changed much since 2020, despite borrowers' minimum scheduled payments having increased by 45 per cent (Graph 10).

Graph 9

Trends in Excess Mortgage Payments



* Share of variable-rate owner-occupier loans in which offset and/or redraw account balances fell over the preceding three months.

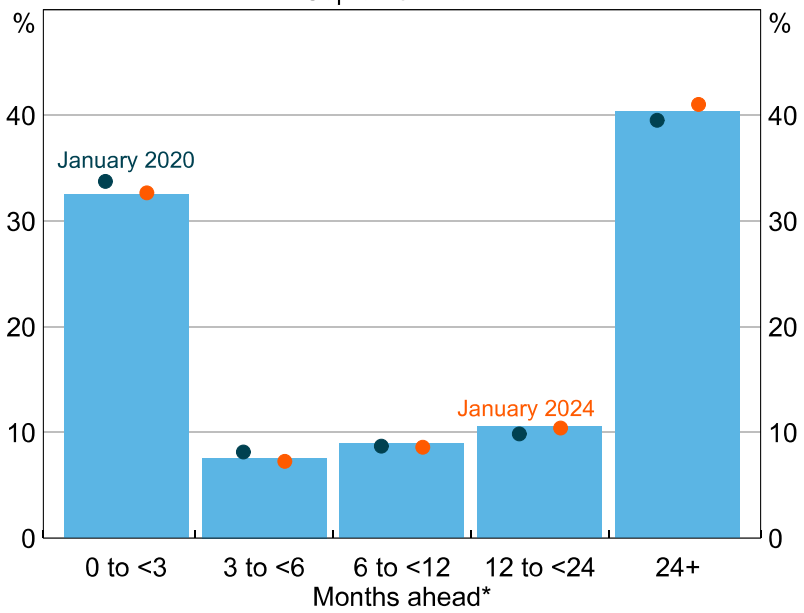
** Share of household disposable income; dashed line represents pre-pandemic average.

Sources: APRA; RBA; Securitisation System.

Graph 10

Household Mortgage Buffers

Share of variable-rate owner-occupier borrowers, September 2024



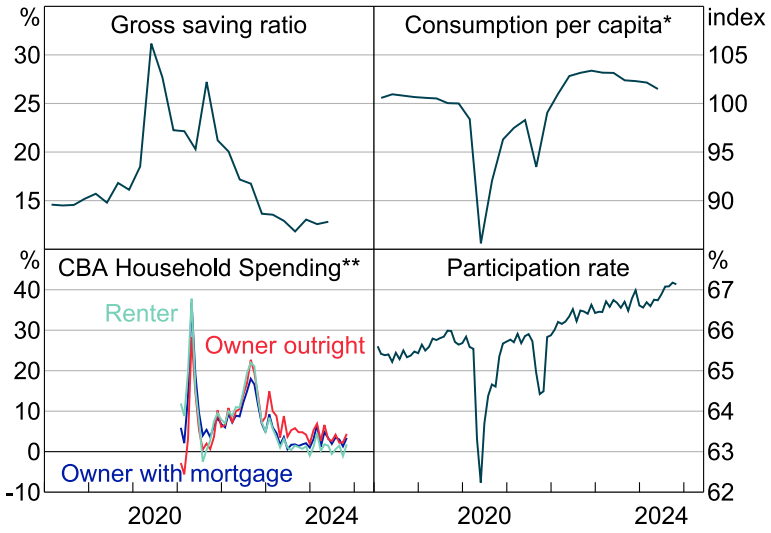
* Months ahead expressed as number of months that prepayments (offset and redraw balances) can cover minimum scheduled payments.

Sources: RBA; Securitisation System.

- Some households may also reduce their savings rates for a time. Consistent with this, the aggregate savings rate for households declined as interest rates increased and broader cost of living pressures ate into households' real incomes; although, some of this decline reflected a normalisation of savings rates as the effects of the pandemic wore off (Graph 11).

Graph 11

Household Indicators



* December quarter 2019 = 100. Population figure adjusted to exclude international students.

** Nominal year-ended growth.

Source: ABS; CBA; RBA.

- At the same time, however, higher interest rates provide an incentive to save more, so some borrowers may reduce the extent of their discretionary consumption and even increase their rate of saving. Other borrowers may have limited options other than to reduce consumption as required mortgage payments increase. While aggregate household consumption, particularly of discretionary items, has been weak for some time now, there is no timely and comprehensive data available on consumption by different household types. Nevertheless, spending data from some of the large banks provide a rough guide. It shows that the growth of spending (in nominal terms) has declined for all types of borrowers since mid-2022, but it has been weaker still for borrowers and renters compared with those that own their homes outright.
- Borrowers may also be able to take on extra work to manage higher mortgage payments. Indeed, borrowers with the highest ratio of mortgage payments to income in 2021 found more work over the past three years than other groups, thereby contributing to the strong rise in labour force participation over recent years.[15]

Lenders can help borrowers manage temporary periods of financial stress, deferring payments for a time – including by charging interest only – or lengthening the term of a loan. Many lenders have had to improve their hardship arrangements after a review by the Australian Securities and Investments Commission.[16] This included identifying stress and setting up hardship arrangements before borrowers fall behind on their mortgages. Borrowers who are experiencing persistent difficulties servicing their mortgages, and with no further options to adjust their finances, may decide to sell their homes. Our liaison with lenders suggests that while more households are making this very difficult decision, it is less costly financially than otherwise given the low share of mortgages currently in negative equity (less than 1 per cent).[17]

I have focused mainly on households in this discussion because their exposures are quite different in Australia than in many other economies. But businesses also face interest rate risk. Recent increases in interest rates have largely passed through to small business loans.[18] Pass-through has been less for listed companies, owing to their use of longer term fixed-rate debt and interest rate hedges. For many Australian businesses, the effect of higher interest rates has been mitigated by strong financial positions as monetary policy was being tightened, including cash buffers that were noticeably above pre-pandemic levels.[19] And while company insolvencies have increased over the tightening phase, this largely reflects factors beyond the direct effects of higher interest rates.[20]

It is worth emphasising that the Reserve Bank Board is attuned to interest rate risk and the burden of adjustment being experienced by households and businesses with sizeable debts. Australians more broadly have had to constrain their spending during the period of elevated inflation, including those people who rent and those without debts. While the Board is well aware of variation in the circumstances facing different households and businesses, it has only one instrument – the cash rate target – to achieve its inflation and employment objectives.

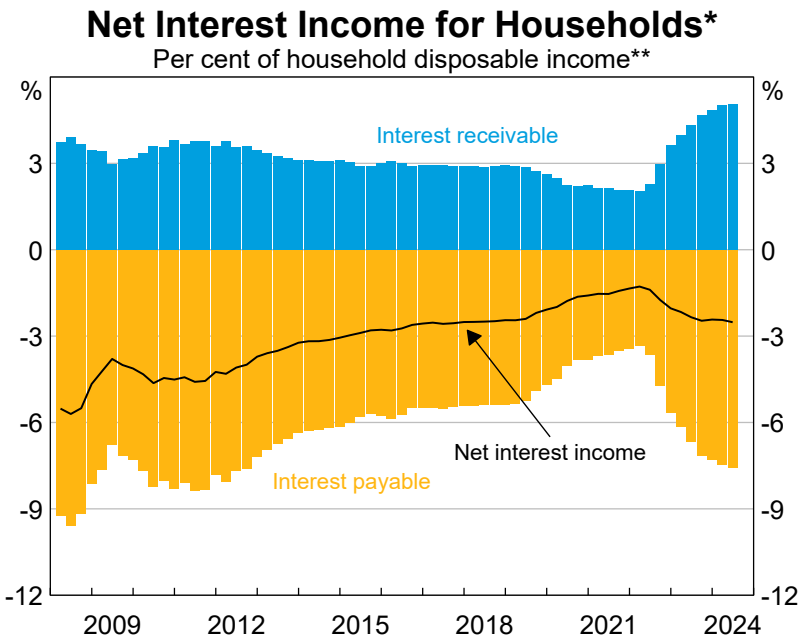
The effect of interest rates on the cash flows and behaviour of indebted households receives extensive attention in Australia. But this is only one side of the cash-flow channel, and that, in turn, is only one of the channels of monetary policy transmission.

The cash-flow channel of monetary policy

The other side of the cash-flow channel is the effect of interest rates on the incomes of households (and businesses) with net asset positions. When interest rates rise, they receive more interest income on deposits and other interest-bearing assets. As interest rates rose from 2022, deposit rates in Australia responded noticeably, with about 80 per cent of the increase in the cash rate being quickly passed through to deposits. Pass-through was greater here than in many other advanced economies.[21]

Because Australian households hold more debt than interest-sensitive assets, the net effect of higher interest rates has been to reduce household cash flows. Household net interest income has declined by 1.2 per cent of household disposable income since early 2022 (Graph 12). While this overall cash-flow effect appears modest, it is important to recognise that borrowers' marginal propensity to consume is generally much larger than it is for savers.[22] Hence, even this modest change in household sector cash flows can have a noticeable impact on household consumption.

Graph 12



* Nominal, quarterly. Excluding unincorporated enterprises.
** Disposable income is after tax and before deduction for interest payments.
Source: ABS.

Other channels of monetary policy transmission

While the cash-flow channel may be stronger in Australia than in many other economies, estimates from the RBA's MARTIN model suggest that the cash-flow channel of monetary policy is not the strongest part of the transmission mechanism in Australia.[23]

The other channels of transmission include the savings/investment, credit, asset price, and exchange rate channels.[24] Again, differences in economic structures, including household and corporate balance sheets, are likely to affect the relative strength of these transmission channels across economies.

The savings/investment channel (or intertemporal channel) operates through the opportunity cost of borrowing (or forgoing saving) to finance new investments or fund consumption. Because savings and investment behaviour should be guided by what the average (real) interest rate is likely to be over the life of the relevant asset or liability, the opportunity cost should not vary according to whether the interest rate on loans is fixed or variable.

But fixed-rate lending may, in some cases, amplify or dampen the effect of monetary policy on some spending and investment decisions. For example, most existing US mortgage holders (with long-term fixed rates) were protected from the effect of rising interest rates from 2022 (Graph 13). But at the same time, it became unattractive for existing borrowers to move house because that would require them to refinance their loan at a much higher rate.[25] This adverse effect on housing turnover and the associated economic activity implies lower investment and consumption than otherwise in the United States. Such a consideration is not relevant to Australian borrowers on variable rate mortgages, though it is important to note that new housing investment is quite sensitive to changes in interest rates in Australia.[26]

Graph 13

US 30-Year Fixed Mortgage Rate

Loan applications, monthly average

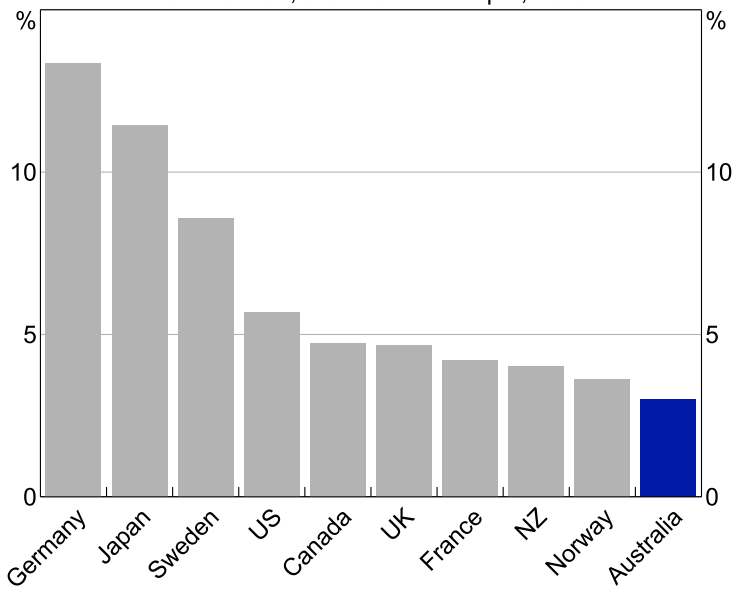
Sources: FRED; Freddie Mac; RBA.

Differences in industrial structures may also matter for the strength of the savings and investment channel. Changes to interest rates can have strong effects on the demand for durable consumption and capital goods (such as cars, furniture, electronics, or plant and equipment used by businesses). This is because households and businesses have considerable discretion about the timing of those purchases.[27] In Australia, production of durable goods is lower than in many other advanced economies (Graph 14). Hence, more of any given change in the demand for durable goods in Australia associated with a change in interest rates is reflected in a change in imports, with less of an effect on the demand for factors of production, like labour. Instead, a larger share of Australian production is accounted for by commodities, the demand for which is less sensitive to interest rates.

Graph 14

Durable Goods Manufacturing*

Value added, share of total output, 2020



* Classification of durable goods-producing sectors from Georgiadis (2014).

Sources: ABS; OECD; RBA.

There are aspects of other channels of monetary policy transmission that are likely to vary across economies. For example, the structure of household and business balance sheets can influence how responsive consumption and investment decisions are to asset prices or the willingness of banks to lend (both of which will change in response to interest rates).[28]

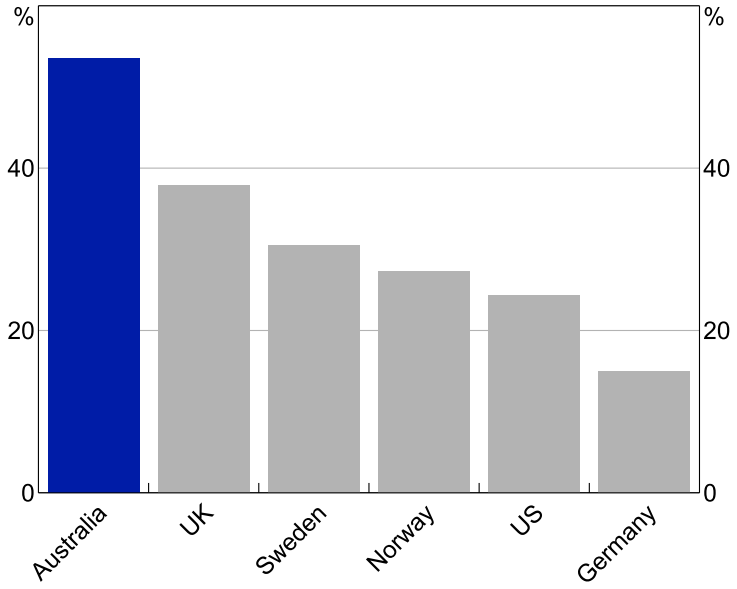
- Australians have a lot of their savings tied up in compulsory superannuation. Hence, they have a higher share of their financial assets in pension funds than many other advanced economies, and more than twice the US share (Graph 15).[29] Consequently, Australians have a lower share of their financial wealth in directly held securities. We would expect the transmission of monetary policy via asset prices to be much stronger for directly held securities, which households can sell (or borrow against) to fund spending, than assets 'locked up' until retirement.
- The median listed company in Australia has a higher share of assets held in cash and lower leverage than the median firm in many other advanced economies (Graph 16). All else equal, this will reduce the vulnerability of Australian companies to a rise in interest rates. With access to internal funds, they are less likely to cut back on investment if lenders are less willing to extend credit in response to higher rates (weakening the credit channel).[30]

Time does not allow for a detailed treatment of the exchange rate channel. The strength of this channel depends, among other things, on the nature of the goods and services traded and the level of foreign currency liabilities exposed to exchange rate movements.[31] It is an important channel for Australia as implied by estimates from the RBA's MARTIN model, and it is also an important channel for other small open economies.

Graph 15

Pension funds

As a share of total household financial assets, 2022

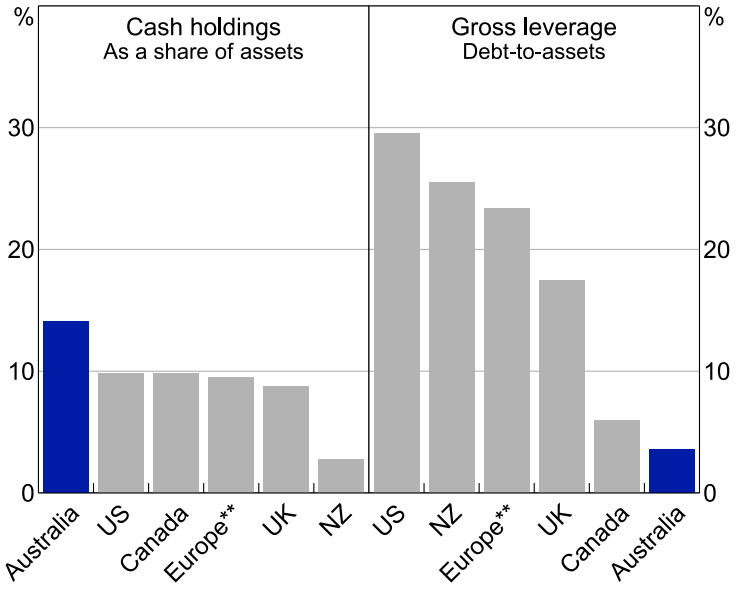


Sources: OECD; RBA.

Graph 16

Non-Financial Corporations*

Median firm, end-2023



* Data only captures publicly listed firms.

** Includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden and Switzerland.

Sources: RBA; S&P Market Intelligence.

Forward guidance and the reaction function

The first stage of the transmission of monetary policy describes how a change in the overnight policy rate (i.e. the cash rate in Australia) passes through to other interest rates further out along the yield curve. These rates will depend, among other things, on the expectation of future short rates. The yield curve, in turn, influences a

broader range of financial conditions, including yields on corporate debt, other asset prices and the exchange rate. The spending and investment decisions of businesses and households – which influence aggregate demand and inflation – will depend not just on the near-term rates they face, but also on the path of future rates they expect.

Hence, the effect of any given change in the overnight rate will depend on the implication of that change for the path of the overnight rate out into the future. This can be influenced by central banks in two ways. First, by providing information about the central bank's reaction function – how it is likely to respond to changing economic circumstances to best achieve its inflation and employment goals. Second, by providing guidance on what policymakers at the central bank see as the likely path of future interest rates. Information on a central bank's reaction function, and its forward guidance on the likely path of rates (that policymakers think will best deliver on the central bank's inflation and employment goals) can also help to anchor inflation expectations.

Central banks provide the public and markets with extensive information on the economic outlook and what guides their monetary policy decisions, and some information on the likely path of interest rates. But exactly how they do this varies across central banks. I will step through some of those differences, with a focus on approaches the RBA has used.

To preface these remarks, I would note two things. First, the results I presented at the outset – on the similarity in the effect of changes in policy rates on aggregate demand and inflation – implicitly suggest that despite different approaches, including on forward guidance, monetary policy effectiveness has been broadly comparable across advanced central banks.

Second, there are two types of forward guidance on interest rates. Under the stronger form, a central bank *commits* to keep interest rates at or close to the effective lower bound during extremely adverse circumstances. The RBA's review of its pandemic experience noted the difficulties of overlaying its initial 'state-based' commitment with an inflexible and lengthy time-based element and pairing it with the three-year government bond yield target.[32] But that pandemic episode has been discussed at length and I will not go over that form of guidance here again.

Instead, in what follows I will consider only forward guidance that provides some sort of information about the likely path for the policy rate.[33] It is worth clarifying that forward guidance can also shed some light on the central bank's reaction function. This was the case, for example, following the August 2024 decision of the Reserve Bank Board. The Governor's media conference and the minutes noted that, in contrast to the market path for the cash rate that had shifted noticeably lower over the days leading into the meeting, the Board thought 'it was unlikely that the cash rate target would be reduced in the short term' based on the information to hand.[34] This reflected concerns that inflation may not return to the target in a reasonable time, which has remained the Board's highest priority. As I will note below, there may be other ways to convey the reaction function more directly.

Outside of the pandemic episode, the RBA's guidance has tended to be provided less frequently, in less explicit and more qualitative ways, and covering shorter terms than several other central banks. For example, policymakers from the central banks of the United States, New Zealand, Sweden and Norway have for some time been providing their views on the appropriate path of policy rates going out three years (conditional on the information to hand about the likely outlook for key economic variables).

I have heard several arguments for the approach that the Reserve Bank Board has taken over the years:[35]

1. One is that more specific guidance may be taken by some people to be a commitment on a particular path of rates. If a different path were taken, even in response to unexpected circumstances, it might damage credibility. This may be more likely in Australia given the intense focus on monetary policy that stems from the prominence of variable-rate mortgages.[36] And while the RBA's experience with strong time-based

forward guidance during the pandemic provided evidence in support of this argument, other central banks have not found this to be a concern when pursuing more standard forward guidance; the Norges Bank is particularly relevant here given that most mortgages in Norway are also at variable rates.[37]

2. Market participants are likely to be more forgiving (than households and businesses) when a central bank's guidance does not come to pass. More importantly for them is understanding the central bank's reaction function. Indeed, the former Deputy Governor Guy Debelle argued that if the reaction function 'is sufficiently clear, then forward guidance does not obviously have any large additional benefit and runs the risk of just adding noise or sowing confusion'.[38] In other words, efforts to clarify the reaction function can be a substitute for providing forward guidance. This could be achieved by consistently explaining the logic of the Board's decisions, and what they are looking for to guide future decisions. More generally, laying out expectations for the economy and explaining decisions is important for transparency and accountability that are the cornerstones of credibility. Another approach gaining attention is to use scenarios to convey how monetary policy might respond in different circumstances. While scenarios can help to convey the reaction function, they need to be based on the policymakers' preferences. Results based solely on models are not sufficient since these are estimated with imprecision and reflect the typical behaviour of policymakers in the past, whereas a board's preferences (and even mandates) can evolve over time, including as the composition of the board changes.
3. This brings me to an argument about the nature of the Reserve Bank Board. Because six of the nine members are part-time, it may be more difficult for them to provide the sort of guidance provided by full-time policymakers, who typically benefit from macroeconomic training and/or extensive support of staff.[39]
4. Another argument I have heard against near-term guidance is that if there is a good degree of agreement among the Board members of the need for an imminent policy change, then rather than provide guidance to that effect, why not just change rates now?[40]
5. A question that may be worth further investigation is whether differences in the channels of monetary policy transmission have implications for forward guidance? In particular, because a large share of funding in the Australian economy is priced off the very short end of the yield curve, it may be that forward guidance beyond the near term may have a more limited role to play than in other economies, particularly the United States, where a lot of funding is priced off the longer end of the yield curve.[41] To be clear, this is not an argument against forward guidance in Australia, just that it might be less useful than in an economy like the United States. Differences in two transmission channels of monetary policy support this argument. First, the cash-flow channel of monetary policy in Australia – which drives off the short end of the yield curve – is stronger than it is in the United States (even if it is not a dominant channel for Australia). Second, the credit channel in Australia depends on the very short end of the yield curve – since the assessment of borrowers' ability to service a loan is based on current interest rates. By contrast, serviceability depends on longer term rates for a much larger share of lending in the United States. However, other channels of transmission depend on longer-run expectations of rates in Australia, implying a potential role for forward guidance. In particular, the savings/investment channel depends on longer-run expectations and should be invariant to the structure of finance in an economy. Similarly, the Australian dollar exchange rate is responsive to interest rates out along the curve, as is the case for exchange rates of other advanced economies.[42]

Conclusion

A key characteristic of the Australian financial system is the prominence of variable-rate mortgage debt. While not unique, it sets Australia apart from financial systems in many other economies.

One consequence of this is that Australian borrowers are exposed to considerable interest rate risk. Indeed, mortgage arrears rates in Australia are trending up following the large rise in required mortgage payments. Even so, arrears rates here remain low and are at similar levels to those in economies with much more fixed-rate lending. This outcome reflects several features of the Australian mortgage market that collectively leave most borrowers with buffers that help them to manage through a period of higher interest rates. That has been the case through the recent episode, although many borrowers have struggled in the face of rising interest rates over the past two years or so, and household spending more broadly has weakened noticeably.

This influence of monetary policy on the cash flows and behaviour of variable rate borrowers receives a lot of attention in Australia. However, this is only one of the channels of monetary policy and there is no evidence that monetary policy overall is more potent in Australia than in other advanced economies. Further study on the efficacy of these different channels, particularly cross-country comparisons, is an interesting area for further research.

Outside the pandemic episode, the RBA has tended to provide forward guidance that is more infrequent, short-term and qualitative than many other central banks. I have outlined some of the arguments for this, but I think it would be worth reviewing the RBA's approach to forward guidance from time to time, including to consider other ways that the RBA might clarify the nature of its reaction function. Any such reviews should carefully account for features of Australia's financial system that set it apart from other economies.

Finally, it also bears repeating that all advanced economy central banks provide extensive information about the economic outlook and their reaction functions that guide the public and markets to form views about the future path of monetary policy. Central banks may be more or less explicit about that guidance, but as is the case with the aggregate transmission of monetary policy, while the internal mechanisms might differ, the overall effect can be quite similar.

Endnotes

* I thank Matt Gibson, Peter Wallis, Dominique D'Netto, David Meredith, Hebe Williams and Sharon Lai for help in preparing this speech, and numerous RBA staff for helpful comments and suggestions. The views are my own and not necessarily those of the RBA.

1 These results are based on semi-structural and DSGE models. Different modelling approaches (e.g. vector autoregression models) tend to yield a wider range of estimates regarding the macroeconomic effects of monetary policy. Even so, these approaches do not suggest that Australia is an outlier in relation to other economies. Note that the estimates presented here almost all come from a one-quarter, unanticipated monetary policy shock that is then unwound. This approach is standard practice in the literature and allows for a relatively consistent comparison of outputs across models. However, the artificial nature of the shocks used means we should not read these estimates as reflecting the real-world strength of monetary policy in an absolute sense. For example, a larger effect would be apparent if a change to the policy rate was held in place for longer than a quarter.

2 During the pandemic, the share of debt fixed for periods longer than one year increased noticeably in response to a decline in fixed rates relative to variable rates following the package of policy measures of the RBA in response to the pandemic. Even so, this share remained lower than in most other countries. It has since declined to historical lows. Presently, 97 per cent of housing credit is either variable rate or fixed for a term of one year or less. See RBA (2022), 'Review of the Term Funding Facility'.

3 For larger businesses, some of this variable-rate borrowing may be hedged. See RBA (2024), 'Chapter 2: Resilience of Australian Households and Businesses', *Financial Stability Review*, September.

4 See Castro M and S Jordan Wood (2022), 'How Changing Interest Rates Affect Variable-Rate Loans to U.S. Firms', On the Economy Blog, 16 August.

5 For the year to date in Australia only around 6 per cent of the value of bonds issued by non-financial corporates had floating rate coupons, while this was even lower in the United States at 2 per cent.

6 For a cross-country overview of household and business exposures to interest rate risk, see Committee on the Global Financial System (2024), 'Interest rate risk exposures of non-financial corporates and households: Implications for monetary policy transmission and financial stability', *CGFS Papers* No 70, November.

7 Average outstanding mortgage rates also rose at a similar rate in New Zealand, where most mortgages have residual terms of less than a year, and the policy rate was increased as much as it was in the United States.

8 Total scheduled debt payments by households (including estimated payments on consumer credit) have also increased but remain below historical peaks because the stock of consumer credit has declined significantly since 2008. See Graph 1.16 in RBA (2024), 'Chapter 1: Financial Conditions', *Statement on Monetary Policy*, November.

9 This recent episode in the United States stands in contrast though to the prelude to the global financial crisis when many sub-prime borrowers faced sizeable jumps in the interest rates on their debt. See 'Chapter 1: Origins of the Crisis' in Federal Deposit Insurance Corporation (2017), *Crisis and Response: An FDIC History, 2008–2013*.

10 See Bergmann M (2020), 'The Determinants of Mortgage Defaults in Australia – Evidence for the Double-trigger Hypothesis', RBA Research Discussion Paper No 2020-03.

11 In 2019, APRA notified banks they were expected to use a serviceability buffer of at least 250 basis points. This was increased to 300 basis points in 2021. Under APRA's prudential framework, banks can use exceptions to policy if these are managed prudently and limited. This approach allows banks to consider additional indicators of repayment capacity beyond those captured in the standard serviceability test. See APRA (2023), 'Housing Lending Standards: Reinforcing Guidance on Exceptions', June.

12 See APRA (2023), 'Update on Macroprudential Settings', December.

13 See Hughes A (2024), 'How the RBA Uses the Securitisation Dataset to Assess Financial Stability Risks from Mortgage Lending', RBA *Bulletin*, July.

14 High-income borrowers are the only group that, in aggregate, have been drawing down on their offset and redraw balances, although within lower income borrower groups there are likely to be households under more stress that have drawn down on what balances they had to help make ends meet. See RBA (2024), 'Chapter 2: Resilience of Australian Households and Businesses', *Financial Stability Review*, September.

15 Das M, J Hambur, K Hellwig and J Spray (forthcoming), 'Labor Supply Effects of Monetary Policy: Evidence from Australian Mortgage Holders', RBA Research Discussion Paper.

16 See ASIC (2024), 'Hardship, Hard to Get Help: Findings and Actions to Support Customers in Financial Hardship', May; RBA, n 14.

17 See RBA, n 14.

18 See Bullo G, A Chinnery, S Roche, E Smith and P Wallis (2024), 'Small Business Economic and Financial Conditions', RBA *Bulletin*, October.

19 See RBA, n 14.

20 These factors include the removal of significant support measures put in place during the pandemic, weaker demand, and the Australian Tax Office resuming enforcement actions on unpaid taxes. Most businesses entering insolvency are small businesses with little debt. Despite the rise, insolvencies as a share of businesses remain below pre-pandemic trends. See RBA, n 14.

21 See Kent C (2023), 'Channels of Transmission', Address to Bloomberg, Sydney, 11 October.

22 Savers that are liquidity constrained, such as pensioners, have been found to have a relatively high marginal propensity to consume (MPC), but they make up a relatively small proportion of households, see La Cava G, H Hughson and G Kaplan (2016), 'The Household Cash Flow Channel of Monetary Policy', RBA Research Discussion Paper No 2016-12. For a discussion of differences in the MPC by income, see Berger-Thomson L, E Chung and R McKibbin (2010), 'Estimating Marginal Propensities to Consume in Australia Using Micro Data', *Economic Record*, 15 August. For differences by wealth, see La Cava G, H Hughson and G Kaplan (2016), 'Housing Wealth Effects: Cross-sectional Evidence from New Vehicle Registrations', RBA Discussion Paper No 2016-02.

23 See Ballantyne A, T Cusbert, R Evans, R Guttmann, J Hambur, A Hamilton, E Kendall, R McCirick, G Nodari and D Rees (2019), 'MARTIN Has Its Place: A Macroeconometric Model of the Australian Economy', RBA Research Discussion Paper No 2019-07; Gross I and A Leigh (2022), 'Assessing Australian Monetary Policy in the Twenty-First Century', *Economic Record*, 13 June.

24 See Kent, n 21.

25 This effect typically operates in reverse as interest rates fall, since most US mortgages allow borrowers to refinance at lower rates with minimal penalties. The current easing of monetary policy by the Fed may be an exception, since long-term rates will need to fall more than in recent cycles for refinancing to become attractive to borrowers who locked in rates in 2020–2021.

26 For a discussion of this effect, see Aidala F, A Haughwout, B Hyman, J Somerville and W van der Klaauw (2024), 'Mortgage Rate Lock-In and Homeowners' Moving Plans', Federal Reserve Bank of New York *Liberty Street Economics*, 6 May. Going the other way, there is an argument that US monetary policy does have a timely effect on disposable incomes via new loans and refinancing; for evidence of this, see Ringo D (2024), 'Inframarginal Borrowers and the Mortgage Payment Channel of Monetary Policy', Board of Governors of the Federal Reserve System Finance and Economics Discussion Series 2024-069.

27 For further discussion, see Black S and T Cusbert (2010) 'Durable Goods and the Business Cycle', RBA *Bulletin*, September; Lawson J and D Rees (2008) 'A Sectoral Model of the Australian Economy', RBA Research Discussion Paper No 2008-01.

28 A rise in interest rates contributes to lower asset prices by increasing the discount factor used to value expected future cash flows generated by assets (such as dividends, coupon payments and rental income, for shares, bonds and housing). A rise in interest rates may also reduce the supply of loans to households and the availability of external funding to businesses. Lenders could face greater credit risks from borrowers facing higher debt servicing costs and who may be less able to provide collateral for loans due to lower asset prices.

29 Bishop J and N Cassidy (2012), 'Trends in National Saving and Investment', RBA *Bulletin*, March, pp 9–18; Connolly E and M Kohler (2004), 'The Impact of Superannuation on Household Saving', RBA Research Discussion Paper No 2004–01.

30 Some tentative empirical support for this relationship in Australia is discussed in Nolan G, J Hambur and P Vermeulen (2023), 'Does Monetary Policy Affect Non-mining Business Investment in Australia? Evidence from BLADE', RBA Research Discussion Paper No 2023-09.

31 The exchange rate channel is typically associated with the trade channel, in which an exchange rate depreciation increases foreign demand for exports and reduces domestic demand for imports, stimulating the economy. However, an offsetting financial or risk-taking channel can exist if an economy has more foreign currency debt than assets, meaning that an exchange rate depreciation worsens its net foreign liability position (unless this exposure is hedged). This can tighten domestic financial conditions. See Kearns J and N Patel (2016), 'Does the Financial Channel of Exchange Rates Offset the Trade Channel?', BIS *Quarterly Review*, December; Smith P (2023), 'The Extraordinary Decline in Australia's Net Foreign Liabilities', Speech to CFA Societies 2023 Australian Investment Conference, Sydney, 18 October.

32 See RBA (2022), 'Review of the RBA's Approach to Forward Guidance' and 'Review of the Yield Target'.

33 For further discussion, see RBA (2022), 'Review of the RBA's Approach to Forward Guidance', and references therein.

34 See RBA (2024), 'Minutes of the Monetary Policy Meeting of the Reserve Bank Board', Sydney, 5–6 September. It is also worth noting that the cash rate path on 6 August, the day of the Board meeting, had declined noticeably following US data since the market path as of 31 July that was used to condition the forecasts presented in the August 2024 *Statement on Monetary Policy*.

35 See RBA (2022), 'Review of the RBA's Approach to Forward Guidance'; Bowman MW (2022), 'Forward Guidance as a Monetary Policy Tool: Considerations for the Current Economic Environment', Speech at the Money Marketeers of New York University, New York, 12 October.

36 Senior RBA leaders have previously discussed the potential limits of being too prescriptive in communication. For example, Debelle noted that 'if the central bank's communications suggest it has greater knowledge or greater precision in its inflation control than it does in reality, then when this becomes apparent and the public's expectations are disappointed, the central bank's credibility may be damaged': see Debelle G (2009), 'The Australian Experience with Inflation Targeting', Speech at Banco Central do Brasil XI Annual Seminar on Inflation Targeting, Rio de Janeiro, 15 May. Lowe noted that following a communication approach that is too prescriptive could 'cost the central bank the support and confidence of the broader community': see Lowe P (2019), 'Remarks at Jackson Hole Symposium', Wyoming, 25 August.

37 For example, in a reflection of its experiences publishing its own policy rate forecasts (formerly named repo rate), Sveriges Riksbank noted that many previous concerns had not materialised: see Sveriges Riksbank (2017), 'The Riksbank's Experiences of Publishing Repo Rate Forecasts', *Riksbank Studies*, June. These concerns included that the forecast would be interpreted as a binding promise or that all members of the Executive Board would fail to agree on a repo rate forecast.

38 See Debelle G (2018), 'Risk and Return in a Low Rate Environment', Speech at Financial Risk Day, Sydney, 16 March. Related to this point, while forward guidance will aid households and businesses in making their longer term investment and spending decisions, those could also be informed by the yield curve, or other market rates at longer terms. The question really should be whether the central bank has a strong conviction that the market path of rates is unlikely to be the right one.

39 For a brief discussion of the difficulties of even full-time central bankers on the Federal Open Market Committee agreeing on a reaction function, see Stein JC (2014), 'Challenges for Monetary Policy Communication', Speech at the Money Marketeers of New York University, New York, 6 May. Edey and Stone note that a disclosure practice that makes sense for a technically focused monetary policy committee might not be well suited to alternative board structures: see Edey M and A Stone (2004), 'A Perspective on Monetary Policy Transparency and Communication', Paper presented at the RBA Annual Conference. Stevens makes a similar point: 'The nature of the Reserve Bank Board – a majority of whom are part-time members, drawn from various parts of the Australian community, but seeking to make decisions in the national interest as opposed to any industry, geographical or sectional interest – needs to be considered when thinking about disclosure practices': see Stevens G (2007), 'Central Bank Communication', Address to The Sydney Institute, 11 December.

40 In a similar vein, some central banks provide guidance about the upcoming decision in a way that reduces the extent of market surprises at the time of the decision. However, providing such guidance in the lead up to a meeting merely brings forward the date of the surprise to that point. For a discussion of this point in the context of communications by the European Central Bank, see Istrefi K, F Odendahl and G Sestieri (2024), 'ECB Communication and Its Impact on Financial Markets', Banco de Espana Document de Trabajo No 2431.

41 Some Fed officials have argued that Treasury (real) yields as far out as 10 years provide a better measure of the stance of monetary policy than the current policy rate, due to their tighter relationship with broader financial conditions and economic activity. See Kashkari N (2024), 'Why I Supported Cutting Rates Last Week', Federal Reserve Bank of Minneapolis, 23 September; Kashkari N (2022), 'Policy has Tightened a Lot. Is It Enough?', Federal Reserve Bank of Minneapolis, 6 May.

42 See Atkin T, I Hartstein and J Jääskelä (2021), 'Determinants of the Australian Dollar Over Recent Years', RBA *Bulletin*, March.