

# Bank Funding and the Recent Tightening of Monetary Policy

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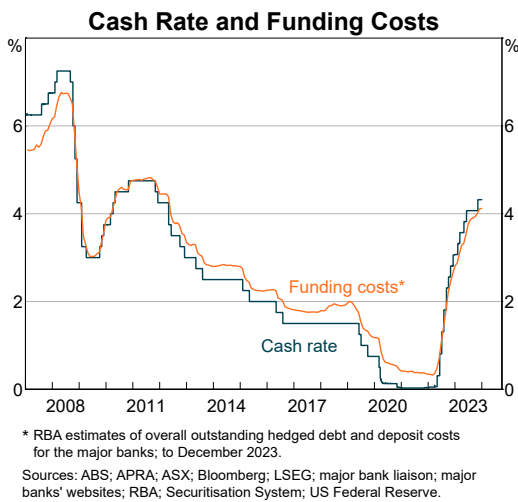
## Abstract

Banks' funding costs have risen substantially since early 2022, driven by increases in the cash rate. This article explains how increases in the cash rate passed through to banks' funding sources and how banks adjusted their funding mix. All non-equity sources of bank funding became more expensive over the hiking phase. Banks increased rates on term deposits by more than at-call deposits. Within at-call deposits, banks increased rates most for those savings accounts with conditions attached. Further, banks' share of funding from term deposits grew and banks issued more debt as the Term Funding Facility started to mature.

## Introduction

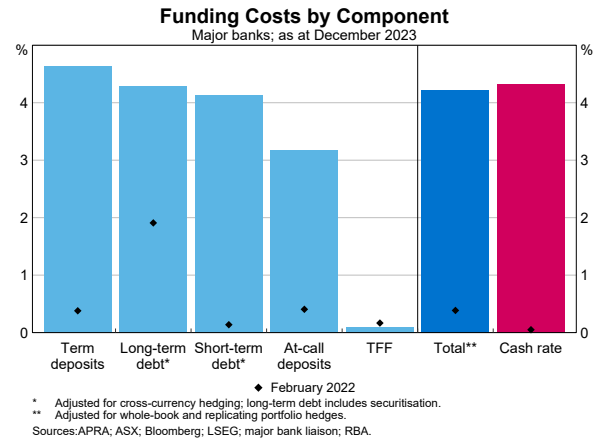
Bank funding costs are important in the transmission of monetary policy because the cost of funding is a key determinant of the rates that banks offer on loans to households and businesses (Brassil, Cheshire and Muscatello 2018). Bank funding costs also represent income to the entities providing the funding to banks, including households with deposits at banks. Tighter monetary policy has increased banks' funding costs significantly since early 2022. From February 2022 to December 2023, non-equity funding costs increased by around 380 basis points, while the cash rate increased by 425 basis points (Graph 1).

**Graph 1**



Monetary policy affects the costs of the components of bank funding primarily through its influence on a range of interest rates in the economy (Carse, Faferko and Fitzpatrick 2023). Banks obtain funding from retail deposits, wholesale deposits, wholesale debt (including securitisations) and equity (Graph 2). In recent years, banks also sourced low-cost funding from the RBA's Term Funding Facility (TFF) (Alston *et al* 2020).

**Graph 2**

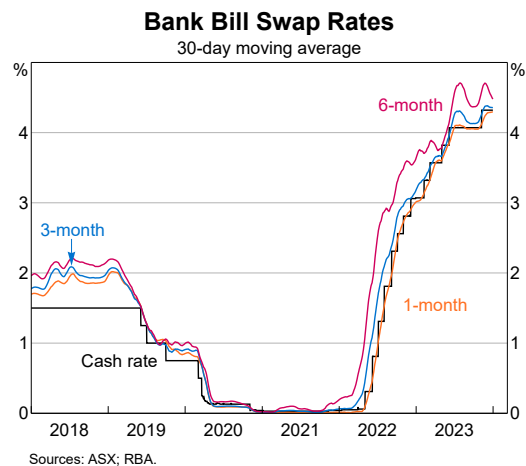


Bank bill swap rates (BBSW), which capture the cost of short-term debt in wholesale markets for major Australian banks at maturities from one to six months, are key reference rates for bank funding costs. This is because:

- banks use these short-term debt instruments as part of their funding mix
- interest rates on banks' longer-term funding liabilities are often linked back to BBSW – either directly in the case of floating-rate liabilities, or indirectly via hedges for fixed-rate liabilities.

Since February 2022, BBSW rates have increased by approximately the same amount as the cash rate (Graph 3). BBSW rates are heavily influenced by the cash rate, including expectations of future changes in the cash rate. BBSW rates are also affected by changes in bank credit risk, term premia and investor demand for short-term bank debt (Black and Titkov 2019).

**Graph 3**



## Drivers of bank funding costs

Over 2022 and 2023, increases in the cash rate were the primary driver of bank funding costs. The cost of short-term debt and term deposits increased by around the same amount as the cash rate. By contrast, the interest rate paid on at-call deposits and on long-term debt increased by less than the cash rate. Banks increased rates on certain at-call accounts (typically ‘bonus’ saver accounts with conditions, or accounts for new customers with introductory offers) by about the same amount as the cash rate. However, rates on other at-call deposits were increased by less. At-call deposits include transaction accounts on which banks pay little or no interest. By the end of 2023, around half of the TFF funding drawn down by major banks had matured and was replaced by more costly sources of funding, contributing around 5 basis points to the increase in bank funding costs. Some of this increase flowed through earlier to funding costs because some banks had hedged their fixed-rate TFF funding back to floating rates, which rose as the cash rate rose.

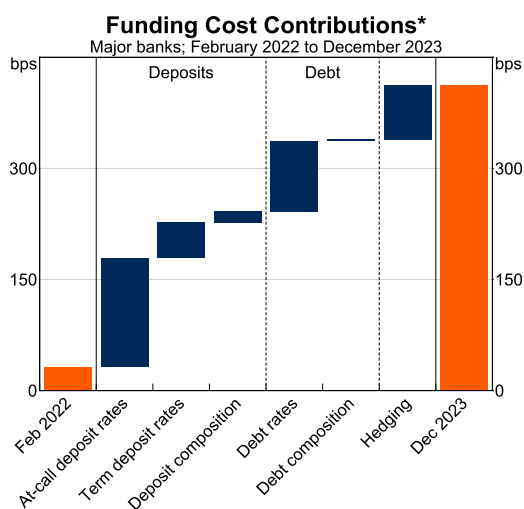
Most of the increase in funding costs owed directly to the higher rates paid on each funding component (Graph 4). Less than 20 basis points of the increase in overall funding costs owed to changes in funding composition (such as when customers shifted from lower- to higher-rate deposit products).

Hedging of fixed-rate liabilities back to floating rates linked to BBSW has added to funding costs over the hiking phase, contributing around 70 basis points of the 380 basis point increase in non-equity funding costs between February 2022 and December 2023. Banks use interest rate swap contracts to smooth the effect of changes in interest rates on their margins (see Box A). Hedging typically adds to funding costs in a hiking phase because banks convert their fixed-rate payments, which would otherwise remain unchanged, into variable-rate payments (such as BBSW) that increase when the cash rate rises. When interest rates decline, such as prior to the pandemic, banks’ hedging activities typically reduce funding costs.

## Deposit costs

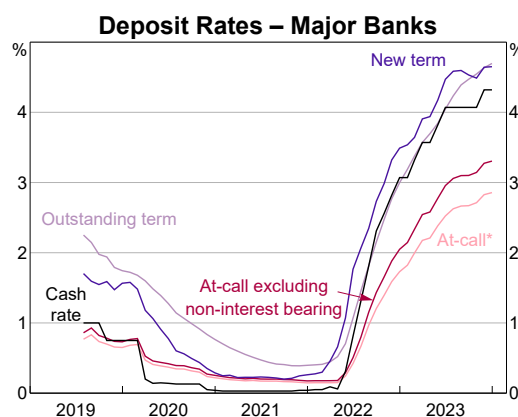
Banks increased interest rates on interest-bearing deposits over the hiking phase, with the degree of pass-through differing across products (Graph 5). Rates on term deposits, where customers invest funds for a fixed period and interest rate, increased by about the same amount as the cash rate alongside similar moves in BBSW. For at-call deposits, which depositors can withdraw at any time, pass-through was more varied. Banks increased rates by more for savings accounts (e.g. ‘bonus’ savers or online-only savings accounts) or accounts with introductory offers than they did for everyday transaction accounts, many of which do not pay any interest. Effective rates on offset deposit accounts linked to mortgages increased with housing lending rates.<sup>[1]</sup>

**Graph 4**



\* RBA estimated outstanding rate; costs include effect of interest rate hedges; values may not sum due to rounding.  
Sources: ABS; APRA; ASX; Bloomberg; LSEG; major bank liaison; major banks' websites; RBA; Securitisation System; US Federal Reserve.

**Graph 5**



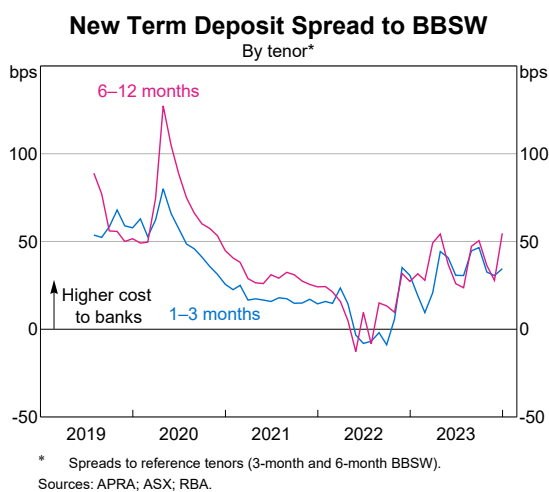
\* Excludes deposits in housing loan offset accounts.  
Sources: APRA; RBA.

Overall, the average interest rate on total deposits excluding offset accounts increased by 325 basis points over the hiking phase, around 75 per cent of the total increase in the cash rate. This degree of pass-through is within the broad range of outcomes observed in past hiking phases in Australia. The level of pass-through over the current hiking phase in Australia has been higher than in other peer economies (see Box B).

**Term deposits**

Banks have increased rates paid on new term deposits by around 435 basis points since February 2022, slightly more than the cash rate. BBSW is typically the reference rate for term deposits, as it is the price at which banks could otherwise borrow funds in wholesale money markets (Black and Titkov 2019). The spreads between term deposit rates and BBSW has widened from lows in 2022 (Graph 6). The wider spread could reflect banks seeking term deposits as a stable funding source when low-cost funding from the TFF started to mature (see below). Increases in new term deposit rates have flowed through to outstanding term deposit rates, which have increased by around 430 basis points over the hiking phase.

**Graph 6**

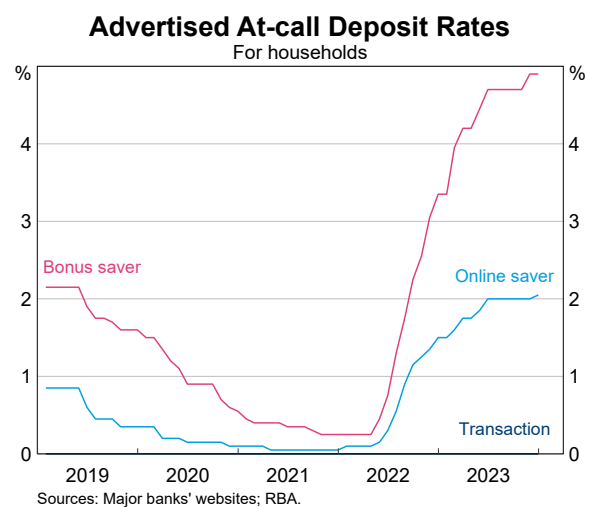


**At-call deposits**

The average rate on outstanding at-call deposits excluding offset accounts has increased by around 275 basis points since February 2022. At-call deposits (including those that pay no interest) comprise around three-quarters of total deposits. In

its inquiry into retail deposits, the Australian Competition and Consumer Commission (ACCC) found that banks have been strategic in passing on rate increases in such a way as to limit the increase in the cost of their overall deposit funding – raising rates more on savings products with conditions and time-limited introductory offers than on standard deposit products (Graph 7; ACCC 2023). Rates on standard online savings accounts have increased by less than bonus savers, and banks continue to pay little to no interest on most transaction accounts.

**Graph 7**



The ACCC noted that this pricing strategy helps banks attract or retain deposit funding at a lower cost than would otherwise be the case (ACCC 2023). On average, around a quarter of total funds in bonus saver accounts do not meet the conditions for the 'bonus' rate each month. The ACCC also found that there is a high degree of customer inertia around switching banks. It recommended measures to increase competition and transparency of household deposit pricing, such as requiring banks to provide more information on available deposit rates and notifying customers who may be at risk of losing their conditional bonus rate.

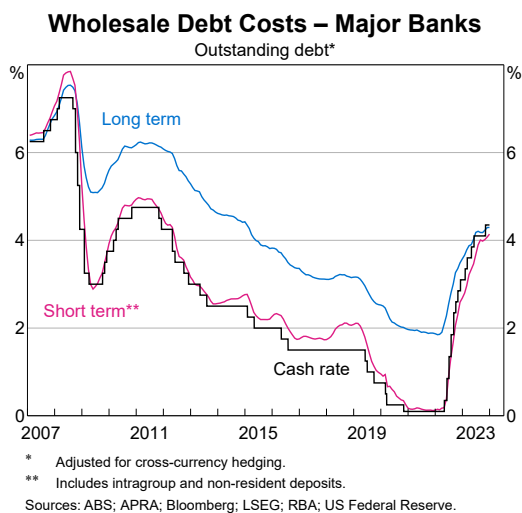
Households with mortgages may also have access to an offset account, which is an attractive savings vehicle (La Cava and Wang 2021). Offset accounts are at-call deposit products linked to mortgages, where the offset account balance is offset against the loan principal and the borrower does not pay interest on that offset portion of the loan. Therefore,

offset accounts in effect earn the mortgage rate. Moreover, this return is not taxed (unlike interest received from other deposit accounts). Offset account balances currently comprise around 10 per cent of bank deposits.

### Wholesale debt costs

The cost of issuing new short-term and long-term debt has risen over the hiking phase, increasing outstanding funding costs as maturing bonds are replaced with higher-cost new issuance. The increase in debt costs have contributed around 100 basis points to the increase in non-equity funding costs. The outstanding rate paid on short-term debt (maturing within 12 months) increased by around 400 basis points. The outstanding rate on long-term debt, by contrast, increased by 245 basis points because the stock of major bank long-term debt turns over more slowly given that the weighted average maturity is around four years (Graph 8; RBA 2018).

**Graph 8**



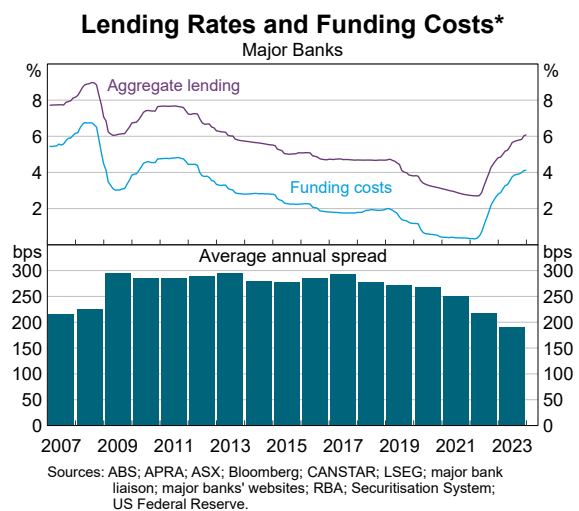
The effect of higher interest rates flows through to banks’ overall funding costs more quickly than outstanding debt turns over because banks hedge their fixed-rate funding and issue floating rate debt in capital markets. Banks hedge fixed-rate debt by swapping fixed-rate payments into variable-rate payments (often BBSW), which closely match interest receipts on their variable-rate loans (see Box A).

### Funding costs and lending rates

Banks’ funding costs flow through to the price of credit, as Australian banks typically set interest rates on loans based on the cost of funding these loans.<sup>[2]</sup> Outstanding mortgage rates increased by around 320 basis points between May 2022 and December 2023, 45 basis points less than the increase in funding costs over the same period (Ung 2024). Rates on outstanding business loans increased by a little more than funding costs (RBA 2024). Banks price mortgage rates at a spread above funding costs and that spread decreased over the hiking phase as mortgage competition increased. The prevalence of low-rate fixed-rate mortgages also held down the average mortgage rate paid.

In the two years to December 2023, the spread between lending rates and funding costs declined 60 basis points to around 190 basis points, continuing the decline since 2017 (Graph 9). Despite these recent declines, the lending spread (the difference between lending rates and funding costs) in Australia has been relatively stable within a range compared with other jurisdictions (Brassil 2022). This relative stability is partly explained by Australian banks’ use of hedging to reduce interest rate risk. In countries such as the United States, where hedging is less prevalent and mortgages have long-term fixed rates, banks are more likely to experience yield compression and expansion through economic cycles (Brassil 2022).

**Graph 9**



Decreases in the lending spread over the last five years have been a key driver of the decline in net interest margins (NIMs) (Graph 10). The NIM is the difference between interest income and interest expenses, divided by interest-earning assets.<sup>[3]</sup> Although major bank NIMs increased modestly in 2022, they have more recently declined below their pre-pandemic level. These banks cited higher wholesale funding costs, changes to their funding mix to higher-rate products and increasing mortgage competition as some reasons for the decline.<sup>[4]</sup>

**Graph 10**

**Net Interest Margin – Major Banks\***  
Domestic, half-yearly



\* Data for a given period relate to banks' public profit reports released in that half; IFRS basis from 2006, AGAAP prior; excludes St George Bank and Bankwest prior to the first half of 2009.  
Sources: Banks' financial reports; RBA.

### Funding mix

The composition of major banks' funding has shifted over the hiking phase (Graph 11). The TFF, which comprised around 4.5 per cent of total funding at the peak of its use, started to mature in early 2023. Deposits have shifted towards term deposits as interest rates increased, and banks have returned to issuing higher volumes of wholesale debt.

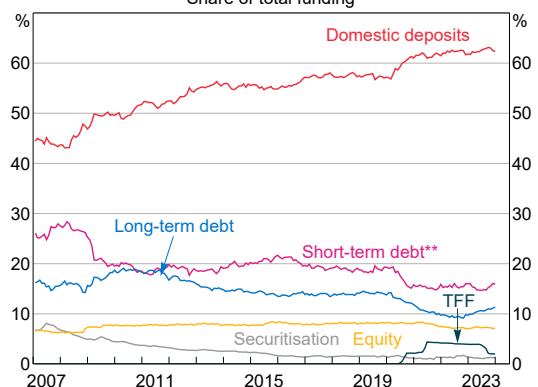
The TFF was introduced, alongside other policy support measures in response to the pandemic, to provide low-cost three-year funding to banks and to provide banks with an incentive to increase lending to businesses (Kent 2021). The TFF lowered banks' funding costs largely because it was used to replace more expensive wholesale debt funding. The TFF increased the supply of exchange settlement (ES) balances, which qualify as high-

quality liquid assets (HQLA). Because the majority of TFF funding was collateralised with securities that do not qualify as HQLA, the TFF increased the supply of HQLA as these non-HQLA securities were exchanged for ES balances. Consequently, the TFF supported banks' regulatory liquidity ratios. The maturity of TFF funding has the opposite effect on banks' regulatory liquidity ratios, as ES balances (HQLA) are repaid in exchange for non-HQLA collateral.

By the end of December 2023, around \$84 billion in TFF funding had matured, with the remaining \$104 billion set to mature by mid-2024 (Graph 12). Banks have managed their liquidity positions well in advance of TFF maturities. For example, most large Australian banks are subject to the liquidity coverage ratio, which requires banks to hold HQLA sufficient to cover their estimated net cash outflows during a 30-day period of stress (RBA 2015). These large banks have sharply increased their holdings of government bonds (which, like ES balances, also qualify as HQLA) by around \$125 billion since early 2022, alongside strong issuance of wholesale debt (Batchelor and Roberts 2024). Similarly, these banks have managed their net cash outflows by increasing their share of term funding such as term deposits (see below), therefore reducing the amount of HQLA they are required to hold to meet regulatory requirements.

**Graph 11**

**Funding Composition – Major Banks\***  
Share of total funding

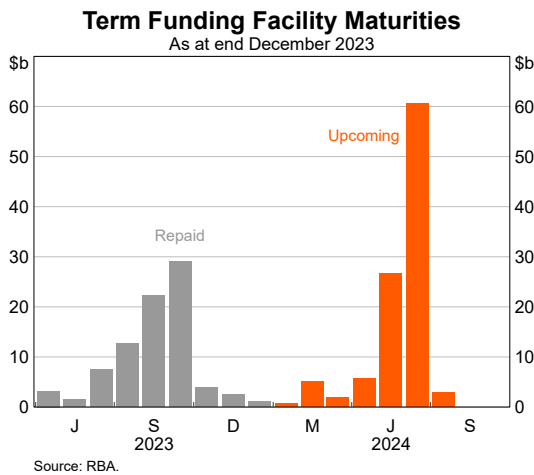


\* Adjusted for movements in foreign exchange rates; tenor of debt is estimated on a residual maturity basis.

\*\* Includes deposits and intragroup funding from non-residents.

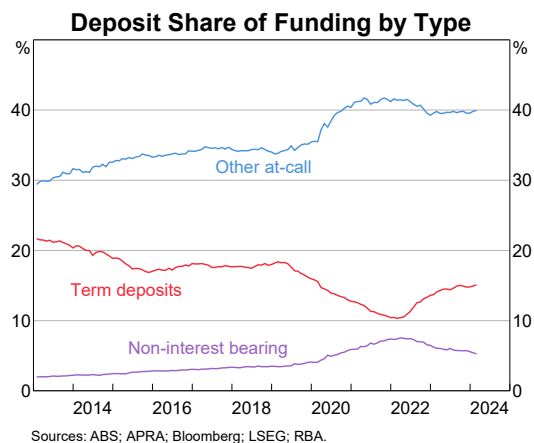
Sources: ABS; APRA; Bloomberg; LSEG; RBA.

**Graph 12**



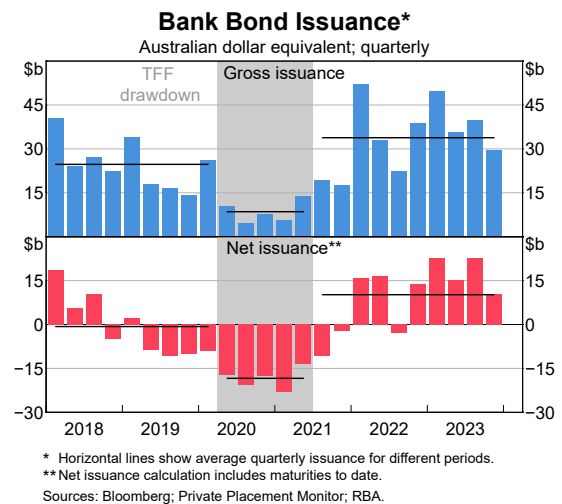
Deposits are the largest component of bank funding. Banks have increased their share of funding from deposits by about ½ percentage point since February 2022, as growth in term deposits has more than offset the decline in at-call deposits. The desire among banks to attract more term funding as the TFF expired was reflected in the larger increases in rates on term deposits relative to at-call products as the cash rate increased. Customers took advantage of the higher rates on term deposits as term premia increased. Over the hiking phase, the term deposit share of total funding rose to around 15 per cent, although that remains well below pre-pandemic levels (Graph 13). The share of at-call deposits, particularly those that pay no interest, declined steadily over 2022 and 2023.

**Graph 13**



Banks issued a historically large \$300 billion in bonds over the tightening phase in favourable market conditions, increasing their long-term debt funding share by around 2¼ percentage points. This followed a period of very low gross issuance over the pandemic, as banks drew down on the TFF. Since then, net issuance has turned positive, largely driven by major banks increasing bond issuance as the TFF started to mature (Graph 14). Overall, short-term debt issuance has remained fairly stable, although it picked up a little over 2023 around TFF maturities. The share of funding from long- and short-term debt remains around 6 percentage points below its pre-pandemic level.

**Graph 14**



**Conclusion**

Monetary policy tightening since February 2022 has increased major banks’ non-equity funding costs by around 380 basis points. The increase in costs was broad-based, although rates paid on term deposits and short-term wholesale debt increased by more than those paid on at-call deposits. Funding costs have increased a little more than lending rates in aggregate, compressing the lending spread and banks’ NIMs. Banks have shifted their funding composition towards term deposits and issued new debt as the TFF has started to mature.

### Box A: The role of hedging in funding costs

When banks take on liabilities to fund themselves, they also take on various forms of risk. Australian banks' assets are mostly variable-rate loans for which rates adjust quickly after changes in the cash rate, whereas their liabilities include fixed-rate funding (such as term deposits, transaction accounts that pay little to no interest, and some forms of term debt) that are slower to reprice. This mismatch in interest rate sensitivity exposes banks to interest rate risk – if the cash rate falls, the interest income banks earn on their loans will fall more quickly than the interest they pay to their creditors, reducing their NIMs. Australian banks also raise funding offshore in foreign currencies. Offshore debt issuance gives banks access to deeper, diversified funding markets, but it can also expose them to foreign exchange risk, whereby any unhedged currency movements affect the cost of servicing this debt in Australian dollar terms (Johnson 2022).

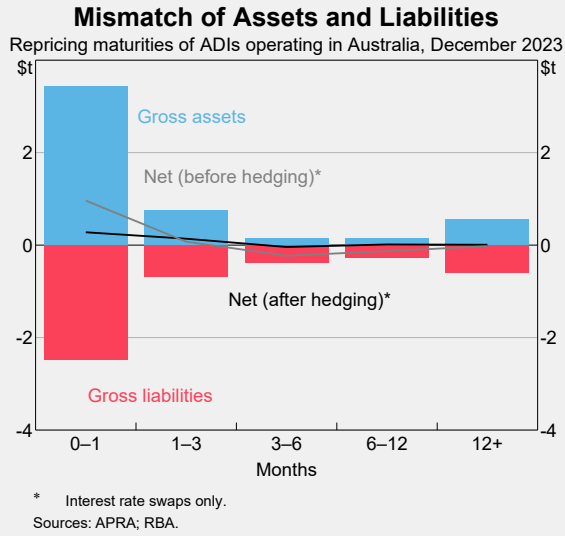
Hedging is a way for banks to mitigate these risks, reducing the influence of interest rates or exchange rates on their NIMs and thereby profitability. There are three main types of hedges that banks may use:

- **Replicating portfolio hedge.** Deposit accounts that pay zero or near-zero interest rates comprise a significant share of banks' deposit funding. These deposits are classified as fixed-rate funding because they are insensitive to interest rates: banks are unwilling (or unable) to reduce their rates further and do not raise rates on these accounts when other interest rates rise. This exposes banks to interest rate risk. To offset this risk, banks often use interest rate swaps, receiving a fixed-rate cashflow and paying a variable-rate cashflow. This 'replicating portfolio' of a rolling portfolio of receive-fixed, pay-floating interest rate swaps makes the effective interest rate associated with these deposits move with short-term market interest rates, like the interest banks receive on assets (Berkelmans and Duong 2014).
- **Whole-book hedge.** Banks use a whole-book hedge to reduce interest rate risk across their entire balance sheet (Graph A1; RBA 2023). This involves comparing the mismatch in fixed- and variable-rate funding between assets and liabilities across different repricing maturities and then using interest rate swaps to better align interest rate sensitivity across both sides of the balance sheet.
- **Cross-currency hedge.** Banks that issue foreign-denominated debt offshore generally use cross-currency swaps to hedge any foreign exchange risk (Atkin and Harris 2023). In a cross-currency swap, counterparties swap both principal and interest rate streams in one currency for another (Kent 2018). This allows domestic banks to swap their foreign currency principal and interest obligations into Australian dollars, at Australian short-term interest rates, providing banks with protection against movements in exchange rates and differences in interest rates between countries.

In the short term, hedging might subtract from banks' funding costs if interest rates fall, or add to costs if interest rates rise, compared with the alternative of not hedging. For example, in the current tightening phase, hedging has added to funding costs (Graph A2). Over the cycle, hedging reduces fluctuations in bank NIMs. Australian banks appear to make greater use of hedging than their international peers, possibly due to the greater role of variable-rate lending in Australia.

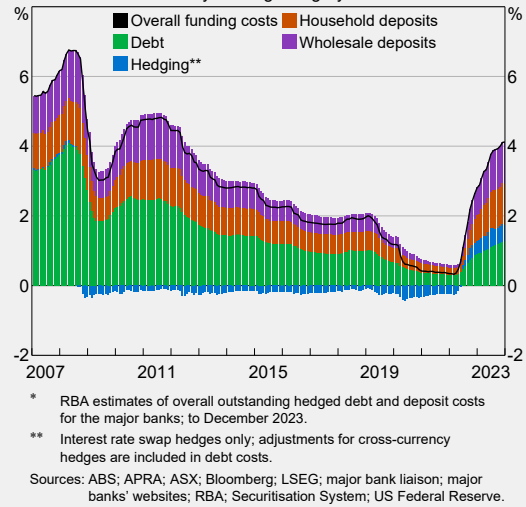


**Graph A1**



**Graph A2**

**Major Banks Funding Costs\***  
By funding category



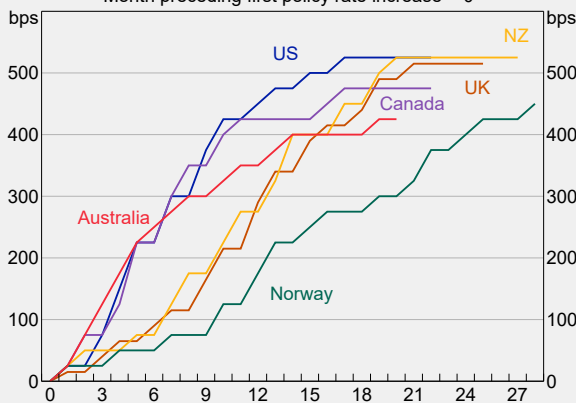
**Box B: Comparison of pass-through to deposits in Australia relative to peer economies**

Deposit rates across advanced economies have increased, consistent with increases in policy rates that tightened broader financial conditions (Graph B1). However, outstanding deposit rates in Australia have increased more quickly and by more than deposit rates in most other advanced economies, despite a relatively smaller increase in the policy rate in Australia (Graph B2; Kent 2023).

**Graph B1**

**Change in Policy Rates**

Month preceding first policy rate increase = 0\*

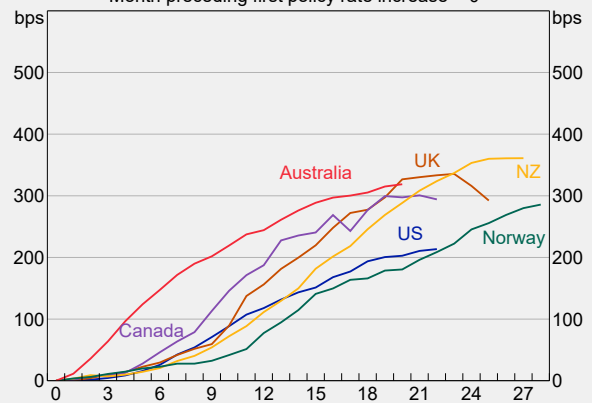


\* Cumulative basis point increase in the policy rate relative to the month immediately preceding first policy rate increase since the onset of the pandemic.  
Sources: Central banks; RBA.

**Graph B2**

**Change in Outstanding Deposit Rates**

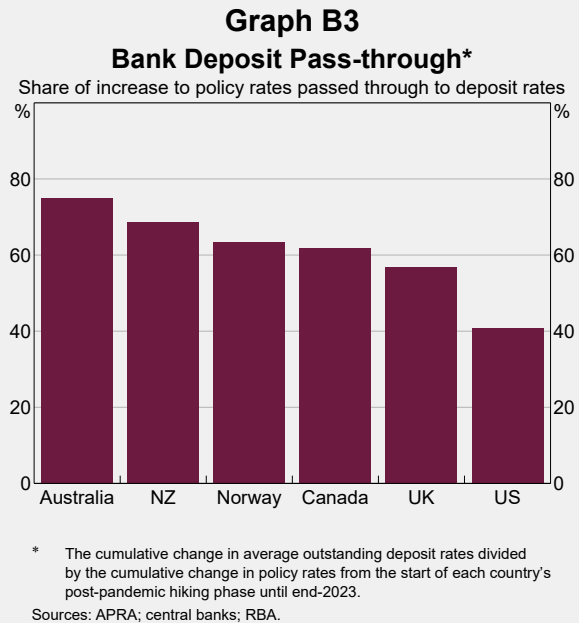
Month preceding first policy rate increase = 0\*



\* Cumulative basis point increase in the average deposit rate relative to the month immediately preceding first policy rate increase since the onset of the pandemic.  
Sources: APRA; Central banks; RBA.

Deposit rates in Australia have also increased by more than peer economies after accounting for differences in the extent of monetary policy tightening. Around 75 per cent of the change in the cash rate has passed through to outstanding deposit rates in Australia, which is in line with the broad range of outcomes in previous hiking phases in Australia. This is higher than those of other advanced economies, where pass-through ranges from 40 to 70 per cent (Graph B3).

A range of institutional features of the Australian financial system are likely to explain the higher pass-through of cash rate changes to deposit rates. For example, Australian mortgage rates are sensitive to changes in the cash rate, reflecting the low share and shorter terms of fixed-rate mortgages in Australia. Australian banks therefore tend to fund these loans with deposits or from market sources that are ultimately linked to short-term rates such as BBSW. This means that the repricing structures of Australian bank mortgage and deposit books are similar, and changes in the cash rate have a relatively small effect on NIMs (Brassil, Cheshire and Muscatello 2018). In Australia, the lending spread has been relatively stable, although it has declined somewhat in this hiking phase.



## Endnotes

- [\*] The authors are from Domestic Markets Department. They would like to thank Tekla Bastian, Sam Batchelor, Duke Cole, Sean Dowling, Oscar To and David Wakeling for their contributions.
- [1] An offset account is an at-call deposit account that is directly linked to a mortgage loan and offsets the outstanding loan balance. As a result, offset accounts effectively receive the mortgage interest rate. We exclude offset accounts from our deposit rate calculations to avoid skewing the data. However, we include them in our calculation of banks' overall funding costs, given they represent a cost to banks.
- [2] Banks allocate costs to different business units, such as mortgage lending, through funds transfer pricing. See ACCC (2023) for discussion on how funds transfer pricing works.
- [3] Although the lending spread is the primary driver of banks' NIMs, the NIM also includes other interest-earning assets such as securities. The lending spread presented in this article includes the RBA's model estimate of hedging, which may differ from the actual costs of hedging faced by banks, captured in their NIMs.
- [4] See, for example, the Commonwealth Bank's 2023 profit announcement (CBA 2023) and the National Australia Bank's 2023 annual report (NAB 2023).

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