BofA SECURITIES

Global Rates and FX Primer

# Money markets and front-end rates in Australia 2025

## Key takeaways

- This primer discusses the structure of Australia's money markets and outlines key products in front-end rates.
- We outline key drivers of price action in front-end rates, including bank regulation, super funds and RBA policy.
- We also explore new developments like CCP reform and financial year-end spikes in AU basis markets.

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Rates Strategy
Australia

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## Money markets and front-end rates in Australia 2025

Australia's money market has undergone significant change since 2019. Pandemic-era policy continues to have consequences for market structure and prices, while structural trends like the rapid growth of Australia's superannuation fund complex and the RBA's new 'ample reserves' system for implementing monetary policy are likely to continue to play a decisive role in front-end, interest-rate pricing.

## Products, drivers and institutional participants

In this primer, we outline the role of the RBA in the Australian money market, key **products**, including repo, BOB, 6s3s, FX-SOFR and cross-currency basis swaps. We highlight some of the unique **drivers** of price action in the front end of Australia's rates markets, including major institutional actors like banks and superannuation funds, Australia's distinctive regulatory environment and central banks' balance-sheet policies. We also review recent trends and outline some of the factors that might determine future changes in market liquidity and front-end rates.



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# RBA and the Australian money market

Banks are at the centre of money markets because they generally hold assets that are longer dated than their liabilities. In a simplified model, a bank accumulates customer deposits, lends funds to creditworthy households, businesses, and governments, and collects income when inflows from the loan book exceed outflows to deposit-holders.[1]

The contemporary Australian banking system is a little more complex. Banks hold other types of interest-bearing assets like securities issued by corporations and governments, and they also seek funding outside the traditional deposit-taking system. However, the organisational principle of banking – borrowing short, lending long and collecting net interest income from the spread – has been the primary dynamic of Australian banking since its inception and this model is foundational to the development of Australia's money markets.

## Liquidity and maturity transformation

By borrowing short and lending long, banks have mismatched asset and liability structures. In Australia, the banking system consists of a broad array of institutions called 'authorised deposit-taking institutions' (ADIs), licensed by the Australian Prudential Regulatory Authority (APRA) to take deposits and perform other bank functions like credit intermediation in Australia.

Around 67% of system-wide, ADI assets are loans or advances to customers and customer deposits account for about 69% of the banking system's liabilities, more than half of which are callable at will/ on demand.[2] In this way, ADIs conduct 'liquidity and maturity transformation' – that is, they typically hold longer-dated, less liquid assets like mortgages or business loans and finance these assets with shorter-dated more liquid liabilities like at-call deposits.

## The Diamond-Dybvig model

In the modern era, Diamond and Dybvig were awarded the Nobel Prize in Economics for demonstrating that banks' liquidity and maturity transformation (i.e., extending long-dated, illiquid loans to other economic actors but funding their assets with overnight or short-term deposits) are at once economically and socially advantageous but also a feature of systems prone to instability (see Federal Reserve Economic Quarterly 2007).

Diamond and Dybvig's work demonstrated with unique scientific rigour the appeal of an operational feature of central banking that has existed for centuries, namely the existence of central banks as a lender of last resort. One of the most well-known maxims of central banking is Walter Bagehot's dictum that central banks should 'lend freely, at a penalty rate, and against good collateral' to avert panics.

The theory also traces its origin to the 18th century and the early operations of the Bank of England, but it describes an essential dilemma of central banking: the central bank's status as lender of last resort (LOLR) is designed to avert the kind of bank runs that might unwind the economic benefits that accrue from liquidity and maturity transformation. At the same time, though, central banks must lend at a 'penalty rate' to discourage commercial banks from engaging in activity that would endanger the banking system based on implicit guarantees (which would not otherwise exist in the absence of a LOLR).

[1] Whereas households and businesses treat bank deposits as assets and loans as liabilities, this relationship is reversed for commercial banks who sit on the other side of these financial transactions. Deposits are a liability owed to account-holders and loans are an asset that accrues interest income for the bank.
[2] APRA, Quarterly Authorised Deposit Institutions, March 2025 (published 13 June 2025).

## Central banking in Australia

In essence, then, one of the primary goals of a central banker is to maximise the economic benefits of a LOLR (smooth functioning of liquidity and maturity transformation) while minimising the potential hazards (i.e., banks using the state's implicit guarantee to extend credit to uncreditworthy counterparties). In Australia, public authorities manage the dilemma of central banking in three ways:

1. Specialised public authorities oversee prudential regulation and governance. The Australian Prudential Regulatory Authority (APRA) and the Australian Securities and Investor Corporation (ASIC) impose conditions on banking licences and corporate governance that are designed to prevent the kind of systemic risks associated with destructive financial instability.

2. The Reserve Bank Board has specific responsibilities or functions. There is practically no limit on the RBA's ability to purchase AUD-denominated assets because it is also the only institution with the power and responsibility for note issuance (i.e., the issuance of Australian dollars). However, section 10(2) of the *Reserve Bank Act 1959* sets out the Reserve Bank Board's functions or 'mandates': (i) the stability of the currency of Australia; (ii) the maintenance of full employment in Australia; and (iii) the economic prosperity and welfare of the people of Australia. Since the early 1990s, the RBA and Australia's Treasury have also agreed an inflation target of 2-3%.

3. The RBA restricts its routine operations to the very front end of the money market (overnight, interbank loans and short-dated secured financing). In exceptional circumstances, the RBA has also intervened in capital markets and even offered term loans directly to commercial banks, but central banking orthodoxy assumes that restricting rate-setting to very short-dated transactions (mostly overnight) in the money market minimises the risk that central bank interventions will interfere with price discovery in the rest of the economy.

## RBA operations and the central bank's mandate

As its name suggests, the RBA holds reserves for the commercial banks and the Australian Government. For qualifying counterparties in the commercial banking system (i.e., qualifying ADIs), the RBA offers Exchange Settlement Accounts (ESA), which are effectively bank accounts for commercial banks to hold their cash. The RBA pays a rate of interest (the exchange settlement or 'ES remuneration rate') on balances each day.

The current exchange settlement (ES) remuneration rate is set at 10bps below the cash rate target but the spread between ES rates and the cash rate target has varied over time. This is generally considered the lower bound of the RBA's policy-rate corridor because banks will always have an economic incentive to hold their cash at the RBA rather than lend to another counterparty at or below the ES remuneration rate. From May 2025, the Monetary Policy Board (MPB) no longer announces the ES rate alongside the cash rate target. Adjustments are now considered "purely operational" and do not require the approval of, or announcement by, the MPB.[3]

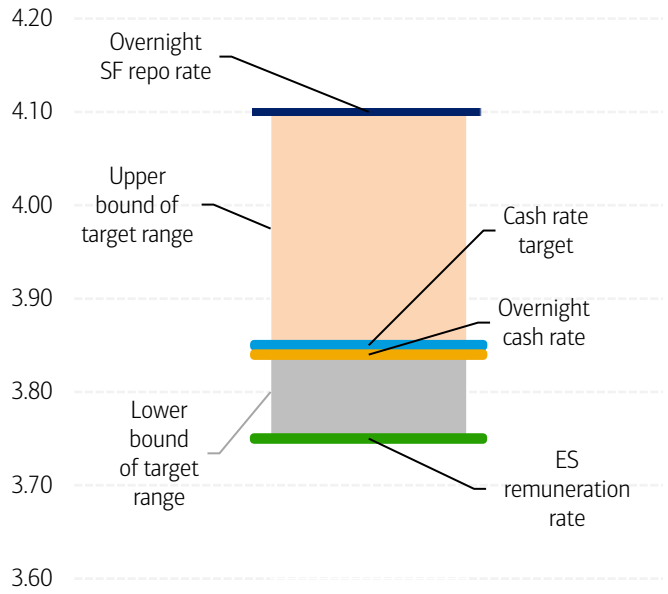
The most widely recognised of the RBA's policy rates is the target cash rate, which the RBA discusses and decides at least 8 times per year (alongside the ES remuneration rate). The cash rate is the weighted average rate at which banks borrow from each other overnight in the unsecured market. The RBA influences the cash rate through its open-market operations, which supply or drain ESA balances and therefore determine the supply/demand of cash in the overnight, interbank market.

[3] Kent, Chris (2025), 'The RBA's Monetary Policy Implementation System – Some Important Updates', Speech, KangaNews Debt Capital Markets Summit, 2 April 2025.

The ceiling on the policy rate corridor is the overnight standing facility (OSF) repo rate, which is 25bps above the cash rate target. Until recently the OSF rate and Exceptional Liquidity Assistance were considered last-resort backstops, which would generally not be tapped by an ADI outside a period of acute stress. More recently, the RBA and APRA have recently moved to encourage use of the OSF if banks fall short of their daily liquidity needs. In other words, the RBA and APRA are attempting to remove the stigma associated with usage of this facility.[4]

Exhibit 1 and Exhibit 2 plot the RBA's current interest rates.

**Exhibit 1: Current RBA interest rates and the overnight cash rate**
As of 2 July 2025




**Source:** RBA, BofA Global Research

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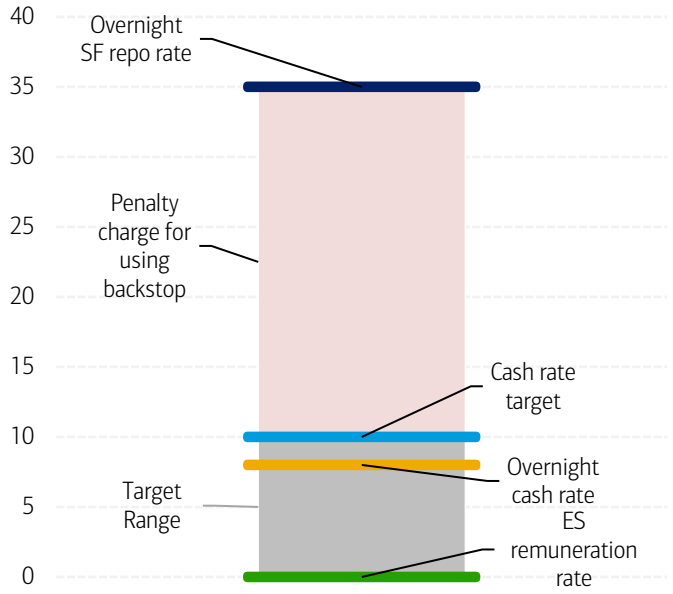
**Exhibit 2: The RBA interest-rate corridor (in basis points)**
As of 2 July 2025




**Source:** BofA Global Research, RBA

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## How does the RBA achieve its objectives?

The RBA achieves its objectives through open-market operations (OMOs). OMOs are *secured*, which means that the RBA will only lend to qualifying counterparties who post eligible collateral as security for a loan. We call these transactions 'repo', which is an abbreviation for 'repurchase agreements' or 'sale and repurchase agreements'. Repo markets are discussed in greater length in 'Products' below. In short, though, the repo market allows its participants to sell their securities and repurchase them at a later date. The difference between the sale and repurchase price is effectively a rate of interest on the secured loan. A reverse repo (RRP) is the opposite of a repo, where an investor buys securities with cash from a counterparty, with a simultaneous agreement to sell the securities back to their counterparty at a specified price and date. When demand for cash is high (low), the repo rate rises (falls).

## How does the RBA use repo to achieve its policy objectives?

The RBA seeks to achieve its cash-rate target by lending cash in the form of ESA balances to eligible account holders. The RBA drains ESA balances by lending securities for a short term (i.e., a repo) and adds ESA balances by lending cash against eligible

[4] For more detail, see APRA and RBA (2025), 'Joint APRA-RBA Statement on Use of the RBA's Overnight Standing Facility', Media Release, 2 April 2025.

securities (i.e., a reverse repo). The regular reverse repo offer is the cash rate target + 10bps (3.95% in July 2025) for a 7-day or 28-day term and OMOs are currently conducted on a weekly basis (each Wednesday).

The RBA also offers intraday repos at no charge, as well as open and overnight standing facility (SF) repos at the cash rate target + 25bps. An open SF repo has no fixed date but can be ended at a day's notice by either party. The purpose of this repo facility is to provide intraday liquidity so that ADIs can manage inflows/ outflows intraday but square up their positions before the end of the daily session.

If a counterparty reduces their ESA balance below the amount borrowed from the RBA overnight, the RBA will charge the overnight SF rate on the funds that have been drawn. For example, if a bank has an ESA balance of AUD 1bn and then borrows an additional AUD 1bn from the RBA through an open repo (i.e., for a total ESA balance of 2bn) but their balance falls to 1.8bn from one day to the next, the RBA will charge the overnight SF rate on AUD 200m.

For a list of eligible collateral for repos, see Exhibit 3. The RBA also applies margin ratios (often described as 'haircuts') to collateral pledged for a reverse repo. These ratios reduce the purchase price of collateral. For example, if a counterparty pledges an ACGB or semi-government bond (semi) maturing in less than 1 year with a face value of $100, the RBA will purchase this security for 99% (100%-1%) of the face value or $99. See Exhibit 4 for a list of margin ratios.

**Exhibit 3: OMO collateral eligibility**
Menu of options for cash borrowers

| s | # public credit ratings | Credit rating | Eligible facilities |
|---|---|---|---|
| ACGBs/ semis | None | N/A | Reverse repos, repos, outright transactions and securities lending |
| New Zealand Government securities | None | N/A | Reverse repos and securities lending (as collateral only; cannot be borrowed) |
| Other Australian and New Zealand Government-guaranteed securities | None | N/A | Reverse repos and securities lending (as collateral only; cannot be borrowed) |
| ADI bonds | 2 | BBB– | Reverse repos |
| ADI paper | 1 | Public | Reverse repos |
| Corporate bonds | 1 | BBB | Reverse repos* |
| | 2 | BBB– | Reverse repos* |
| Commercial paper | 1 | BBB/A–3 | Reverse repos* |
| | 2 | BBB– | |
| Asset-backed securities | 1 | AAA | Reverse repos* |
| Self-securitisations | 1 | AAA | Reverse repos (Exceptional Liquidity Assistance and Term Funding Facility only, where a related-party exemption has been granted) |
| Supranational and offshore government securities | 1 | AAA | Reverse repos and securities lending (as collateral only; cannot be borrowed) |
| Other AAA | 1 | AAA | Reverse repos* |
| Asset-backed commercial paper | 1 | AAA/A–1 | Reverse repos* |

**Source:** RBA, BofA Global Research.

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**Exhibit 4: OMO collateral margin ratios (%)**
The RBA applies haircuts to securities pledged as collateral for reverse repos

| | Average Credit Rating | 0–1 years | 1–5 years | 5–10 years | >10 years |
|---|---|---|---|---|---|
| ACGBs | n/a | 1 | 2 | 2 | 2 |
| Semis | n/a | 1 | 2 | 2 | 2 |
| SSAs/ offshore govt securities | AAA | 2 | 3 | 4 | 4 |
| Securities with an Australian Government Guarantee | n/a | 2 | 3 | 4 | 4 |
| Securities with a Foreign Sovereign Government Guarantee | AAA | 2 | 3 | 4 | 4 |
| ADI-issued securities | AAA | 6 | 7 | 8 | 10 |
| | AA– | 10 | 12 | 14 | 16 |
| | A– | 12 | 14 | 16 | 18 |
| | BBB– | 18 | 22 | 26 | 30 |
| | public credit rating | 24 | n/a | n/a | n/a |
| Non-ADI securities | AAA | 6 | 7 | 8 | 10 |
| | AA– | 10 | 12 | 14 | 16 |
| | A– | 12 | 14 | 16 | 18 |
| | BBB– | 18 | 22 | 26 | 30 |
| Asset-backed Securities(e) | | | | | |
| - *Standard* | A–1 or AAA | 10–15 | 10–15 | 10–15 | 10–15 |
| - *Other* | A–1 or AAA | 15–40 | 15–40 | 15–40 | 15–40 |
| Other Securities | AAA | 6 | 7 | 8 | 10 |

**Source:** RBA, BofA Global Research. See RBA margin requirements for a full list of technical details and eligibility criteria.

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## RBA balance-sheet policy

In 2020, the RBA launched a series of balance-sheet policies to counteract the adverse economic effects of the global pandemic. These policies and programs were:

(1) Bond Purchase Program (BPP)

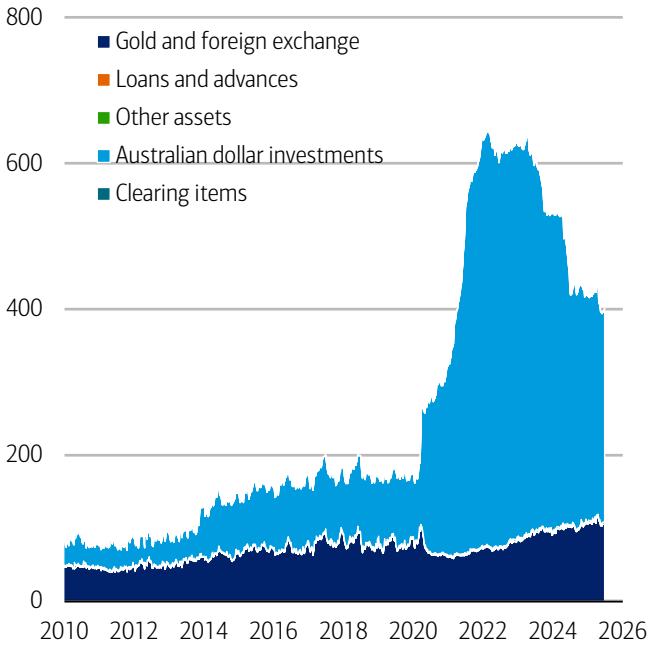
(2) Yield Curve Control (YCC)

(3) Term Funding Facility (TFF).

We refer to these programs as balance-sheet policies (as opposed to interest-rate policies) because they expanded the balance-sheet of the RBA. The TFF offered three years of secured financing to commercial banks at 0.1%. Banks pledged securities, mostly self-securitised mortgages, as collateral. In effect, the trade was a term repo.

As a result, the RBA's 'Australian dollar holdings', which include the nation's official reserves as well as bonds issued by the Australian Government and State Governments in Australia, expanded in roughly equal proportion to its ESA balance liabilities (Exhibit 5, Exhibit 6).[5]

**Exhibit 5: RBA Assets (AUD bn)**
Most investments are bonds acquired between 2020 and 2022




**Source:** BofA Global Research, RBA

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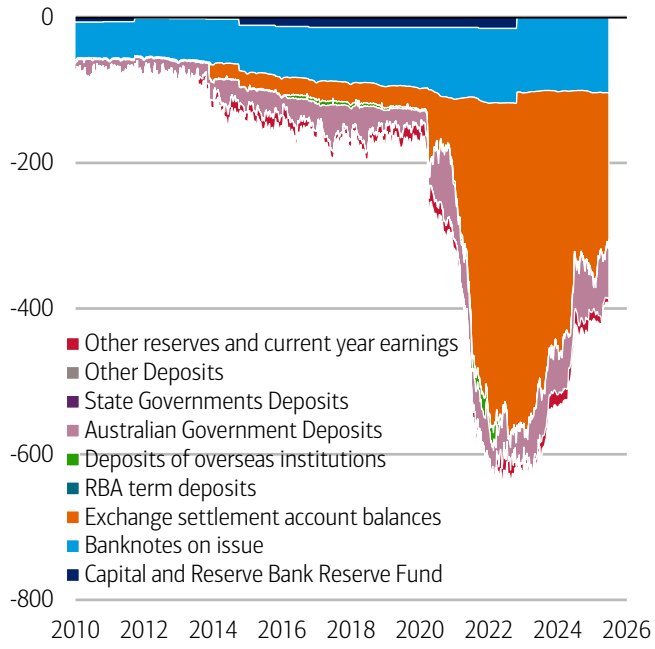
**Exhibit 6: RBA Liabilities (AUD bn)**
More than half of the RBA's liabilities are banks' ESA balances




**Source:** BofA Global Research, RBA

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## YCC/ BPP – how did it work?

Yield Curve Control and the Bond Purchase Program operated slightly differently to the TFF, expanding the RBA's holdings of government securities. In so doing, YCC/ BPP increased the size of bank reserves by an equal amount. To understand the mechanics of this process, consider the private sector as a single, homogenous balance-sheet. When the RBA purchases a bond, they transfer cash to a private-sector entity.

In this simplified model, there are two types of private-sector participants – Banks that hold reserves (i.e., ESA balances) at the RBA, and non-banks/ non-ESA holders who hold deposits with commercial banks. When the RBA conducts a quantitative easing program, either a bank or non-bank sells the bond to the RBA. Commercial banks sell bonds to the

[5] Shifts in the official reserve position and government deposits at the RBA can offset some of these moves.

RBA and deposit the cash they receive from the RBA directly into ESA balances while non-ESA holders like fund managers or other private-sector actors sell their bonds to the RBA and deposit cash with a commercial bank, which is in turn transferred to ESA accounts as bank reserves. Exhibit 7 and Exhibit 8 display these transactions in ledger form.

**Exhibit 7: Commercial bank sells bonds to the RBA**
YCC/ BPP mechanics

**Commercial bank sells bonds to the RBA**

| Commercial bank (ESA holder) | | RBA | |
|---|---|---|---|
| Asset | Liability | Asset | Liability |
| ↓ Bonds | | ↑ Bonds | ↑ Reserves (ESA balances) |
| ↑ Reserves (ESA balances) | | | |

**Source:** BofA Global Research.

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**Exhibit 8: Non-bank sells bonds to RBA**
YCC/ BPP mechanics

**Non-bank sells bonds to RBA**

| Non-bank (Non-ESA holder) | | Commercial bank (ESA holder) | | RBA | |
|---|---|---|---|---|---|
| Asset | Liability | Asset | Liability | Asset | Liability |
| ↓ Bonds | | ↑ Reserves (ESA balances) | ↑ Deposit | ↑ Bonds | ↑ Reserves (ESA balances) |
| ↑ Deposit | | | | | |

**Source:** BofA Global Research.

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## Quantitative tightening – how does it work?

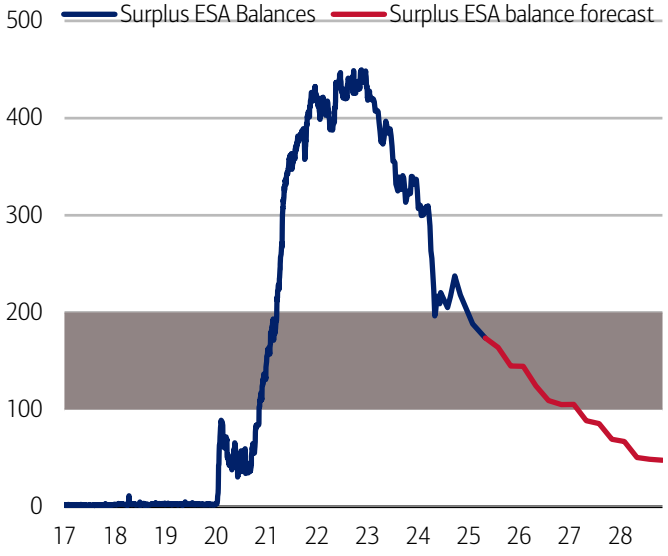
Quantitative tightening (QT) operates in reverse. The TFF has the most straightforward effect on cash balances. As TFF loans expired, the RBA returned collateral to banks and banks repaid the principal amount of their loan by transferring ESA balances to the RBA. The RBA then permanently removes this cash permanently from circulation, lowering system-wide ESA balances.

YCC/ BPP bond maturities drained ESA balances in a slightly different way. When the RBA allows a bond to mature without reinvesting the proceeds in government securities, the Australian Government or a State/ Territory Government needs to rollover this maturity and this new issuance is sold to the private sector.

The AOFM drains ESA balances by increasing their funding program. In practical terms, the AOFM will ordinarily pre-fund large maturities so there is unlikely to be a large change in ESA balances on the day of a maturity but a by allowing bonds to mature without reinvestment, the RBA increases the AOFM's funding task and in so doing reduces the overall size of ESA balances.

In other words, the RBA removes cash from circulation and its decision to allow a bond to mature without reinvestment (i.e., 'passive QT') drains bank reserves in the same way that QE added bank reserves to the system. As a result, if we set aside the potential impact of full-allotment OMOs on ESA balances and assume liquidity management policy remains unchanged, we can forecast the pace of drawdown in ES balances out to 2033 when the RBA's final bond holding matures as in Exhibit 9 and Exhibit 10.

**Exhibit 9: Surplus ESA balances (AUD bn), including forecasts***
RBA estimates underlying reserve demand c. AUD100-200bn




**Source:** RBA, AOFM, BofA Global Research * assuming passive QT continues unchanged, no shift in underlying reserve demand.

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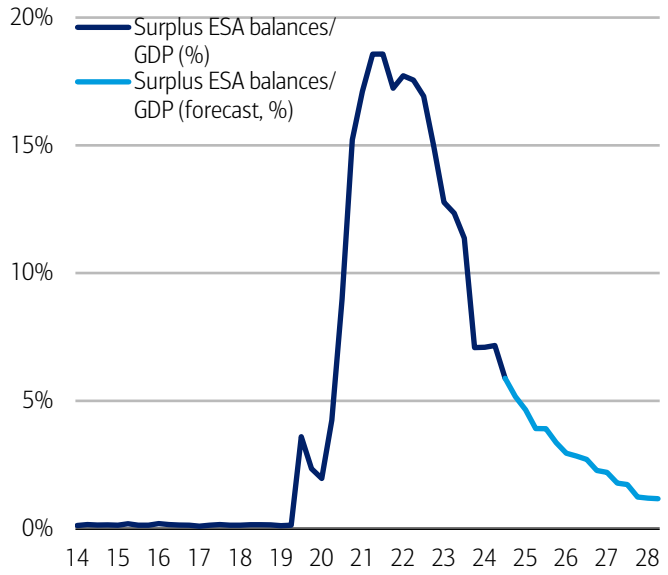
**Exhibit 10: Surplus ESA balances (% GDP), including forecasts**
Assuming passive QT continues until 2033, underlying reserve demand remains unchanged




**Source:** RBA, AOFM, BofA Global Research

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## The future of balance-sheet policy

In 2024, the RBA signalled its intention to shift from a de facto floor system with 'excess reserves' to an 'ample reserves' regime. In April, 2025, Chris Kent, Assistant Governor (Financial Markets), specified some of the details of this transition. There are three elements to the new reserves regime:

- An increase in the price of new OMO repos to 10bps (from 5bps) over the cash rate target,
- The introduction of a 7-day term, in addition to the existing 28-day term, at each weekly OMO from 9 April 2025,
- The ES rate will no longer be announced alongside the cash rate target (from the May RBA meeting) and could be shifted lower to encourage additional private market activity (i.e. more interbank lending and repo market activity, lower ESA balances). From May 2025, the Monetary Policy Board (MPB) no longer announces the ES rate alongside the cash rate target. Adjustments are now considered "purely operational" and do not require the approval of, or announcement by, the MPB.[6]

The RBA maintains a full-allotment OMO, which means providing all the reserves that banks demand at a set price (currently, cash rate target + 10bps).

These changes mean the RBA would not be required to hold a sizeable buffer of reserves over underlying demand. The transition from an 'excess reserves' to an 'ample reserves' regime is designed to reduce risk to the RBA (primarily, interest-rate risk) by reducing the size of the RBA's balance sheet and trim the size of the RBA's footprint in private markets. In so doing, the RBA intends to transition from a de facto floor system to a corridor system – the trade-off is that there will likely be more cash-rate volatility in an 'ample reserves' vs 'excess reserves' regime.

[6] Kent, Chris (2025), 'The RBA's Monetary Policy Implementation System – Some Important Updates', Speech, KangaNews Debt Capital Markets Summit, 2 April 2025.

### Future changes to the policy-rate corridor

We anticipate that over the medium to long-run, the RBA will eventually shift to a symmetric policy corridor, which would mean the ES rate is set 25bps below the cash-rate target (instead of 10bp below). The RBA shifted the ES rate to 10bps below the cash rate target when it set the cash rate target at 0.1% (i.e. the ES rate moved to zero) and has maintained this spread in policy rates since. Consequently, the upper bound of the policy-rate corridor (i.e. the OSF repo rate) is 25bps above the cash-rate target while the lower bound (i.e. the ES rate) is 10bps below the cash-rate target. In this way, the policy-rate corridor is 'asymmetric' because the spread between the cash rate target and the upper/ lower bound of the corridor is not equal.

Over the medium run, we expect the RBA to move to a symmetric policy corridor by lowering the ES rate to 25bps below the cash-rate target (i.e. to mirror the 25bps spread between the cash rate target and the OSF repo rate). A lower ES rate would also facilitate greater private-market activity by encouraging banks to lend to each other, although this would also probably mean greater volatility in the overnight cash rate, which fluctuates between the lower and upper bound of the policy-rate corridor based on supply-demand dynamics in the overnight cash market.

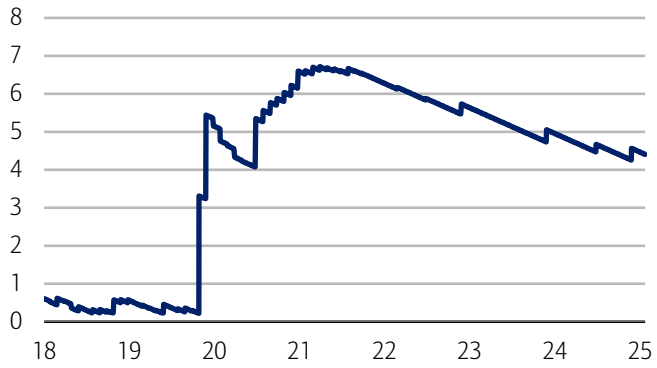
### Asset sales

The RBA has discussed speeding up the pace of balance-sheet run-off by selling the bonds in its portfolio before they mature. The MPB periodically reviews the pace of balance-sheet run-off and has paid particular attention to interest-rate risk on the RBA's balance sheet. The mechanism for asset sales, which we occasionally refer to as 'active QT', would operate similarly to 'passive QT' (no reinvestments when its bond holdings mature), except in this case the RBA would sell its holdings before maturity, causing a larger and faster drawdown in ESA balances.

In our view, bond sales are unlikely because the RBA's portfolio has a shorter WAM than most peers (Exhibit 11, Exhibit 12). For comparison, the Fed's SOMA portfolio has a WAM of around 9 years, while the two G10 central banks to have undertaken active QT, the Bank of Canada (BoC) and Bank of England (BoE) have a weighted average maturity of around 8 years and 10 years on their bond holdings, respectively.

While asset sales would speed up the normalisation of the RBA's balance sheet, most of its bond holdings will have been redeemed in the next few years. The Bank would also be forced to realise losses on most of its bond portfolio at current prices.

**Exhibit 11: Weighted average maturity of RBA's bond portfolio**
The RBA's portfolio has a shorter-dated WAM than peers




**Source:** RBA

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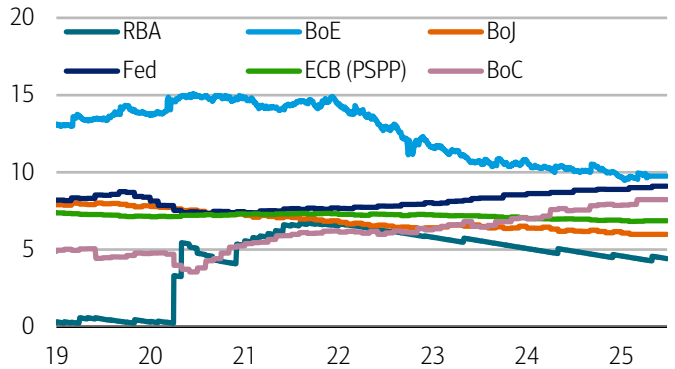
**Exhibit 12: Weighted average maturity, central bank bond portfolios**
RBA's bond portfolio has a shorted WAM than major central banks




**Source:** RBA, BoE, Fed, BOJ, BoC, ECB

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# Products

In this section, we distinguish between three types of front-end products: single-currency basis (i.e., in AUD only), cross-currency basis and repo.

## Single-currency basis – bank bills-OIS basis (BOB)

The spread between bank bills and overnight indexed swaps (OIS), measured in basis points, is an important measure of tightness because it measures the unsecured credit risk of Australia's major banks. Prime bank accepted bills are issued by Australia's four prime banks – Commonwealth Bank of Australia (CBA), Australia and New Zealand Banking Group (ANZ), Westpac Banking Corporation (WBC) and National Australia Bank, which collectively account for about 73% of banking system assets (as of 31 March 2025).

Prime banks must meet several minimum requirements: they must be APRA-regulated ADIs, issue securities which are eligible for RBA repos, have a minimum credit rating of A (long term) and A1 (short term) or equivalent from at least two of the recognized credit rating agencies. They must also have a minimum average of A$10 billion of eligible securities on issue in the domestic market on a rolling 6 monthly basis and endeavour to maintain A$15 billion in outstanding eligible securities (i.e., bank bills). Prime Banks also commit to making markets (i.e., offering two-way prices) during the daily BBSW rate set window.

### Bank bills and BBSW benchmark rates

The rate at which bank bills trade in a daily window, also known as the Bank Bill Swap Rate (BBSW) is a benchmark interest rate. BBSW is the most widely used reference rate in the swaps market - about AUD 18trn of securities reference these benchmark rates.[7] BBSW is calculated using transaction data and live prices during the daily Rate Set Window between 8:30am and 10am AEST/AEDT. In 2017, responsibility for BBSW calculation was transferred to the Australian Securities Exchange (ASX), which calculates BBSW using a waterfall methodology visualised in Exhibit 13.

**Exhibit 13: BBSW calculation waterfall**
ASX will proceed through steps until conditions are met

| Step | Name | Description | Conditions |
|---|---|---|---|
| 1A. | Volume-weighted average price (VWAP) methodology | A volume weighted average (VWAP) calculation methodology based on eligible trades in the BBSW rate set window (8:30-10am AEST/AEDT) The VWAP calculation methodology will only be used if all trades for that tenor occur on the same trade date. | Minimum volume threshold: AUD 100m, minimum of 3 transactions and at least 4 counterparties. Eligible trades must have a notional value of at least AUD 10m. |
| 1B. | Weighted Least Squares Regression (LSR) Methodology | Based on eligible trades that fall on multiple maturity dates within a tenor, the weighted LSR methodology determines a line of best fit between independent variables to identify the dependent variable (BBSW rates). | Minimum volume threshold: AUD 100m, minimum of 3 transactions and at least 4 counterparties. Eligible trades must have a notional value of at least AUD 10m. |
| 2 | NBBO Methodology | National Best Bid and Offer (NBBO) methodology used when a BBSW rate cannot be formed under the VWAP or weighted LSR Methodology, the ASX will scrape live bid/offer data to calculate a BBSW rate | Samples taken from three different 'sessions' in the rate set window and prices are valid if the bid/offer spread is no greater than 1bp |
| 3 | Fall-Back Methodology | A rarely used fall-back methodology that includes setting 2,4 or 5-month tenors off neighbouring tenors, setting 1,3 and 6-month BBSW off a single valid tenor, using futures prices or prior day prices to set current rates. | N/A |

**Source:** BofA Global Research, ASX

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[7] See ASX Benchmarks

To be eligible for use in the VWAP Or weighted LSR calculation, a transaction must have a maturity date that falls within the rolling maturity pool (-5 to +10 business days either side of the straight run date for the 1 month tenor and +/-10 business days for 2 to 6 month tenors) on the proviso that a transaction will be used for the tenor closest to the straight run maturity date and the longest tenor if it falls equally distant from two maturity dates.

The ASX notes: "BBSY 'bid' and 'ask' rates for 1, 2, 3-, 4-, 5- and 6-month tenors are published on Refinitiv/LSEG Data & Analytics page 'BBSY' and on Bloomberg LLP page 'ASX29' using a set difference respectively of five basis points above and below the BBSW (mid) rate. For clarity, the BBSW rate is represented as the mid rate and the BBSY rates are represented as bid and ask rates" (see ASX Benchmarks)."

Ordinarily, shorter-dated swaps (up to around 3 years) reference three-month BBSW while longer-dated swaps (beyond 3 years) reference six-month BBSW. Therefore, while prime banks issue 1,2,3,4,5 and 6-month bills, 3-month and 6-month bank bills tend to be the most liquid and widely monitored tenors.

**Bank bill futures and bills-OIS basis (BOB)**

Given that bank bills are a credit product, the spread between BBSW/ bank bill futures and overnight indexed swaps (OIS) is a widely recognised measure of unsecured credit risk for Australia's prime banks. By measuring the spread to OIS, we strip out the effect of future cash-rate expectations on market prices and we are left with a residual credit risk component. The difference between the yield on BBSW/ bank bill futures and OIS is measured in basis points and so market participants will often refer to this spread as bank bills-OIS basis or simply 'BOB'.

We discuss the idiosyncratic features of this market in greater detail below (see 'Drivers') but a wider (higher) spread between the BBSW rate and the yield on overnight indexed swaps with the same maturity date generally indicates tighter funding markets because the expected premium over cash rates for prime banks to issue is higher. Conversely, when the spread between BBSW and cash rate futures is tight (low), investors are not demanding much (or any) compensation for unsecured credit risk and so we might describe funding conditions in this environment as 'abundant' or 'loose'.

**What is BOB?**

How do we calculate BOB? OIS reference the interbank cash rate (the same rate the RBA targets), compounded daily until expiry and paid 2 business days after the expiry date of the swap. Note that the AUD Overnight Index Average (AONIA) rate is an alternative benchmark rate derived from Australian cash rates that is functionally equivalent to OIS.

The ASX offers 90-day bank bill futures contracts. Contracts start on the second Thursday of March, June, September, and December each year. Each of these months is signified by a letter: H (March), M (June), U (September) and Z (December). Market participants will often quote this letter followed by a number to signify the month and year of the contract expiry. For example, H27 refers to a futures contract expiring in March 2027 and U9 refers to a contract expiring in September 2029.

The CME Group's IMM (International Money Market) dates are the global standard for futures contracts, but these start on the third Wednesday. The forthcoming IMM and ASX 24 (formerly Sydney Futures Exchange or SFE) dates are listed in Exhibit 14.

ASX bank bill futures contracts are generally categorised into 'packs' based on their proximity to the spot contract:

- **White pack**: First four consecutive listed underlying 90 Day Bank Bill Futures contracts commencing from the spot contract to spot +3 (e.g., September 2025 to June 2026 as of 2 July 2025).

- **Red pack**: Four consecutive listed underlying 90 Day Bank Bill Futures contracts commencing from Spot + 4 up to Spot + 7 contracts (e.g., September 2026 to June 2027 as of 2 July 2025).
- **Green pack**: Four consecutive listed underlying 90 Day Bank Bill Futures contracts commencing from Spot + 8 up to Spot + 11 contracts (e.g., September 2027 to June 2028 as of 2 July 2025).
- **Blue pack**: Four consecutive listed underlying 90 Day Bank Bill Futures contracts commencing from Spot + 9 up to Spot + 12 contracts (e.g., September 2028 to June 2029 as of 2 July 2025).

There is a market for calendar dates in the spot and forward-starting BOB. For example, longer-dated BOB (2y-10y) and forward-starting structures like 1y1y BOB trade frequently. There is also a market for 6-month BOB (i.e., the spread between 6-month BBSW and OIS) but market participants will generally find that BOB quoted out of ASX 24 dates (e.g., BOB starting on 12 December 2025) are the most liquid points because two-way pricing is easiest at these points on the curve. Dealers may struggle to perfectly match (or 'clear') their risk exposures for other structures and so bid/offer spreads may be wider than for ASX 24-starting BOB structures.

**Exhibit 14: IMM and ASX 24 dates to year-end 2027**
ASX 24/ SFE = second Thursday, IMM = third Wednesday

| Contract | IMM | SFE |
|---|---|---|
| U25 | 17-Sep-25 | 11-Sep-25 |
| Z25 | 17-Dec-25 | 11-Dec-25 |
| H26 | 18-Mar-26 | 12-Mar-26 |
| M26 | 17-Jun-26 | 11-Jun-26 |
| U26 | 16-Sep-26 | 10-Sep-26 |
| Z26 | 16-Dec-26 | 10-Dec-26 |
| H27 | 17-Mar-27 | 11-Mar-27 |
| M27 | 16-Jun-27 | 10-Jun-27 |
| U27 | 15-Sep-27 | 9-Sep-27 |
| Z27 | 15-Dec-27 | 9-Dec-27 |
| H28 | 15-Mar-28 | 9-Mar-28 |
| M28 | 21-Jun-28 | 8-Jun-28 |
| U28 | 20-Sep-28 | 14-Sep-28 |
| Z28 | 20-Dec-28 | 14-Dec-28 |
| H29 | 21-Mar-29 | 8-Mar-29 |
| M29 | 20-Jun-29 | 14-Jun-29 |
| U29 | 19-Sep-29 | 13-Sep-29 |
| Z29 | 19-Dec-29 | 13-Dec-29 |

**Source:** ASX 24, CME Group

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## 6s3s

Just as BOB measures market pricing of prime banks' unsecured credit risk, market participants also monitor the term structure of bank bills as a barometer of tightness in funding markets. In Australia, we use the term '6s3s' to describe the spread between 6-month and 3-month bank bills. In some other G10 markets, a similar spread between 3 and 6-month interest-rate products is referred to as '3s6s'.

### What are 6s3s flows?

In general, issuers will pay or receive 6s3s as part of their hedging programs because long-dated swaps reference 6-month BBSW but cross-currency basis swaps reference 3-month BBSW. For example, offshore issuers of AUD-denominated bonds (also known as 'Kangaroo bonds') raising funding for more than three years will typically pay 6s3s, receive cross-currency basis and receive interest-rate swaps at the same tenor as their issuance to swap their payments back to US SOFR. Conversely, offshore issuers will sometimes receive 6s3s and pay cross-currency basis to mark their payments as a spread to BBSW.

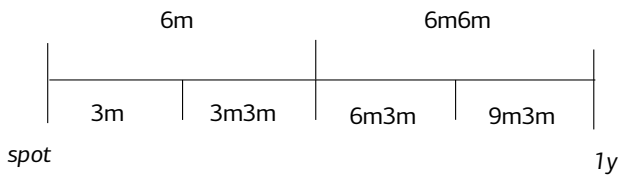
### What is 6m 6s3s?

To derive the 6s3s spread, we cannot simply subtract the yield for 3-month bank bills from a 6-month bank bill yield because there is a mismatch between the expiry dates. For example, if we purchase a three and six-month bank bill today, in 3 months the three-month bank bill will mature and we will be left with a 6-month bill that matures in 3 months (in effect, a three-month bank bill). 3-month-forward 3m BBSW (i.e. 3m3m BBSW) is unknown but a quarterly rate over a six-month period can be derived from the interest-rate swaps curve. The difference between this quarterly rate and 6m BBSW is implied 6m 6s3s basis. To derive implied 6m 6s3s basis, we therefore calculate 6-month bank bill futures and forward-starting 3-month bill futures as in Exhibit 15.

### 6s3s – front-end vs long-end drivers

Broadly speaking, front-end rates will be driven primarily by the spot spread, which is driven by regulation and general funding market conditions (see 'Drivers' below) whereas longer-dated 6s3s basis swaps (i.e. beyond 2y) tends to be driven by issuance-related flows (e.g., Kangaroo bond issuers and corporate issuers receiving or paying long-dated 6s3s) and tend to remain more subdued.

**Exhibit 15: How to construct a 6s3s curve**
6s3s = the spread between 6m and 3m bank bills in the future




**Source:** BofA Global Research

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## Cross-currency basis

As its name suggests, cross-currency basis tracks the cost to borrow or lend across currencies. Broadly speaking, three types of products exist in the Australian money market:

1. FX forwards: a commitment to buy or sell a currency in the future.
2. FX swaps: an agreement to buy or sell a currency at spot rates and reverse the transaction in the future. The swaps can reference fixed rates (i.e., FX forward points) or floating rates (e.g., AUD OIS vs US SOFR) for a fixed period.
3. Cross-currency basis swaps: an agreement to exchange two floating-rate income streams using BBSW for the AUD leg (i.e., an exchange of BBSW for SOFR).

The 'basis' component of these markets measures deviations from covered interest rate parity (CIRP) in basis points (bps). Covered interest-rate parity (CIRP) states the difference between the interest rate of two currencies should equal the difference between the forward and spot exchange rate. For an AUD-based investor, the CIRP states the investor should make the same return from:

- Investing AUD at interest rate $r_{AUD}$, and
- Buying USD with AUD in the spot market at $AUDUSD_{spot}$, lending the USD at interest rate $r_{USD}$, and repurchasing AUDUSD at the forward rate of $AUDUSD_{forward}$ entered at the start of the investment

Formulaically:

$$1 + r_{USD} = \frac{(1 + r_{AUD}) * AUDUSD_{forward}}{AUDUSD_{spot}}$$

$$\frac{AUDUSD_{forward}}{AUDUSD_{spot}} = \frac{1 + r_{USD}}{1 + r_{AUD}}$$

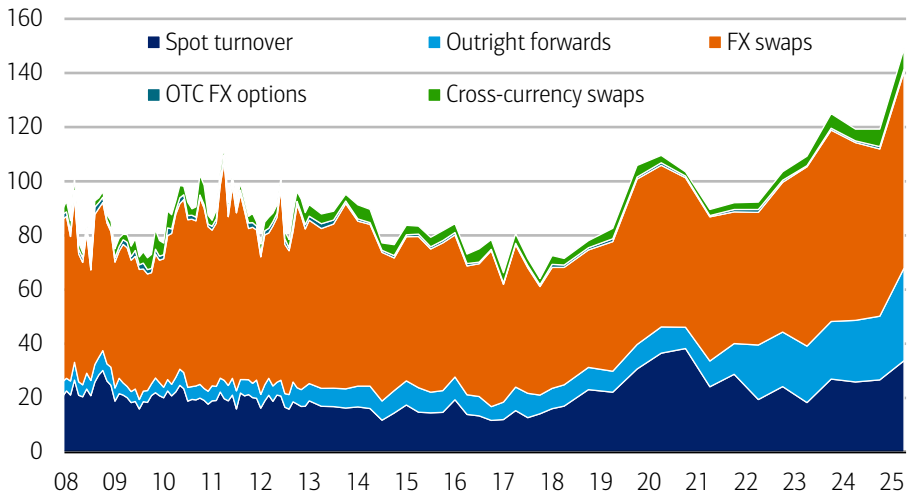
The interest rate used for the US dollar and AUD are based off their respective risk-free rate curves. In the US, this is the SOFR curve. In Australia, this is the AUD OIS curve.

The CIRP does not hold in practice because there is an imbalance between demand and supply of one currency relative to another. This imbalance is captured by the FX-SOFR basis. By convention, the FX-SOFR basis is applied to the AUD or non-US dollar interest rate. In the case of AUD FX-SOFR, a negative AUD FX-SOFR basis represents more demand for (or less supply of) USD relative to demand for (or supply of) AUD; and vice versa.

### FX swaps

FX swaps are the most common type of FX transaction in the AUD market. Alongside outright FX forwards, swaps volumes have increased the significantly since 2022 (Exhibit 16). FX swaps allow market participants to borrow or lend foreign currencies. They comprise two transactions. The first transaction is the spot leg, which is an exchange of currencies using the spot exchange rate. The second transaction is the forward leg, which reverses the exchange at a predetermined future date and at the forward rate.

**Exhibit 16: Daily average turnover by product (AUD bn)**
Higher volumes in FX forwards and FX swaps over the past few years




**Source:** BofA Global Research, RBA

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The interest rate used for USD and AUD are based off their respective benchmark rate curves. In the US, this is the SOFR curve. In Australia, this is the AUD OIS or AONIA (Australian Overnight Index Average) curve, both of which are derived from the daily interbank cash rate. It also means the day count convention for interest calculations is actual number of days divided by 360 (ACT/360), following the convention from the risk-free rate (RFR) swaps.

The CIRP does not hold in practice because there is an imbalance between demand and supply of one currency relative to another. This imbalance is captured by the FX-SOFR basis. By convention, the FX-SOFR basis is applied to the AUD or non-US dollar interest

rate. In the case of AUD FX-SOFR, a negative AUD FX-SOFR basis represents more demand for (or less supply of) USD relative to demand for (or supply of) AUD; and vice versa.

As a result of risk-free rate reform, US dollar premium now captured by FX-SOFR rather than FX-OIS, but FX-SOFR will sometimes be referred to as FX-OIS by veterans of the FX swaps market. Dealers tend to use 'tomorrow/next day' or T+1 buy (sell) vs T+2 sell (buy) (which is also referred to as 'tom next' or simply 'T/N') FX swaps to fund their positions whereas institutional investors and bank balance-sheets tend to finance their assets/ borrowing in term FX swaps out to 1 year.

The RBA is also an active participant in the FX market and regularly transacts in FX forwards and FX swaps. The Bank notes in its 2023 Annual Report that "swaps can also be an efficient way to manage the shorter-term investments within the reserves portfolio". The RBA maintained around $22bn in FX swaps in financial year 2022/23 and also transacted in FX forwards to enhance the yield on the reserves portfolio (see Exhibit 17).

**Exhibit 17: RBA Official Reserves, Annual Report 2024 (AUD m)**
The RBA transacts in FX markets every day

| Currency | Securities held outright | Securities lent under repurchase agreements | Deposits at official institutions | Total (gross) | Forward FX commitments | | | Total (net) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Against A$ | Against other currencies | Other | |
| USD | 9,483 | - | 836 | 10,319 | 15 | 10,418 | 4,668 | 25420 |
| EUR | 3,585 | -1,429 | 323 | 2,478 | -5 | 4,425 | 2,241 | 9,139 |
| JPY | 27,200 | – | 7,502 | 34,702 | -17,635 | -14,678 | – | 2.389 |
| CAD | 2,998 | – | 4 | 3,002 | – | -554 | – | 2,448 |
| CNY | 1,191 | – | 1,215 | 2,406 | – | – | – | 2,406 |
| GBP | 1,473 | – | 5 | 1,479 | -2 | 971 | – | 2,448 |
| KRW | 2,443 | – | 1 | 2,444 | - | - | – | 2,444 |
| **Total** | **48,373** | **-1,429** | **9,886** | **56,830** | **-17,627** | **682** | **6,909** | **46,694** |

**Source:** RBA

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### Cross-currency basis swaps

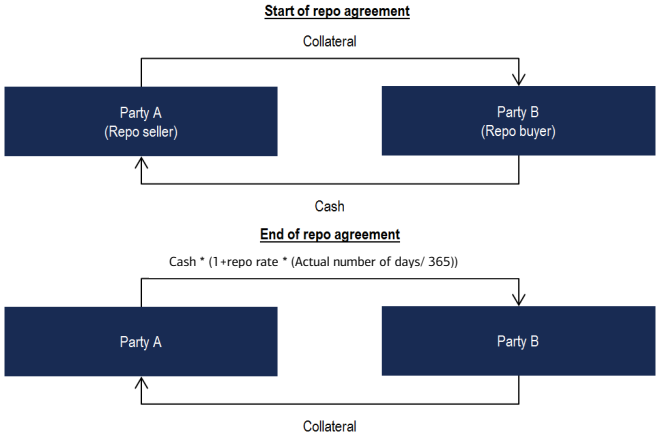
In Australia, cross-currency basis swaps reference BBSW for the AUD leg of the swap while FX-SOFR references OIS or AONIA. Although risk-free rate reform saw the establishment of a new benchmark rate in the US (SOFR), BBSW has remained the most widely referenced benchmark rate in Australia.

The difference between FX-SOFR and cross-currency basis swaps is therefore BOB. Formulaically, AONIA-SOFR + BBSW-AONIA = BBSW-SOFR. Ordinarily, cross-currency basis swaps are preferred by bank treasuries which will mark their funding costs as a spread to BBSW although other market participants like asset managers and relative-value traders also participate in this swaps market.

## Repo

Repo markets act as a meeting place between short-term investors and short-term borrowers who need to finance their bonds. There are two types of transaction in the repo market – 'general collateral' repo which is a type of financing designed for liquidity enhancement, and 'specific collateral' repo, which is when a borrower needs to find collateral with a specific tenor, maturity, and issuer. Bonds that are generally scarce will sometimes trade 'special' (commanding a lower repo rate). See Exhibit 18 for a basic illustration of a repo transaction.

**Exhibit 18: Mechanics of a repo transaction**
Secured financing using collateral (usually GC1)




**Source:** BofA Global Research.

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### Cash-driven repos: General collateral (GC)

GC repos allow a participant to acquire short-term funding by using securities as collateral. In GC repos, the collateral is part of a basket of securities that can be substituted for one another at little or no cost. GCs tend to include government bonds and Treasury bills. The substitutability of securities in a GC repo means the GC repo rate is driven by cash demand rather than demand for a specific security, and the choice of security is the seller of the repo subject to the buyer's consent. In Australia, there are two types of general collateral:

GC1 –T-notes, ACGBs and semis (nominals and indexed)

GC2 – any other securities accepted for RBA OMOs (see Exhibit 3 for a full list).

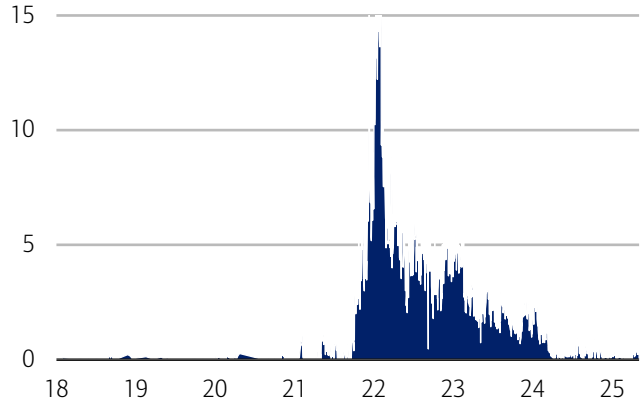
For some foreign dealers, the different treatment of semis and ACGBs at offshore repo facilities like the Federal Reserve may provide a disincentive to hold semis as collateral.

### Collateral-driven repos: Special collateral (SC)

SC repos allow a participant to acquire specific bonds, which supports the liquidity of the bond market. Collateral in SC repos tends to be in high demand and cannot be easily substituted for another security. The low substitutability of the collateral means the SC repo rate is driven by demand for the securities rather than demand for cash, and the SC repo rate would typically be lower than the GC repo rate. SC repos typically include bonds that are held by the RBA, which are concentrated in the <5y maturity bucket (Exhibit 20).

The RBA and AOFM operate a facility that allows dealers to borrow bonds in short supply. Although daily volumes have fallen markedly from their peak, the concentration of borrowing in lines with up to 3y to maturity correlates with the lines that have tended to trade special (Exhibit 19).

**Exhibit 19: AOFM Securities Lending Facility daily volumes (AUD bn)**
<5y bond borrowing skyrocketed after the bond purchase program




**Source:** RBA, BofA Global Research

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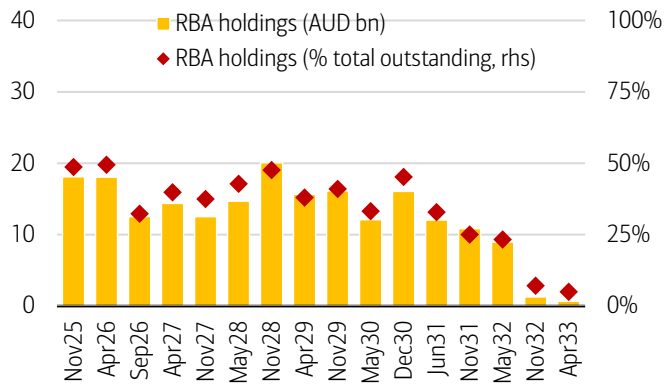
**Exhibit 20: RBA holdings of ACGB bond lines**
Most RBA holdings mature by the end of the decade




**Source:** RBA, BofA Global Research

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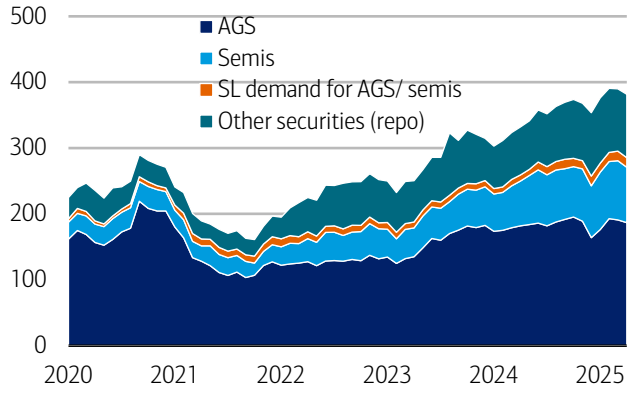
## Trends in collateral and term in the Australian repo market

Investors can decide to lend intraday, overnight for a term or open-dated/ at-call. Intraday repo is generally provided by the RBA or AOFM to facilitate the orderly settlement of transactions in government securities. AGS is the most popular form of collateral, although demand for semis and non-GC1 collateral has also increased over time (Exhibit 21). The most popular tenor is out to 1 month but greater than 1 day, which captures T/N (tomorrow/ next, T+2) repo flows. The second most popular form of repo is open-dated (Exhibit 22).

**Exhibit 21: Monthly repo volumes by collateral type (AUD bn)**
GC1 repo still dominates but GC2 repo has been growing since 2022




**Source:** RBA, BofA Global Research

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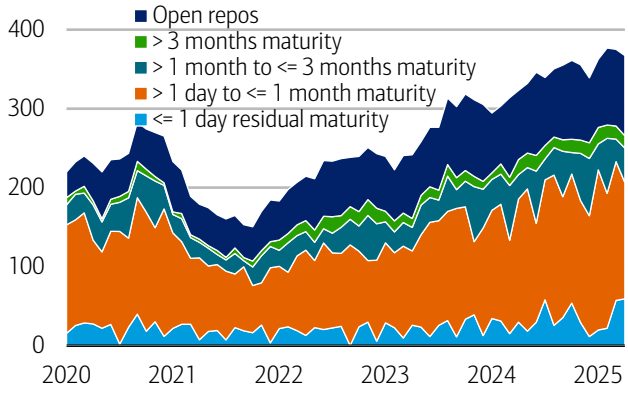
**Exhibit 22: Outstanding repo by maturity (AUD bn)**
>1 day to <=1 mth most popular tenor




**Source:** BofA Global Research, RBA

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## ASX Beta SOFIA rate

The ASX has recently started publishing a draft or Beta SOFIA rate, which is designed to measure the rate at which GC1 overnight repo transactions occur. This rate is expressly prohibited as a benchmark and is intended solely for testing and consultation, but it is indicative of how GC repo rates might generally be calculated. To filter out the effect of specials on the Beta SOFIA rate, the ASX ranks transactions by yield from highest to lowest and applies a volume weighted average price from the top 75% of transaction volumes. The ASX intends to eventually transition SOFIA from a beta version into a benchmark rate but the timeline and process for this change is uncertain.

## Benchmark rates and central counterparty reform in Australia

Central counterparty (CCP) reform could potentially impact the timeline and design of benchmark rates in the repo market. Although repo is cleared bilaterally and the RBA

decided against counterparty reform in 2015, RBA authors noted in a 2023 RBA bulletin "the public policy case for central clearing in the Australian bond and repo markets is stronger than in 2015 when the Reserve Bank last considered the case".[8] In July 2024, the Council of Financial Regulators (CFR - the coordinating body for Australia's main financial regulators) launched a consultation to reassess the case for central clearing of bonds and repo. Their response to submissions was subsequently published in March 2025.

Although the consultation identified potential benefits like reduced counterparty credit risk, operational efficiencies and reliable data for benchmark rate calculation were identified in the consultation process, the CFR also found no compelling case for regulatory intervention and instead left the decision to the industry and prospective CCP operators. The CFR's response to the consultation identified that the establishment of a bond and repo central counterparty (CCP) "has the potential to enhance the efficiency, stability and transparency of these markets" but declined to mandate centralised clearing.[9]

Ultimately, we view the establishment of a CCP as likely given an increase in repo volumes and the RBA's decision to reduce its footprint in private markets and encourage greater interbank lending (e.g. in repo markets). There has also been a substantial increase in repo volumes over the past few years, disproportionately attributable to growth in secured lending with non-GC1 and semis as collateral (Exhibit 21). Moreover, unlike comparable international, benchmark rates like SOFR (secured overnight financing rate) or SARON (Swiss Average Rate Overnight), Australia's SOFIA (beta version) relies on settlement data because trade data is not available. In our view, the establishment of a CCP is therefore likely in the medium term.

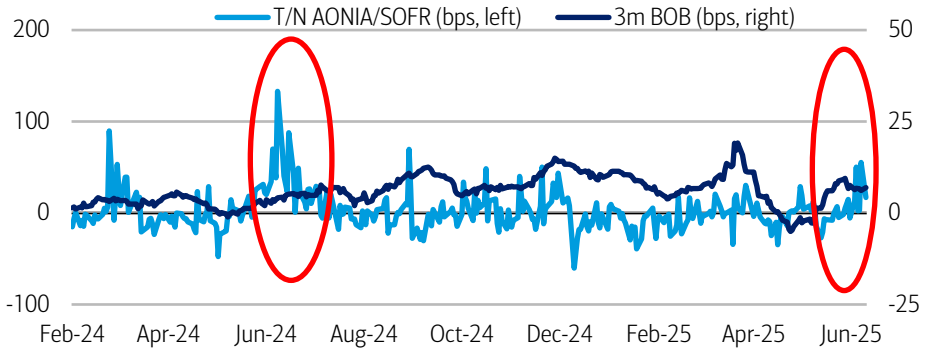
**A new year-end turn premium in Australia?**

Accounting rules, the design of tax systems and windows for calculating regulatory ratios often lead to the emergence of seasonal fluctuations otherwise known as a 'turn premium' around quarter or year-end in global basis markets. To the extent that the 'turn premium' exists in Australia's market, it is often a spillover effect of excess demand for, or supply of, funding in other markets.

Yet over the past two years, AONIA/SOFR basis has spiked around the end of June. Australia's financial year, which runs from 1 July to 30 June. In June 2024 & 2025, AONIA/SOFR basis widened markedly, signalling an increase in demand for AUD relative to USD. In both cases, a widening in AONIA/SOFR basis has not coincided with an increase in BOB, which suggests that there has not been a general tightness in domestic funding conditions. See Exhibit 23.

[8] Cheshire, J. and Embry, J. (2023), 'Reassessing the costs and benefits of centrally clearing the Australian bond market', *RBA Bulletin*, March 2023, pp. 96-107.
[9] Council of Financial Regulators (2025), 'Reassessing the Case for Central Clearing of Bonds and Repos in Australia: A Response to Consultation by the Council of Financial Regulators', March 2025, p. 13.

**Exhibit 23: Seasonal widening in FX-SOFR (but not BOB) around financial year-end**
Lack of AUD supply and demand for AUD funding




**Source:** Bloomberg

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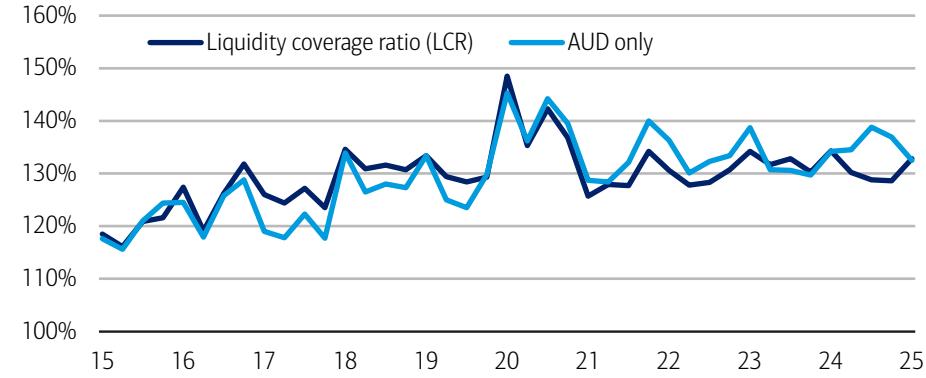
Although there are several plausible explanations, we highlight two recent trends in AU markets that may be causing the financial year-end spike in FX-SOFR basis:

### AU regulatory dynamics

In Australia, banks are required to hold high-quality liquid assets (HQLA) for the purposes of maintaining their liquidity coverage ratio (LCR) above a regulatory minimum (see discussion in Drivers below). There are two LCR benchmarks – AUD-only (i.e. HQLA in AUD, measured against cash outflows in AUD) and a comprehensive or all-currency LCR (i.e. HQLA in all currencies, measured against cash outflows in all currencies). Although the major banks' AUD and all-currency LCRs tend to be quite similar (Exhibit 24), it is possible that banks are less willing to lend – or require a higher premium over OIS/ cash to lend – around the end of Australia's financial year.

**Exhibit 24: Major banks AUD and all-currency LCRs (%)**
AUD-only LCR vs all-currencies LCR for Australia's 4 prime banks




**Source:** APRA

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### Bond financing – international borrowers

At the end of June 2024, a spike in AONIA-SOFR basis coincided with a spike in overnight GC repo rates (Exhibit 25). These moves suggest a sudden demand for bond financing (or a sudden exodus of lenders).

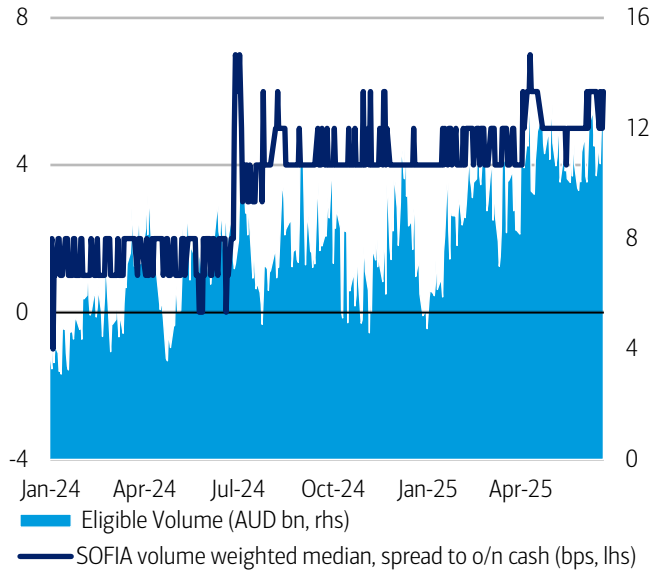
The RBA reports that of the more than $4trn outstanding in AUD FX swaps, "our assessment is that a smaller, but still material, share of repo activity involving AUD-denominated securities and cash occurs offshore" (see RBA Bulletin, July 2024). In other words, institutional investors and market participants have a choice between financing their bonds onshore in AUD repo markets or in offshore repo markets, using FX swaps to hedge the cross-currency risk.

This theory is supported somewhat by recent trends – non-resident borrowing (i.e., by foreign ADIs) in the repo market has been the main driver of rising repo volumes over the past two years (Exhibit 26). We might assume these borrowers have more established pattern of borrowing in foreign repo markets and therefore would be more inclined to finance their bonds offshore and use FX swaps to hedge their risk.

Admittedly, the spike in AONIA/SOFR basis around the end of June 2025 was not accompanied by a similar move in the spread between GC repo and overnight cash rates. Yet GC repo vs cash spread had already widened in April 2025 after the RBA announced a new ample reserves regime so it is possible banks that typically lend in this market were not sufficiently discouraged from lending at year-end given a higher yield pick up over cash than in 2024 (5-6bps).

In any case, these episodes highlights an important dynamic: investors have a choice between borrowing locally or offshore, transacting in FX swaps to hedge the risk. Sudden moves in onshore repo rates can therefore have knock-on effects for FX-SOFR basis or vice-versa.

**Exhibit 25: Secured Overnight Funding Index Australia (SOFIA)**
Repo rate spiked in June '24 but remained stable in June '25




**Source:** BofA Global Research, ASX

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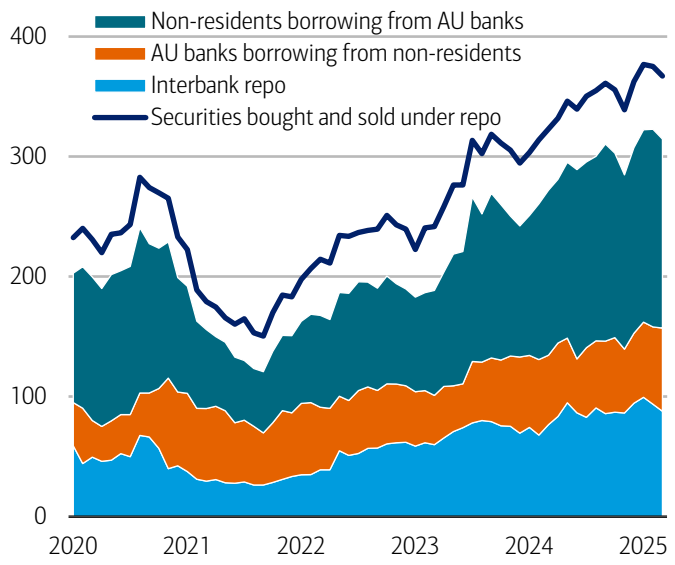
**Exhibit 26: Repo volumes by collateral value outstanding (AUD bn)**
Non-resident bank borrowing have increased the most




**Source:** BofA Global Research, RBA

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# Drivers

There are several major drivers of front-end rates, including cross-border flows from major institutions like asset managers (hedging offshore assets) and bank balance-sheets (hedging offshore issuance), RBA balance-sheet policy, regulatory dynamics and accounting rules.

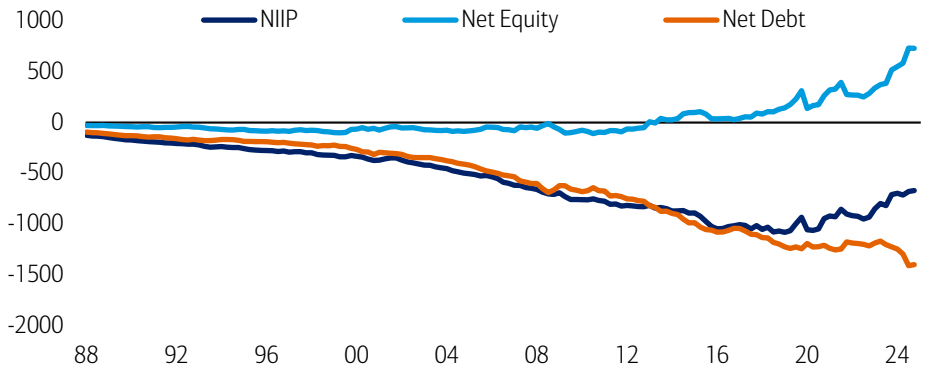
## Superannuation funds and AU institutional investors

Local asset managers' offshore holdings play an important role in basis markets. The growth in Australian investors' non-AUD holdings accelerated over the past decade alongside faster growth in superannuation balances. Employers' minimum contribution to Australian employees' retirement accounts increased for most employees from 9% to 12% of gross income from 2013 to 2025. Coupled with a substantial and, to an extent, unforeseen increase in the working population, an increase to guaranteed superannuation contributions has boosted superannuation system balances significantly. Consequently, we have seen a meaningful turnaround in Australia's net international investment position over the past decade (Exhibit 27).

### Super funds and the FX swaps market

Super funds will typically run rolling hedges to reduce the offshore FX risk associated with their international assets, mainly by receiving FX swaps out to 1y, and this places downward pressure on the front-end of the curve (i.e., lower cross-currency basis). Although super funds tend to have lower hedge ratios on their largest allocation (foreign equities) because of the AUD's high beta to risk (i.e. AUD depreciation tends to cushion the impact of falling equities in a sell-off), hedged AUM has increased by almost 400bn over the past three years.

**Exhibit 27: Australia's net international investment position, AUDbn**
Rising superannuation balances have lifted non-AUD holdings




**Source:** BofA Global Research, Australian Bureau of Statistics (ABS)

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## Australian banks

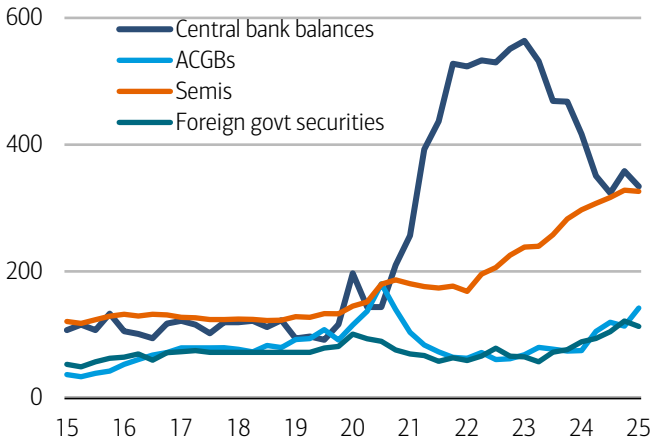
Australia's commercial banks maintain a large footprint in fixed-income markets. Bank funding programs are a form of liability management that augments the traditional deposit-taking function of a bank. Like deposits, which are issued overnight or for a short term to the public, bank funding programs straddle different tenors from overnight to several years and beyond. As the name suggests, these programs are also designed to fund the assets that a bank holds like loans to households and businesses. Unlike deposits, though, bank funding programs are generally targeted at institutional investors and so individual transactions tend to be much larger. For this reason, we often distinguish between *retail* deposits like savings and transaction accounts held by households and small/ medium-sized businesses, and *wholesale* funding raised in money and capital markets.

Australian banks issue around USD 100bn in term funding each year. Banks issue across the curve but typically aim to match the duration of Australian mortgages (around 5y) by issuing 3y-5y paper. In addition, banks maintain an active presence in the short end, taking advantage of unique depth in US money markets to plug any gaps in their liquidity requirements. The bulk of issuance is undertaken by Australian's four major banks, which also own the major banks in New Zealand. Banks ordinarily pay 3m-1y FX-SOFR or BBSW-SOFR basis to hedge their money market issuance and 3y-5y basis to hedge their term funding.

Bank regulation in Australia minimises bank balance sheets' demand for non-AUD and non-government securities. As discussed below, the Australian Prudential Regulatory Authority (APRA) has restricted the definition of High Quality Liquid Assets (HQLA) that banks can hold to meet regulatory requirements. In Australia, APRA restricts banks operating in Australia to holding Australian Commonwealth Government Bonds (ACGBs) and semi-government bonds (semis) or cash/ central bank balances as HQLA for the purposes of meeting regulatory requirements like the Liquidity Coverage Ratio (LCR). As a result, these instruments are dominant in bank portfolios and there are few offshore assets to hedge (Exhibit 28).

Consequently, during periods of global stress when demand for USD typically rises, the opposite trend is typically visible in Australia. Demand for AUD and NZD rises as banks step up their short-term funding in deep capital markets abroad, which may lead to upward pressure on AUD FX-SOFR basis or dampen the magnitude of tightening driven by global USD demand. The divergence between AUD and NZD BBSW-SOFR basis and EUR and JPY FX-SOFR basis during global banking stress in March 2023 is exemplary of this dynamic (Exhibit 29).

**Exhibit 28: Australian ADIs' HQLA holdings (AUD bn)**
Semis, central bank balances and ACGBs eligible to meet regulatory ratios




**Source:** BofA Global Research, APRA

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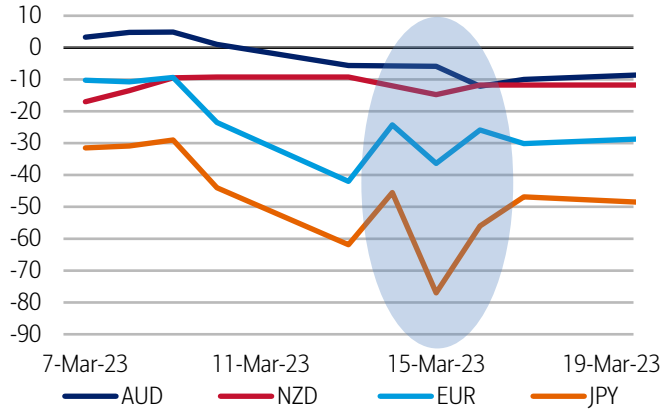
**Exhibit 29: AU/ NZ 3m basis driven by bank paying in crises, bp**
Major AU banks tap US money markets in periods of funding stress




**Source:** BofA Global Research, Bloomberg

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## Regulations

Money-market issuance is generally cheaper for banks than term funding, and maintaining a smaller funding program relative to a bank's asset base could mean lower total funding costs and therefore higher net interest income for the bank. Yet if every bank sought to maximise net interest income in this way, the banking system would ultimately be more vulnerable to sudden spikes in money-market spreads.

To manage this tension and minimise the risks associated with banks relying on excessively large, short-dated issuance, APRA has implemented a global standard for banking regulation called Basel III in 2015. The centrepiece of these reforms (at least for our purposes) was the introduction of two regulatory ratios, the net stable funding ratio (NSFR) and liquidity coverage ratio (LCR). The LCR requires Australia's 15 largest domestic banks to hold sufficient High Quality Liquid Assets (HQLA) to meet 'net cash

outflow' (NCO) assumptions in a 30-day stress scenario. The NSFR requires banks not to rely too heavily on short-term funding. Australian Prudential Standard (APS) 210 sets out LCR and NSFR requirements in Australia.

### LCR and bank funding

The LCR's net cash outflow assumptions are determined by assumptions about how 'sticky' different funding sources might be in a 30-day stress scenario (i.e., outflow assumptions) and how much income banks are likely to draw from their asset base during this period (i.e., inflow assumptions). See Exhibit 30 and Exhibit 31.

**Exhibit 30: APRA LCR cash outflow run-off rates**
Assumptions in APS 210

| Cash outflow category | Run-off rate (%) |
|---|---|
| Secured funding transactions backed by HQLA1, with any counterparty | 0 |
| Stable deposits (retail and SME <AUD 2m) | 5 |
| Operational deposit balances from all counterparties fully covered by deposit insurance | 5 |
| Undrawn credit and liquidity facilities to retail and SME customers | 5 |
| Revocable credit and liquidity facilities | 5 |
| Non-contractual obligations related to structured products and managed funds | 5 |
| Less stable retail deposits (bonus offer, no established relationship, rate-driven and/or online accounts) | 10 |
| Undrawn credit facilities to non-financial corporates, sovereigns, public sector entities and central banks | 10 |
| Secured funding transactions backed by HQLA2A, with any counterparty | 15 |
| Non-operational deposits from nonfinancial corporations, sovereigns, central banks, PSEs, MDBs and SMEs of greater than AUD 2m where the entire amount is fully covered by deposit insurance | 20 |
| Less stable retail deposits - higher run-off rate* | 25 |
| Operational deposit balances from all counterparties not fully covered by deposit insurance | 25 |
| Secured funding transactions that are not eligible for inclusion in the 0 or 15 per cent categories above where the counterparties are domestic sovereigns, PSEs (but not the RBA) or MDBs with a risk weight of 20 per cent or lower under APS 112 | 25 |
| Secured funding transactions backed by RMBS eligible for inclusion as HQLA2B | 25 |
| Undrawn liquidity facilities to non-financial corporates, sovereigns, public sector entities and central banks | 30 |
| Non-operational deposits from nonfinancial corporations, sovereigns, central banks, PSEs, MDBs and SMEs of greater than AUD 2m where the entire amount is not fully covered by deposit insurance | 40 |
| Undrawn credit and liquidity facilities to other banks, financial institutions and ADIs | 40 |
| Secured funding transactions backed by other HQLA2B with any counterparty | 50 |
| All other non-operational deposits | 100 |
| All other secured funding transactions | 100 |
| ABCP/ ABS/ most derivatives cash outflows | 100 |
| All other liquidity facilities | 100 |
| All other contractual cash outflows | to be set by APRA or 100 |

**Source:** BofA Global Research, APRA * Note: this list is not exhaustive. See APS 210 for a full list of LCR requirements.

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**Exhibit 31: APRA LCR cash inflow rates**
Assumptions in APS 210

| Cash inflow category | Inflow rate (%) |
|---|---|
| Performing loans to retail and SME customers | 100 |
| Performing loans to retail and SME customers (rollovers) | 50 |
| Wholesale inflows - financial institutions and central banks | 100 |
| Wholesale inflows - all others | 50 |
| Operational deposits | 0 |
| Derivative cash inflows | 100 |
| All other contractual cash inflows | 100 |
| **Maturing secured lending backed by the following assets** | **Inflow rate (%)** |
| HQLA1 | 0 |
| HQLA2A | 0 |
| HQLA2B (eligible RMBS) | 15 |
| Other HQLA2B | 25 |
| Margin lending backed by securities that are not HQLA1 or HQLA2 | 50 |
| All other collateral | 100 |

**Source:** BofA Global Research, APRA * Note: this list is not exhaustive. See APS 210 for a full list of LCR requirements.

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### LCR formula and purpose

The LCR is calculated as: stock of HQLA divided by total net cash outflows (NCOs) over the next 30 calendar days. Note: assumed cash outflows - assumed cash inflows = net cash outflows.

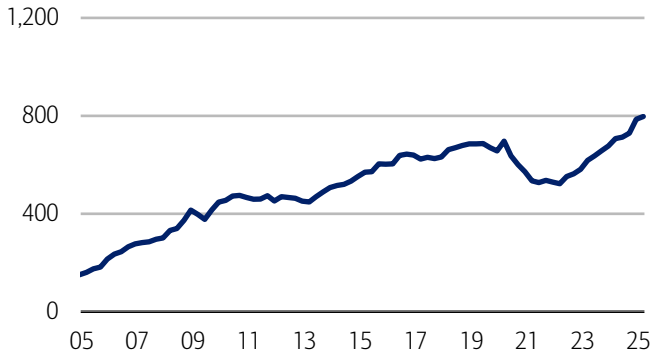
The LCR is designed to encourage banks to accumulate liabilities that are less likely to dissipate in a risk-off episode. For example, retail deposits and small and medium-enterprise (SME) deposits are considered the stickiest type of deposit and therefore attract the lowest net outflow assumption for a deposit product while deposits from other financial institutions attract the highest outflow assumption because the regulator assumes that these funds will be fully drawn in a crisis. Any funding maturing in greater than 30 days, including term deposits, is not considered and therefore attracts no outflow assumption.

At a minimum, banks are required to hold sufficient High Quality Liquid Assets (HQLA) to match NCOs although in practice banks will generally hold a buffer of 20-30 percentage points above the 100% LCR requirement. Unlike in most other G10 jurisdictions, Australia is unique because APRA has limited the HQLA menu for calculating the LCR to just three products: Australian Commonwealth Government Bonds (ACGBs), State and Territory Government bonds (semi-government bonds or semis), and cash/ central bank balances. Consequently, banks cannot use other highly rated assets like supranational bonds or other sovereign bonds to meet their LCR requirements although these assets are subject to different regulatory treatment (e.g., for determining NCOs).

In this way, the LCR generates a funding requirement but so does the funding mix and the performance/ mix of assets on a bank's balance sheet. An increase (decrease) in non-performing loans or an outflow (inflow) of retail deposits could increase (reduce) a bank's funding requirement. For example, bank funding programs ballooned in 2022/23 as banks prepared to repay TFF loans to the RBA, pushing the average LCR for the banking system to 136.5% (see Exhibit 32, Exhibit 33).

The design of the LCR and NSFR also meant that TFF loans started to affect regulatory ratios before the loans came due. For example, TFF repayments affected NSFR requirements 12 months prior to their due date and LCR requirements 30 days before the loans were due to be repaid.

**Exhibit 32: System-wide term funding programs**
Issuance accelerated markedly from 2022 to 2024




**Source:** BofA Global Research, Bloomberg

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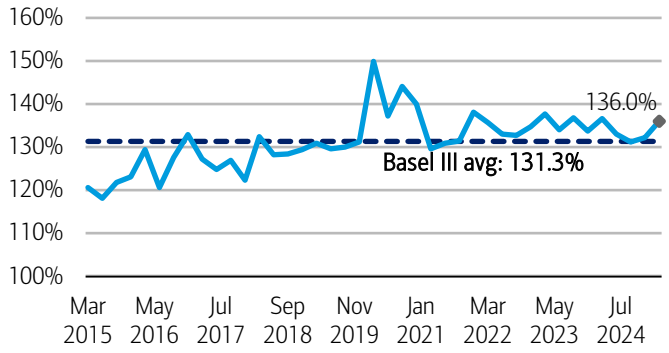
**Exhibit 33: Bank LCRs remain elevated vs Basel III average**
Bank LCRs have been more higher since the pandemic




**Source:** BofA Global Research, APRA

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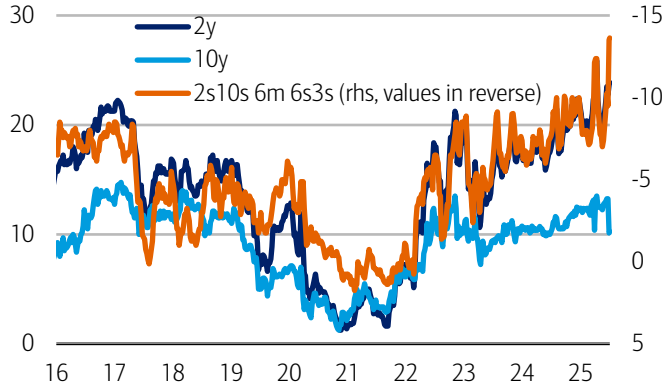
### Implications for front-end rates

The funding requirements generated by APS 210 regulations tend to place upward pressure on front-end BOB and 6s3s spreads because regulation generates a funding requirement that is insensitive to fluctuations in the demand for bank paper. The most immediate impact of any anticipated or realised increase in bill supply will usually fall on shorter-dated BOB and 6s3s spreads (e.g. <2y BOB or 6s3s). The front end of the BOB/ 6s3s curves tend to move in a much wider range and are often more sensitive to spot rates because long-dated basis products assume a gradual convergence of basis spreads with long-run trends over time.

**Exhibit 34: Term 6s3s – curves led by the front end**
The curve tends to be led by price action in the front end




**Source:** BofA Global Research, Bloomberg *Note: weekly data, all figures in basis points

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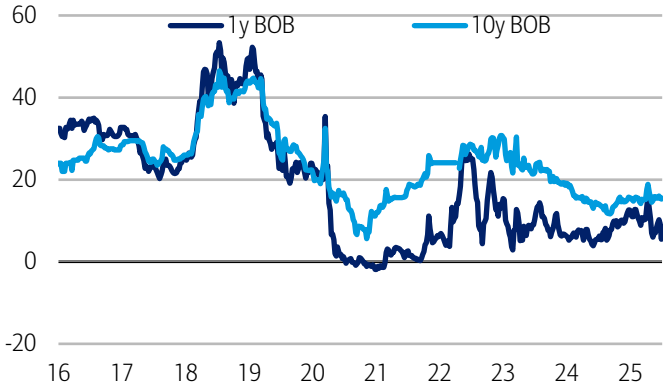
**Exhibit 35: Term BOB (bps) – long-dated BOB lags front-end moves**
Front-end BOB more sensitive to spot moves




**Source:** BofA Global Research, Bloomberg *weekly data

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### NSFR and bank funding

The net stable funding ratio (NSFR) is similarly designed to ensure funding programs are not excessively short-term or volatile. To achieve this objective, the regulator segregates the bank's balance sheet into 'available stable funding' (ASF) and 'required stable funding' (RSF). Funding that is considered less likely to shift suddenly or in great size like retail deposits has a higher weighting than funding that regulators assume will be less stable like deposits from other financial institutions or large companies.

The NSFR ratio compares a bank's weighted liabilities and own funds against its weighted assets. It creates an incentive for banks to use more stable sources of funding to fund their activities. The NSFR ratio is defined as:

$$\frac{Available\ stable\ funding}{Required\ stable\ funding}$$

The available stable funding (ASF) is a weighted sum of the accounting value of various liability types and own funds by their respective ASF factor. The required stable funding (RSF) is a weighted sum of the accounting value of various types of assets and off-balance sheet items by their RSF factor. ASF factors are primarily a function of the residual maturity of the liability. In general, regulatory capital and retail deposits attract a higher ASF weighting than wholesale funding with a residual maturity of less than 1 yr. Funding with a residual maturity of less than 6 months attracts a zero ASF weighting.

Conversely, assets with longer residual maturity or lower quality tend to have a higher RSF. For example, performing residential mortgages with low-risk characteristics (e.g., up to 80% loan-to-value (LVR) ratio, with principal & interest repayments and to owner occupiers) have a lower RSF factor than loans with a higher risk weight or non-performing loans. See Exhibit 36 and Exhibit 37 for a summary of RSF/ ASF weights.

**Exhibit 36: APRA ASF factor weightings**
NSFR nominator

| ASF category | ASF Factor (%) |
|---|---|
| Regulatory capital | 100 |
| Any liability with a residual maturity of >1yr (excluding securities where call dates fall within 1 year) | 100 |
| Stable demand deposits and term deposits to retail and SME customers | 95 |
| Stable deposits with a >12-month notice period for redemption | 95 |
| Less stable demand and term deposits with maturity <1yr | 90 |
| Less stable intermediated deposits, including member-directed super deposits | 90 |
| Operational deposits, including intermediated deposits >6mths notice | 50 |
| Funding with residual maturity of 6mths to <1yr | 50 |
| All other liabilities | 0 |

**Source:** BofA Global Research, APRA * Note: this list is not exhaustive. See APS 210 for a full list of NSFR requirements.

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**Exhibit 37: APRA RSF factor weightings**
NSFR denominator

| RSF category | RSF Factor (%) |
|---|---|
| Notes, coin, central bank balances, claims on a central bank with a residual maturity of less than 6mths | 0 |
| Trade receivables from FX and commodities transactions expected to settle | 0 |
| Certain central bank, government and supranational securities | 5 |
| Unencumbered loans with residual maturity <6mths secured by HQLA1 and some self-securitised assets | 10 |
| Encumbered assets with residual maturity 6mths to <1yr | 50 |
| Unencumbered HQLA2B Assets | 50 |
| Any HQLA encumbered for 6mths to <1yr | 50 |
| ASX200 securities | 50 |
| Operational deposits otherwise subject to 50% RSF | 50 |
| Loans to central banks and financial institutions with maturity of 6mths to <1yr | 50 |
| all other non-HQLA that have a residual maturity of <1yr including loans to non-financial corporate clients, loans to retail/ SME customers and loans to sovereigns and PSEs. | 50 |
| Unencumbered performing residential mortgages with a residual maturity of 1yr+ qualifying for 35% risk weight under APS 112 (up to 80% LVR, P&I, owner-occupied) | 65 |
| Cash posted as margin for derivative contracts with central counterparty | 85 |
| Unencumbered performing loans that do no qualify for 35% risk weight under APS 112 | 85 |
| Encumbered assets >1yr | 100 |
| Assets encumbered for >1yr, including open repos | 100 |
| Non-performing loans and 20% of derivative liabilities (negative replacement cost amounts) | 100 |

**Source:** BofA Global Research, APRA * Note: this list is not exhaustive. See APS 210 for a full list of NSFR requirements.

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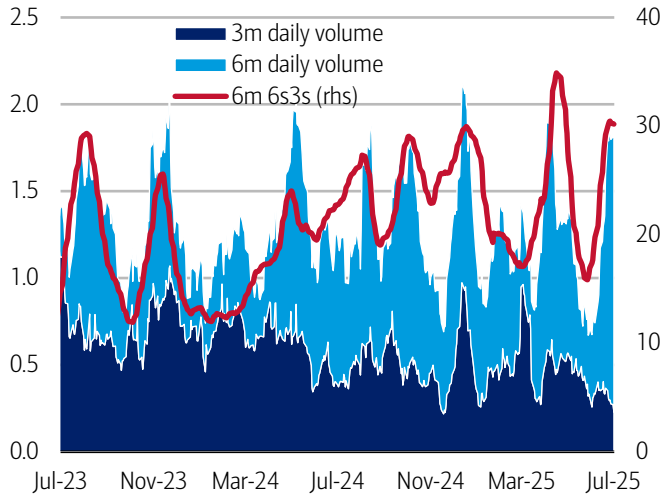
### Implications for front end rates

The NSFR discourages excessive reliance on shorter-dated funding and is one of the main reasons term funding now makes up a much larger share of banks' wholesale funding task than it did prior to 2008 (Exhibit 39). For example, term funding is more desirable from a regulatory standpoint and so banks tend to lean more heavily on term funding programs than short-dated issuance Bank bills and other short-dated issuance (e.g. in US commercial paper) typically make up less than half the total funding mix for banks (Exhibit 39). Although 6m bank bills frequently have the same regulatory treatment as 3m bank bills, the NSFR helps give the term funding curve its shape and can generate an incentive for banks to issue 6m bills if, for example, 1y paper is trading especially cheap and 3m bills are trading especially rich.

The 6s3s curve has generally tracked shifts in the volume of 6m bank bills traded in the rate set window (Exhibit 38). Our rationale for this correlation is that 6m bank bill volumes are a rough proxy for the total supply of 6m bank bills each day. All else equal, an increase in supply should widen the anticipated spread between 6m and 3m paper and we have seen this dynamic play out when 1y paper is trading at a high premium to 3m bank bills.

**Exhibit 38: 6m 6s3s (bps) tracks 6m daily rate set volumes**
We use daily trading volumes as a rough proxy for supply




**Source:** BofA Global Research, ASX

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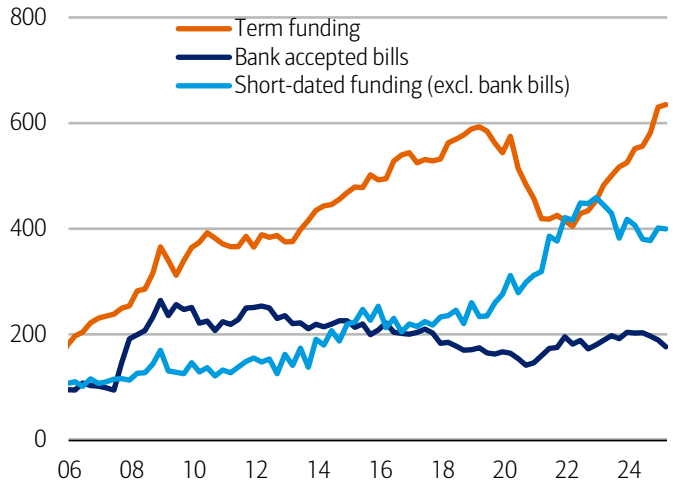
**Exhibit 39: AU prime bank funding (total outstanding, AUDbn)**
Term funding programs have grown faster than short-dated issuance




**Source:** BofA Global Research, APRA

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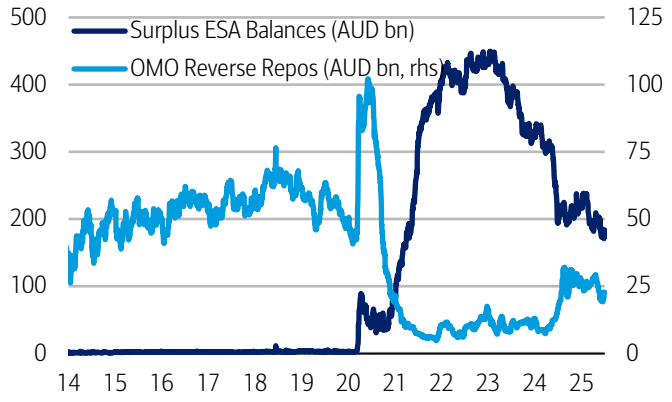
## RBA balance-sheet policy and front-end rates

After the RBA's bond purchases, the volume of ESA balances increased by an order of magnitude. As a result, the demand for borrowing from the RBA's RRP facility fell (Exhibit 40). In fact, demand for cash fell to such an extent that volumes int he unsecured, overnight, interbank cash market were occasionally insufficient for the RBA to determine a cash rate without the use of 'Expert Judgement' (Exhibit 41). The RBA uses Expert Judgement to determine overnight cash rates when volumes are insufficient to rely on the weighted average of daily transactions.

The RBA deployed this administrative fallback procedure 65 times in the third quarter of 2021 and the cash rate descended closer to the bottom of the policy-rate corridor (ES rate) than the top (the target cash rate). When the cash rate trades closer to the bottom of the corridor, an imbalance between (higher) supply and (lower) demand for cash depresses the yield pick-up that cash lenders can earn over the rate they collect on ESA balances.

**Exhibit 40: ESA balances vs outstanding reverse repo (AUD bn)**
Note the inverse relationship between ES balances and demand for RRP




**Source:** RBA, BofA Global Research

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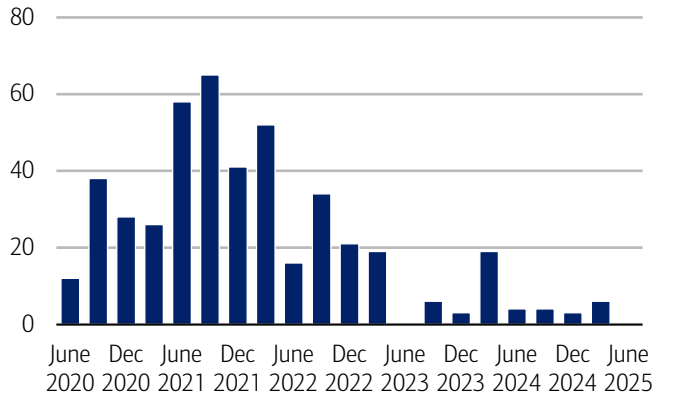
**Exhibit 41: Usage of Expert Judgement to set the cash rate**
Number of days each quarter




**Source:** RBA, BofA Global Research

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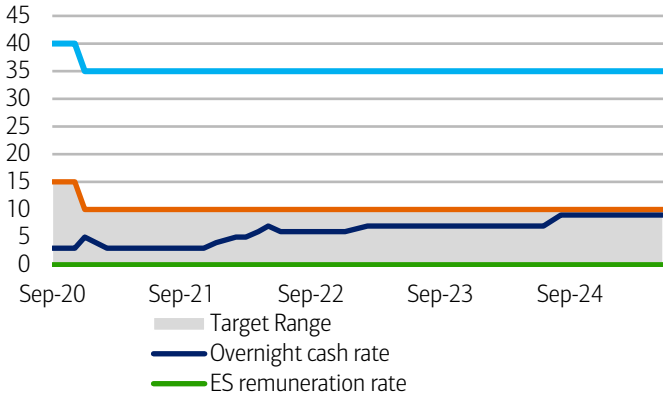
As QT has drained cash from the system, though, this trend reversed. Use of expert judgement declined to zero in the second quarter of 2025 and OMO RRP usage has increased (albeit gradually) and total ESA balances have fallen by about 50% from their peak, driving interbank cash rates to 1 basis point below the cash rate target (Exhibit 42, Exhibit 43). The overnight cash rate is currently 3.84% whereas the ES remuneration rate is 3.75% and the target cash rate is 3.85%. We expect greater volatility in the overnight cash rate as the RBA reduces the size of its balance sheet and transitions to an 'ample reserves' regime.

**Exhibit 42: Cash rates have moved to the top of the policy-rate corridor**
As surplus ESA balances have fallen




**Source:** RBA, BofA Global Research

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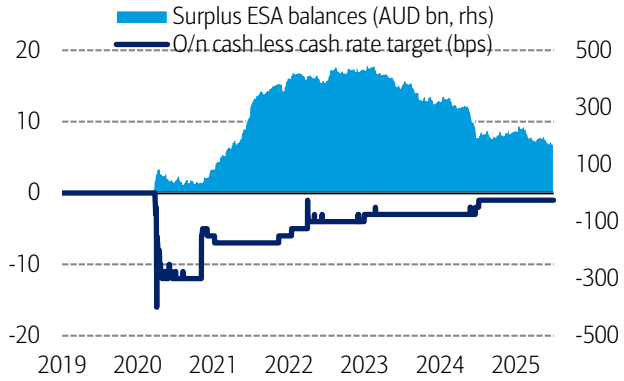
**Exhibit 43: Balance-sheet normalisation**
Cash rates setting closer to target as ESA balances fall




**Source:** RBA, BofA Global Research

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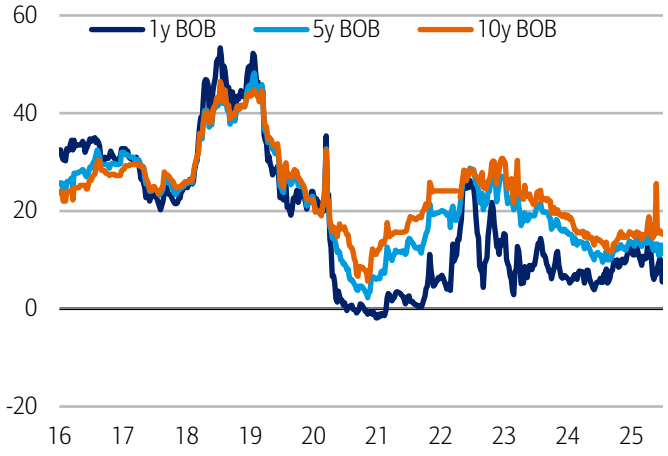
## Balance-sheet normalisation – effects on basis markets

One of the primary effects of balance-sheet normalization is in basis markets. When the RBA announced its YCC/BPP program, front-end BOB spreads compressed rapidly and stayed at very tight levels for over a year. Long-end BOB spreads (e.g., 10y BOB) lagged these moves because markets expected a gradual return to pre-pandemic levels after the emergency measures concluded. Long-end BOB generally moves at a lower correlation to spot than shorter-dated contracts, mostly because markets expect mean reversion to historic averages over a decade.

To a large degree, though, while the relationship between ESA balances and BOB levels is quite clear in trend terms, it is difficult to forecast where BOB will print given a specified level of ESA balances (Exhibit 45). Unlike other G10 markets, the RBA's pandemic response was its first experiment with QE and its current approach to balance-sheet run-off in Australia's first experience with QT. The RBA has also announced its intention to move to an 'ample reserves' regime and projects underlying reserve demand will sustain surplus ESA balances around AUD 100-200bn, which corresponds to a fair value for BOB around 15bps.

Yet structural trends depressing BOB spreads like continuous growth in demand for cash products from growing super funds have weighed on long-dated BOB spreads and the term BOB curve has remained reasonably stable over the past 12 months (Exhibit 44).

**Exhibit 44: Term BOB (basis points)**
Term premium slowly returning to the BOB market




**Source:** BofA Global Research, Bloomberg

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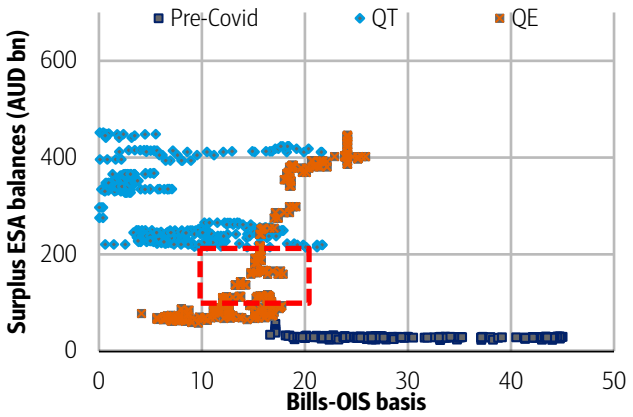
**Exhibit 45: BOB vs Surplus ESA balances**
Red box = RBA's estimate of underlying reserve demand (AUD 100-200bn)




**Source:** Bloomberg, RBA

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As discussed above, 6s3s curves are also usually led by movements in shorter-dated 6s3s while long-dated 6s3s moves in a tighter range (Exhibit 34). Importantly, though, the different shapes of these curves generates different incentives for investors and traders. A steep BOB curve makes curve flatteners or received positions more attractive because these structures have positive carry (i.e., longer positions, further out the curve have positive carry and roll). Conversely, a flat 6s3s curve makes steepeners and paid positions more attractive because short positions, closer to spot have more positive carry and roll.

## How the Fed affects AU single-currency basis

Australia's five largest banks (ANZ, CBA, NAB, Westpac, Macquarie) maintain an active presence in US commercial paper (CP) markets. The banks generally issue US CP to cover short-term funding gaps and will expand their offshore program CP issuance is cheaper than AU bank bill issuance or during periods of extraordinary stress when US money markets offer unique liquidity (for example, in March 2023).

When US CP funding costs fall on a relative basis vs Australian bank bill issuance, Australian banks might find CP issuance even more attractive, reducing their reliance on (and therefore the supply of) bank bills. In early 2024, for example, the relative cheapening of US funding was driven by suggestions from Federal Reserve officials that they were preparing to slow the pace of balance-sheet run-off. When the Federal Reserve slows the pace of its balance-sheet normalisation, it reduces the pace at which it drains bank reserves and deposit-like facilities at money market funds in the United States.

Similarly, fluctuations in the US Treasury's General Account (TGA), which usually drains as the US debt ceiling approaches, and is replenished once the debt-limit ceiling has been lifted, tend to have spillover effects on the Australian money market because shifts in US liquidity dynamics can affect banks' preference for US CP issuance vs AU bank bill issuance.

## Seasonality in government deposits and BOB

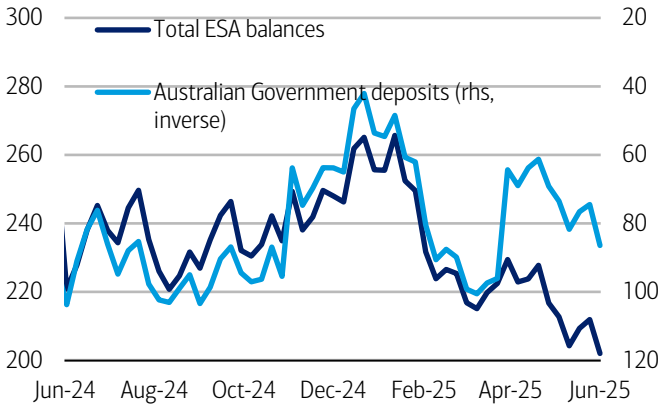
The link between ES balances and BOB is tenuous but insofar as basis markets are affected by shifts in banks' excess reserves, seasonality in Australian Government deposits can have an impact on market prices. Government deposits generally move inversely with ES balances because of the relationship we observe with balance-sheet policy: when the government's deposits at the RBA increase, it is usually because of a

drain on private sector accounts because of new borrowing or tax payments (Exhibit 46). Over the last decade, the beginning of the calendar year and the end of the tax year have emerged as key times for an increase in government deposits (Exhibit 47).

More recently, as the Australian Government's annual funding task has increased (because government expenditure has increased more than revenues after unanticipated fiscal surplus in 2022/23 and 2023/24), the AOFM has started to draw down its cash balances at the RBA. In so doing, they have partly offset the increase in annual bond supply generated by budget deficits and increased the size of ESA balances.

In its 2023/24 Annual Report, the AOFM reported a cash balance of AUD 86bn vs around AUD 31bn in 2019 so further cash drawdowns are possible, in our view, and this could partly offset or delay the impact of passive QT on total ESA balances.

**Exhibit 46: ES balances vs Australian Govt deposits at the RBA (AUD bn)**
Australian Government deposits tend to move inversely to ES balances




**Source:** BofA Global Research, RBA

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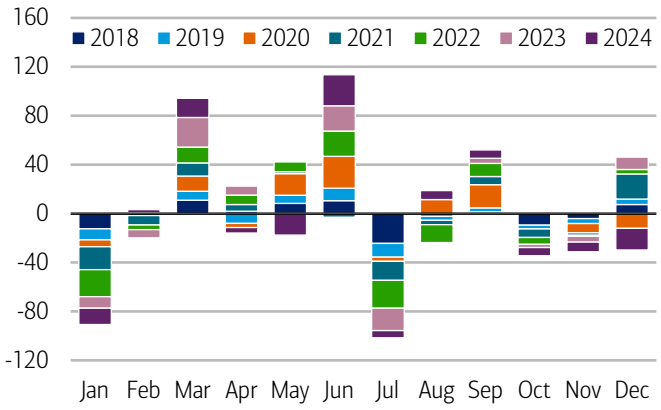
**Exhibit 47: Monthly changes in average Aus Govt deposits (AUD bn)**
Large increase around end of tax year, beginning of calendar year

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