

# The Australian Repo Market: A Short History and Recent Evolution

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## Abstract

In 2019, the repurchase agreement (repo) market became the second largest onshore short-term wholesale funding market in Australia. In addition to its size, the range of participants and diversity of collateral used to obtain funds under repo has grown in recent years. As a result, the repo market provides valuable information about conditions in short-term wholesale funding markets. This article describes the recent growth in the Australian repo market and discusses the pricing in the repo market relative to other benchmarks.

## Introduction

The repurchase agreement (repo) market is one of several ‘money markets’ in Australia – a broad term that refers to different products available to wholesale participants to borrow or invest their money for a short term (less than 12 months). Different money markets are typically distinguished by the length (or tenor) of transactions, whether the cash lender requires collateral, the type of cash borrower, and the trade’s currency denomination.

The repo market has grown and become more widely used such that it provides more valuable information about conditions in short-term money markets than previously. The RBA also uses the repo market to implement monetary policy through its open market operations (OMOs). For a short history of the repo market and the RBA’s involvement in it, see Box A.

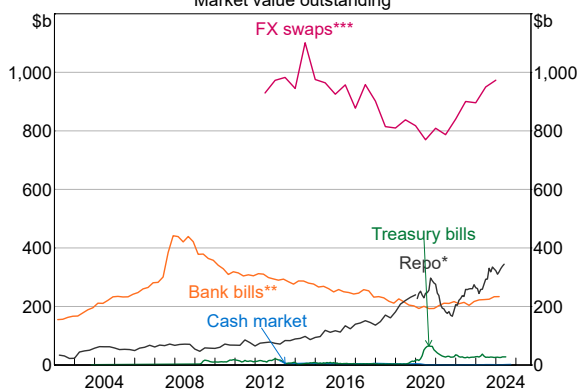
This article describes the recent growth in the Australian repo market and explores some reasons for the small increase in repo rates relative to the Exchange Settlement (ES) rate. These reasons include increases in the demand for cash to fund securities, interbank trading and collateral availability.

## The repo market through the COVID-19 pandemic

In 2019, the repo market became the second largest onshore money market in Australia (Graph 1). In part, strong growth in the repo market is due to repo being a safer product than unsecured alternatives like bank bills (Hing, Kelly and Olivan 2016). This is because a repo involves the exchange of cash for collateral that the cash lender can sell if the cash borrower defaults. A repo is economically similar to a short-term secured loan: one party sells securities to (and receives cash from) another party and agrees to repurchase the securities (paying back the cash) at a set price later. The difference between the purchase and repurchase price represents the interest paid on the loan – the repo rate.

**Graph 1**

### AUD Money Markets Market value outstanding



\* Includes repo and securities lending; excludes repos with the RBA and repos collateralised by equity securities.

\*\* Issued onshore.

\*\*\* Includes forwards, FX swaps, currency swaps and options, in Australia. Not adjusted for dealer double counting.

Sources: ABS; AOFM; APRA; BIS; RBA.

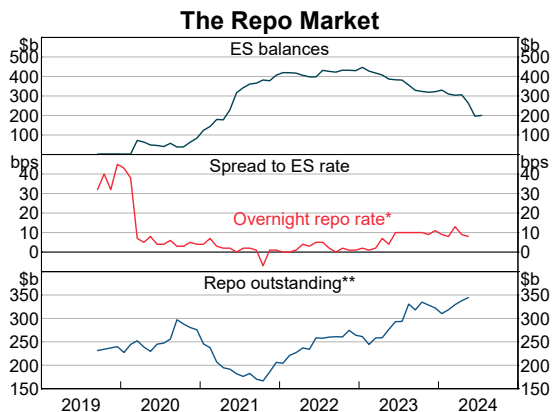
There are considerable offshore elements to each of the Australian money markets, although a complete comparison of market sizes is complicated by data limitations. Nevertheless, around three-quarters of Australian dollar (AUD) foreign exchange (FX) swap

activity occurs offshore, with the total value of AUD FX swaps outstanding estimated to exceed \$4 trillion. Our assessment is that a smaller, but still material, share of repo activity involving AUD-denominated securities and cash occurs offshore.

Activity and pricing in money markets, including the repo market, changed in response to the RBA's pandemic-era policies. Prior to the COVID-19 pandemic, the RBA supplied only a small amount of ES balances to banks. In this system of scarce ES balances, money market rates across a range of terms traded above the actual and expected cash rate (the price for interbank, overnight unsecured borrowing). Partly, this divergence represented a lack of arbitrage between markets because of balance sheet limitations (Cheung and Printant 2019). Further, banks that facilitate trading in repos were less willing to lend their ES balances in the repo market, wary that they may not be able to borrow back these funds in the cash market at the end of the trading day.

In 2020, the supply of ES balances increased significantly because of the RBA's repo provision via OMOs, bond purchases and the Term Funding Facility (TFF) (Debelle 2021). As the supply of ES balances expanded, money market rates converged on the interest paid on banks' deposits held at the RBA – known as the 'ES rate' (Graph 2). Further, the divergence in money market rates observed prior to the pandemic largely disappeared, which could indicate these markets are now more connected (Graph 3). In addition, banks with excess ES balances were more inclined to lend in the repo market as they were no longer concerned about the potential need to borrow these funds back at the end of the day. More recently, ES balances have declined as the TFF is paid back and some of the RBA's bond purchases roll-off. So far, the decline in ES balances has coincided with a small increase in the overnight repo rate (relative to the ES rate) and a substantial increase in activity (Graph 2, middle and bottom panels).

**Graph 2**



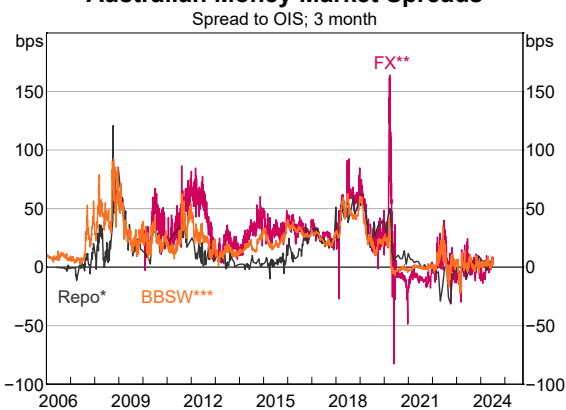
\* Rate on trades with 1 day residual maturity, originated within the month. Calculated using ASX's SOFIA methodology on APRA form 721\_0A data.

\*\* Entered into by banks and registered financial corporations; includes repo and securities lending; excludes repos with the RBA and repos collateralised by equity securities.

Sources: APRA; RBA.

**Graph 3**

**Australian Money Market Spreads**



\* RBA OMO repos used prior to 2020, private market high-quality liquid assets (HQLA) repos used from 2020.

\*\* Implied AUD rate based on covered interest parity.

\*\*\* Bank Bill Swap Rate.

Sources: APRA; ASX; Bloomberg; RBA; Tullett Prebon; US Federal Reserve.

**Recent growth in the repo market**

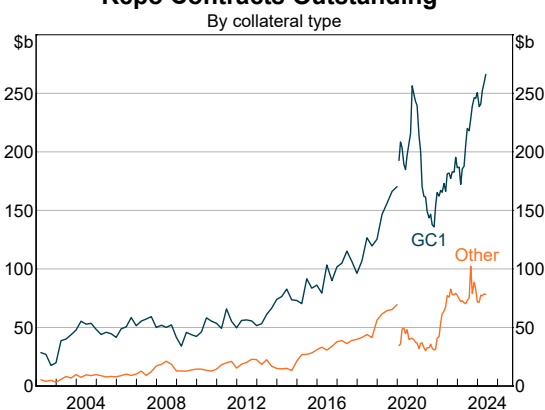
Since late 2021, repo contracts outstanding have grown from around \$200 billion to around \$350 billion. Over this time, there have been changes in the type of collateral posted under repo, the number of market participants and their sectoral composition.

Various types of securities are posted as collateral in repo contracts. The most common type of securities are bonds issued by the federal and state governments and referred to as 'General Collateral 1' (GC1). These securities tend to be preferred by the cash lender as they are the safest and most widely available form of collateral. Specifically, using

government securities as collateral substantially reduces credit risk exposures among money market participants and there are around \$1.5 trillion of bonds outstanding – making them easy to find in the market. A material share of the total demand to borrow cash in the repo market comes from market participants, such as dealers, funding their holdings of GC1 securities. These participants purchase GC1 securities and lend them in the repo market in exchange for cash. This cash is used to pay for the initial purchase of the bond (Plong and Maru 2024). The participant gains an exposure to the bond and faces a funding cost of holding the bond equal to the repo rate. Similarly, some of the supply of cash in the repo market comes from dealers borrowing bonds that they sell. The GC1 segment of the repo market has grown by around 30 per cent since 2019 (Graph 4).

**Graph 4**

**Repo Contracts Outstanding\***



\* Entered into by banks and registered financial corporations; includes repo and securities lending; excludes repos with the RBA and repos collateralised by equity securities.

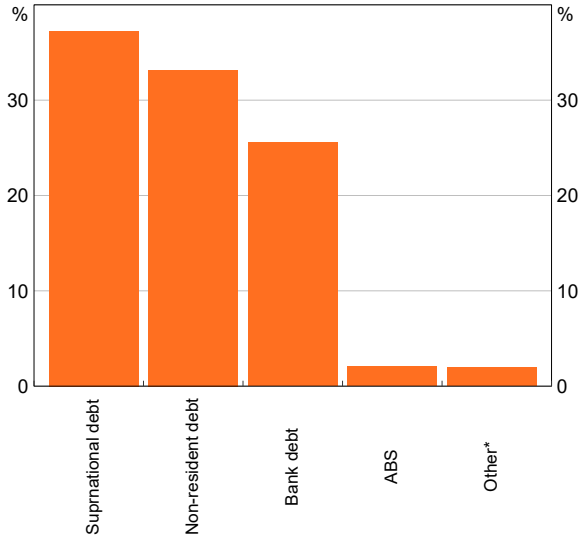
Sources: APRA; RBA.

Participants can also use other forms of collateral in the repo market. Supranational debt (a sub-category of non-resident debt), other non-resident debt and bank debt make up the vast majority of the other forms of collateral posted under repo (Graph 5). This part of the repo market has more than doubled in size since 2020 – with most of the growth occurring in 2022. Repo collateralised by bank debt increased alongside reductions in the size of the Committed Liquidity Facility (CLF). Under this facility, the RBA provided contingent funding to banks, which they could draw upon in the event of liquidity stress in exchange for collateral. Apart from

self-securitisations, the largest collateral group securing CLF positions was bank debt (Bergmann, Connolly and Muscatello 2019). As the size of the facility was reduced, some of this bank debt appears to have entered the private repo market.

**Graph 5**

**Other Securities Posted Under Repo**  
Share of market



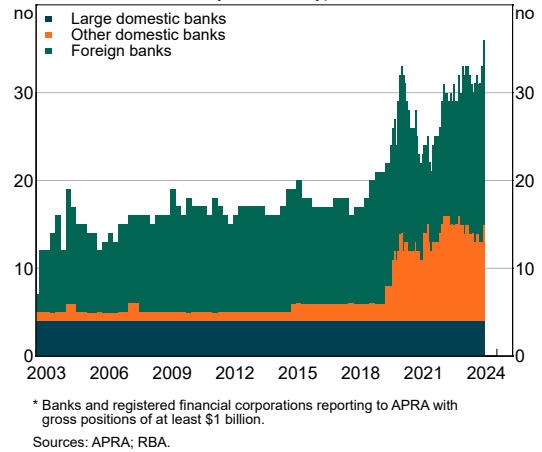
The repo markets for GC1 and other collateral types responded differently to the stress caused by the COVID-19 pandemic. During 2020, there was a market-wide increase in the demand for cash associated with uncertainty surrounding the pandemic. This 'dash-for-cash' resulted in market participants turning their GC1 into cash by posting them as collateral under repo (Graph 4). In contrast, there was a decline in the use of other collateral over this period. One of the reasons for this is that investors typically demand a higher premium for credit risk in times of significant uncertainty and so raising funds with these securities becomes relatively more costly. As the RBA increased the supply of ES balances, banks no longer needed to recycle their ES balances among each other in the repo and other money markets, and the demand to borrow cash in the repo market using GC1 halved between late 2020 and late 2021.

The number and variety of participants in repo markets have grown in recent years. The number of reporting dealers has increased from around 15 in the decade prior to 2018 to 33 in 2024 (Graph 6).

Non-residents have become much more heavily involved in the repo market, doubling their share of outstanding transactions over the past decade to around 60 per cent (Graph 7). Furthermore, foreign banks' dealers often act as intermediaries for non-resident clients, underscoring their role in facilitating a diverse market.

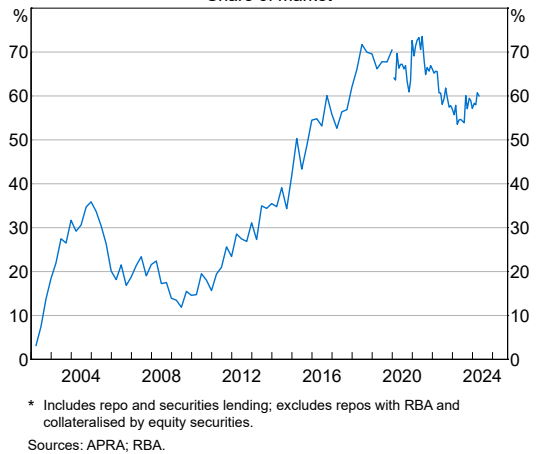
**Graph 6**

**Repo Dealers\***  
By institution type



**Graph 7**

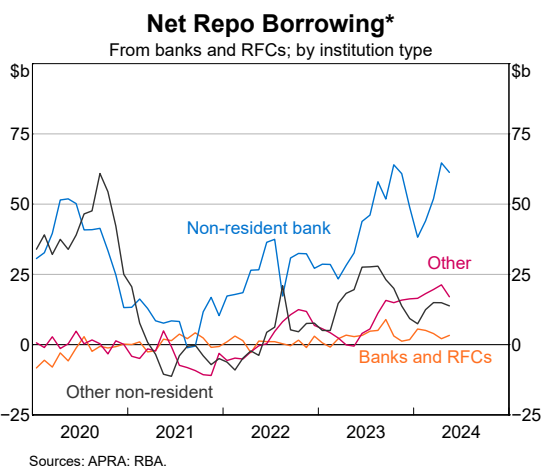
**Non-Resident Repo Outstanding\***  
Share of market



Of the different types of clients operating in the repo market, non-resident banks are the largest net borrower of cash (Graph 8). These banks operate on behalf of their customers but may also use repo as a source of short-term funding. Domestic banks and registered financial corporations (RFCs) tend to borrow and lend similar amounts of cash in aggregate. Accordingly, the repo market is not a net funding market for domestic banks that fund themselves more with deposits. Non-bank entities

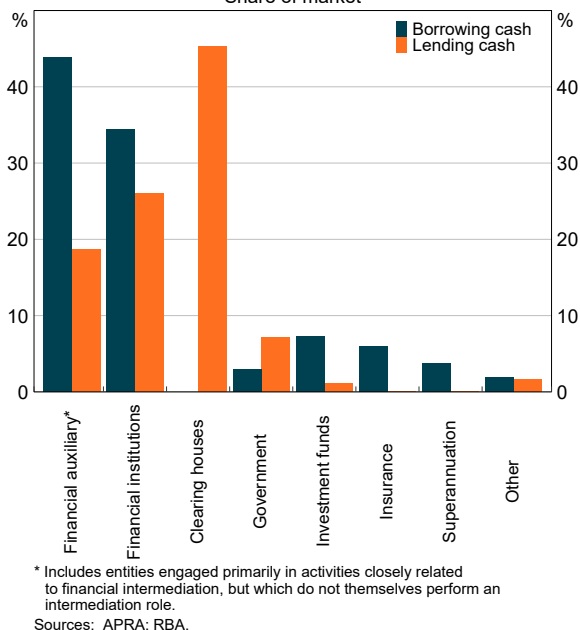
have been net lenders and borrowers at different points over time. The most common non-bank entities reported in data received from the Australian Prudential Regulation Authority (APRA) are financial auxiliaries, other financial institutions and clearing houses (Graph 9).

**Graph 8**



**Graph 9**

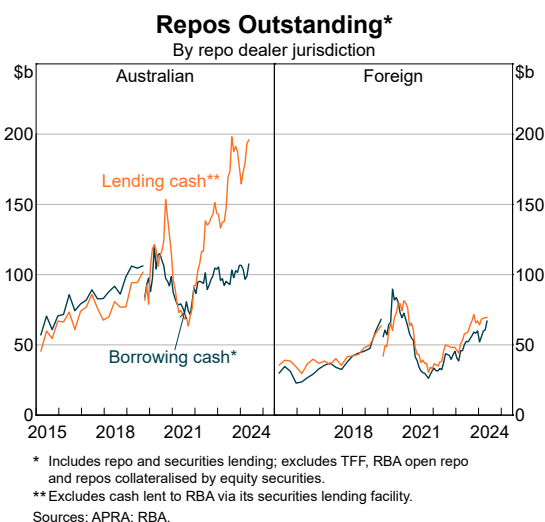
**Non-bank Repo Participants**  
Share of market



The way repo reporting dealers act in the market has changed since the COVID-19 pandemic. Prior to the pandemic, both Australian and foreign reporting dealers ran ‘matched books’ in aggregate – meaning they borrowed and lent similar amounts of cash (Graph 10). Recently, Australian reporting dealers, as a group, have increased their cash

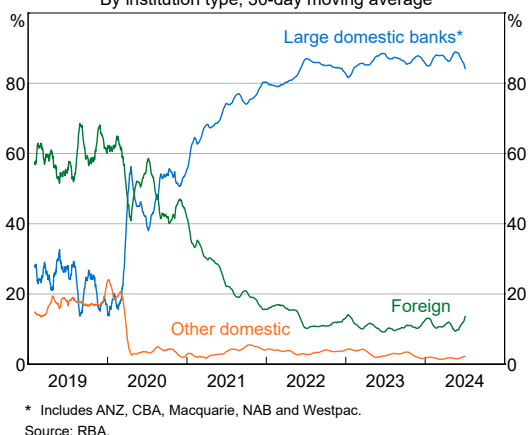
lending to clients but have not funded this lending in the repo market or from the RBA. Instead, domestic dealers are receiving other internal funding. In contrast, foreign repo dealers have, as a group, continued to run a matched book. One factor may be their smaller share of ES balances (Graph 11) – limiting the ability of their repo desk to receive internal funding. Nevertheless, net repo dealer positions, both domestic and foreign, may also be driven by other institution-specific or strategic factors.

**Graph 10**



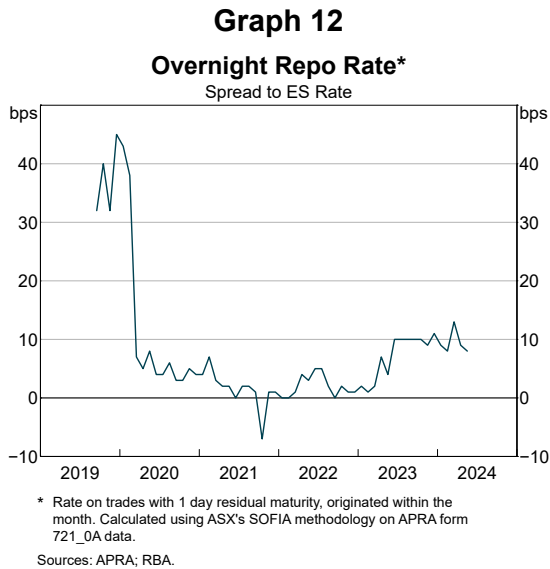
**Graph 11**

**Share of Surplus ES Balances**  
By institution type, 30-day moving average



### Recent drivers of increasing repo rates

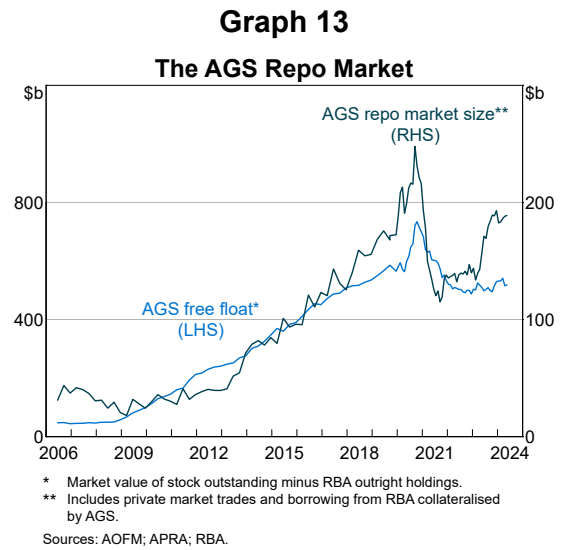
Increases in the demand to fund securities, interbank trading and collateral availability have contributed to a small rise in repo rates relative to the ES rate since early 2023 (Graph 12).



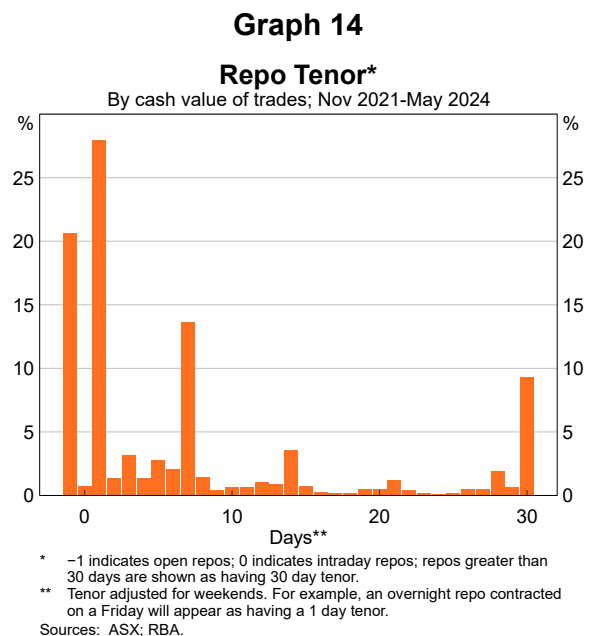
Increased demand to fund securities purchases can put upward pressure on repo rates. As mentioned above, participants can purchase bonds and lend them in the repo market in exchange for cash, which is then used to pay for the initial purchase of the bonds. In doing so, participants are funding their bond purchases through borrowing cash via repo. Increased demand for borrowing via repo can be associated with investor perceptions that interest rates on bonds are less likely to increase much further (Plong and Maru 2024). Consistent with this, increases in borrowing from non-residents and non-banks coincided somewhat with the market's expectation of longer term interest rates having peaked.

Similarly, an increase in repo borrowing is often linked with an increase in the supply of government bonds as some investors fund their purchases of these bonds through repo. For example, repo borrowing against Australian Government Securities (AGS) collateral has historically increased alongside the amount of AGS on issue (Graph 13). However, the recent increase in borrowing under repo has not occurred alongside increased AGS outstanding, nor was AGS issuance particularly strong over the last 12 months (RBA 2023). As such,

changes in the supply of government bonds is unlikely to be driving increases in repo rates.



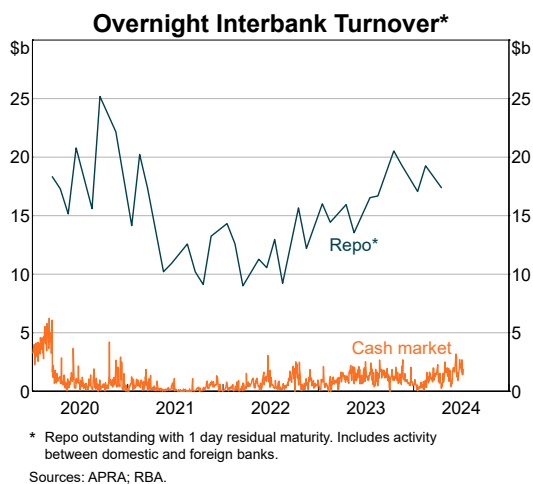
Banks also use the repo market to, among other things, manage their short-term cash needs. Consistent with this, around half of repo market activity is between banks – with the remainder of the market being between banks and their clients.<sup>[1]</sup> Furthermore, around 75 per cent of repo transactions have a term of less than two weeks, with the bulk being only a few days (Graph 14).



Demand to borrow cash over short terms in money markets is also dependent on the stock of ES balances supplied by the RBA. As the stock of ES balances rose to a peak in late 2022, banks had little

need to recycle these funds as rapidly among themselves and so activity in the repo market fell. As ES balances began to decline, activity recovered. While the cost of borrowing cash in the repo market has increased a little, market participants have indicated that repo markets are performing the function of redistributing cash well. Banks can also use other money markets to redistribute cash reserves among themselves. One of these markets is the interbank overnight cash market. Volumes in the cash market have not increased as much as repo volumes and remain well below pre-pandemic levels (Graph 15). As such, the pick-up in overnight repo volumes might be driven by other factors.

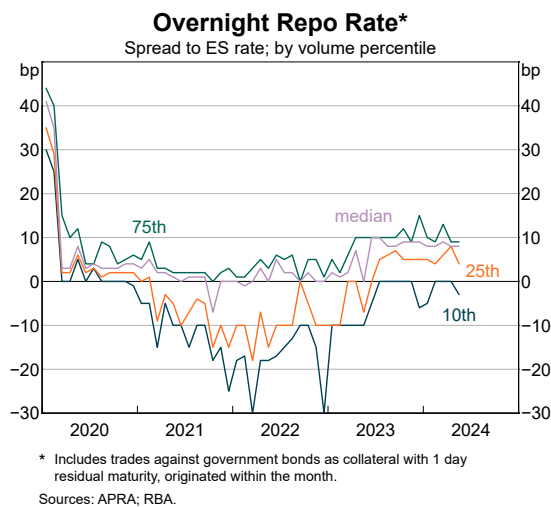
**Graph 15**



Repo rates have also risen, in part, due to reduced bond scarcity. Counterparties can engage in repos with the purpose of borrowing specific bonds as collateral – known as ‘specials’. Specials trades are distinguished by lower repo rates as the lender of cash is willing to accept a low rate of return on their cash to access a specific bond. One consequence of the RBA’s Bond Purchase Program is that it reduced the supply of government bonds available to post under repo in the private market. As a result, some of these bonds were in short supply – increasing the volume of bonds under repo trading ‘special’ (or below the ES rate) in the repo market (Graph 15). The RBA’s securities lending facility – which makes bonds available to borrow at a cost of 20 basis points below the ES rate – helped limit some of these pressures (Aziz and Jackman 2022). More recently, there has been a reduction in the number

of bonds trading special, as approximated by the lower percentiles of traded rates, leading to increases in repo rates (Graph 16).

**Graph 16**

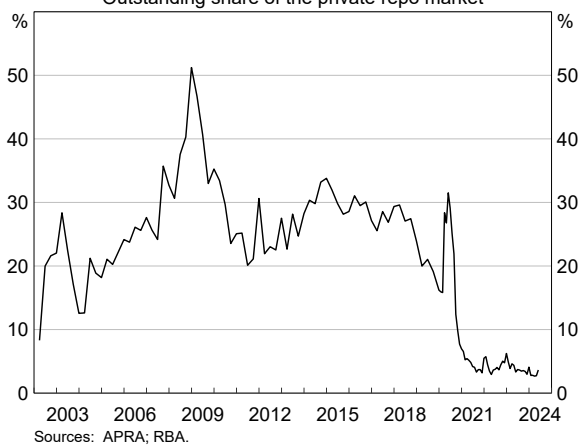


## The repo market outlook

Prior to the onset of the COVID-19 pandemic, the RBA had a relatively large footprint in the repo market (Graph 17). Now, with ES balances still relatively large, banks have little need for additional ES balances and their demand for funds through the RBA’s repo operations remains small. As the stock of ES balances declines, banks will naturally respond by obtaining ES balances under OMOs – increasing the RBA’s footprint in the repo market (Kent 2024). In addition to OMO repo, the RBA could accommodate banks’ demand for ES balances with a mix of FX swaps and government bond purchases. Using a range of liquidity operations will help the RBA avoid an overly large presence in the repo market, which might crowd out private sector activity.

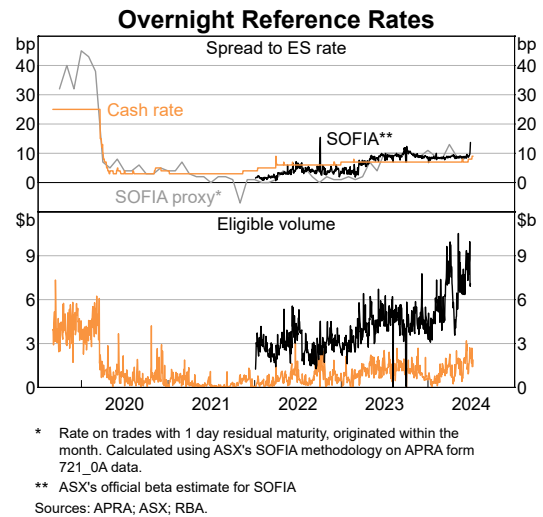
**Graph 17**

### Repos for RBA Open Market Operations Outstanding share of the private repo market



Conditions in the repo market will be easier to monitor with the development of the ASX’s new Secured Overnight Funding Index for Australia (SOFIA: ASX undated). SOFIA measures the cost of borrowing cash overnight under repo collateralised by government debt, for transactions settled in Austraclear. The published rate lines up closely with a repo rate calculated using the same methodology with data obtained through APRA. Activity in SOFIA is higher than the overnight cash rate (Graph 18). Alongside the rate and its eligible volume, the ASX publishes the number of trades eligible for rate calculation, as well as the minimum and maximum yield on those trades – improving market transparency.

**Graph 18**



In February 2024, the RBA expanded the coverage of its repo market statistical table to assist in enhancing repo market transparency. Increased transparency in the repo market may encourage participation from a broader set of investors in the future. Finally, the market is considering the commercial viability of a repo central counterparty, which has been prompted by the RBA following similar assessments of their overall benefit in other jurisdictions (Cheshire and Embry 2023; SEC 2023).



## Box A: A brief history of the Australian repo market

The distinction between a secured loan and a repo is that the title of the security passes to the cash lender for the duration of the repo. This feature distinguishes modern repos from the first repos in Australia known as 'buy-backs'.

### The buy-back market (1949–1959)

Until 1949, short-term investments in Australia were limited to three- and six-month term deposits or at-call bank deposits that rarely earned interest (Cashion 1977). Around this time, several stockbroking firms began accepting 'buy-backs' – they sold government securities to the public and agreed to buy them back at a later date. This financial innovation created a new opportunity to invest spare cash for a few days up to a month.

In 1958, a group of brokers approached the original Commonwealth Bank (from which the RBA later descended) with a request to have access to lender-of-last-resort facilities – they were unwilling to expand their balance sheets without central bank support. This request was accepted in 1959 as it aligned with several bank goals at the time, including: supervising the credit growth of institutions outside the banking system, influencing conditions in short-term markets, improving government bond market liquidity, and limiting the financial stability consequences of failing dealers (Allan 1977). The official short-term money market was subsequently created to accredit certain brokers, called 'authorised dealers', to conduct operations under bank supervision in return for access to lender-of-last-resort facilities.

### The official short-term money market (1959–1996)

While having access to bank facilities assisted buy-back activity, authorised dealers' operations were heavily restricted. First, authorised dealers' sell-backs with non-banks (dealer receiving collateral, giving loans) were restricted to 0.25 per cent of their asset mix on the basis that these loans did not represent asset holdings in high-quality transferrable securities. Second, authorised dealers were prohibited from conducting buy-backs or sell-backs with banks. In 1962, the RBA communicated to authorised dealers that it 'thought that the buyer should be at risk if he found it necessary to sell the securities [at a later date]' and that buy-backs that circumvented this principle were not 'of benefit in assisting in the establishment of a market [for government bonds]' (RBA Archives).

In 1984, the RBA began transacting in repos to implement monetary policy. However, on occasion, the RBA wanted to buy large quantities of government securities (by sale or under repo) to increase the level of settlement balances in the banking system. This proved difficult as dealers owned only a small quantity of securities and were reluctant to sell them to the RBA in favour of clients' needs. The RBA lifted all restrictions on buy-backs in 1986, which allowed dealers to borrow securities from banks and non-banks and thus increase the supply of securities available for the RBA to purchase in OMOs. With restrictions lifted, authorised dealers' turnover increased 4.5 times between 1985 and 1990 (RBA 1991).

### The post-dealer era (1996–present)

In the period when authorised dealers were the main OMO counterparties, banks held settlement balances in the form of interest-earning loans to authorised dealers; interest was not paid on bank balances in ES accounts at the RBA. In 1996, during preparations for Real-time Gross Settlement (RTGS), the RBA began dealing directly with all major financial institutions, including banks. Authorised dealers ceased to exist (Campbell 1998) and banks transferred their transaction balances with dealers to their ES accounts and interest was paid on these balances. Since then, banks have been the main intermediaries in the Australian repo market.

## Endnotes

- [\*] The authors are from Domestic Markets Department. group on shadow banking found that the volume of non-bank to non-bank transaction was not material.
- [1] APRA data used in this analysis do not provide visibility over the non-bank to non-bank sector of the repo market. In 2016, a Council of Financial Regulators' special working

## References

- Allan RH (1977), 'The Economics of Intervention in the Short-term Money Market', PhD Thesis, Australian National University, June.
- ASX (Australian Securities Exchange) (undated), 'Benchmarks Overview'. Available at <<https://www.asx.com.au/connectivity-and-data/information-services/benchmarks/benchmark-data>>.
- Aziz A and B Jackman (2022), 'The RBA and AOFM Securities Lending Facilities', *RBA Bulletin*, December.
- Bergmann M, E Connolly and J Muscatello (2019), 'The Committed Liquidity Facility', *RBA Bulletin*, September.
- Campbell F (1998), 'Reserve Bank Domestic Operations under RTGS', Remarks to the AFMA TechnoFuture '98 Seminar Program, Sydney, 19 October.
- Cashion M (1977), 'Comments: The Short Term Money Market in Australia and Its Regulations', *UNSW Law Journal*, 2(1), pp 90–104.
- Cheshire J and J Embry (2023), 'Reassessing the Costs and Benefits of Centrally Clearing the Australian Bond Market', *RBA Bulletin*, March.
- Cheung B and S Printant (2019), 'Bank Balance Sheet Constraints and Money Market Divergence', *RBA Bulletin*, September.
- Debelle G (2021), 'Monetary Policy during COVID', Shann Memorial Lecture, Online, 6 May.
- Hing A, G Kelly and D Olivan (2016), 'The Cash Market', *RBA Bulletin*, December.
- Kent C (2024), 'The Future System for Monetary Policy Implementation', Address to Bloomberg Australia Briefing, Sydney, 2 April.
- Plong B and N Maru (2024), 'What Has Been Putting Upward Pressure on CORRA?', Bank of Canada Staff Analytical Note No 2024-4.
- RBA (Reserve Bank of Australia) (1991), 'Authorised Short Term Money Market Dealers', *RBA Bulletin*, June.
- RBA (2023), 'Chapter 3: Domestic Financial Conditions', *Statement on Monetary Policy*, August.
- RBA Archives, 'Unreserved'.
- SEC (US Securities and Exchange Commission) (2023), 'SEC Adopts Rules to Improve Risk Management in Clearance and Settlement and Facilitate Additional Central Clearing for the U.S. Treasury Market', Media Release No 2023–247, 13 December.