RESERVE BANK OF AUSTRALIA

# Staff's detailed assessment of additional monetary policy tools

## Supplementary document to the AMPT Framework

29 June 2026

# Contents

# Introduction

This document complements the Monetary Policy Board's (MPB's) *Framework for Additional Monetary Policy Tools at low interest rates* (the 'AMPT Framework'). It provides an overview of each of the six AMPTs in the AMPT Framework's toolkit, and discusses the tools' expected effectiveness, potential costs and viability and flexibility, and the key design parameters of each tool. These assessments are intended to support staff analysis.

This document reflects staff's current assessments of the tools, based on the research and evidence of the tools' effects and the structure of the Australian economy. The assessments will be reviewed and updated at least as frequently as the AMPT Framework. Significant developments in academic, empirical or practical understanding of the tools' effects will be reflected earlier, as needed, to ensure the assessments remain up to date.

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# Term Lending Facilities (TLFs)

## Key points

**Expected effectiveness:** TLFs are designed to boost activity by lowering the cost and supporting the availability of term credit to businesses and households through the provision of low-cost, medium-term funding to banks (against high-quality collateral).[1]

TLFs are especially valuable when the bank lending channel is impaired. At such times, the provision of low-cost, medium-term central bank funding can allow banks to revive their usual lending patterns. TLFs can also aid the transmission of monetary policy when interest rates are very low.

**Potential costs:** Without sufficient oversight, the exit from a TLF could present system-wide risks as banks transition back to private sector funding, creating a potential 'refinancing cliff'. The COVID-19 pandemic experience highlighted the importance of the Australian Prudential Regulation Authority's (APRA) prudential oversight of banks' refinancing plans and coordination between the RBA, APRA and the Council of Financial Regulators (CFR).

TLFs require the RBA to manage the credit risk (and collateral) involved with lending at term to private sector counterparties; the RBA may also face interest rate risk if it chooses to lend to banks at a fixed rate. Variable rate pricing is an option.

**Viability and flexibility:** Operationally, the RBA is well placed to quickly stand up a TLF that uses similar infrastructure and processes to that used in the COVID-19 pandemic. Banks could also use existing processes, but small banks might not have sufficient collateral (or incur high costs) to access the facility.

**Broader public policies and consolidated public-sector balance sheet**: TLFs often include implicit subsidies, can create financial risks on the consolidated public-sector balance sheet, and will impact the work of other government agencies (especially APRA). The RBA should consider consulting with relevant agencies to manage the risks of TLFs.

# Overview of term lending facilities

TLFs typically involve central banks offering banks medium-term funding at an interest rate below banks' marginal cost of funds. The RBA used a TLF during the COVID-19 pandemic, with its Term Funding Facility, and many peer central banks also used such facilities in the GFC, euro area crisis and the COVID-19 pandemic.[2]

Depending on the circumstances, these facilities have up to three objectives:

1. Stimulate aggregate demand by lowering lending rates for businesses and households to support the labour market and lift inflation. This is particularly important because, in the absence of AMPTs, cash rate pass-through is likely to become weaker at low interest rates.
2. Provide banks with low-cost and stable funding, especially during periods where funding markets are impaired, to support an impaired bank lending channel. TLFs are likely to be still effective when markets are well-functioning, aiding the transmission of monetary policy at low interest rates.
3. Provide an incentive (and potentially an expectation) for banks to grow lending volumes.

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[1] This would capture authorised deposit-taking institutions (ADIs) that extend credit and are members (or eligible to become members) of the Reserve Bank Information and Transfer System (RITS) and Austraclear. Lending facilities for non-banks are not included in this assessment

[2] For a review of the RBA's experience during the pandemic see Kent (2024) and RBA (2024).

On the asset side of the banking system balance sheet, TLFs provide central bank reserves to eligible banks in exchange for less liquid collateral (a long-term repurchase agreement). This provides banks with an uplift in their liquidity positions and lowers their funding costs, both of which support credit supply. TLFs can be offered with a fixed rate or a variable rate and can include incentives (such as the ability to draw down additional funds or pay a discounted rate) or requirements for banks to increase their lending volumes.

# Assessment of term lending facilities

## Expected effectiveness

**TLFs can ease financial conditions by lowering bank funding costs**. Funding from the central bank can substitute for market funding, including when priced at more favourable terms. The reduction in funding costs typically leads to a reduction in household and business lending rates, an increase in lending volumes and an easing in financial conditions (Benetton, Gavazza and Surico 2025; Benetton and Fantino 2021; Andreeva and Garcia-Posada 2021; Altavilla *et al* 2023). Australia's experience with the Term Funding Facility (TFF) – which was part of a package of measures – was that these savings were passed on to households and businesses via lower lending rates.

**TLFs can also lead to lower yields in broader fixed-income markets**. By reducing banks' need to issue term debt, TLFs help to lower yields on bank bonds and encourage investors to seek alternatives. This can include purchasing asset-backed securities or other debt instruments that are thought to be a close substitute. In this way, TLFs can also indirectly lower funding costs for institutions that do not have direct access to the facility (RBA 2024).

**TLFs have operated successfully in a variety of situations but are especially valuable when bank funding or lending channels are impaired** (Altavilla *et al* 2021). This is because stable central bank funding can mitigate disruptions in wholesale markets and restore confidence in banks' liquidity. However, if households and businesses are reluctant to borrow, the facility would need to be offered on more attractive terms to stimulate credit growth. This carries additional financial and reputational costs (see *Potential Costs*).

**The macroeconomic effects are difficult to estimate but findings are generally positive**. The international literature suggests the effects can vary widely – in part because it depends on the nature of the shock – but are in the order of an additional 0.05 to 0.4 per cent of GDP and 0.02 - 0.2 per cent of inflation for each 1 per cent of GDP worth of funds. These effects are broadly comparable to a government bond purchase program of similar size (Churm *et al* 2015; Darracq-Paries and De Santis 2015; Cahn, Matheron and Sahuc 2017). The effects are larger in financial crises, in economies where banks are a significant share of the financial system, and when the amounts that banks are able to borrow (or the price at which they can borrow) are tied to their lending volumes. However, additional benefits diminish as program size grows.[3]

**TLFs appear well suited to the Australian context, given banks' funding and lending structures**. In Australia, as of 2026, banks account for around 60 per cent of the financial system and issuance of bank bonds tend to be at the 3 to 5 year horizon. Australian banks typically issue around $100b worth of term funding each year. Banks account for around 90 per cent of outstanding credit in Australia. Households with a mortgage are mostly at variable rates and businesses also often borrow at variable rates. As such, wholesale funding markets (for banks) and the bank credit channel play prominent roles in the provision of funding to the non-financial sector, and the typically high share of variable rate borrowing could provide a strong cashflow channel for households and businesses.

[3] This is partially because banks can only replace their existing term funding so quickly, and because there can be other constraints which limit the amount of credit that banks can supply.

## Potential costs

***Financial stability and market functioning***

Although TLFs can help to mitigate liquidity risks in the near term and can improve market functioning, the fact that they rely on providing funding below (impaired) market rates means that in some circumstances they could in theory contribute to the build-up of vulnerabilities in the financial system. Specific areas of potential concern include:

- **Excessive risk taking.** TLFs could encourage banks to loosen lending standards and expand credit to riskier borrowers, and households and businesses to take on too much leverage. This could occur if funding (and the consequent lending) is provided at too cheap a price, or if banks are trying to meet a TLF's lending incentives in the face of subdued credit demand. Although the policy is intended to encourage investors to take on more risk than they would choose to do in impaired market conditions, too much risk could materially lower lending standards, worsen portfolio quality, and leave the financial system more vulnerable to future shocks.

  There is not strong evidence that this occurred in schemes launched in Australia and elsewhere in recent years (Barmeier 2025; Flanagan 2020; Barbiero *et al* 2022). In part this reflects that tools exist to limit such risks, in particular through APRA supervision and macroprudential policies.
- **Disorderly exit.** Banks can face a significant refinancing task when TLF funding expires. If banks attempt to access wholesale funding markets in large volumes at the same time, the available supply of funding could be insufficient or very costly. Individual banks could also lose relationships with investors following a prolonged absence from primary markets for term debt. This risk can be partly mitigated by staggering drawdowns and maturities, and continued engagement by regulators with the industry throughout the process.

***Neutrality***

Poorly designed TLFs could distort the allocation of credit and reduce competition in the financial system.

- **Credit allocation**. A TLF that incentivises lending to specific sectors (see *Tool Design*) raises the risk of funding less productive sectors of the economy, including propping up 'zombie-firms' or an over-allocation to housing. There is some evidence that this might have occurred in systemically vulnerable economies, such as the euro area periphery (Perdichizzi *et al* 2023).
- **Financial sector competition**. TLFs can provide a funding advantage to larger banks that are able to access the scheme. This concern was raised by non-banks (who could not access the TLF) and smaller banks (who lacked sufficient collateral) in Australia during the COVID-19 pandemic. Disadvantages to smaller banks and non-banks have been a publicised issue in other countries that have implemented a TLF. These concerns could be partly alleviated through the indirect effects on fixed-income markets and the government providing other schemes (such as the Australian Office of Financial Management's (AOFM's) Structured Finance Support Fund to support smaller banks and non-banks during the COVID-19 pandemic).

***Risks to the RBA***

TLFs carry financial and other risks for the RBA, which can be mitigated by facility design choices and using scenario analysis to inform these choices. The key risks are:

- **Credit risk**. TLFs carry the potential for credit risk, but this depends on the creditworthiness of the counterparty, the collateral received and haircuts imposed, the term of the central bank loan and the amount of funding extended. The RBA's appetite for credit risk, although flexible in principle, is limited by the RBA's tolerance for reputational damage and financial losses that could be posed by defaults. Credit risk can be mitigated by using existing arrangements for repurchase agreements (repos) – including requiring highly-rated collateral, applying haircuts to collateral and daily margining - and carefully calibrating the duration and size of the program.

As with the RBA's previous Term Funding Facility, the RBA may need to accept highly-rated self-securitisations in order to provide sufficient funding to the system.

- **Interest rate risk**. Most international TLFs have been offered at a variable rate linked to the central bank's own cost of funds. Offering a TLF with a fixed interest rate – as the RBA did during the COVID-19 pandemic – can have policy benefits in certain circumstances but creates interest rate risk because the policy rate could be increased before the funds are repaid. The RBA incurred notable losses when interest rate risk on the fixed-rate TFF was realised, though these losses were materially smaller than under the bond purchase program.[4,5]
- **Reputational risk**. TLFs can lead to negative sentiment about banks receiving funding that is in effect publicly subsidised and some concerns regarding the RBA's involvement in credit allocation. This public pressure can also encourage banks to pass on the lower funding costs to borrowers. Losses on the RBA's operations, through crystallisation of either credit or interest rate risk, can also result in reputational damage.

## Viability and flexibility

- **Operational readiness**. A TLF can be set up quickly if it reuses the RBA infrastructure and processes operated during the COVID-19 pandemic. Most banks should be able to access the facility using the processes they operated during this time, but some small banks are more likely to be constrained by inadequate systems. APRA and other relevant agencies would also need to be consulted to help with broader readiness.

  Introducing more complex incentives (either allocation- or price-based) could raise additional operational and legal issues that would need to be worked through (see *Tool Design*). For example, the RBA would probably need to confirm that the relevant banks are reporting the appropriate lending data in APRA's data collection before implementing the policy. Some central banks have used external auditors to verify that banks have met requirements for the funding incentives, but this can reduce take up.

  The RBA should consider whether banks have enough collateral to access the volume of funding that is intended to be provided (see *Tool Design*).
- **Policy exit.** It is difficult (by design) for the central bank to change TLF terms once funds have been drawn or exit the policy early. Programmes that are more staggered and have a variable rate can offer more flexibility, either through tailoring terms with each iteration or by incentivising banks to repay as interest rates increase.
- **Communication**. TLFs have been generally well understood by financial market participants. Complex facilities with complicated incentive structures would require more active engagement with market participants; the evidence suggests there is little to be gained by the added complexity. The RBA would need to communicate with the market particularly carefully around the exit and unwind of a TLF, to help manage the risks of market dysfunction due to a perceived funding cliff.

  TLFs can be misunderstood by some households and businesses. Improving understanding among these groups would reduce reputational risks associated with the facility and may still create public pressure for banks to pass through lower funding costs to households, improving effectiveness.

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[4] When the TFF, which provided three-year fixed-rate funding, was introduced in March 2020, the RBA did not have the capacity to offer variable rate funding. The introduction of floating-rate open market operations means the RBA now has the scope to introduce either a fixed- or variable-rate facility in a timely manner.

[5] Broader effects on the general government balance sheet are difficult to quantify, given the tax implications from stronger economic outcomes, private sector revenue from our losses and lower government debt costs.

### Broader public policies and consolidated public-sector balance sheet

TLFs can have broad effects which impact other agencies. While it is possible to design a TLF which does not provide a direct subsidy to the banking sector, to achieve monetary policy objectives most TLFs provide funding at below market rates. These implicit subsidies may generate losses on the RBA's balance sheet, and therefore on the consolidated public-sector balance sheet. At the same time, TLFs can increase tax revenue from stronger economic activity, providing near-term benefits to the consolidated public-sector balance sheet. Given the potential implications for fiscal policy and the consolidated public-sector balance sheet, the RBA should consult the Treasury about the scale and likelihood of any implicit subsidies or losses, where timing and circumstances permit.

TLFs also impact APRA (which regulates banks) and could impact the AOFM (which has provided complementary funding support to the non-bank sector in the past). The RBA should engage with APRA, the AOFM and possibly the CFR before implementing a TLF and over the lifecycle of the tool to ensure the financial system is prepared for the program's introduction and equipped to plan for refinancing tasks, and to discuss possible interactions with other agencies' policy toolkits.

## Key design choices of term lending facilities

***Pricing***

As a monetary policy tool, these facilities are usually designed to encourage lending rather than as a backstop for banks' funding, and as such are priced to be below (impaired) market interest rates. However, there are trade-offs to consider. The cheaper the funding, the greater the typical facilitation of program uptake, leading to a larger easing of financial conditions. At the same time, a lower rate entails greater risks to financial stability and the RBA.

Most central banks have used variable-rate facilities, and these have been found to be effective at meeting their objectives. Variable rates also offer lower financial risk to the RBA. By contrast, if a fixed-rate facility reinforces expectations that the policy rate will not increase for some time, it could lower term rates, leading to higher take-up of the facility and providing additional stimulus.

***Amount of funding support provided***

Historically, facilities have varied in size. For example, TLFs implemented in response to the COVID-19 pandemic ranged from 3 per cent of GDP (the US Federal Reserve) to close to 27 per cent (the European Central Bank). The RBA's TFF (initial allowances only) was around 10 per cent of GDP but had the highest take up relative to its peers, with over 88 per cent of allowances drawn down.

Staggering the availability of allowances helps to smooth the distribution of funding over time, which reduces the risk of concentrated maturities disrupting funding markets and can provide flexibility to adjust program parameters in response to evolving market conditions. But this can come at the cost of the program's stimulus by reducing the amount of funding immediately on offer.

***Additional lending incentives***

Many term lending facilities introduced during the GFC and the COVID-19 pandemic included additional incentives, linking the cost or quantity of available funding to banks' lending volumes. In a competitive banking market, provision of cheap funding should be sufficient to induce more and cheaper credit provision. But in more oligopolistic market conditions, or in the presence of pervasive uncertainty, it is sometimes argued that further incentives are required to ensure banks do not simply use central bank funds to purchase safe assets rather than expand credit, reducing the impact of the facility on lending rates and volumes (Altavilla *et al* 2023).

- **Price-based incentives** adjust the interest rates banks pay depending on whether they hit pre-defined lending targets; hitting these targets provides an additional subsidy. These incentives can be challenging for the central bank to provide without cutting the offered rate to, or even below, its remuneration rate on bank reserves.
- **Quantity-based incentives** provide banks with additional borrowing allowances if they hit pre-defined lending targets. These are operationally easier to implement (as they do not require different interest rates across different repos for the same bank, or to change the rate of a repo that has been drawn down), provided bank-level lending data are readily available and of sufficient quality. They can be less risky for central banks to supply compared to price-based incentives.

Such incentives are complex to design, and the evidence of their efficacy is mixed. Quantity based incentives appear to have had limited impact on lending volumes domestically and internationally. Price-based incentives have sometimes seen stronger take up and pass though – though the most effective (such as the European Central Bank's targeted longer-term refinancing operations (TLTRO) III program) have been priced below the central bank's cost of funds.

While some TLFs have included incentives to target specific sectors (such as small and medium-sized enterprises (SMEs)), there is mixed evidence that these have been effective (Havrylchyk 2016; Lai, Lane and Nunn 2022). This could in part reflect subdued credit demand during recent crises, as some evidence suggests that some TLFs with SME incentives have increased credit supply to these sectors (Minoiu, Zarutskie and Zlate 2021; Anbil, Carlson and Styczynski 2023).

***Maturity***

Most central banks have offered funding for 1 to 4 years. Shorter terms run the risk of not giving banks sufficient certainty and hence fail to spur lending, while longer terms risks excessive stimulus, dependency and financial risk to the central bank. The RBA's TFF allowed banks a year to draw down, and unused allowances counted as high-quality liquid assets (HQLA).

***Collateral***

Term lending exposes central banks to material credit risk. It is important that these loans are appropriately collateralised, with effective risk mitigants. The nature of collateral taken will depend on the desired scale of credit support, and the extent to which the central bank wishes to provide banks with a liquidity upgrade. More conservative collateral requirements may place a constraint on bank's ability to access the facility. As during the COVID-19 pandemic, in most cases a large-scale TLF would require the RBA to expand its eligible collateral to include banks' self-securitised loan portfolios. In some instances, eligible collateral could be tied to a program offered by another agency (such as a government loan guarantee program offered by the Treasury) to incentivise lending to a specific sector.[6]

[6] As an example in the United States, see Federal Reserve Board, 'Paycheck Protection Program Liquidity Facility (PPPLF)', Policy Tools.

# Government Bond Purchase Programs (BPPs)

The RBA has existing procedures for circumstances where it may be necessary for the RBA to intervene directly in government bond markets to address dysfunction that poses a risk to its financial stability objective. This assessment focuses on the use of government bond purchase programs as a tool to ease the stance of monetary policy.

This assessment focuses solely on the purchase of Australian and state government securities. Large scale purchases of non-government assets are out of scope but may be considered in a separate assessment in a future version of the AMPT Framework.

### Key points

**Expected effectiveness:** BPPs are intended to ease financial conditions and stimulate aggregate demand by lowering longer-term interest rates and potentially putting downward pressure on the exchange rate. They tend to be most effective when market liquidity is impaired, and risk premia are elevated. However, their effectiveness in Australia is not well understood; some theory and empirical estimates suggest the effects of this tool may be weaker than in peer economies.

**Potential costs:** Central banks face substantial interest rate risk from BPPs, which increases with the duration of the debt purchased. It is important to be clear about the potential range of such risks, including under adverse scenarios, at the time a BPP is committed to. Ending, and in due course unwinding, BPPs can cause volatility across the yield curve, with implications for market functioning and financial stability, requiring careful program design and deliberate market communications to minimise surprises.

**Viability and flexibility:** The RBA is operationally ready to purchase and manage holdings of Australian state and territory government bonds, but the size and conditions of the market would need to be considered when purchasing bonds to avoid creating scarcity in bond lines and market dysfunction. Explicit consideration should be given to possible exit strategies at the time any BPP is launched.

**Broader public policies and consolidated public-sector balance sheet**: BPPs have fiscal implications and may impact the work of other government agencies. The RBA should consult with the Treasury, the Australian Office of Financial Management (AOFM) and, if needed, state authorities to manage the risks of using this tool.

## Overview of bond purchase programs

BPPs involve the central bank purchasing fixed-rate government bonds in the secondary market from financial institutions over a period of time, in exchange for floating-rate central bank reserves. These bonds can be sold at a later date or held to maturity. The RBA used a BPP during (though not in its initial response) the COVID-19 pandemic.[7] Many peer central banks have also used BPPs.

BPPs are intended to lower yields on government bonds, and in turn to lower the broader spectrum of savings and borrowing interest rates for households and businesses and put downwards pressure on the Australian dollar. Lower interest rates also raise asset prices via lower discount rates. These factors help to stimulate aggregate demand, the labour market and inflation. BPPs are thought to work through three key transmission channels:

[7] For a review of the RBA's experience during the pandemic see Bullock M (2022), Kent C (2022) and RBA (2022b).

- **Portfolio balancing:** By reducing the available supply of government bonds, BPPs encourage investors to seek close substitutes – domestic (or even overseas) assets. This reduces term premiums (the additional compensation investors demand for absorbing interest rate risk) and puts downwards pressure on the Australian dollar (Vayanos and Vila 2021; Greenwood, Hanson, and Liao 2018).
- **Market functioning and liquidity**: During periods of market stress or elevated uncertainty, dealers may be less willing to intermediate between buyers and sellers. Greater illiquidity may lead investors to demand additional compensation for holding bonds (liquidity premiums). Predictable central bank buying reduces the risk of investors being unable to sell at a reasonable price (Christensen and Gillan 2022).
- **Signalling**: BPPs can signal that the central bank intends to hold policy rates at low levels for an extended period. This can lower both the expected path of interest rates (at least in the nearer-term) and the term premium (uncertainty around the path for interest rates declines). Some argue BPPs can reinforce the commitment to keep rates low because central banks will face losses on their bond holdings if policy rates are increased earlier than expected (Eggertsson and Woodford 2003; Bhattarai, Eggertsson and Gafarov 2023).

BPPs can vary widely in terms of their design: the types of bonds the central bank buys, their duration and how the program is managed over its life. Programs can be fixed-size, open-ended or an upper-limit for purchases can be specified. In an Australian context, a BPP would include outright purchases of Australian Government Securities (AGS) and, potentially, the purchase of state and territory government securities (semis).[8]

# Assessment of bond purchase programs

## Expected effectiveness

**BPPs are most effective during periods of financial strain, when market functioning is impaired and risk aversion is high.**[9] In these conditions, empirical studies find that effectiveness of BPPs is higher, in part because these tools help to restore market functioning and liquidity, reducing bond market liquidity premia. Additionally, some argue that the portfolio balance channel may be more powerful in periods of elevated risk aversion, partly because investors' demand for risk-free assets typically increases during period of economic and financial strain (Krishnamurthy and Vissing-Jorgensen 2011).

**BPPs can lower government bond yields immediately, though the observed marginal impact on yields could diminish with subsequent rounds.** During periods of financial market stress, international evidence suggests that bond yields can fall by around 5 to 7 basis points for every 1 per cent of GDP in purchases (Gagnon, Raskin, Remache and Sack 2011; Altavilla, Carboni and Motto 2021). By contrast, estimates from calmer episodes – including the RBA's bond purchase program announced in November 2020 – are smaller, at around 2 to 3 basis points per 1 per cent of GDP (Finlay, Titkov and Xiang 2022). The larger announcement effects are likely to reflect both stressed initial market conditions and expectations of future purchases (Krishnamurthy and Vissing-Jorgensen 2011).

**BPPs can ease broader financial conditions, particularly through fixed-income markets.** There is some international evidence that BPPs also promote bank lending by improving banks' liquidity positions. At the same time, BPPs shift bank funding toward highly liquid but less sticky deposits, making the liability side of banks' balance sheets more fragile.

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[8] Many peer central banks also bought private sector securities (i.e. high-quality corporate bonds and mortgage-backed securities) to ease credit conditions during the GFC and the COVID-19 pandemic. The purchase of corporate bonds and equities are beyond the scope of this assessment.

[9] Central banks' purchases of bonds can have their largest effects when restoring market functioning during a financial crisis, which can sustain or repair monetary transmission channels and in and of itself support economic activity and inflation during these periods. Tools to address market dysfunction tend to be more targeted and focused on restoring conditions rather than easing monetary policy to stimulate the economy, which is broader and more enduring in focus. The distinction of purpose for the tools is particularly critical when they are seemingly at odds – for example the Bank of England's response to the LDI crisis – and requires careful public communication.

The academic literature is split on the impact of BPPs on credit risk premia, in part due to difficulties in isolating the effects of government bond purchases from the announcement of other credit easing measures in most jurisdictions.

**The exchange rate can depreciate due to domestic BPPs, but the estimated magnitude is unclear and depends on the policies of other central banks** (Dedola *et al* 2018; Rogers, Scotti and Wright 2014). However, BPPs are generally considered to be somewhat effective at mitigating upward pressure from overseas factors, such as widespread foreign central bank BPPs.

**International estimates of the macroeconomic benefits can be material.** Internationally, where purchases are more focused on longer-term bonds, BPPs are estimated to raise economic activity by 0.05 to 0.5 per cent and the price level by 0.05 to 0.3 per cent for every 1 per cent of GDP in purchases (amongst others, see Fabo *et al* 2021).

**The effectiveness of BPPs in Australia remains uncertain.** Compared with many other economies, Australian households and businesses are less exposed to longer-term interest rates, which may dampen transmission through cash flow and savings-and-investment channels. On the other hand, exchange rate effects could be stronger in a small open economy like Australia.

Estimated impacts for Australia tend to be smaller: model-based estimates of the COVID-era BPP suggest it lifted GDP by around $25 billion over three years – equivalent to roughly a 0.1 per cent increase in output for each 1 per cent of GDP in purchases, at the lower end of estimates in the international literature. It remains unclear whether these weaker results reflect the absence of acute financial market dysfunction in the episodes studied, difficulties in identification, or structural features that make BPPs less effective in Australia.

**BPPs could complement the fiscal response to boost aggregate demand if it temporarily provides the government with more fiscal space.** This can occur if the BPP effectively reduces debt servicing costs by removing excessive risk premia, or if the BPP helps to speed the return of output and inflation to balance, raising tax revenue. However, a well-designed BPP should not seek to depress long-term rates, and hence boost fiscal space, beyond sustainable levels. In such a situation, fiscal positions could become reliant on the BPP holding down funding costs.

## Potential costs

### *Financial stability and market functioning*

Although BPPs can support market functioning, they have the potential to create vulnerabilities in the financial system over their lifespan.

- **Unexpected announcement of an end to purchases:** Unexpected slowing or stopping of purchases can trigger sharp adjustments to interest rates and market volatility, such as the US 'taper tantrum' in the mid-2010s (Fischer 2017).
- **BPP winddown:** Winddowns tend to be slow and predictable, but different approaches can still give rise to different risks. 'Active Quantitative Tightening (QT)' (outright bond sales) allows for a faster winddown but requires careful design and communication to manage the risks of market dysfunction that could arise if the pace of bond sales is a surprise, too quick for the market to absorb, or if sales continue through periods when markets are vulnerable for other reasons. 'Passive QT' (letting bonds mature) is slower and is less likely to lead to market dysfunction but requires the central bank to maintain a larger balance sheet for longer – which can itself impair market functioning or pose financial and reputational risks to the central bank. 'Slow QT' (partial reinvestment of maturity proceeds) is slower again.

  Passive and slow QT are likely to be more appropriate if the RBA's balance sheet is very large or if the average maturity of the RBA's holdings is short.

- **Bond scarcity:** Large-scale purchases can cause market dysfunction if the central bank's purchases create significant scarcity in specific bond lines. Scarcity makes it difficult for market participants to price and transact in that instrument, leading to poor liquidity, including in the repo market. Scarcity of specific bond lines can be mitigated to some degree by a central bank's stock lending facility (where the central bank makes its securities available to dealers on short-term loans).
- **Excessive risk taking:** In a low yield environment, banks and other institutions could be encouraged to shift into riskier assets, possibly leading to a material deterioration in the quality of investors' portfolios and increasing duration, credit and liquidity risks. There has been little evidence domestically or internationally of excessive credit risk-taking at major banks. In some overseas jurisdictions, concern has focused on non-bank financial intermediaries (NBFIs) and smaller banks with weaker supervisory oversight.

***Neutrality***

The empirical evidence suggests government BPPs have little net impact on the distribution of wealth and income because of largely offsetting factors (Bunn, Pugh and Yeates 2018, Ampudia *et al* 2018). While higher asset prices and profits can increase wealth inequality, more jobs and a tighter labour market tend to reduce income inequality (Lee 2024).

***Risks to the RBA***

BPPs can incur significant financial and reputational risks for the RBA. The key risks are:

- **Financial risks:** BPPs carry the potential for significant financial costs, but these depend on the phase and effectiveness of the program:
  - If the market-implied policy rate path (at the point each bond is purchased) is realised, the program's profit or loss depends on the term premium. This is because the central bank funds these purchases at the cash rate and so earns the average term premia on the bonds, which could be positive or negative.
  - If bond yields move higher after purchases have taken place, perhaps because of an exogenous shock or because of the stimulus from the BPP, any profits are eroded and could become losses (equal to the market value of losses).[10] This happened with the BPP during the COVID-19 pandemic, which had an estimated financial cost of $30 billion to the RBA (as of mid- 2026).

  The magnitude of potential losses is also determined by the volume of purchases, which would depend on the program size and type (see *Design Choices*).
- **Reputational risk**: Large accounting losses can trigger public criticism and pressure, especially if these losses are perceived to constrain the fiscal budget or blur the line between monetary and fiscal policy. These risks are most acute when losses create short-term fiscal pressures, which could arise if the central bank requires a capital injection from the government. However, most central banks have instead sought to rebuild their capital positions by retaining profits that are traditionally paid to the government each year through a dividend – although the pace of this process depends heavily on the scale of seigniorage income, and in general takes several years to complete. The RBA also used this latter approach following losses from the COVID-19 policy package.[11]

  While uncommon, in some overseas jurisdictions the purchase of government bonds by the central bank – even through the secondary market – has led some commentators to raise concerns about reputational risks, central bank independence and the perception of monetary financing (Praet 2017; de Haan and Eijffinger 2017; Bank of Japan (BoJ) 2024; Uchida 2025).

## Viability and flexibility

A BPP is operationally ready, including both implementation and the winddown. Purchases could be conducted using systems available at the time of the COVID-19 pandemic.

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[10] The losses can also be thought of as the interest rate expense the RBA pays on the reserves which fund the purchases.

[11] See RBA (2022a).

***Exit strategy: Winddown of portfolio***

A key lesson from the GFC and the COVID-19 pandemic experiences of BPPs is the importance of reflecting on possible approaches to exit at the time the BPP is first designed.

Expectations for how the central bank could eventually reduce its bond portfolio can influence the market's initial response to an announced BPP (and therefore the effectiveness of the program). Early communication from the central bank could help shape market expectations in a way that boosts the program's effectiveness and limits the potential for market volatility in response to later central bank actions. At the same time, pre-committing too precisely to a specific winddown strategy could unhelpfully constrain policymakers. Ultimately, any winddown strategy should stress the primary role played by the cash rate target in altering the monetary policy stance when lifting off from the lower bound.

The most appropriate strategy for winding down a bond portfolio will depend on the design of the program:

- If purchases are focussed on shorter-dated securities, then passive QT might be preferable since the RBA's holdings will mature quickly.
- If the RBA purchases longer-term bonds, then an active sales program might help to limit the RBA's financial risk and allow for greater policy space in future crises.
- If the program size is very large, slow QT might help to manage risks to market functioning.

As exit approaches, the RBA should engage with the AOFM and state authorities to help ensure that the QT strategy does not impair market functioning. For active QT, selling bonds to the AOFM (rather than to the market) would be operationally simpler and should lessen the risks of market dysfunction. The main design challenge would be to ensure that, in working closely with the AOFM, the MPB is nonetheless able to run its holdings down at the pace it judges consistent with its broader monetary policy objectives, and at market prices in order to ensure the sales process is transparent. The detailed arrangements for selling to the AOFM should be agreed in advance.

***Communication***

While BPPs are generally well understood by financial markets, international experience shows that clear, consistent communication is critical throughout the program – including initiation of purchases, the conditions for cessation, and the exit strategy. The MPB will also need to assess how communications affect policy rate expectations.

This can be achieved by upfront communications which acknowledge the potential financial losses associated with this tool, clear and early communication about policy exit and unwind, and by emphasising the goals and mechanisms of a BPP.

By contrast, BPPs are less well understood by the broader public, suggesting a need for more active engagement over the life of the program to clarify its objectives.

## Broader public policies and consolidated public-sector balance sheet

BPPs have fiscal implications because they impact the consolidated balance sheet, though their total impact is hard to quantify. AGS purchases under a BPP are recorded as RBA assets and AOFM liabilities; in both cases they are marked to market, resulting in offsetting movements in the RBA's and AOFM's accounting profit and loss over time. But a BPP changes the interest rate exposure of the consolidated public-sector balance sheet and can cause large losses as yields rise.

At the same time, a BPP can lower government borrowing costs and increase tax revenue from stronger economic activity, providing near-term benefits to the consolidated public-sector balance sheet. Although this may strengthen the consolidated balance sheet for a time, an improvement in economic conditions would likely be accompanied by higher interest rates, increasing the refinancing costs of government debt. The resulting fiscal costs could be amplified if a prolonged period of low interest rates and compressed

government bond yields under a BPP encouraged greater public borrowing or led to a loosening of fiscal discipline (BoJ 2024).

Given the potential implications for fiscal policy and the consolidated public-sector balance sheet, the RBA should consult the Treasury about planned purchases and possible large financial losses, where timing and circumstances permit. Purchases of state government securities have additional risks, since the RBA would need to determine how much of different state's securities to purchase. This may create the perception that the RBA is unfairly advantaging or disadvantaging certain states.

The RBA should also engage with the AOFM and state authorities to assess whether issuance plans could adversely impact the efficacy of a BPP or market functioning, or whether a BPP could impact issuance plans.

# Key design choices of bond purchase programs

***Program type***

- **Fixed-sized:** Specify total volume of purchases and timeframe. This provides certainty to market participants about the size of the program, which supports both the portfolio balance and signalling channels at announcement. But fixed-size programs lack flexibility. Sequential fixed-size programs give more flexibility but create uncertainty about the ultimate size of the program; studies suggest that it is the expected stock and duration of bonds sitting on the central bank balance sheet that drives policy effectiveness.
- **Open-ended:** Commit to a pace of asset purchases until a specified objective is judged to have been achieved, such as for inflation.[12] This provides more flexibility but creates uncertainty about the ultimate size of the program, weakening the portfolio balance channel. Similar to a term rate target that needs to be defended, an open-ended program could require very sizable purchases and may become large enough to threaten market functioning and cause significant financial risk to the RBA before the stated goals have been met. Communications around suspending the program at that point would need to be carefully designed to avoid any unintended signals about the future course of monetary policy.
- **Upper-limit:** Set a maximum size of purchases and usually an end date. This size might be set according to risk considerations and factor in the available stock of bonds for purchasing. The program is intended to be complete when either of these limits are reached, and sit somewhere in the middle between the certainty of fixed-size programs and the flexibility of open-ended programs. However, if the MPB's monetary policy objectives remain clearly unachieved as the upper limit approaches, the MPB might consider implementing other components of an AMPT package.

***Program size and purchase pace***

During the GFC and the COVID-19 pandemic, international BPP programs varied in size, typically from 10 to 30 per cent of GDP (Bank of Japan is an exception at over 70 per cent). The RBA's COVID-19 BPP was around 15 per cent of GDP, lower than most peers' pandemic programs.

A key consideration for the size of the program is the amount of government debt on issue. Australia's historically relatively low government debt to GDP may limit the size of a program. That said, fiscal expansion might coincide with the low-interest rate environment, increasing the supply of government bonds.

The pacing of a program involves similar considerations; a faster pace of purchases might be required to restore market functioning in the short term but could impair market functioning in the longer term if the central bank purchases too many securities before its monetary policy objectives are achieved.

[12] The specified improvement in the economy could be a hard threshold (i.e. until actual or forecast inflation is greater than a specific outcome) or a soft target (i.e. until actual or forecast inflation is sustainably within the target band).

***Maturity composition***

The maturity composition of a bond purchase program has material implications for its effectiveness, and it is likely that the RBA would need to do more work to understand the most effective mix of short- and longer-term bonds to purchase.

Central banks have typically chosen to target longer-dated bonds to remove substantial amounts of duration from the market. This shifts substantial interest rate risk onto their balance sheets. In Australia, where shorter-term interest rates play a more prominent role, focusing on shorter maturities might still provide some economic support (particularly through the exchange rate channel) while limiting interest rate risk. However, targeting purchases at shorter maturities may have a smaller effect on overall financial conditions, in part because shorter-term government securities and Exchange Settlement (ES) balances are closer substitutes.

Market liquidity is a key constraint. Smaller or more illiquid segments of the government bond market would be much harder to target in ways that maintain market stability. To avoid impairing market functioning, central banks often spread purchases across the curve.

***Asset types***

A BPP would include AGS, given their yields are a key benchmark for interest rates in Australia, and because they allow the central bank to extract only duration (and not credit risk) from the market. The program could be extended to semis if the MPB wanted to impact a broader set of yields in the market.

The COVID-19 BPP had a composition of 80 per cent AGS and 20 per cent semis, all fixed-rate bonds and no inflation-indexed bonds.

# Forward Guidance with Commitment

This assessment only considers forward guidance that is (a) a commitment to an easier-than-otherwise path for the cash rate (sometimes referred to as 'Odyssean' forward guidance in the literature) and (b) when the cash rate is nearing zero. Broader uses, such as purely informational guidance that communicates policy intentions conditional on the economic outlook (sometimes referred to as 'Delphic' guidance in the literature) or publishing cash rate projections are beyond the scope of this assessment.

### Key points

**Expected effectiveness:** Forward guidance with commitment is intended to ease financial conditions and stimulate aggregate demand by lowering expectations for the future path of the policy rate and, therefore, medium-term risk-free rates. This could lower other funding costs and put downward pressure on the exchange rate. It may also raise medium-term inflation expectations, providing a further boost to nominal demand, by signalling that inflation may temporarily exceed the central bank's target.

Forward guidance is only effective when it is widely understood and treated by market participants as credible at the time it is committed. It is less effective when the central bank lacks credibility or the commitment itself is not credible. It is also less effective when the underlying forces affecting the economy are slow-moving and very long-lasting, such as demographic shifts, or if the commitment is weak.

**Potential costs:** Forward guidance limits policy flexibility. If the central bank then deviates from its commitment in order to hit its policy targets this can damage its reputation and thereby damage future credibility. It may be possible to mitigate (though not eliminate) this risk by tying the commitment to achieving some economic goal, such as a desired level of inflation (actual or forecast). But conveying such macroeconomic conditionality is challenging, particularly to households, and weakens the potential impact of the policy.

**Viability and flexibility:** As an operational matter, the MPB can readily deploy forward guidance, but there are significant communications challenges.

**Broader public policies and consolidated public-sector balance sheet**: Forward guidance has limited direct consequences on other agencies, beyond lowering government borrowing costs.

## Overview of forward guidance with commitment

This form of forward guidance is a commitment to maintain an easier-than-otherwise path for the policy rate, including for a time after aggregate demand has started to increase. The RBA used forward guidance during the COVID-19 pandemic, and many peer central banks have also used some variant of the tool, including the US Federal Reserve, European Central Bank (ECB), Bank of Canada (BoC) and Reserve Bank of New Zealand (RBNZ).[13] This type of forward guidance can take two forms, though at times may include elements of both:

- **State-based**: A commitment to maintain an easier-than-otherwise path for the policy rate until pre-specified economic outcomes are realised or forecast to occur.
- **Date-based**: A commitment to maintain an easier-than-otherwise path for the policy rate for a specific time.

[13] For a review of the RBA's experience during the pandemic see RBA (2022c).

In practical terms, when deploying this form of forward guidance, the central bank is aiming to convince people that, because the cash rate is near zero, it will keep the policy rate lower for longer than they would otherwise expect. In other words, the policymaker commits to temporarily use a different reaction function than normal. If credible and understood by markets, this commitment may lower policy rate expectations and reduce uncertainty about future interest rates. In such circumstances, near-term and medium-term nominal interest rates fall, easing broader financial conditions. A credible commitment to allow more inflation than otherwise is also intended to raise medium-term inflation expectations, thereby lowering real interest rates. As this discussion makes clear, because it works through expectations, forward guidance must be (a) credible and (b) widely understood to be effective. Meeting these tests is challenging and requires careful policy design.

# Assessment of forward guidance with commitment

## Expected effectiveness

**Forward guidance with commitment can ease financial conditions by lowering expected interest rates and reducing interest rate uncertainty**. These effects are well-documented in several countries (Campbell *et al* 2012; Femia, Friedman and Sack 2013; Swanson 2021; Hubert and Labondance 2018).

**If credible, forward guidance may also raise medium-term inflation expectations.** In doing so, it can help anchor longer-term expectations at target in situations where a binding effective lower bound (ELB) means there is a risk that inflation expectations may be too low, or when inflation expectations are already too low (Andrade and Ferroni 2021; Eggertsson and Woodford 2003; Krugman 1998). To convince people of its commitment to easier-than-otherwise policy, the central bank can signal that it will allow inflation to be temporarily higher than its usual target in the future. If the commitment is credible, it raises medium-term inflation expectations relative to a no-guidance counterfactual. More generally, forward guidance can reduce the scope for self-fulfilling pessimism in low-interest rate periods by lifting expectations of real incomes. However, survey evidence suggests that it is challenging to influence households' expectations in this way (Blinder *et al* 2024).

**The macroeconomic benefits of successful forward guidance are difficult to estimate but may be material.** Empirical estimates are very imprecise and vary across studies but suggest that forward guidance that lowers the one-year or two-year ahead expected policy rate by 1 percentage point could raise the price level by 1 to 2 per cent and economic activity by 2 to 3 per cent (Bundick and Smith 2020; D'Amico and King 2023). Model simulations show that forward guidance modestly improves economic outcomes compared with a standard Taylor rule, even under conservative assumptions about how households and firms form expectations (Bernanke 2020; Chung *et al* 2025). A range of overseas policymakers have described forward guidance with commitment as being an effective monetary policy tool when the policy rate is near zero (Bernanke 2020; Poloz 2014; Yellen 2018).[14]

**Forward guidance is less effective when it is not understood or not credible** (i.e. people do not believe it will be fulfilled). This could be the case if the central bank lacks credibility (e.g. because very low inflation expectations are entrenched) or if the commitment itself is not seen as credible (e.g. because a central bank has deviated from similar commitments in the past or the duration of date-based guidance is too long). It might also be less effective when the underlying forces that drive the economy to very low interest rates are slow-moving and long-lasting because markets may come to expect near zero interest rates to bind indefinitely (Eggertsson and Egiev 2025).

**Forward guidance has little impact when the commitment is weak or has too many qualifications.** Very short date-based guidance, state-based guidance with timid thresholds or guidance with many qualifications

[14] It is worth noting that even if household expectations do not directly respond to the central bank's guidance (e.g. because of inattention) it can still encourage spending because households can directly observe lower medium-term lending rates (Dupraz, Le Bihan and Matheron 2024).

(or 'escape clauses'; see below) reduce the strength of the central bank's commitment to maintaining an easier-than-otherwise stance of policy. As a result, the impact on expected interest rates is small and there is little impact on financial conditions. But increasing the strength of the commitment would incur greater risks to the RBA.

**The effectiveness of future forward guidance in Australia remains uncertain.** During the COVID-19 pandemic, the RBA's forward guidance was intended to be state-based, but at various times included a time-based element. It lowered funding costs and supported the economy early in the pandemic. Over time, however, the time-based elements dominated interpretations of the guidance, overshadowing its conditional nature, and led to extensive criticism when the cash rate was increased much earlier than implied by the time-based component. The exit in 2022 has likely lessened the credibility – and therefore the effectiveness – of forward guidance for the foreseeable future.

## Potential costs

### *Financial stability*

Like other policy tools that aim to ease financial conditions, forward guidance could contribute to the build-up of vulnerabilities in the financial system if it pushes rates down too far or for too long. There is not strong evidence that this has occurred (Altavilla *et al* 2021; Bernanke 2020). A more significant risk is:

- **Volatility at exit.** Both state-based and date-based forward guidance can reduce the responsiveness of market interest rate expectations to macroeconomic news, especially when date-based guidance has an extended horizon – referenced in some studies as more than 18 months (Ehrmann *et al* 2019; Swanson and Williams 2014). This period of muted responsiveness can cause volatility when the time to increase the policy rate approaches (Poloz 2014). State-based guidance linked to achieving desired levels of inflation and/or employment, when clearly communicated, can potentially mitigate this risk because it gives market expectations room to respond endogenously to incoming data pertaining to the outlook for the conditioning variables (Ehrmann *et al* 2019; Feroli *et al* 2017). On the other hand, state-based forward guidance can engender volatility if thresholds are unclear, policy is required to take a different course from that stated in the guidance, or the data are too noisy.

### *Neutrality*

Like conventional monetary policy communication, forward guidance aims to influence interest rate and inflation expectations. The difference is that forward guidance does this more explicitly. As a result, its effects are qualitatively similar to conventional monetary policy, and it does not disproportionately impact specific sectors or groups.

### *Risks to the RBA*

Forward guidance commitments create reputational risks for the central bank and communication challenges, which can be at least partly mitigated through design choices and using scenario analysis to inform these choices. The key risks are:

- **Reputational risks.** By committing to keep the policy rate unusually low as the economy recovers, the central bank is effectively promising to allow inflation to be higher than otherwise (this applies to both date-based and state-based guidance). In this way, the central bank will have an incentive to deviate from its initial commitment in the future, especially if the policy is effective. Those that understand this incentive may not believe the commitment in the first place, rendering the tool less effective. Those who do not understand the incentive and therefore trust the commitment may lose confidence in the central bank if it later deviates from the commitment, impeding its ability to use forward guidance in future (Nakata 2018), and possibly undermining central bank credibility more broadly.[15] On the other hand, if the central bank follows through on its commitment, it must tolerate higher inflation and/or higher activity than it otherwise would, which could undermine the longer-term credibility of the central bank's inflation target.

  Reputational risks are most pertinent for date-based guidance.[16] They might be mitigated somewhat by using state-based guidance, which commits to achieving a pre-specified level of realised or forecast inflation, thereby delaying any rate rise but also limiting how much of a rise in inflation the central bank will tolerate (Woodford 2013). But such guidance requires careful specification and clear communication to ensure it is time-consistent and widely understood.
- **Misinterpretation.** In practice, conveying state-based conditionality has proven challenging, and the central bank must accept some risk of misinterpretation when using forward guidance (Broadbent 2022). For example, if the central bank uses state-based guidance but provides a conditional forecast of the policy rate, markets and the media may interpret the date-based policy rate forecast as an unconditional date-based commitment. In this situation, increasing the policy rate in line with the state-based conditionality but prior to the expiry of the perceived date-based commitment may damage the central bank's credibility and erode public trust. There is a risk that state-based guidance is mistaken for date-based guidance when central bank forecasts indicate conditions for rate rises are expected to be met at a specific future time.

  It may be possible to reduce the risk of misinterpretation through consistent communication that reinforces the intended message and clarifies the conditions attached (e.g. through publishing scenarios of how interest rates would respond under different circumstances). It is worth noting that such communication is easier if there are no other AMPTs also at work that are date-based.
- **Less informative market signals.** By muting how interest rate expectations respond to news, forward guidance may diminish the information value of market pricing for policymakers as an independent gauge of the economic outlook (Blinder *et al* 2024). As mentioned above, this risk is less pertinent for state-based guidance because markets should remain responsive to news about the conditioning variables.
- **De-anchoring of longer-term inflation expectations.** A period of above-target inflation, which would be expected if the policy was effective, creates some risk that longer-term inflation expectations could drift above target. This risk is more pertinent for date-based forward guidance, which is less flexible if inflation recovers quicker than expected. Re-anchoring longer-term expectations is costly. While there is no evidence that this has occurred in practice, the risk can be mitigated by keeping any intended overshoot modest, and by continuing to monitor a broad range of inflation expectations measures.

## Viability and flexibility

As an operational matter, forward guidance with commitment can be readily deployed. It does not face legal or mandate constraints, and coordination with other agencies is not required in most circumstances. That said, there are potentially significant communications challenges when implementing this form of forward guidance:

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[15] Reneging on forward guidance may trigger public criticism and pressure because interest rate commitments are salient to households, especially mortgagors. By contrast, tools such as bond purchases or term rate targets work more through financial markets, so reneging on them may pose a smaller reputational risk.

[16] This time inconsistency problem arises both if the central bank's ex-ante inflation forecasts are realised and when unexpected shocks cause inflation to rise more rapidly than expected. In both cases, the central bank has an incentive to renege on its guidance early to avoid inflation overshooting its target.

- In general, the effectiveness of forward guidance depends on the public understanding that the central bank is intentionally deviating from its normal reaction function, or past behaviour. This underscores the need for explicit and clear communication. It also highlights the importance of improving public understanding of the central bank's reaction function in normal times, which has proved challenging (Mester 2024).
- State-based guidance presents a trade-off between accurately conveying the intended conditionality and maintaining a simple and clear message. Central banks have managed this trade-off by setting thresholds for inflation (either observed or forecast) or employment that, once met, prompt a re-evaluation of the policy stance. While relatively simple, this approach is not free from communications challenges (see below). More generally it is not clear that it would be possible to implement state-based guidance without a date-based element (and the attendant risks) because policymakers will be asked what the guidance implies for the likely path of the cash rate.
- While date-based guidance is simple to communicate in isolation, in practice it would likely have to be qualified to allow policy to respond to unanticipated events, like an inflation surge. Adding such qualifications (or 'escape clauses'; see below) could complicate messaging: if they are not well-understood, the time consistency problem remains; or if they are well-understood, this may diminish the potency of the commitment. Moreover, frequently revising provided dates could cause confusion and reduce the credibility of the commitment.
- The central bank should clearly communicate that it is committing to an easier-than-otherwise path of policy. If it fails to do so, markets and/or households might interpret the guidance about future low rates as a projection consistent with a weaker economic outlook, causing them to downgrade their inflation and income growth expectations, which could in turn drag on demand (Andrade and Ferroni 2021; Lunsford 2020). For this reason, qualitative guidance (e.g. "rates will be low for the foreseeable future") is not recommended by the literature.

Accordingly, when implementing forward guidance, the central bank should develop a communications strategy that describes how it will be communicated to a range of audiences (e.g. financial market participants, media, and households).

### Broader public policies and consolidated public-sector balance sheet

Forward guidance has limited direct consequences for the government and other agencies. It can lower government borrowing costs and increase tax revenue from stronger economic activity, providing near-term benefits to the consolidated public-sector balance sheet. Although this may strengthen the consolidated balance sheet for a time, an improvement in economic conditions would likely be accompanied by higher interest rates, increasing the refinancing costs of government debt. The resulting fiscal costs could be amplified if a prolonged period of low interest rates encouraged greater public borrowing or led to a loosening of fiscal discipline.

## Key design choices of forward guidance with commitment

***Type***

State-based guidance is preferred to date-based in most circumstances because:

- it better balances commitment with maintaining policy flexibility if the economy recovers more quickly than expected or if there are unanticipated inflationary shocks (Tenreyro and Wazzi 2025). By recognising the time-consistency problem of forward guidance in this way, state-based guidance can be more credible than date-based guidance (Campbell et al 2020).

- it allows market interest rate expectations to respond to incoming data relevant to the economic outlook, while date-based guidance may attenuate markets' response to news to an undesirable degree (Feroli et al 2017).
- it might be less prone than date-based guidance to inadvertently signalling a weak economic outlook (Woodford 2013).

That said, date-based guidance is easier to understand and is likely to be more potent – so long as it is viewed as being credible (Bernanke 2020). This suggests date-based guidance should be reserved for genuinely extreme circumstances where the central bank is reasonably confident that it will not need to be revised much. However, these judgements could be difficult to make in real-time because: (a) there is no clear threshold for whether a large shock is 'extreme enough' to warrant date-based guidance and the additional risks it poses; and (b) revisability is potentially endogenous (since the more the commitment is believed, the more likely it is to be effective in lowering yields and bringing forward the time at which the commitment has to be broken).

***Conditions (state-based guidance)***

State-based guidance has typically been implemented by setting thresholds for inflation (either observed or forecast) or employment that, once met, prompt a re-evaluation of the policy stance. Key considerations when defining such thresholds include:

- Linking guidance to observed inflation outcomes has the advantage that it is easy to understand and is transparent.[17] However, given lags in policy transmission and nonlinearities in inflation dynamics, it is likely to result in the central bank being behind the curve when inflation eventually rises, even if it has committed to temporarily overshoot its inflation target. For this reason, some argue that state-based forward guidance should be tied to inflation forecasts (Tenreyro and Wazzi 2025).[18]
- Using a numerical threshold for the unemployment rate is challenging given the inherent uncertainty about the level of full employment/NAIRU. The US Federal Reserve (the Fed) and the RBA linked state-based guidance to achieving full employment during the pandemic.
- Linking guidance to achieving a higher inflation level, and/or lower unemployment level, provides more stimulus at the cost/risk of higher inflation later.
- Linking guidance to non-mandate or intermediary variables, like wages growth, is probably not desirable because it adds complexity (reducing effectiveness) and risks tying the central bank to mechanisms which may be misjudged or not appropriate in the event of unanticipated shocks.
- More generally, there is a risk that thresholds are misinterpreted as hard triggers for rate rises (Campbell *et al* 2020). This can cause communication challenges when unanticipated shocks cause thresholds to be met before central bank deems tightening appropriate (Broadbent 2022).[19]

***Duration (date-based guidance)***

Most instances of date-based guidance during the GFC and the COVID-19 pandemic were for durations of 1 to 3 years. Shorter durations may not ease financial conditions much. And longer durations might not be perceived as credible. Some empirical evidence suggests that a duration of 18 months or more may reduce the responsiveness of market interest rate expectations to news too much, providing less informative market signals for the central bank.

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[17] For example, the central bank might commit to maintain lower-than-normal rates until actual underlying inflation reaches a desired level (e.g. 2½ per cent; as the RBA and Bank of Canada did during the pandemic).

[18] In this case, the central bank should (temporarily) target higher forecast inflation than it usually does (e.g. the Fed's forward guidance in 2012-13 explicitly allowed for inflation forecasts 1 to 2 years ahead to be ½ percentage point above their 2 per cent target).

[19] During the pandemic, several central banks, including the RBA, tied their guidance to achieving inflation 'sustainably' at or near target, which may have reduced the risk of inflation thresholds being interpreted as hard triggers for rate rises, but potentially reduced clarity.

***Escape clauses***

Both state-based and date-based forward guidance can be accompanied by escape clauses that describe macroeconomic or financial conditions (e.g. excessive increases in inflation, or long-term inflation expectations, or an excessive build-up of financial system risk) that, if realised, would cause the central bank to remove its guidance and revert to its standard reaction function. Escape clauses can provide the central bank with flexibility to respond to difficult contingencies, which may make its forward guidance more credible (Campbell *et al* 2020). But they add to the conditionality attached to the guidance, so may undermine the strength of the perceived commitment (and hence the impact on yields) and complicate messaging. At a minimum therefore any escape clauses should be as simple and clear as possible.

# Negative Interest Rate Policy (NIRP)

Historically, the RBA has ruled out taking the cash rate into negative territory, with the lowest rate set at 0.1 per cent in 2020.[20] NIRP is not currently operationally ready in Australia; upfront investment, policy design and communication would be required from the RBA and market participants before this tool could be used. Coordination with APRA would also be needed to help markets and institutions prepare to operate with negative rates.

### Key points

**Expected effectiveness:** NIRP provides additional policy space to reduce short-term interest rates if needed. It may be effective during periods of persistently low inflation and sluggish growth, and more so in economies where banks are very profitable, lending is mostly at variable rates and where banks are quite competitive.

However, the policy rate can probably only be lowered to about –1 per cent, and pass-through to lending and deposit rates weakens as rates move further negative. The policy is unlikely to be suited to periods of financial stress.

**Potential costs:** NIRP weighs on bank profitability, which could dampen, and in more severe cases undermine, the bank-based transmission channel of monetary policy. Persistently weaker profits could cause banks' balance sheets to become less resilient to shocks, including to a deterioration in asset quality. The impact on profitability can in principle be reduced through the use of 'tiered' remuneration, in which only a fraction of reserves are remunerated at negative rates. It may also be partly or fully offset by improved economic conditions and increases in non-interest income.

NIRP has led to widespread criticism in many of the countries that have implemented NIRP, reflecting that negative rates can lead to persistently low, and sometimes negative, deposit rates and higher deposit account fees for savers, reduce banks' profits, and have uncertain impacts on non-banks and broader financial markets. Such criticism brings material reputational costs and could make the policy unsustainable. Tailored and strategic communication could partially reduce this risk.

**Viability and flexibility:** NIRP is easier to exit as conditions change compared to most other AMPTs since it is in essence an extension of usual cash rate policy. But NIRP is not operationally ready for use in Australia. Implementing reserve tiering would also require material preparation.

**Broader public policies and consolidated public-sector balance sheet**: As an extension of the policy rate, NIRP does not generate subsidies or expose the RBA's balance sheet to financial risks. However, it has important implications for other agencies, including the Australian Prudential Regulation Authority (APRA) and the Treasury.

## Overview of negative interest rate policy

A central bank deploying NIRP would reduce one or more key policy rates into negative territory. In doing so, it would effectively levy a charge on holding reserves at the central bank (typically excess reserves but this can include all balances).[21] A number of advanced economy central banks - the European Central Bank (ECB), Bank of Japan (BoJ), Swiss National Bank (SNB), Riksbank and Danmarks Nationalbank - have implemented negative policy rates, which have ranged from -0.1 to -0.75 per cent. These policies were in place between 2012 and

[20] In a speech in November 2019, Governor Lowe commented that negative interest rates in Australia are "extraordinarily unlikely".

[21] Commercial banks hold deposits at the central bank for three main reasons (Bristow 2024): to meet regular day-to-day payments (transactional), to meet potential outflows from runnable liabilities in a stress period (precautionary) and to optimise their liquid asset portfolios, depending on the rate of return relative to other assets (relative value). In return for commercial banks' excess reserves, central banks typically pay interest, or a 'deposit rate'.

2024; no central bank implemented NIRP or cut further into negative territory in response to the COVID-19 pandemic.[22]

NIRP can stimulate aggregate demand, the labour market and inflation through similar transmission channels as conventional monetary policy. However, there are some important differences from reductions in the policy rate when it remains above zero.

Three key channels could amplify the effectiveness of NIRP relative to traditional (positive) interest rate policy:

- **Interest rate expectations**. NIRP can directly lower expected interest rates and can flatten the yield curve if taking such extraordinary action sends a strong signal that interest rates are likely to be 'lower for longer' (de Groot and Haas 2023). The distribution of expected interest rates embedded in market pricing would encompass negative rather than only positive rates, which further lowers expected interest rates. These effects could be strongest when NIRP is first introduced, particularly if it is a surprise.
- **Increased risk-taking**. NIRP could see a greater increase in risk-taking than standard policy cuts. By increasing lending volumes, banks can partially reduce the penalty they face from holding (excess) reserves and compensate for the compression on their net interest margins (NIMs), as discussed below. In this way, negative rates can encourage banks to lend more, including to riskier borrowers.
- **Exchange rate**. Some studies suggest that the exchange rate could be more sensitive to interest rate differentials when interest rates become negative.[23]

Three key factors might diminish pass through and constrain NIRP:

- **Incomplete transmission to lending and deposit rates**. Although negative rates often flow through to money market rates and bond yields, they can have a weaker transmission to lending and deposit rates than conventional monetary policy. In particular, banks rarely pass on negative rates to retail depositors (although they sometimes increase fees to help compensate for the lost earnings).
- **Ability to switch into cash.** If interest rates are pushed sufficiently negative, the cost of holding deposits will become so high that depositors will substitute on a sufficiently large scale towards holding cash. This threshold (the true 'effective lower bound', ELB) depends on the storage, transportation and insurance costs associated with holding currency, and will change over time. Other things equal, the further and longer the policy rate is negative, the greater the benefit from moving into currency despite the practical costs. At the extreme, cutting below the ELB could see a large outflow of household and business deposits from banks, which could materially impede banks' funding and therefore the supply of credit. Banks might also make a large-scale switch from central bank deposits into currency.
- **Reversal rate.** Separate from the potential costs from a widespread move to currency, the reversal rate is the (typically negative) official interest rate at which the adverse effects on bank profitability (from charges on reserves, lower returns on holdings of government bonds and narrower interest earnings) would severely impair pass-through of NIRP to lending and deposit rates (Abadi, Brunnermeier and Koby 2023). At this point, banks could pull back on lending and reduce the size of their balance sheets. Eventually, the impact on banks' profits could result in banks increasing their deposit and lending rates.

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[22] This partly reflects that some central banks – the ECB and SNB – were already at moderately negative levels and had concerns about the impact of the policy on financial institutions during a period of high uncertainty; the SNB increased its deposit exemption threshold in early 2020 to reduce the burden on banks' profits (Maechler and Moser 2020). The BoJ also made no changes to its policy rate in response to the pandemic; the BoJ cut its policy rate to -0.1 per cent in 2016 and kept it unchanged for the following eight years. In contrast, the DNB increased its policy rate from -0.75 to -0.6 per cent in March 2020 to slow large capital outflows (DNB 2020).

[23] One theory is that negative rates affect both the level and the distribution of expected policy rates over the medium term (Rostagno et al 2019). Another theory is that preferred habit effects could mean that a broader range of investors may become sensitive to rate differentials (Vayanos and Vila 2021).

# Assessment of negative interest rate policy

## Expected effectiveness

**NIRP is most effective when inflation is persistently low, growth is weak, and credit supply is low but not dysfunctional**. It extends conventional policy and amplifies effects through expectations, lending and investment. It could also counter appreciation pressures on the exchange rate, particularly those arising from very low (and even negative rates) offshore.

**NIRP would be less effective during financial stress or when the private sector is deleveraging.** NIRP does not resolve dysfunction in financial markets (indeed in certain circumstances it may amplify it), and financial market stresses would reduce the effectiveness of the expectations channel. Also, NIRP weighs on banks' profitability and their willingness to lend. This risk is higher if the compression of NIMs is not compensated by growth in lending volumes, higher asset/collateral valuations or by declines in non-performing loans.

**NIRP lowers short-term rates and to a lesser extent longer yields** (Jensen and Spange 2015; Grisse and Schumacher 2018). For modestly negative rates, NIRP has typically not weakened the pass-through of policy rates to money market rates. Though evidence is thin, some event studies suggest that NIRP announcements in the range of 10 to 25 basis points into and within negative territory reduce 2- and 10-year sovereign bond yields by as much as 15 basis points in total over the first month (Arteta *et al* 2016; Christensen 2019). But further reductions in the policy rate have a lesser impact on longer-term yields.

**Pass through to lending rates has been stronger for countries with a large share of variable rate lending but diminishes as policy rates move further below zero** (IMF 2017). Modelling for Australia has estimated that pass-through would fall from around 90 per cent at a cash rate of 0 per cent to around 80 per cent at a cash rate of -0.5 per cent, versus typically full pass-through for changes above 1 per cent (Brassil, Major and Rickards 2022). Some international studies suggest that lending volumes increased during periods of NIRP, but findings are mixed and the driver of the increase is not clear and could reflect the effect of other AMPTs (Bottero *et al* 2022; Basten and Mariathasan 2023; Schelling and Towbin 2022; Lopez, Rose and Spiegel 2020; Eggertsson *et al* 2024). Interest rates for retail depositors have typically had a zero lower bound while larger companies have faced negative interest rates. This sectoral difference could reflect differential costs of holding cash and political economy considerations.

**International estimates suggest that the policy rate cannot be cut below -1 per cent**. The lowest rate to date was -0.75 per cent, which was in Denmark and Switzerland. RBA studies suggest that the reversal rate – the rate where the adverse effects on bank profitability impairs pass-through – could in theory be at a materially negative level in Australia given the structure of the Australian banking system. More than 55 per cent of Australian banks' non-equity funding (as of early 2026) is comprised of items that are either directly tied to market rates or are hedged to move with market rates; the cost of these funding sources might continue to decrease when the policy rate is cut in negative territory. As such, RBA modelling implies that Australian banks might be able to continue to pass through at least some of the reduction in the policy rate to lending rates even if customer deposits have a zero lower bound, with only a small impact on their NIMs (Brassil 2022).

We do not have estimates on where the ELB – the rate which could trigger a widescale flight to currency - is in Australia.

**Empirical evidence of the macroeconomic impact is thin, but there appears to be a positive impact on aggregate demand and, to a lesser extent, inflation** (Czudaj 2020). Some studies suggest that this effect is of a similar or slightly smaller magnitude than rate cuts in positive territory while others suggest that the effect on inflation is modest (Villanueva 2021; Rostagno *et al* 2019). There is some evidence that businesses exposed to negative rates on their cash balances increased their investment by more than what can be explained by the reduction in interest rates (Altavilla *et al* 2022; Abildgren and Kuchler 2023).

## Potential costs

There are many potential, and highly uncertain, costs with NIRP. Reflecting this, some central banks (notably the US Federal Reserve (the Fed) and the SNB) have stated they are reluctant to use or reintroduce NIRP, given the costs imposed on banks, savers and some non-bank institutions, and the reputational challenges, but have not ruled them out.

***Financial stability and market functioning***

- **Bank profitability:** Prolonged negative interest rates could erode bank profits, weakening a key transmission channel of monetary policy and reducing banks' resilience to shocks. However, empirical evidence suggests that bank profits did not deteriorate materially in response to the period of moderately negative interest rates (Brandão-Marques *et al* 2024). In some cases, the squeeze on NIMs was offset by improved economic conditions and gains in non-interest income (such as fees and insurance income, Lopez *et al* 2020; Altavilla *et al* 2022). In other cases, as noted above, banks opted to reduce the extent of pass-through to protect margins. A central bank determined to implement NIRP can however mitigate part of the impact on profits by 'tiering' reserves remuneration (discussed below).
- **Impact on broader markets**: The introduction of negative interest rates tends to lead to a decline in money market activity but the effect on markets more broadly appears to be modest. Some central banks used reserve tiering to alleviate market functioning issues from NIRP.
- **Non-bank financial institutions.** The evidence on the impact of negative rates on non-bank financial institutions is not clear. It is likely that the greater concern would lie with less regulated non-banks and institutions with weaker supervisory oversight; lending by non-banks can be more concentrated, riskier and more pro-cyclical than bank lending, which could make their profits more vulnerable to negative rates.
- **Excessive risk taking**: Empirical evidence suggests that NIRP has led to a rise in risk-taking by banks and investors in economies where it had been used (by design), but there is little evidence to suggest that this increase in risk-taking translated into higher non-performing loans (Heider *et al* 2019; Bottero *et al* 2022). But some research suggests that if NIRP is in place for an extended period, it could distort investment decisions, lower potential output and reduce bank profitability (Berentsen, Buggenum and Ruprecht 2023).
- **Administrative risks:** There have been concerns around accounting standards, and legal and operational challenges faced by market participants and broader investors. However, many of these could be mitigated through communication and pre-work ahead of implementing NIRP, and by the negative rate guidance issued by the International Financial Reporting Standards Foundation.

***Neutrality***

NIRP could have uneven effects across banks and depositors, going beyond the distributional impacts typically associated with conventional monetary policy. These distributional effects could become politicised and, in some cases, alter the transmission of policy rate cuts.

- **Uneven effects on banks:** NIRP tends to reduce profitability for banks with high shares of retail deposits, limited wholesale funding and/or proportionately large reserve holdings. Empirical evidence suggests that the income of smaller banks and more specialised banks fared worse under low rates, including negative rates.
- **Uneven effects on depositors:** Negative interest rates are rarely passed on to retail depositors but are commonly applied to some institutional deposits, including corporations and superannuation funds, which indirectly affects households through lower returns. In some cases, households with large deposit balances have faced negative rates, which has led to criticism from these groups.

  More broadly, some banks may respond to NIRP by increasing fees and commissions to offset pressure on profits. Because such fees are often not proportional to the size of deposits, this could place a larger burden on lower-deposit households. Overall, the distributional effects of negative rates are difficult to assess, with limited empirical evidence available.

***Risks to the RBA***

NIRP can incur significant reputational and other risks for the RBA. The key risks are:

- **Reputational risk:** Negative interest rates can be deeply unpopular. Some countries that have implemented NIRP have seen widespread criticism by the public, the media and market participants. Much of this stems from savers facing persistently low, and sometime negative, deposit rates and higher deposit account fees, and banks facing pressure on their profitability. Broader public criticism can also reflect that the expected effects of the policy are not widely understood.

  There is also a clear division among policymakers and economists more broadly on the viability of the policy; this debate is most prominent in countries who have not implemented NIRP.

  Tailored and strategic communications could partly offset the extent of the reputational risk (see *Viability*).
- **Operational risk:** Negative rates could disrupt our operations if internal work to prepare the RBA's IT and operation systems were rushed or insufficient. Other institutions will also need to invest in their systems. This speaks to the need for careful preparation before contemplating NIRP (see *Pre-work* below). Even with thorough preparation, some unexpected operational issues may still arise.

## Viability and flexibility

- **Operational readiness.** The RBA and Australian institutions would need to ensure operational and legal readiness for NIRP. Overseas, this has been managed through early communication by central banks and prudential regulators, requiring institutions to prepare for negative rates in advance (with a timeframe of around 6 to 12 months). If the RBA were to consider NIRP, it would need to signal intentions before implementing and coordinate closely with APRA. Internal reviews of IT systems, documentation, and accounting rules would also be essential.
- **Policy exit.** If operationally ready, as an extension of the conventional monetary policy tool, moderate NIRP could be easier to calibrate and implement than some other AMPTs. Changing or exiting the policy early is straightforward; the tool is (almost) as flexible as conventional monetary policy.
- **Communication.** Communicating NIRP to the general public and financial market participants can be challenging and risky; the expected effects of the policy are not widely understood, and it can be deeply unpopular and politicised. This cost would be higher if RBA messaging had recently implied negative rates were unlikely.

  Clear, targeted communication can help to manage some of the reputational risks associated with the policy. Central bank messaging that emphasises the expected benefits of adopting negative rates, and the likelihood and size of potential costs, can improve public understanding and ease some of the concerns among households and businesses. Regular reporting on how cuts in the cash rate are passing through to funding costs and to deposit and lending rates may also build households' and businesses' confidence in the policy, and public pressure may encourage banks to pass on the cuts.

  As part of designing the policy, the RBA would need to prepare a communication strategy tailored to audiences with different levels of economic literacy. The RBA would also need to consider how moving to negative rates influences previous communication about its reaction function, and how best to guide policy rate expectations both before implementation and while rates remain negative.

## Broader public policies and consolidated public-sector balance sheet

As an extension of the cash rate, NIRP does not generate subsidies or expose the RBA's balance sheet to financial risks. However, it has important implications for other agencies, particularly APRA and the Treasury.

As the prudential regulator, APRA would be well placed to monitor and assess how NIRP affects the profitability of banks and non-banks, as well as any changes in risk-taking by lending institutions. Close coordination with APRA and the CFR would also be needed to help ensure the market is operationally prepared (see below).

NIRP can provide near-term benefits to the consolidated public-sector balance sheet. Negative rates can lower government borrowing costs; in some overseas cases governments earned significant amounts from issuing debt at negative yields. Stronger economic activity can also raise tax revenue. Although this may strengthen the consolidated balance sheet for a time, an improvement in economic conditions would likely be accompanied by higher interest rates, increasing the refinancing costs of government debt. The resulting fiscal costs could be amplified if a prolonged period of negative interest rates encouraged greater public borrowing or led to a loosening of fiscal discipline (BoJ 2024).

# Key design choices of negative interest rates

NIRP, unlike other AMPTs, does not have many design parameters. However, the effectiveness of the policy would depend on the pace and extent of rate cuts into and within negative territory, and whether to tier reserves. The extent of communication and operational preparation ahead of the policy being implemented is also crucial.

- **Operational preparation**. It has been common for a central bank to review their systems, documents and rules if NIRP is viewed as being a useful option. In this case, it is also common for central banks to openly communicate the expectation for market participants and broader institutions to operationally and legally prepare for negative rates. This could happen either as the policy rate approaches zero, or in a time of economic stability. Coordination with the prudential regulator assists in the markets' preparedness. The RBA would also need to engage with other agencies – including APRA and the Treasury, and the CFR – as part of its pre-work engagement.

  However, the Bank of Japan was able to announce NIRP without providing advance notice to market participants. Banks had just over two weeks to be operationally ready for implementation of NIRP. This contributed to some public criticism about the BoJ's approach and left certain participants with trading systems requiring urgent updates to manage negative rates (McCurry 2016; Sano and Kihara 2016). Nonetheless, the policy was implemented with limited disruption overall.
- **Pace**. The pace of NIRP cuts is typically slower than conventional policy rate cuts given uncertainties around the estimates of the ELB and reversal rate. A slow pace of reductions – such as in 10 basis point increments with extended holds – would help to manage the risk of rates going below one of these thresholds. But it also potentially reduces the (cumulative) effectiveness of negative rates.
- **Reserve tiering.** Tiered remuneration reduces the burden of negative policy rates on banks' profits and liquidity, but tiering could slightly diminish pass-through to lending rates (Basten and Mariathasan 2023; Maechler and Moser 2020; Fuster, Schelling and Towbin 2024). Tiering involves having a portion of reserves – often the minimum amount for legal or prudential requirements, but sometimes more – exempt from negative interest rates. At a system level, reserve tiering could also help to support activity in the interbank market.

  Approaches to reserve tiering have varied considerably across the central banks who implemented negative rates, based on the structure of their banking system and whether the aim of introducing tiering was to alleviate pressure on banks' profits or to support interbank market activity. This includes how the level of expected reserves was calculated, the rate applied to those balances, and the number of tiers used.

  Implementing reserve tiering in Australia would require significant work. The appropriate design would depend on the structure of the Australian banking system and would be subject to close scrutiny from market participants. Given the complexity, it should form part of any pre-work for operationalising NIRP to allow sufficient time for development.

# Term Rate Targets (TRTs)

## Key points

**Expected effectiveness:** TRTs involve the central bank committing to hold the yield on a market instrument, such as the 3-year yield on a government bond, at a given low level. This is intended to signal that policy will remain accommodative for some time (similar to forward guidance, but with the commitment defined with reference to a term rate and underpinned by central bank purchases). If the commitment to maintaining an accommodative policy stance is credible and term rates are above what the central bank judges appropriate, TRTs could influence a range of market prices and ease broader financial conditions.

The effectiveness of a TRT declines as the commitment to maintaining the target detaches from public and market expectations for the policy rate. In these circumstances, the signalling channel weakens, and the target has little influence on broader market rates and financial conditions unless the central bank is prepared to take on substantially more financial risk.

**Potential costs:** To the extent that TRTs require active bond purchases, they pose similar risks to BPPs: defending the target could incur significant financial and reputational risk, and compromise market functioning if the central bank's purchases create too much scarcity in the target instrument.

The largest risks arise around a TRT's exit. Signalling an exit too early risks undermining the credibility of the target and its influence on policy rate expectations, but an unannounced exit could lead to a period of market dysfunction and harm to the central bank's reputation. Some strategies can mitigate this to some extent. A TRT is more likely to be effective when there is a sufficiently high level of confidence about the economic outlook.

**Viability and flexibility:** The RBA is operationally ready to implement an operational target on a government bond yield. But purchasing a wider range of instruments to promote transmission of the target across markets when policy rate expectations shift, or a target on a different type of instrument such as swaps, would require substantial preparation.

Given the risks around a TRT's exit, clearly defined exit and communication strategies should be developed as part of the tool design. This could include pre-defining the conditions that would trigger an early exit or increase to the tolerance band.

**Broader public policies and consolidated public-sector balance sheet**: TRTs have fiscal implications and may impact the work of other government agencies. The RBA should consult with the Treasury and the Australian Office of Financial Management (AOFM) to manage the risks of using this tool.

## Overview of term rate targets

A TRT involves the central bank specifying an operational target for a yield(s) on an instrument (or instruments) with a term longer than overnight and committing to achieve the target with market transactions as needed. In some ways a TRT has similarities to forward guidance with commitment as it works by shaping expectations of the future policy rate and therefore relies on the credibility of the central bank. But a TRT expresses that commitment in terms of a yield, which is a function of expected future short-term rates plus term premia. In this sense, a TRT can provide a clearer and more concrete commitment than forward guidance alone, because the commitment is defined in terms of an observable yield and reinforced through transactions, and can influence broader financial conditions – particularly when the chosen yield is a key benchmark rate for other markets and products. The RBA used a yield target as part of its response to the COVID-19 pandemic.[24]

[24] For a review of the RBA's experience during the pandemic see RBA (2022d).

The commitment to maintaining the target yield can be specified in a few ways, which can influence its effectiveness, viability and the flexibility of its exit strategy (see *Viability*). These include:

- **Security-based**: Maintaining the target for a specific security (for example, targeting the yield on the current three-year bond), and not extending the target over time. In most cases, committing to maintain the target on a specific maturity will be interpreted by market participants as date-based forward guidance. For example, the RBA's target on the three-year Australian Government bond was interpreted by some market participants as three-year forward guidance.
- **Duration-based**: Maintaining the target on a specific maturity for a specific period (for example, targeting the three-year yield on Australian Government Securities (AGS) for three years). This would involve extending the target over time to include securities with the maturity closest to the target.
- **State-based:** Maintaining the target until specific economic outcomes are realised or forecast to occur (for example, until inflation reaches 2 per cent). As an example, the Bank of Japan (BoJ) committed to maintaining a target on ten-year Japanese Government bonds until it achieved its price stability target, provided the target could be maintained in a stable manner (Bank of Japan 2016).

A TRT could lower interest rates more broadly through two channels:

- **Signalling**: A TRT can signal that the central bank intends to hold policy rates at low levels for an extended period. If the commitment to maintaining accommodative policy is credible, then this can lower the expected path of risk-free rates and the term premium (Eggertsson and Woodford 2003; Bhattarai, Eggertsson and Gafarov 2023).
- **Portfolio balance**: Central bank purchases of targeted instruments encourage investors to seek close substitutes, thereby reducing term premia on a wider range of instruments, through the same mechanisms as a BPP (Vayanos and Vila 2021; Greenwood, Hanson, and Liao 2018).

Because these channels can influence the expected path of risk-free rates and term premia, a credible TRT can ease broader financial conditions, including via the banking sector, the exchange rate and other financial markets. These effects can encourage borrowing and investment, support economic growth and lift inflation expectations.

In practice, implementing the target typically involves purchasing instruments directly linked to the operational target (e.g. a specific 3-year Australian Government Security), but could also involve purchasing a broader range of securities around the targeted security to reinforce transmission (for example, the BoJ's nimble market operations for their 10-year Japanese Government Bond (JGB) target included purchasing bonds of maturities between 3 and 25 years, and JGB Futures). Implementation also depends on the pricing and other terms of any 'stock lending facility' for market participants to borrow the security from the central bank, if in place.[25]

# Assessment of term rate targets

## Expected effectiveness

**TRTs can ease financial conditions when the commitment is credible enough to meaningfully lower the expected policy path.** This is possible when term rates are significantly above what the central bank judges appropriate given the outlook and the TRT is sufficiently credible to reduce market participants' interest rate expectations. Under these conditions, both the signalling and portfolio balance channels operate; the TRT can influence the expected path of risk-free rates and broader financial conditions, and ultimately lower borrowing costs for households, businesses and governments. If term rates are already low, or if the target is viewed as non-credible, it will not have the same impact on interest rate expectations or broader financial conditions.

[25] A stock lending facility is where the central bank makes its securities available to dealers on short-term loans to improve market liquidity, help with settlement and support market-making functions.

The experience in Japan suggests that TRTs can lower yields along portions of the government curve and, at times, ease broader financial conditions (Hattori and Yoshida 2023; Shiratsuka 2024; Nakazawa and Osada 2024). Similarly, the RBA's Yield Target during the COVID-19 pandemic was able to materially lower funding costs and reinforce the RBA's forward guidance for much of the time it was in operation (RBA 2022d).

TRTs may also delay the expected cash rate lift-off, helping to keep financial conditions easier for longer. However, these effects face the same time-inconsistency problems as forward guidance with commitment, which may reduce these effects.

**TRTs are less effective when the target stops influencing policy rate expectations.** If policy rate expectations rise materially above those implied by the TRT, the inconsistency between the central bank's interest rate policy and the target will give rise to arbitrage opportunities. Market participants may then sell or short instruments around the targeted maturity, putting upward pressure on the targeted yield.

In these circumstances, the central bank could choose to defend the target. But doing so would involve substantial financial and reputation risks, create bond-scarcity concerns, and risk inflation materially overshooting target (see *Viability and flexibility*). Whether the target continues to influence broader interest rates would depend on the central bank's tolerance for financial risk, and the terms of a 'stock lending facility'.[26]

Restricting short-selling through the stock-lending facility could reduce the financial risks associated with defending the target but would also limit the impact of the TRT on broader financial conditions. Here, broader market rates will dislocate from the targeted instrument and yield, and spillovers to broader financial conditions will wane. For example, spreads widened between targeted Japanese Government Bonds and other rates such as swaps in Japan (Hattori and Yoshida 2023), and the RBA's yield target became inconsistent with the expected short-rate path in early 2021 – as reflected in rising swap rates – which substantially reduced its impact on broader financial conditions (Lucca and Wright 2022; Finlay, Titkov and Xiang 2022).

**A TRT could raise aggregate demand if credible, but empirical evidence is sparse**. Some evidence from Japan suggests that the BoJ's yield target accounted for over a third of the overall policy impact from 2016 to 2022 (Koeda and Wei 2024). The RBA's MARTIN model suggests that an immediate reduction in 2-year government yields by 35 basis points could lead to an additional 0.2 percentage point increase in GDP growth over two years, and a 0.15 percentage point increase in inflation. But such effects are only likely if broader financial conditions ease too.

**There is debate about the effectiveness of a TRT, particularly in Australia.** Empirical evidence on the effect of a TRT is very limited and difficult to disentangle from the impact of other policies. Some economists argue that much of a TRT's effect operates through the signalling channel, and that defining the commitment in terms of a yield and reinforcing it through purchases may offer only limited additional benefit relative to forward guidance with commitment, particularly given the risks involved. Additionally, the experience of the 2021 exit may have lessened the credibility of any TRT in Australia.

[26] If the fee the central bank charges counterparties to borrow the three-year target bond increases, this can make it more difficult for market participants to short sell the instrument, and therefore to speculate against the viability of the target. However, if the fee on the target instrument(s) is too high relative to other repo rates, this can contribute to a widening in spreads between the target instrument's yield and those of other securities, frustrating the intent of the policy.

## Potential costs

***Financial stability and market functioning***

Although TRTs can improve market functioning in some circumstances, they can create vulnerabilities in the financial system over their lifespan.[27]

- **Bond scarcity**: Defending the target can cause market dysfunction if the central bank's purchases create significant scarcity in the target instrument. Scarcity makes it difficult for market participants to price and transact in that instrument, leading to poor liquidity and undermining pass through to broader interest rates (Fukuma *et al* 2024).[28] While creating scarcity in the instrument may be necessary to maintain the target price on the bond, deterioration in bond market functioning can spill over into other markets; weaknesses in the Japanese government bond market due to the BoJ's interventions affected the corporate bond market and contributed to higher volatility across other financial markets (BoJ 2024). Scarcity of specific bond lines can be mitigated to some degree by a central bank's stock lending facility.
- **Policy exit**: Abandoning the target in a disorderly way can cause market dysfunction, predominantly in fixed-income markets. Even if the target was no longer thought to be credible, large upward movements in yields and uncertainty about the future of the target can lead to periods of excess volatility and strained market function (e.g. the RBA's exit from its Yield Target in 2021). A more carefully planned and transparent exit strategy could help to mitigate this risk, though in doing so poses other challenges (see *Viability*).

***Neutrality***

A TRT generally has limited implications for market neutrality. There could be some impact from the policy on relative asset prices and the allocation of credit, but the effect of this on market neutrality is likely to be small.

***Risks to the RBA***

TRTs carry very large financial and other risks for the RBA. The key risks are:

- **Financial risks:** Like a BPP, TRTs carry the potential for financial losses. Risks arise because the central bank is issuing short-term liabilities to fund the purchase of medium or long-term securities. The extent of losses depends on whether the target – and therefore the policy rate – is maintained over the life of the bond. If the target is abandoned, and yields and interest rates rise, the central bank will incur losses on its bond holdings (or other positions taken in support of the target).

  Similar to an open-ended BPP, the magnitude of potential losses depends on the volume of purchases required to implement the policy. If the central bank's commitment to the target – and therefore to maintaining accommodative monetary policy - is credible, a TRT might require only limited purchases to maintain the target. Conversely, defending a target could require very sizeable purchases and result in a substantial increase in the RBA's balance sheet (see *Viability*).
- **Reputational risk:** TRTs can pose significant reputational risks around the exit (see *Exit risks* and *Viability* below). Similar to BPPs, large financial losses can also lead to public criticism and public pressure, and to the perception that central bank losses are adversely impacting the government's budget.

  While uncommon, in some overseas jurisdictions the purchase of government bonds by the central bank – even through the secondary market – has led some commentators to raise concerns about reputational risks, central bank independence and the perception of monetary financing (Praet 2017; de Haan and Eijffinger 2017; BoJ 2024; Uchida 2025).

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[27] A TRT can improve market functioning during periods of market stress and volatility, as it can anchor expectations, adds to liquidity and price discovery, and places a cap on potentially disorderly moves in yields.

[28] Prolonged and significant intervention in the bond market by the BoJ – as a result of its yield target and bond purchase program (QQE) – impaired the functioning of the Japanese bond market (Koeda and Wei 2024) and, in some cases, trading almost stopped completely.

- **Disorderly exit:** if policy-rate expectations increase and broader market rates dislocate from the target yield, the RBA faces a difficult choice: either (a) attempt to defend the target, which will require purchasing large volumes of the targeted instrument and potentially broader securities, incurring duration risk on the balance sheet and eventually hitting capacity constraints in the market; or (b) to abandon the target, a step that is likely to lead to a period of material market dysfunction. Each option presents sizeable credibility, financial and market functioning risks (see *Viability*).

  To manage some of this risk, RBA staff and the MPB should consider exit strategies as part of the tool design. This could include pre-defining the conditions that would trigger an early exit or increase to the tolerance band, and the communication strategy for these situations.
- **Less informative market signals:** A TRT reduces the responsiveness of market pricing to economic news, similar to forward guidance. In doing so, it may diminish the information value of market pricing for policymakers as an independent gauge of the economic outlook.

## Viability and flexibility

- **Operational readiness.**The operational readiness of a TRT would depend on whether the RBA implements a narrow target focused on just one type of instrument purchased. Such a target – where operations are confined to a single (or small number of) instrument and terms of the stock lending facility fee are managed to reduce short-selling of the instrument, where necessary – is already feasible for government bond yields, and could be implemented quickly. As discussed above, such a target could be effective when it can influence policy rate expectations and the RBA is able to exit the policy when conditions shift.

  To defend the target and promote broad transmission, even when policy rate expectations increase, the RBA could consider conducting broader operations (such as by purchasing a wider range of instruments around the targeted security). This would require internal work by RBA staff, particularly if purchases were to extend to bond futures or swaps. As discussed below, these types of operations would entail significant risks, and would not be viable in many circumstances.
- **Credibility.** Low credibility would require the RBA to take on more financial and reputational risk in order to achieve the targeted price and desired impact on broader financial conditions. The credibility of a target would depend on the choice of securities to target and the exit strategy.
- **Communication.** Communicating a TRT would be extremely difficult. The policy carries material risks, is not well understood by the general public, and may be deeply unpopular, particularly given the experience of the 2021 exit.

  As part of policy design, the RBA would need to develop a communication strategy that sets out how it will describe its commitment to the target, how it would avoid or correct misinterpretations of that commitment, and how messaging will evolve as policy rate expectations shift and as the target approaches its end.

  There is also an important trade-off to manage. Stronger communication about the commitment enhances credibility and supports effectiveness, but may increase the reputational costs if the target needs to be adjusted or abandoned. More measured communication could reduce these reputational risks but may mean the target requires more purchases to be maintained.

  As with a BPP, the RBA should also be transparent about the financial risks associated with the policy. Transparent communication of the potential losses can help reduce reputational costs if losses materialise.
- **Operational versus policy decisions.** Operational decisions for the staff, policy decisions for the MPB and avenues for seeking advice from the Governance Board should be clearly defined ahead of implementing a TRT.

*Defending the target and exit strategy*

As discussed above, a TRT's commitment can be for a specific security (security-based), for a specific period (duration-based) or until an economic threshold is met (state-based). As with forward guidance, the flexibility of the policy depends on how the condition is specified and communicated. But the viability of the target, and the financial and reputational risks, differ with the commitment type.

- **Security-based**: Defining the target in terms of a particular security (such as a certain bond line) provides the easiest conditions to unwind; the target will roll off naturally as the security matures, reducing the need to defend the target towards the policy's exit. But this type of target is likely to be less potent that other types of commitment.
- **Duration-based**: Duration-based commitments are harder to unwind if conditions improve unexpectedly and increase the risk of inflation overshooting. Additionally, maintaining the commitment for an extended period is challenging when uncertainty is high.
- **State-based**: A state-based strategy might better balance commitment with maintaining policy flexibility but makes the TRT increasingly unviable as the threshold approaches and there is some probability the target will be lifted. As the yield will push higher well in advance of hitting the exit point, defending the target would require the RBA to commit to take on greater financial risks towards the end of the policy to offset speculative selling. Such a strategy is unlikely to be credible, and locks in an almost certain capital loss when the target is released.

To defend the target – either if policy rate expectations increase unexpectedly or as the policy approaches the specified exit – the central bank could take different approaches:

- **Abandoning the target** before the exit criteria are reached. This would damage the central bank's credibility and reduce the effectiveness of future commitment-based policies. But it would lower the financial risks associated with the policy and reduce the reputational risks from making substantial purchases and incurring large losses on an increasingly unviable policy.
- **Defending the target** would require the central bank to purchase large volumes of the targeted instrument and to adjust the terms of any stock-lending facility to limit short selling. This approach increases financial risks, heightens bond-scarcity concerns and risks policy remaining too accommodative. Additionally, the effect on broader interest rates will be limited as the target yield dislocates from other markets.

  Gradually widening the tolerance band around the target can help mitigate some of these risks. The BoJ widened its yield-target range four times over the life of the policy, which allowed it to look through short-term deviations and ultimately exit the framework more smoothly.
- **Defending the target and reinforcing broad transmission** would involve very large volumes of purchases. This would not be a credible option in most circumstances; it entails extremely large financial risks and substantial reputational risks, carries significant bond-scarcity concerns, and risks inflation overshooting.

The efficacy of each option would depend on the relative size of each risk, the extent of future uncertainty and whether pressure on the target might be temporary or not. As policy rate expectations increase, defending the target becomes progressively less viable.

To formally exit a TRT, the central bank could remove the target by letting the target maturity roll down (if it is not already tied to a specific security), gradually lifting the target yield, or widening the tolerance band before discontinuation

*Broader public policies and consolidated public-sector balance sheet*

TRTs have fiscal implications because they impact the consolidated balance sheet, though their total impact is hard to quantify. AGS purchases under a TRT are recorded as RBA assets and AOFM liabilities; in both cases they are marked to market, resulting in offsetting movements in the RBA's and AOFM's accounting profit and loss over time. But a TRT changes the interest rate exposure of the consolidated public-sector balance sheet and can cause large losses as yields rise.

At the same time, TRTs can lower government borrowing costs and increase tax revenue from stronger economic activity, providing near-term benefits to the consolidated public-sector balance sheet. Although this may strengthen the consolidated balance sheet for a time, an improvement in economic conditions would likely be accompanied by higher interest rates, increasing the refinancing costs of government debt. The resulting fiscal costs could be amplified if a prolonged period of low interest rates and compressed government bond yields under a TRT encouraged greater public borrowing or led to a loosening of fiscal discipline (BoJ 2024).

Given the potential implications for fiscal policy and the consolidated public-sector balance sheet, the RBA should consult the Treasury about planned purchases and possible large financial losses, where timing and circumstances permit.

The RBA should also engage with the AOFM to assess whether issuance plans could adversely impact the efficacy of a TRT or market functioning, or whether a TRT could impact issuance plans.

# Key design choices of term rate targets

Designing a TRT requires decisions on the operational target, the instruments used to defend it, and the exit strategy.

***The targeted yield range and instruments***

Because a TRT is intended to signal the expected path of the policy rate, the operational target should be a risk-free (or near risk-free) rate, such as a specific government bond yield or a swap rate at a given maturity. The choice of an appropriate instrument (or instruments) would depend on what would most effectively ease financial conditions (given the nature of the economic weakness and structure of the Australian economy), whether the market would have sufficient liquidity and what could minimise reputational and financial risks around the policy exit. The target maturity should align with the period over which the central bank expects the policy rate to remain at (or near) zero and be consistent with any forward guidance.

A TRT would most likely involve targeting the yields on Australian Government Securities, given they are highly liquid and a key benchmark for interest rates in Australia. In particular, the three-year maturity plays a key role in funding for much of the Australian economy and may have a larger impact on the exchange rate than longer-term maturities (Galí 2020). However, maintaining a commitment beyond the short-term would be challenging, and should be reserved for genuinely extreme circumstances where the central bank is reasonably confident it will carry through on its commitment. Additionally, if the three-year AGS yield becomes detached from other markets rates and from broader policy rates expectations, the relevance of the 3-year AGS yield as a benchmark could decline. Targeting a shorter maturity might be more robust and credible but would provide less stimulus and would face greater bond scarcity concerns.

Other instruments – such as interest rate swaps - could also be viable for a TRT. However, targeting swap rates would differ significantly from targeting bond yields in terms of operations, communication and policy transmission, and could incur significantly greater financial and reputational risks. The RBNZ has previously communicated that they would consider targeting interest rate swaps, which are an important benchmark for interest rates (particularly mortgage rates) at short horizons in New Zealand (Kengmana 2021).

***Securities purchased***

Most TRT programs transact in instruments directly linked to the operational target. For example, the RBA's Yield Target was for a specific 3-year Australian Government Security and almost all operations in support of the target involved purchases of the target bond. This approach would most directly achieve the target but can create dysfunction where the target market is shallow or illiquid. More fundamentally, confining operations to a relatively small market may limit transmission to broader interest rates.

Transacting in instruments with deeper, more liquid markets may require taking greater positions to influence their yields, increasing financial risks for the central bank. The central bank would need to be prepared to take positions proportional to the size of the 'broader' financial market to ensure pass through. In some cases, the existence of derivatives markets (both interest rate swaps and forward/repo markets for 'physical' securities) means there is no natural limit on the size of the relevant markets or the positions that the central bank may need to acquire in defence of a TRT.

# Foreign Exchange (FX) Asset Purchases

The MPB has established a policy that permits intervention in the spot FX market to address a significant misalignment in the value of the Australian dollar from levels implied by monetary policy settings or other 'fundamental' determinants of the exchange rate.[29]

That said, it is important to distinguish FX operations to lean against a perceived departure in the exchange rate from its 'fundamental' value that is undermining our monetary policy stance from FX operations designed to initiate a change in the stance of monetary policy.

The MPB's policy does not currently permit the use of FX operations to change the stance of monetary policy. Here we consider if there is a case to revisit that policy position once the cash rate target approaches or reaches zero.

### Key points

**Expected effectiveness:** FX asset purchases could be used to keep the value of the Australian dollar (AUD) low – by buying foreign currency and selling Australian dollars – thereby supporting aggregate demand and inflation. However, given the size of the market, the RBA would need to commit to extremely large FX purchases to meaningfully influence the AUD on an ongoing basis and outside of periods of market dysfunction. As the AUD tends to depreciate when economic conditions weaken, FX asset purchases to weaken the currency even further are only likely to be useful in rare circumstances.

**Potential costs:** FX asset purchases present very large financial risks to the RBA because it implies accumulating a lot of outright FX reserves. Financial risks are typically higher for a 'currency ceiling' than the alternative of quantity-based purchases; reserve growth could be uncapped to maintain the ceiling. Exiting a currency ceiling also presents high financial stability and market functioning risks.

**Viability and flexibility:** Existing systems could be used to implement FX asset purchases, but work would be required to understand the implementation details and governance arrangements of the policy. Some existing systems may struggle to process the volume of trades required to intervene for monetary policy purposes.

A currency ceiling could be extremely challenging to defend or exit. Quantity-based intervention would be operationally easier to implement and exit, but determining the scale of purchases would be difficult.

**Broader public policies and consolidated public-sector balance sheet**: FX asset purchases expose the public balance sheet to substantial foreign exchange risk and could become increasingly politicised. The RBA should consult with the Treasury to manage the risks of using this tool.

## Overview of FX asset purchases

FX asset purchases (as an AMPT) refer to operations where a central bank purchases foreign currency and sells domestic currency, aiming to depreciate the domestic currency and thereby stimulate aggregate demand.[30] FX asset purchases can influence the exchange rate through two main channels:

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[29] Purchases in the spot market to address dysfunction in the Australian dollar would be captured under the MPB's Policy on Financial Market Intervention to Address Market Dysfunction (RBA 2025).

[30] Interventions can be sterilised (offset by domestic market operations to neutralise the impact on monetary base) or unsterilised (allowing the monetary base to change). This distinction has been historically important under scarce reserve regimes but is less important under an abundant or ample reserve regime. Additionally, this distinction is unlikely to be relevant in a near-zero policy rate environment.

- **Portfolio balance**: Given that domestic and foreign currency assets are not perfect substitutes, altering their relative supply changes their relative prices. Central bank operations can therefore affect the exchange rate (Branson and Henderson 1985).
- **Signalling**: Intervention may signal future policy intentions or the likelihood of further operations, shaping expectations for the path of monetary policy or exchange rate dynamics (Sarno and Taylor 2001).

This assessment focuses on the use of **quantity-based foreign exchange interventions** and **managed exchange rate regimes** as a monetary policy tool in a near-zero policy rate environment:

- **Quantity-based foreign exchange interventions**. Purchasing a given volume of foreign currency over a specified period. This is similar in some ways to intervention that is designed to counter one-sided or speculative moves, but this policy is intended to be enduring so as to ease monetary policy settings.
- **Managed exchange rate regimes (currency ceiling)**. Adopting a ceiling for how much foreign currency a unit of domestic currency can purchase, where the nominated level is below the prevailing exchange rate. This approach has been used by several European economies that fall outside the euro area but are sensitive to euro fluctuations (such as the Czech National Bank (CNB) and the Swiss National Bank (SNB)).

FX-centred monetary policy frameworks, where a central bank uses the exchange rate as their primary monetary policy instrument (such as Singapore), are also out of scope for this assessment.

The RBA has not intervened in the FX market since 2008, when it sought to address market dysfunction during the Global Financial Crisis. The RBA has not used FX asset purchases as an AMPT before; past interventions did not aim to stimulate demand when the policy rate was near zero.

# Assessment of FX asset purchases

## Expected effectiveness

**Limited evidence suggests that a currency ceiling can stimulate aggregate demand and boost inflation**. A currency ceiling has been employed as an AMPT by two advanced economy central banks: the CNB and SNB. Empirical evidence suggests these policies lifted inflation by around 0.5 to 1.8 percentage points (Caselli 2017; Brůha and Tonner 2017; Opatrný 2017; Cwik and Winter 2024; Auer, Burstein and Lein 2021).[31]

**The evidence on the impact of quantity-based FX interventions is sparse.** Interventions in FX markets by advanced central banks have typically been to counter one-sided pressures (such as preventing sharp appreciations or depreciations). Although actions to prevent an excessive appreciation will indirectly support aggregate demand, these interventions are not usually framed as tools for monetary policy purposes, but rather as market functioning tools (with an exception being the SNB's interventions after abandoning the FX ceiling).

Some studies suggest that FX purchases equal to 1 percentage point of GDP can depreciate the exchange rate by around 0.2 to 1.7 per cent, though the effect is likely to depend on the nature of the shock, the intervention strategy (including its pace, duration and communication), and the relative size of the FX market to GDP (Adler, Lisack and Mano 2015; Cwik and Winter 2024). These studies are mostly focused on either emerging markets or on the experiences of the SNB.

**It is not clear in which contexts FX asset purchases would be effective or sustainable as an AMPT in Australia**. The AUD is highly risk-sensitive and tends to depreciate sharply (and sometimes in a disorderly way) during global downturns. Consequently, the need to counteract 'safe-haven' or other appreciation pressures is unlikely to arise. That said, there may be circumstances, such as during the pandemic, where all central banks

[31] The SNB and the CNB call their FX intervention floors, because their currency is typically quoted in terms of units of domestic currency per unit of foreign currency (unlike Australia). For the sake of consistency we call these policies FX ceilings, because they are designed to prevent domestic exchange rate appreciation.

lower rates to near zero. In such circumstances, the currency may not be misaligned but the exchange rate channel would nevertheless be more muted than otherwise.

**Sustainably lowering the AUD would be very difficult when FX markets are well-functioning.** The AUD is one of the most liquid and highly traded currencies; in 2025, daily turnover was around US$200 billion and the AUD was the fifth most traded currency in the world. To meaningfully influence the exchange rate on an ongoing basis, the RBA would need to credibly commit to extremely large FX purchases. However, some models suggest quantity-based FX intervention could be more effective when policy rates are at, or close to, zero (Cwik and Winter 2024) due to the signal it sends about the future path of policy. The success of FX policy would also depend on other central banks' actions. For example, a currency ceiling on the AUD might be even less sustainable if other central banks adopt FX asset purchases or other AMPTs (which also tend to work to depreciate the value of their currencies).

**The macroeconomic effects in Australia are uncertain but would likely be positive**. There is a substantial body of evidence which estimates the effects of FX shocks on inflation and output. This suggests that, in general, exchange rate movements have a material impact on both output and inflation. As a rule of thumb, Chung, Kohler and Lewis (2011) estimate that a 10 per cent sustained depreciation of the Australian dollar adds 0.2 to 0.3 percentage points to inflation in the first year, and up to 1 percentage point over 2 to 3 years. However, not all exchange rate movements pass-through in the same way; Forbes, Hjortsoe and Nenova (2020) finds that the nature of the FX shock plays an important role, with monetary policy shocks having a larger effect on prices.

## Potential costs

***Financial stability and market functioning***

FX asset purchases would pose substantial risks to market functioning and financial stability.

- **Disorderly exit (currency ceiling)**. Exiting a currency ceiling is likely to be extremely challenging and pose substantial risks to market functioning (see *Viability*). A build-up of leveraged positions (predicated on the central bank maintaining its FX policy) can mean that exiting the policy causes a rapid appreciation in the currency as participants rush to cover their positions. Liquidity squeezes and margin calls on positions can have implications for the health of banks and non-bank financial institutions (such as hedge funds). FX market liquidity and price discovery can evaporate for a time and market volatility can be extreme (as occurred when the SNB abandoned its ceiling in 2015).[32]
- **Distorted incentives.** Exit risks could be compounded if the exchange rate ceiling distorts the incentives for the private sector and encourages excessive risk taking, such as if Australian banks and corporations – which have large foreign liability positions – change their hedging behaviour in response to the ceiling.

***Neutrality***

FX asset purchases generally have limited implications for market neutrality domestically. While some industries could be advantaged or disadvantaged over others, depending on their relative export/import mix, these effects are likely to be small. However, there may be concerns that the central bank is distorting international markets if the balance sheet becomes very large.

[32] When the SNB abandoned its ceiling, there was a rapid 15-30 per cent currency appreciation and market dysfunction. On the day the policy was abandoned, liquidity in the currency evaporated and some market participants were unable to exit trades or reconcile their exposures. Some traders and retail brokers experienced substantial losses as a result, and a small number entered bankruptcy following the policy change (Logutenkova 2015; Enrich, Rexrode and Whittall 2015).

***Risks to the RBA***

FX asset purchases carry significant financial and other risks for the RBA. The key risks are:

- **Exchange rate risk**. FX asset purchases could result in a substantial increase in the RBA's FX reserve holdings, increasing its exposure to exchange rate risk. This could lead to material losses in the event of a significant appreciation of the AUD. These losses can arise during the course of the program (if it is unsuccessful), on or after the exit from the program (even if the program has been successful in achieving its monetary policy objectives). This risk is much higher for a currency ceiling (than a quantity-based program), where reserve growth can be uncapped and the currency can rapidly reprice when the ceiling is removed. The SNB lost an estimated 50bn francs (A$95bn, or approximately 7 per cent of GDP) on its FX reserves in the six months following its abandonment of the FX ceiling in 2015 (SNB 2015; BBC 2015).
- **Other financial risks.** Even absent an adverse move in the exchange rate, large FX reserves can be costly if the domestic interest rate paid on central bank liabilities (in the RBA's case, exchange settlement balances) exceeds the average yield on the FX reserves. Larger FX reserves also expose the RBA to much higher sovereign risk and can lead to impaired total liquidity because the RBA owns a much larger share of the sovereign bond market. In rare cases, concentration risks may require investing in less liquid or riskier securities, exposing the central bank to potential losses.
- **Credibility (exchange rate ceiling).** FX asset purchases and unclear exit strategies risk destabilising expectations (about exchange and interest rates) if the policy is not well understood by market participants. Like a term rate target, a currency ceiling imposes a price on the market that may not otherwise be achieved, which can trigger large market transactions and increase financial risk. Furthermore, a currency ceiling often lacks a natural exit point, heightening credibility and exit challenges
- **Reputational risk**. The growth of the central bank's balance sheet can create political challenges that may impair independence, particularly if the reasons for the growth in reserves is not well understood. FX asset purchases may also create geopolitical risks if foreign governments view the RBA's asset purchases as currency manipulation.

## Viability and flexibility

- **Operational readiness**. FX asset purchases could be implemented with existing systems. However, the RBA would need to confirm that its existing trading and compliance systems could handle the volume of transactions required. The RBA would also need to consider how intervention could interact with its counterparty credit risk limits, and how to operationalise purchases in a way that is viable given the large magnitude of purchases that could be required. Furthermore, work would be required to understand the potential sizing (i.e. the scale of purchases and/or the level of the ceiling) and governance arrangements of the policy. Staff would likely need to re-assess many of the RBA's existing policies in light of the new policy.
- **Credibility (currency ceiling)**. The credibility of establishing a ceiling for the currency is uncertain, including because of the RBA's earlier experience with a 3-year yield target and the SNB's experience with its FX policy. If credibility is weak, the RBA may need to demonstrate that it is prepared to take on significantly higher financial (and reputational) risks to implement the policy. This has had mixed results historically. The SNB's ceiling required substantial FX purchases – increasing the SNB's foreign exchange reserves from around 50 to almost 100 per cent of GDP – and ultimately proved unsustainable; the SNB unexpectedly abandoned the ceiling in 2015 (SNB 2015). By contrast, the CNB's exchange rate ceiling was assessed as generally effective at supporting demand in a low-interest rate environment and had a smoother exit, which was in part due to a greater willingness to signal their exit and absorb the resulting speculative flows (Caselli 2017).
- **Communication**: Communicating the need for large-scale FX asset purchases for monetary policy purposes would be extremely difficult. This is particularly true for FX ceilings, because they are an open-ended commitment whose costs, duration, and exit depend on uncertain global conditions.

- **Policy exit**: Changing or exiting a currency ceiling is extremely difficult. The CNB managed a relatively smooth exit by committing to maintaining the ceiling up to a specific date before signalling that the ceiling may be removed. However, this approach increased the CNB's financial risk due to the need to absorb large speculative flows. By contrast, the SNB's abrupt exit caused major disruption but avoided a substantial increase in financial risk (Jeffery 2018). A quantity-based FX program would offer greater flexibility and an easier exit but is likely to be far less powerful than a currency ceiling.
- **Unwinding the balance sheet**: Unwinding the FX reserves which would accumulate during an extended period of intervention would be slow and challenging, particularly if there were significant purchases. The RBA would need to sell reserves carefully to ensure that the unwinding process does not conflict with the desired stance of monetary policy.

### Broader public policies and consolidated public-sector balance sheet

FX asset purchases can have broad effects on other institutions, particularly the Treasury. Large-scale FX asset purchases would expose the RBA's balance sheet – and therefore the consolidated government balance sheet - to substantial foreign exchange risk. Decisions about the currency composition and asset allocation of potentially very large foreign exchange reserves could also become increasingly politicised, and FX purchases may carry geopolitical risks if foreign governments interpret them as a form of currency manipulation. At the same time, FX asset purchases can increase tax revenue from stronger economic activity, providing near-term benefits to the consolidated public-sector balance sheet.

Given the potential implications for fiscal policy and the consolidated public-sector balance sheet, the RBA should consult the Treasury about its plans to purchase foreign assets and possible large financial losses, where timing and circumstances permit.

## Key design choices of FX asset purchases

***Intervention type***

A **currency ceiling** could, if credible, deliver a sustained and predictable depreciation of the currency. This could provide a powerful boost to aggregate demand and inflation. However, this approach carries substantial risks. Maintaining a ceiling may require very large (and potentially unlimited) FX reserve accumulation – particularly if the commitment to defending the level is not seen as credible – thereby exposing the RBA to significant financial risk.

By contrast, a **quantity-based FX intervention program** may involve less financial risk. It would also be more flexible, allowing adjustments as economic conditions change and/or if the effects of the initial intervention need to be supplemented with further operations. But this flexibility may come at the cost of effectiveness; if the central bank's desired effect on the exchange rate is unclear to market participants *ex ante*, this approach may be much weaker than a (credible) currency ceiling in influencing the exchange rate. Hence, whether the scale of actual purchases required is greater or lesser than with a ceiling is unclear

***Nature of a currency ceiling***

The RBA would need to decide at what exchange rate to set the ceiling. The RBA could aim for a particular bilateral exchange rate (most likely AUD/USD) or a level of the AUD against a basket of currencies (such as the trade-weighted index (TWI)). The TWI is arguably more important for achieving the desired effect of the policy but would introduce greater operational complexity.

***FX reserve management***

FX asset purchases are likely to lead to rapid increases in the central bank's foreign exchange reserves, and the RBA would need to determine how to best manage its larger FX reserves. This includes determining the optimal currency mix, duration, liquidity and credit risk parameters. Though unlikely, in a rare case the RBA may need to allocate funds to assets that are less liquid or riskier, given market concentration risks from the

potentially large size of the reserves. In some cases, central banks have accumulated 'investment portfolios' that were less liquid.

# Summary of Tool Interactions

To help staff when designing a package, Table 1 provides a high-level summary of how tools could interact and complement one another tools' effectiveness, potential costs and viability and flexibility. It does so by describing how other tools could impact the selected tool.

In general, many tools strengthen each other. For example, reinforcing effects arise when tools share transmission channels. Signalling effects can be strengthened when commitment-based tools are deployed together, or when balance sheet tools place interest rate risk on the RBA's balance sheet. Balance sheet tools (TLFs, BPPs, TRTs and FX asset purchases) often amplify each other through portfolio-balance effects, while combinations such as TLFs with BPPs or negative rates can enhance credit supply incentives. FX asset purchases are reinforced by tools that lower rate expectations or alter the relative supply of domestic versus foreign securities.

But costs can also amplify when tools that individually carry financial, reputational or financial stability risks are used simultaneously. Large expansions of the balance sheet – via a BPP, TLF, TRT or FX asset purchases – can heighten the central bank's balance sheet exposure and add to reputational risks. Tools that raise leverage or encourage risk-taking can compound those effects when used together. Conflicts can also arise where tools target similar market segments (e.g. BPPs and TRTs at the same maturity) or imply inconsistent policy paths (e.g. certain forms of forward guidance versus TRTs or negative rates).

Operational and exit considerations become more complex as tools are combined. Balance sheet tools can create liquidity drains as they unwind, raising financial stability risks if markets cannot absorb them smoothly; this risk is higher if multiple tools unwind at the same time. Using multiple tools also increases the difficulty of coordinating exits, particularly where commitment-based tools have been used. Some tools also interact mechanically - for example, reserve expansions from balance sheet tools can influence the feasibility of reserve-tiering under negative rates.

Taken together, the interactions across tools highlight the importance of careful package design, sensible sequencing, and explicit consideration of cross-tool effects; both in entry and exit, and when choosing different tool design elements. While many combinations can meaningfully reinforce policy transmission, they can also magnify risk if applied without careful consideration.

## Table 1: Summary of AMPT interactions

| Tool | Effectiveness<br>Tools which complement or reinforce | Potential costs<br>Tools which increase potential costs or contradict effect | Viability and flexibility<br>Operational and exit considerations |
|---|---|---|---|
| **Multi-tool interactions** | Many tools work through the signalling channel; using these tools together reinforces the potential signalling effect. | Several tools could encourage banks to take on excessive risks, and households and businesses to take on too much leverage. Using these tools together could amplify this risk.<br>Using balance sheet tools (TLFs, BPPs, TRTs and FXI) could amplify the financial risk to the RBA, with very large increases in the central bank's balance sheet and high reputational risk.<br>In general, most tools come with reputational costs. These costs could reinforce each other. | Balance sheet tools (TLFs, BPPs, TRTs and FXI) drain liquidity as they unwind, which could create FS risks if too fast for markets to absorb.<br>Drain on operational resources from certain tools – such as BPPs, TRTs and FXI – should be considered in tandem.<br>Using multiple commitment-based tools adds complexity to the exit of a policy package. |
| **Term lending facilities** | BPPs flatten the yield curve, increasing credit demand and reinforcing a TLF. Both remove duration from the market, reinforcing portfolio balance effects.<br>Forward guidance's low-rate commitment may reinforce the price-based incentives of a TLF.<br>Negative rates could create scope for a lower TLF rate, boosting incentives to use the facility. Banks could also be more motivated to meet TLF incentives to offset the profit impact of negative rates.<br>A TRT reduces banks' ability to profit from using cheap TLF funding to buy government bonds, improving a TLF's impact on credit supply. | If a fixed-rate TLF, a sharp rise in rate expectations or a need to over-tighten due to the end of forward guidance could create large financial costs when paired with balance sheet tools. | Interactions with forward guidance would depend on whether a variable or fixed rate TLF. |

| Tool | Effectiveness<br>Tools which complement or reinforce | Potential costs<br>Tools which increase potential costs or contradict effect | Viability and flexibility<br>Operational and exit considerations |
|---|---|---|---|
| **Government bond purchases** | BPPs and TLFs both take duration out of the market, reinforcing portfolio balance effects.<br>Negative rates make very short-dated securities costly to hold, strengthening a BPP's portfolio balance effects. Both could also reinforce lower policy rate expectations and the exchange rate channel. | A sharp rise in rate expectations or a need to over-tighten due to the end of forward guidance could create large financial costs when paired with balance sheet tools.<br>Negative rates introduce uncertainty about the future policy path, partly offsetting a BPP's impact on term premia.<br>A TRT and BPP that target the same part of the curve makes them close substitutes, potentially diluting each other's impact. Concurrent AGS purchases could raise scarcity concerns. | Exiting a BPP and TRT around the same time could be difficult to coordinate. In some circumstances, maintaining a BPP could help to manage exit from a TRT. |
| **Forward Guidance** | BPPs, fixed-rate TLFs and TRTs can reinforce forward guidance by strengthening the commitment to an accommodative policy stance.<br>Negative rates expand future policy space and signal lower-for-longer rates, reinforcing guidance.<br>TRTs and forward guidance could reinforce each other if commitments are consistent.<br>Large FX asset purchases (particularly currency ceilings) could reinforce forward guidance. | Negative rates could increase uncertainty about the future policy path, partly weakening forward guidance's ability to reduce rate uncertainty<br>Forward guidance and a TRT's commitment could conflict – such as state-based guidance alongside a date-based TRT – complicating policy. | Implementation choices of other tools could unintentionally create or alter forward guidance (e.g., implying rates won't rise until other tools are unwound).<br>A BPP's effect on forward guidance depends on whether guidance is date- or state-based, and whether the BPP is fixed-size or open-ended.<br>The impact of negative rates on guidance would need to be considered and depends on whether the commitment is to hold rates steady or not raise them. |
| **Negative interest rates** | A TLF could help to offset the profit impact of negative rates for banks.<br>A BPP could saturate money markets, making a negative cash rate easier to maintain; both tools reinforce lower rate expectations and the exchange-rate channel. | BPPs, TRTs and FXAP could expand reserves; other things equal, with negative rates, this increases pressure on banks' profits and, in extreme cases, could weaken passthrough and pose financial-stability risks. This could be managed through reserve tiering. | The expansion of reserves from other tools could make reserve tiering more viable. |

| Tool | Effectiveness<br>Tools which complement or reinforce | Potential costs<br>Tools which increase potential costs or contradict effect | Viability and flexibility<br>Operational and exit considerations |
|---|---|---|---|
| **Term rate targets** | If they target different maturities, a BPP could support a TRT's passthrough across the curve.<br>TRTs and forward guidance could reinforce each other if commitments were consistent.<br>Negative rates allow a lower TRT target and can strengthen the commitment to keep policy rates low over the target period. | Volatility around a TRT's disorderly exit could be exacerbated if it aligns with the end of a TLF.<br>A TRT and BPP that target the same part of the curve makes them close substitutes and potentially conflicting. Concurrent AGS purchases could raise scarcity concerns.<br>Forward guidance and a TRT's commitment could conflict – such as state-based guidance alongside a date-based TRT – complicating policy.<br>A sharp rise in rate expectations or a need to over-tighten due to the end of forward guidance could create large financial costs when paired with balance sheet tools.<br>Introducing negative rates after a TRT is set could create confusion and volatility about the future policy path and target rate. | Exiting a BPP and TRT around the same time could be difficult to coordinate.<br>Exiting forward guidance and a TRT around the same time could be difficult to coordinate; the TRT would likely need to be removed first.<br>Sequencing the exit from negative rates and a TRT could be challenging, but if done well could smooth the transition out of a TRT. |
| **FX asset purchases** | BPPs and TRTs could reinforce a currency ceiling by better aligning the term structure of rates with the exchange-rate target.<br>By lowering rate expectations, credible forward guidance could contribute to a weaker exchange rate and reinforce FX asset purchases.<br>Negative rates could lower interest-rate differentials reinforcing FX asset purchases. | A currency ceiling would likely become extremely expensive to defend as the forward guidance threshold is approached. | |

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