DISCUSSION OF 'NORMALIZING THE CENTRAL BANK'S BALANCE SHEET: IMPLICATIONS FOR INFLATION AND DEBT DYNAMICS' – RBA-TREASURY CONFERENCE – SEPTEMBER 2025[1]

I am excited to discuss Begoña and Pedro's paper on balance-sheet normalisation, as I have spent a big share of my career at the RBA thinking about QE, QT and government bond markets generally.

The main value-add of my discussion will be to connect Begoña and Pedro's paper to the Australian context. I will not recap the paper, though I will start by sharing some of my takeaways from it. Then, I will discuss the relevance of the paper to Australia and how its findings might apply. Before wrapping up, I will mention some potential paths forward for research on this topic.

Key takeaways

My main takeaway from the paper was that liquidity premia might matter for coordination in normalising a central bank's balance sheet. Specifically, taking the paper at face value and assuming that long-term bonds are less liquid than short-term bonds, I took away that the central bank should:

- be sufficiently responsive to economic conditions in normalisation, i.e. it should hold more-than-normal bonds on its balance sheet if government debt is above the target set by the fiscal authority
- target a sufficiently short maturity structure for its balance sheet.

I found the US calibration in the paper striking, as it suggests that the Fed should hold less than one-third of its balance sheet in long-term bonds, a much smaller share than in recent history. Governor Waller has advocated for a maturity structure of around one-half in long-term bonds (and the rest in short-term bills), whereas some others have advocated for a longer structure of around four-fifths in long-term bonds.[2] Generally, I took away that it is important to think about coordination in balance-sheet normalisation and that models are useful for thinking through the various interactions, as naïve intuitions can lead you astray.

Relevance to Australia

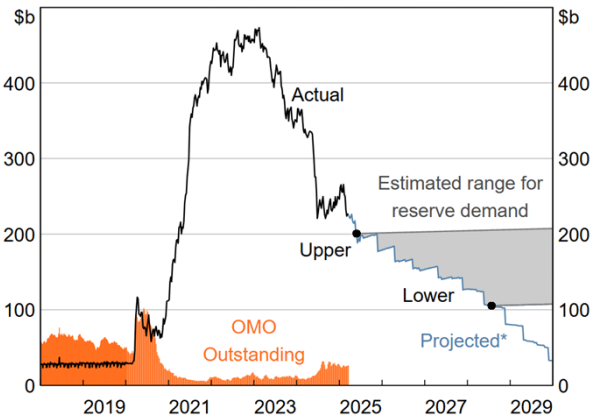
Begona and Pedro's paper is highly relevant to Australia as the RBA is currently normalising its balance sheet. This follows a large increase in the RBA's balance sheet in response to COVID, where the RBA purchased around one-third of outstanding government bonds to support the Australian economy.[3]

The amount of reserves that commercial banks hold at the RBA has declined a lot since its peak a few years ago, as some purchased bonds have matured and term funding provided to banks has been repaid (Graph 1). The RBA has been thinking a lot about the future steady state of its balance sheet and normalisation.[4] However, there is much that remains uncertain:

- The steady-state size is uncertain because the RBA's system for implementing monetary policy is demand-driven – that is, we supply as many reserves as banks demand at our OMO at a price near our policy rate. This means that the RBA does not have an explicit target for the size of its balance sheet. Rather, there is an uncertain size that is consistent with principles supporting the design of the RBA's system for implementation.

Graph 1[5]

Total Reserves



* Projection assumes the RBA does not undertake liquidity operations to replace or drain reserves and that the RBA's bond holdings are held to maturity.

Source: RBA.

1 I am grateful to Begoña Domínguez and Pedro Gomis-Porqueras for fruitful conversations and for sharing their code and data with me. I thank Matt Boge, Sean Dowling, Ben Jackman, Aidan Penman, Claudia Seibold and the Monetary Policy Strategy Department for feedback that improved my discussion of the paper. All of the views expressed in this discussion are my own and do not necessarily represent those of the Reserve Bank of Australia.

2 Speech by Governor Waller on the balance sheet - Federal Reserve Board.

3 The Yield and Market Function Effects of the Reserve Bank of Australia's Bond Purchases* - Finlay - 2023 - Economic Record - Wiley Online Library.

4 The Future System for Monetary Policy Implementation | Speeches | RBA.

5 The RBA's Monetary Policy Implementation System – Some Important Updates | Speeches | RBA.

- The steady-state composition of the balance sheet is also uncertain, but purchases of long-term bonds are not among the operations that the RBA plans to use to supply reserves. This means that the maturity structure of the RBA's balance sheet should be sufficiently short from the perspective of the paper.

There is somewhat less uncertainty about normalisation, the pace of which is expected to be gradual alongside maturities of purchased bonds. The Monetary Policy Board recently determined that sales of bonds no longer warranted active consideration.[6]

Another reason that the paper is relevant to Australia is because the RBA is developing a framework for the use of additional monetary policy tools – that is, tools other than the RBA's policy rate – including purchases of government bonds. The framework will give the Monetary Policy Board the information it needs to make decisions about using additional tools, including the expected costs, benefits and risks, considering not only the effectiveness of tools when they are deployed but also how we might exit from them. The paper suggests some considerations for the framework, specifically regarding any future use of government bond purchases:

- first, constraints on the responsiveness or pace of normalisation may mean there are limits on the flexibility with which we can exit from them
- second, the extent of coordination required between the central bank and the debt management office for good outcomes may affect the viability of their use.

The paper presented by Karsten at this conference also provides useful evidence to inform the framework, regarding the effectiveness and side effects of government bond purchases in the context of New Zealand.[7]

Application to Australia

What can we learn from applying Begona and Pedro's paper to Australia? I will discuss how their model might apply to Australia with reference to their US calibration and sensitivity analysis.[8]

As liquidity premia are central to the model, they are an important factor for applying the model to Australia. Based on the paper's calibration approach, short- and long-term bonds appear a bit closer in terms of liquidity in Australia than they are in the US (Figure 1). Moreover, as the paper connects relative liquidity premia to the relative pledgeability of short- and long-term bonds, observed haircuts may be instructive. In Australia, observed haircuts imply that short- and long-term bonds are similarly pledgeable, including at our OMO.[9] One point to note that is beyond the model is that the pledgeability of short- and long-term bonds can be influenced by the central bank's collateral framework, providing policymakers an extra degree of freedom.

Figure 1: Relative Pledgeability of Long-term Bonds in the Model

The sensitivity analysis in the paper suggests that where short- and long-term bonds are closer in liquidity:

- the maturity structure of the central bank's balance sheet should be shorter
- the process of normalisation should be more responsive to economic conditions.

Another important factor for applying the model to Australia is the size and composition of Australian government debt. Relative to the US, Australia has a much lower level of government debt (Graph 2). Additionally, relative to the US, Australia issues a much higher share of its government debt in the form of long-term bonds rather than short-term notes. T-notes make up less than one-twentieth of Australian government debt, whereas the US's equivalent T-bills make up around one-fifth.[10] One complicating factor is that debt issued by state governments makes up a more meaningful share of government debt in Australia than in the US, though it is unclear how this should be modelled.[11]

6 12 August 2025 | Minutes of the Monetary Policy Board Meeting | RBA.
7 Chipeniuk, Ludvich and Quigg (forthcoming).
8 I was not able to make the model work using data for Australia, though I thank Begoña and Pedro for their help in troubleshooting.
9 Margin Ratios | RBA. Bristow, Penman and Sharma (forthcoming) find that haircuts for AGS, including short- and long-term bonds, in the private repo market tend to be zero, so there is little to suggest that long-term bonds are relatively less pledgeable in the Australian context. Similar findings have been observed in other contexts, including for the US (Kahn and McCormick 2025).
10 Australian Money Markets through the COVID-19 Pandemic | Bulletin – March 2022 | RBA.
11 Australia's Bond Market in a Volatile World | Speeches | RBA.

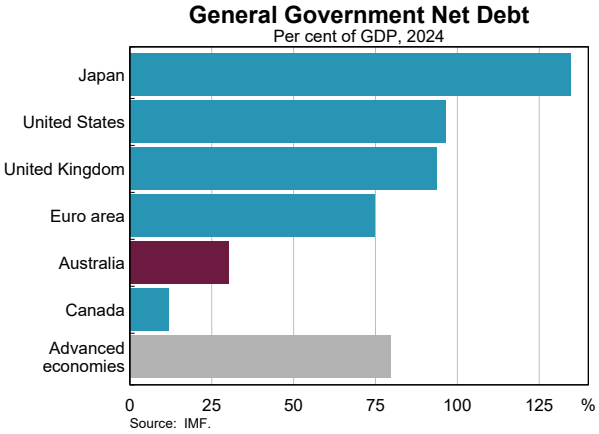
The sensitivity analysis in the paper suggests that the size and composition of our government debt means:

- the maturity structure of our balance sheet can (but does not need to) be longer than the Fed's
- the process of normalisation should be slightly more responsive than in the US.

Putting this together with the upshots based on liquidity premia, applying Begona and Pedro's model to Australia suggests, relative to the US calibration:

- an ambiguous result for the maturity structure of the RBA's balance sheet, though it is likely to be sufficiently short in any case, given that the RBA does not plan to hold long-term bonds in its steady state
- a process of normalisation that is more responsive to economic conditions, and it is unclear whether the gradual normalisation that is expected by the RBA qualifies as sufficiently responsive in the paper's eyes.

Graph 2[12]



Potential paths forward

I want to highlight some potential paths forward for research on monetary-fiscal policy interactions in the government bond market. In the list below, the first few potential paths are about clarifying the mechanism for interactions and the last few paths are about constraints on coordination, with the middle path – that is, the remuneration of central bank reserves – touching on both the mechanism and coordination:

1. **Risk premia beyond liquidity.** While Begona and Pedro's paper suggests liquidity premia might matter, other risk premia may matter much more, in particular premia for interest rate risk. The key wedge between short- and long-term bonds is the difference in their duration rather than in their pledgeability.
2. **Liquidity premia beyond pledgeability.** The paper focuses on 'funding' liquidity though pledgeability, but 'market' liquidity – that is, the effects of flows on prices – may matter too. Low market liquidity could constrain the responsiveness or pace of normalisation that is consistent with good outcomes.
3. **Central bank reserves.** The model in the paper is cashless, but reserves may matter for the mechanism, as they are a close substitute for short-term bonds and an increase in reserves could be expected to reduce liquidity premia. Additionally, the remuneration of reserves has implications for fiscal policy through central bank remittances, as has been the focus of recent debate in the UK and elsewhere.[13]
4. **State fiscal authorities.** State government debt could be a complicating factor in the Australian context, as the appropriate and feasible extent of coordination could differ for state fiscal authorities.
5. **Central bank remittance policy.** The model in the paper assumes that central bank remittances simply pass through profits/losses from the central bank to the government. However, typically there is discretion about the extent to which central bank profits/losses are passed through.[14]

Summary

Begona and Pedro's paper makes a useful contribution to the literature on monetary-fiscal policy interactions and is relevant for the RBA's work, both at the current juncture and going forward. Applying it to Australia raises a question about the responsiveness of the RBA's approach to normalising its balance sheet. However, there are interactions and constraints that are not captured by the model, so further work would be needed before policymakers can rely on its results. Generally, the paper reminds us of the value of close cooperation between a central bank and the debt management office in navigating interactions in the market for government bonds.

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12 Australia's Bond Market in a Volatile World | Speeches | RBA.
13 Quantitative easing, monetary policy implementation and the public finances.
14 Alston (unpublished) suggests that central bank remittance policy may matter for monetary policy transmission, though the calibration of his model for Australia indicates that the effects may be relatively small in the Australian context, due to the relatively low level and long maturity structure of Australian government debt, as discussed above.

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