



Reserve Bank
of New Zealand
Te Pūtea Matua

Liquidity management: Principles for liquidity provision and the end of an abundant era

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Introduction

E ngā mana, e ngā reo. E ngā karanga maha o te wā.

Tēnā koutou, tēnā koutou, tēnā koutou katoa,

Good morning. It's great to be back in Sydney representing Te Pūtea Matua, the Reserve Bank of New Zealand. I want to thank CBA for hosting this event and inviting me to speak with you today.

Over the past year or so we have undertaken significant work reviewing both the composition and use of our balance sheet in delivering our objectives. In prior speeches I have addressed both the reviews of our foreign reserves' framework and our financial resources, plus the multiple roles we play in ensuring stable financial markets.¹

In my comments today I will focus on how we are considering the future use of our balance sheet to manage liquidity in the financial system and the principles that will inform that. We manage liquidity to support financial stability not only during periods of market dysfunction, but also to ensure the efficient settlement of payments and anchoring of short-term interest rates near the Official Cash Rate ("OCR").

There are three key messages I would like you to take away from my remarks today.

First, the Reserve Bank is resourced and ready to provide liquidity to support market functioning when necessary to meet our objectives.

Second, we will apply a principles-based approach to the provision of liquidity to financial markets. The intention of our principles is to preserve incentives for market participants to seek market-based solutions to their own liquidity needs in the first instance and not rely on the Reserve Bank as a 'lender of first resort'.²

Third, our liquidity management framework will ensure we have the right facilities and operations in place to maintain settlement cash at an ample level, as we decline from the post-COVID abundant levels. However, market participants should also be prepared to be more active in the management of their own liquidity.

A principles-based approach to addressing domestic market dysfunction

In March 2020, at the onset of the COVID-19 pandemic, the Reserve Bank deployed a range of balance sheet tools in response to dysfunction in the New Zealand Government Bond (NZGB) market and the foreign exchange (FX) swap market.³ In 2023, we undertook a review of our actions to support

¹ See [Silk \(2023a\)](#) and [Silk \(2023b\)](#).

² A risk [Schnabel \(2023\)](#) discusses in the context of central banks providing system liquidity through lending operations.

³ The [Facilities at a Glance](#) page on our website outlines the full suite of facilities and operations we have available to provide liquidity both during normal times and in crisis periods like March 2020. [Kengmana \(2021\)](#) further discusses the transmission of monetary stimulus through LSAPs.

markets, bringing together empirical evidence and reflections from a range of financial markets participants.⁴

The overarching conclusion from our review was that our response to market dysfunction in 2020 was both timely and effective, but there were lessons to consider for the future. These lessons are detailed in a [Bulletin](#) we published at the start of this year.⁵ In response, we have adopted a set of principles designed to guide our approach to future dysfunction in New Zealand dollar financial markets. The substance of these principles is not new, but we have taken the opportunity to formalise them to ensure our approach represents best practice for the future.

Avoiding the risk of moral hazard

It is somewhat non-negotiable for any central bank speech on crisis support to reference Bagehot's formulation of the lender of last resort function. He advised central banks, in times of stress, to calm market panic by lending "freely and vigorously" for good collateral and at backstop pricing.⁶ In other words, we should be ready and willing to provide possibly significant amounts of liquidity during episodes of stress — but *how* we provide this liquidity really matters.

Generous and low-cost crisis liquidity provision might be highly effective, at least initially, but can also create incentives for excessive risk taking by market participants. Defined as moral hazard risk, it is traditionally discussed in relation to central bank support of individual institutions but can also apply when providing liquidity to a broader set of counterparties.⁷

Market participants may hold fewer or lesser quality liquid assets on their balance sheet in pursuit of return if they believe the central bank will always step in to provide low-cost liquidity during periods of stress. Stronger prudential liquidity requirements in the wake of the Global Financial Crisis ("GFC") have in part served to mitigate some of this risk. However, US regional bank stress in 2023 and UK gilt market volatility in 2022 serve as reminders that market dysfunction is always a risk, and central banks need to keep their eye on the ball.

Principles for addressing financial market dysfunction

The principles we have adopted will assist in the design and deployment of our liquidity support tools during a crisis. At its best, central bank liquidity should support financial markets by enabling more stability in market conditions, improve market liquidity, and reduce volatility, without encouraging moral hazard and undermining market discipline.⁸ A tall order indeed!

⁴ Summarised in [Robinson and Watson \(2024\)](#).

⁵ See [Robinson and Watson \(2024\)](#).

⁶ [Walter Bagehot, Lombard Street: A Description of the Money Market, at 51 and 96–97.](#)

⁷ For example, see [Buitier et al. \(2023\)](#).

⁸ See papers and speeches from the [Bank of Canada](#), the [Reserve Bank of Australia](#), the [Bank of England](#), the [Sveriges Riksbank](#), [De Nederlandsche Bank](#), and from [Paul Tucker](#).

1. Firstly, we should intervene only in circumstances where the Reserve Bank’s remits are likely to be compromised.

We have financial resources to intervene to promote financial stability and market functioning.⁹ When stability is threatened, it is within our risk appetite to use our financial resources to intervene and support markets before conditions deteriorate further. However, our interventions should be limited to scenarios where our remits are likely to be compromised. Space should be provided for markets to self-correct.¹⁰

2. Secondly, our interventions should target the source of dysfunction, and have a high chance of success.

Ensuring the tools we deploy have a high chance of success requires us to identify and target the likely source of dysfunction. We should endeavour to match our tools to the drivers of the dysfunction and, importantly, adapt them as we develop our understanding. Effective communication at the time of deployment is also essential to ensure a greater chance of success.

3. Thirdly, our interventions should mitigate moral hazard.

Robust prudential regulation and supervision can help minimise moral hazard, and the design of our interventions should seek to ensure entities are incentivised to manage their own liquidity risks. This means our interventions should be appropriately sized, be priced as a backstop and have a clear exit strategy. These features ensure interventions are targeted and temporary.

4. Fourthly, we should aid price discovery and support monetary policy implementation.

Our interventions should catalyse market recovery, which enables the transmission of monetary policy, rather than replacing market pricing of risk. Backstop pricing and a clear exit strategy support these goals, by incentivising market participants to return to the market, instead of becoming reliant on central bank liquidity support.¹¹

5. Finally, we should not expose the public balance sheet and Reserve Bank to undue risks.

Expanding our balance sheet entails taking on greater risk, so any expansion requires justification against our policy objectives. This principle also implies our collateral framework should be chosen carefully.

To reiterate my first two key messages: The Reserve Bank stands ready to support market functioning if that is what is necessary to achieve our legislated objectives. But we intend to do this in a way that leaves room for markets to self-correct and ensures risk is appropriately priced. The principles we have adopted should ensure our actions are consistent with these objectives.

⁹ See the Reserve Bank’s [2022–23 Annual Report](#) for a discussion of the Review of Financial Resources. Central banks have the unique capacity to rapidly expand their balance sheet size to support their statutory objectives (Tucker, 2014).

¹⁰ Bindseil (2016), Jackson Hole at 205–206.

¹¹ Walter Bagehot, *Lombard Street: A Description of the Money Market*, at 96–97.

The future of our liquidity management framework

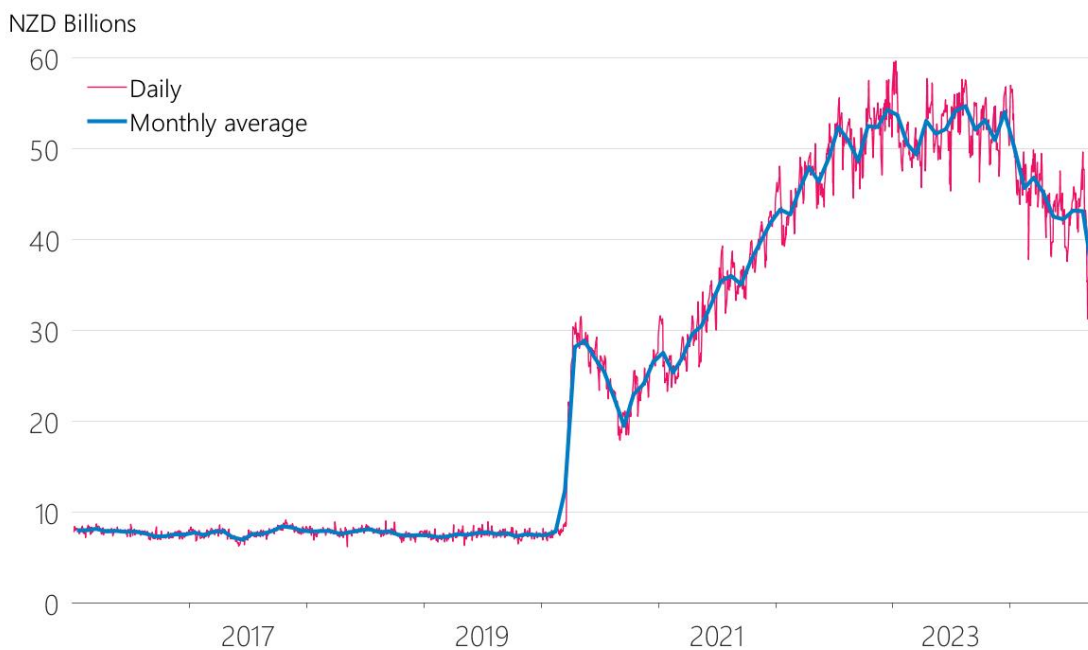
So far, I have focused on how the Reserve Bank provides liquidity during crisis events. I now want to turn to how we should manage liquidity in the cash system as COVID-19-era balance sheet tools wind down.

Settlement cash is moving from an era of abundance to one of ample liquidity where there will be *sufficient* cash to anchor interest rates to the OCR, and support an efficient payments system, **but not much more**. As stated earlier, in an ample era, market participants need to be ready to be more active in their management of cash.

The balance sheet tools we used during COVID-19 were funded through an increase in settlement cash balances, which you can see in Figure 1.¹² These are known as Exchange Settlement balances here in Australia,¹³ or bank reserves in other jurisdictions. As our COVID-era balance sheet tools mature, the settlement cash created as a by-product is drained from the cash system.

Our focus now is to ensure that our liquidity management framework includes the appropriate mix of market operations and standing facilities to maintain ample liquidity in the cash system.

Figure 1. Settlement cash level as of 30 September 2024



Source: RBNZ [D12 table](#)

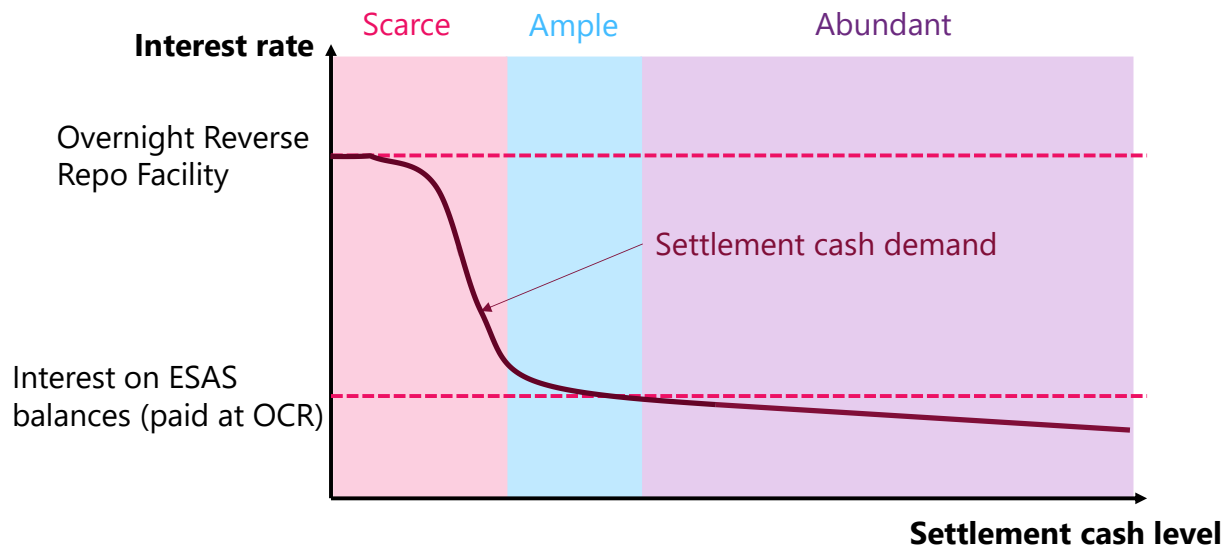
¹² See [Callaghan et al. \(2023\)](#) for further details on settlement cash and the impact of the COVID response on the settlement cash level.

¹³ See this [RBA explainer](#).

Moving from 'abundant' to 'ample' settlement cash

To illustrate the transition to a lower settlement cash level, Figure 2 shows a stylised representation of the demand curve for settlement cash. The greater the settlement cash level, the lower the interest rate, within the bounds imposed by our standing facilities. Settlement cash currently sits within the 'abundant' region, where we would expect to see short-term interest rates being less responsive to modest movements in the settlement cash level.

Figure 2. Scarce, ample, and abundant settlement cash



Source: RBNZ

Note: The demand curve does drop below the OCR in this chart at the very highest levels of settlement cash. This captures the 'leaky floor' effect, where short-term interest rates in some markets can still drop below the OCR if settlement cash is highly abundant. This is discussed in more detail in [Callaghan et al. \(2023\)](#).

More active management of settlement cash is required by the Reserve Bank at our intended ample level. A decline back into scarce levels would result in short-term interest rates rising above the OCR. This occurs because market participants would be willing to pay more for settlement cash to meet their liquidity needs. This would result in small movements in settlement cash causing large movements in short-term interest rates¹⁴

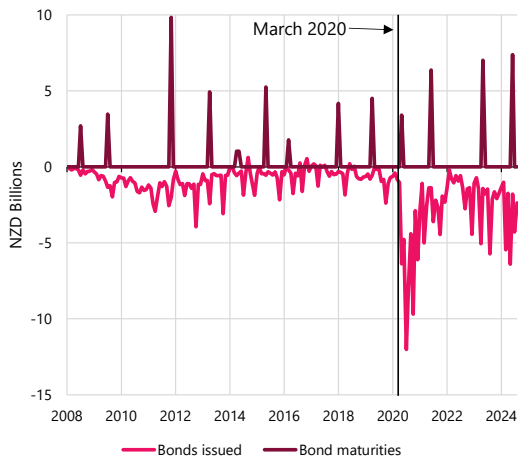
Our intention to maintain settlement cash at an ample level is an easy statement to make. However, what constitutes an ample level is uncertain and may change over time. There is also no historical precedent for the level of decline in settlement cash that is underway. Current internal estimates of ample carry a wide range, reflecting the inherent uncertainty surrounding the many factors that can influence the demand for settlement cash. As a consequence, we do not intend to publish a point estimate of ample but will monitor indicators and market intelligence to maintain it. To borrow a phrase, we will know the ample settlement cash level by its works.

¹⁴ Although it is important to note that the Overnight Reverse Repurchase Facility provides a limit on how high interest rates should rise above OCR, since counterparties can always borrow cash overnight at OCR plus 25 basis points if they have eligible collateral.

As an example of one of the influencing factors, consider the timing of net government debt issuance, spending and taxation flows. Government debt issuance and tax revenue drain cash from the system, reducing the settlement cash level. Conversely, government debt maturities or expenditure inject cash back into the system, increasing the settlement cash level.

As shown in Figure 3 and Figure 4, the influence of these factors has become more significant in the wake of the COVID-19 pandemic due to the scale of the fiscal response and resulting increase in government debt.¹⁵

Figure 3. Government bond issuance impact on settlement cash



Note: Issuing bonds drains liquidity from the cash system as cash is paid into the Crown Settlement Account, and bond maturities inject cash into the system as the cash is paid back into ESAS accounts. Bond issuance includes syndications and weekly tenders by NZDM. Source: RBNZ [D10 Spreadsheet](#).

Figure 4. Government cash influence on settlement cash (12-month moving-average)



Note: Government cash influence is government revenue (taxes provided through Inland Revenue Department and Customs), less government expenditure and interest paid on government bonds and Treasury bills. Source: RBNZ [D10 Spreadsheet](#).

Other policy factors potentially impacting the demand for settlement cash, and its distribution throughout the system, will include the implementation of a Committed Liquidity Facility (CLF) as part of our updated liquidity standard, the outcome of our ESAS access review, and longer-term developments like digital cash.¹⁶

While noting the uncertainty, our internal projections suggest it is possible we may reach an ample settlement cash level in the second half of 2025. Participants in the cash market should prepare for an end of the abundant liquidity environment we have become used to in recent years, and likewise we are preparing to support a smooth transition to an ample settlement cash level.

That leads to the question: what is the best way for the Reserve Bank to provide liquidity to reach and maintain ample settlement cash?

¹⁵ Callaghan et al. (2023) explain the interactions between settlement cash, the Crown Settlement Account, and the Reserve Bank.

¹⁶ See the consultation on [Deposit Takers Core Standards](#), and information on [digital cash](#).

The appeal of a 'hybrid' approach to liquidity provision

Approaches to liquidity provision have begun to be characterised in the central banking community as 'supply-driven', 'demand-driven', or a 'hybrid' of the two.¹⁷

In a supply-driven approach, the central bank determines the quantum of liquidity required and supplies that amount. This essentially reflects the RBNZ's current approach and in our case is largely achieved through transacting in the FX swap market. We do not currently foresee a need to use additional asset purchases to form part of our supply-driven toolkit as is being contemplated in other jurisdictions.

In a demand-driven approach, the central bank provides cash through regular collateralised lending operations or standing facilities. In the New Zealand context, a feasible way to do this would be through our existing Open Market Operations.¹⁸

We believe that the most pragmatic and flexible way to provide liquidity in New Zealand is to use a hybrid approach, combining supply- and demand-driven elements. This should require only a modest adjustment to our current framework.

There are 3 main reasons we think a hybrid approach makes sense for New Zealand:

1. The use of FX swaps for monetary policy implementation (MPI)

The first is because of the relevance of FX swaps for monetary policy implementation in New Zealand. Implementing monetary policy means keeping short-term wholesale interest rates trading close to the OCR. In New Zealand, that has increasingly meant keeping short-term FX swap implied interest rates trading close to the OCR, due to the relative lack of activity in the domestic interbank and repo markets.

To transact on both sides of the FX swap market – that is to be able to add *and* withdraw New Zealand dollar liquidity – we need to maintain a stock of liquidity management reserves. The act of raising those reserves itself injects New Zealand dollar liquidity as we fund the purchase of reserves through the creation of settlement cash. In this way, the structural balance of our liquidity management reserves can be thought of as a supply-driven element of our liquidity provision. Around that structural level of liquidity provision, our Portfolio Management team can make tactical adjustments to add and withdraw liquidity to meet our MPI objectives. As market participants will be aware, this is something we have been doing for some time.

2. Market discipline and a leaner central bank balance sheet

The second benefit of a hybrid approach relates more to the demand-driven component. If we relied purely on supply-driven liquidity provision to maintain an ample settlement cash level we would need to forecast an ample level with great accuracy, or – more likely – provide a buffer to our best estimate of this level, such that liquidity was always tending towards abundant.

¹⁷ Schnabel (2023).

¹⁸ Prior to COVID-19, Open Market Operations were regularly used as part of our management of the settlement cash level (Parekh, 2016).

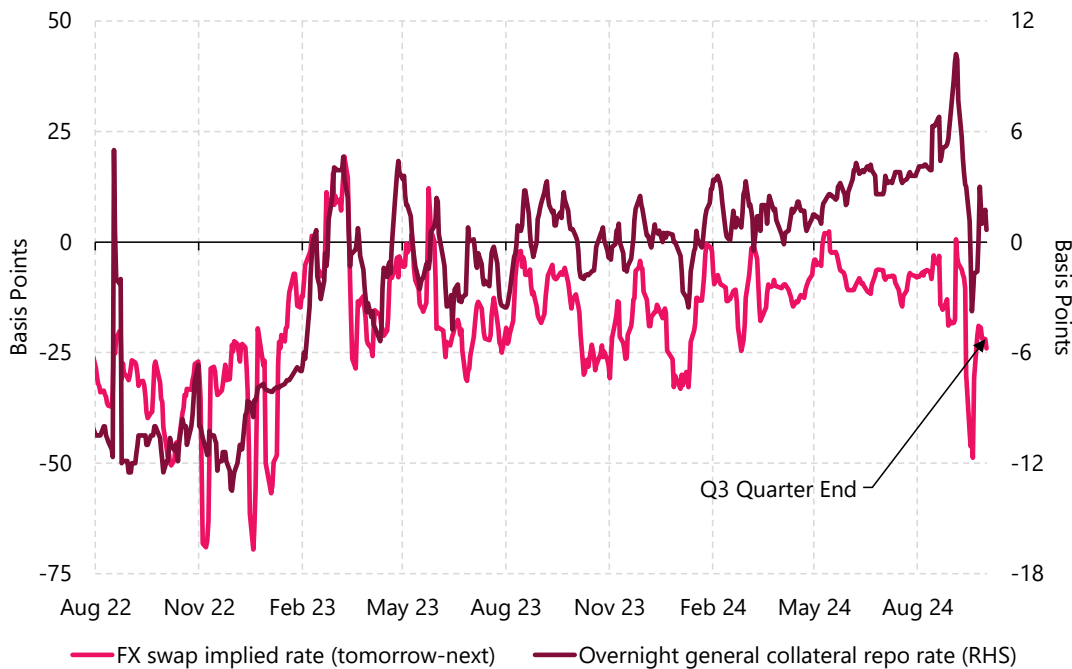
Instead, by providing a demand-driven element we should be able to run a slightly “leaner” balance sheet as market participants can take confidence that central bank liquidity is available (subject to good collateral) on demand, thereby removing unnecessary precautionary demand which can have a “ratcheting” effect on the central bank’s balance sheet. Not overly relying on supply-driven liquidity provision also places a greater onus on market participants to forecast and manage their own liquidity.

3. More flexibility to deal with market segmentation

The third reason we favour a hybrid approach is that segmentation between different short-term interest rate markets means we need flexibility to ensure liquidity reaches where it is needed. During 2024 we have at times observed a divergence in the cost of borrowing New Zealand dollars between the repo market and the FX swap market (Figure 5). Downward pressure on FX swap rates was particularly intense over the September quarter end.

In recent weeks the Reserve Bank has withdrawn New Zealand dollar liquidity in the FX swap market to push back against that downward pressure in rates, while simultaneously injecting liquidity through Open Market Operations to alleviate funding pressure in the repo market. In both cases, these actions support short-term wholesale interest rates to trade close to the OCR.

Figure 5. Short-term borrowing costs in NZD/USD FX swap market and general collateral repo market (spread to OCR, five-day moving average)



Source: Bloomberg, RBNZ estimates

Prior to the pandemic our framework included the use of tiered ESAS remuneration as a means to ensure distribution of liquidity with a targeted settlement cash level. As we are no longer targeting an explicit settlement cash level, a return to a tiered remuneration approach would create added and potentially unnecessary complexity. However, we retain the ability to adapt our framework at any time

as needed to support our objectives. Should distribution of settlement cash within the system become an issue, it is always possible for us to look at tiering again.

An aside on shrinking our balance sheet while interest rates fall

As you are no doubt aware, the Monetary Policy Committee has started to ease the restrictiveness of monetary policy in New Zealand. Simultaneously, our Additional Monetary Policy (“AMP”) tools are continuing to roll off the balance sheet. A natural question people might ask is whether the MPC is intending to continue with balance sheet reduction during an easing cycle.

The answer is yes. The wind-down of the Large Scale Asset Program (“LSAP”) is consistent with the MPC’s stated objectives of minimising impact on monetary stimulus; avoiding harming the efficient functioning of financial markets; and ensuring the MPC has the capacity to use the LSAP tool effectively again, if it were ever warranted. We do continue to monitor for any impact, but the normalisation of our balance sheet is generally not indicative of our monetary policy stance. The monetary policy stance will continue to be communicated via changes to the OCR and the MPC’s communication around the outlook for the economy and the policy rate.

Conclusion

To conclude, I will reiterate the three key points I want you to take away from today.

Firstly, the Reserve Bank is resourced and ready to support the functioning of key New Zealand dollar financial markets that are relevant to the transmission of monetary policy and for financial stability.

Secondly, we have adopted a principles-based approach to addressing domestic market dysfunction. Application of these principles in the future should allow for markets to self-correct where possible, mitigate moral hazard risks, and protect the Reserve Bank balance sheet from undue risk.

Lastly, the settlement cash level will decline from current abundant levels to an ample level, possibly as early as the second half of next year. The Reserve Bank intends to adopt a hybrid approach to ensuring there is ample liquidity in the cash system, with operational details now under development. It is likely this ample level of liquidity will place greater onus on market participants to understand, forecast and manage their individual liquidity needs than has been necessary during the abundant liquidity era.

My intention in this speech was to provide further insight into the progression of our thinking on the future management of system liquidity. Throughout our review we have benefitted from generous and frank feedback from market participants, and we intend to continue proactive engagement over the coming months to ensure transparency as we refine our approach.

Thank you.

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