

MEMORANDUM

To: Vector New Zealand
From: John McDermott
Date: 13 July 2023
Subject: **Response to the Commerce Commission report review on the problem of forecasting inflation**

This note is in response to the Commerce Commission's report on *Financing and incentivising effective expenditure during the energy transition paper*, focusing on forecasting inflation over a five-year period. In particular, the note highlights why I disagree with the Commerce Commission's view that it is appropriate to use the Reserve Bank of New Zealand's (RBNZ) forecasts as a basis for a five-year ahead inflation forecast to index the Regulatory Asset Base (RAB).

Both the original purpose of how the RBNZ's forecasts were intended to be used and their accuracy (or lack thereof) point to the unsuitability of using those forecasts in the way the Commerce Commission intends.

The fundamental problem with using the RBNZ projections is that they are a tool designed for near-term planning and signalling, not for long-term regulation.¹ For most users, the principal value of the RBNZ's projections lies in the Bank's analysis of the conjuncture, its diagnosis of the state of the domestic and world economy, and its evaluation of the policy options available to the Monetary Policy Committee (MPC) — rather than in the specific details of its forecasts. Moreover, from the perspective of supporting monetary policy and the Bank's performance of inflation control in the long run, the Bank's scenario analyses around its forecasts are arguably more relevant than the short-term forecasts.²

It is worth noting that the RBNZ only provides a genuine inflation forecast six months ahead.³ The remaining 30 months of their projections reflect an assumed transition to two percent. The RBNZ always shows inflation heading to two percent, irrespective of the

¹ Michelle Lewis, John McDermott, and Adam Richardson (2016). "Inflation Expectations and the Conduct of Monetary Policy in New Zealand." *Reserve Bank of New Zealand Bulletin* 79(1).

² John McDermott and Rebecca Williams (2018), "Inflation Targeting in New Zealand: An Experience in Evolution," *Central Bank Frameworks*, Reserve Bank of Australia Conference Volume, 7-24.

³ That is a forecast based on an econometric model where a past relationship between inflation and key inflation indicators is estimated as opposed to calibrated inflation path that is always assumed to take two years to gravitate to two percent.



circumstances. Given that inflation is always targeted to hit two percent, the role of RBNZ's model is to reverse engineer an interest rate path needed to deliver that result.⁴ One consequence of this approach is that the interest rate path changes at each forecast round while the inflation path remains relatively stable.

The RBNZ's projections are a suitable tool for understanding and monitoring the inflation dynamics in New Zealand if the projections are frequently updated. The Bank updates its position publicly every 13 weeks or so and privately every 6 to 7 weeks. However, even when adopting such dynamic updating, it is possible to misdiagnose how a big and uncertain event, such as COVID-19, will impact inflation, as many central banks have unfortunately found out. Thinking you can forecast inflation five years ahead using a set-and-forget approach is just hubris.

Forecasting inflation, even a few months ahead, is challenging.⁵ Knowing where inflation will be over the next five years is immense. The problem is particularly acute now. The existing long-term inflation risks are influenced by some large and persistent secular forces whose impact on inflation is very uncertain, if not unknowable. For example:

- China is transitioning from a 10 percent growth economy to a 2 percent growth economy, just as Japan did in the 1990s, and this will introduce a deflationary force into the global economy.⁶
- The investment demand needed to transition modern economies from carbon-intensive productions will add global inflationary pressures for decades.⁷
- The ongoing expansion of renewable energy production will diversify energy sources in a way that has the potential to increase competition and lower inflationary trends.⁸
- The massive technological advances (especially Artificial Intelligence) adopted by firms worldwide will change business practices and cultures while lowering production costs (mainly labour costs) over the long term.⁹
- The growing geopolitical risks and trading block separations make the just-in-time delivery model less feasible and increase the trade barriers. Such changes to global business models and supply chain management will inevitably increase production costs.¹⁰

⁴ For an explanation of the Reserve Bank's model, see Neroli Austin and Geordie Reid (2017), "NZSIM: A model of the New Zealand Economy for Forecasting and Policy Analysis," *Reserve Bank of New Zealand Bulletin*, 80(1). A technical exposition of the model can be found in Gunes Kamber, Chris McDonald, Nick Sanders, and Konstantinos Theodoridis (2015), *A Structural Model for Policy Analysis and Forecasting: NZSIM*, Reserve Bank of New Zealand Discussion Paper DP2015/05.

⁵ John McDermott (2017), "The Value of Forecasting in an Uncertain World," Speech given at the New Zealand Manufacturers and Exports Association (NZMEA) Leaders' Network event, Christchurch, 15 May 2017.

⁶ "A slowing China Helps Rein in Inflation Around the World", *The Wall Street Journal*, 4 September 2022.

⁷ Serhan Cevik and Joao Tovar Jalles (2023), *Eye of the Storm: The Impact of Climate Shocks on Inflation and Growth*, IMF Working Paper, WP/23/87.

⁸ Taner Akan (2023), "Can Renewable Energy Mitigate the Impact of Inflation and Policy Interest on Climate Change?" *Renewable Energy*, 214, 255-289.

⁹ Lv L, Liu Z, Xu Y (2019) Technological Progress, Globalization and Low Inflation: Evidence from the United States. *PLoS ONE* 14(4): e0215366.

¹⁰ Dario Caldra, Sarah Conlisk, Matteo Iacoviello and Maddie Penn (2023), *Do Geopolitical Risks Raise or Lower Inflation?* Federal Reserve Board, draft memorandum.

Rather than use the Reserve Bank forecasts, a more valid regulatory approach would be to remove the inflation uncertainty altogether. The first best option is to stop indexing of RAB to forecast inflation and leave the RAB not linked to any inflation forecast. Such a change would remove a great deal of unnecessary uncertainty from the process, improving future incentives for investment.

Of course, inflation forecasts would still be required for other smaller areas, such as how to inflate operational expenditure over the regulatory period. But even here, mindlessly adopting an approach designed for creating policy options seems problematic, and better choices are available. For example, survey measures of inflation can be used to improve the Reserve Bank Forecasts.¹¹

¹¹ Melterm Chadwick and Tyler Smith (2023), "Great Expectations: Performance of Survey Inflation Expectation at Improving Model-based Inflation Forecasts," *Reserve Bank of New Zealand Analytical Note Series*, AN2023/3. Reserve Bank of New Zealand.