Appendix: An RBA hiking cycle: Some paths less travelled

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Full article: An RBA hiking cycle: some paths less travelled

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This appendix explains the assumptions underlying the scenarios in Saunders (2022).

The three different scenarios for the cash rate vary in how the RBA initially responds to inflation and wages growth.

The key assumptions are listed below.

- **'Pre-emptive':** The RBA starts increasing the cash rate when trimmed-mean inflation reaches the middle of its target band. For example, if trimmed-mean inflation increases to 2.5 per cent or higher in the March quarter, then the RBA is assumed to start increasing the cash rate in the June quarter (as this is when the March quarter data will be released).
- **'Cautious':** The RBA increases the cash rate when there has been three-consecutive quarters of trimmed-mean inflation at 2.5 per cent or higher.
- **'Dovish':** The RBA does not increase rates until trimmed-mean inflation is at 2.5 per cent and wages growth is at least 3 per cent for two-consecutive quarters.

These assumptions have been used to assess the sensitivity of the outlook to the timing of cash rate increases. The RBA's actual decision on when to increase the cash rate will be based on many different factors and cannot be replicated in a simple rule.

Following the initial hike, the cash rate projections are estimated using optimal control. This approach estimates the cash rate path that minimises deviations of both inflation and the unemployment rate from their targets. I have also included an interest rate smoothing objective into the central bank loss function, to reduce the volatility of the projected cash rate.
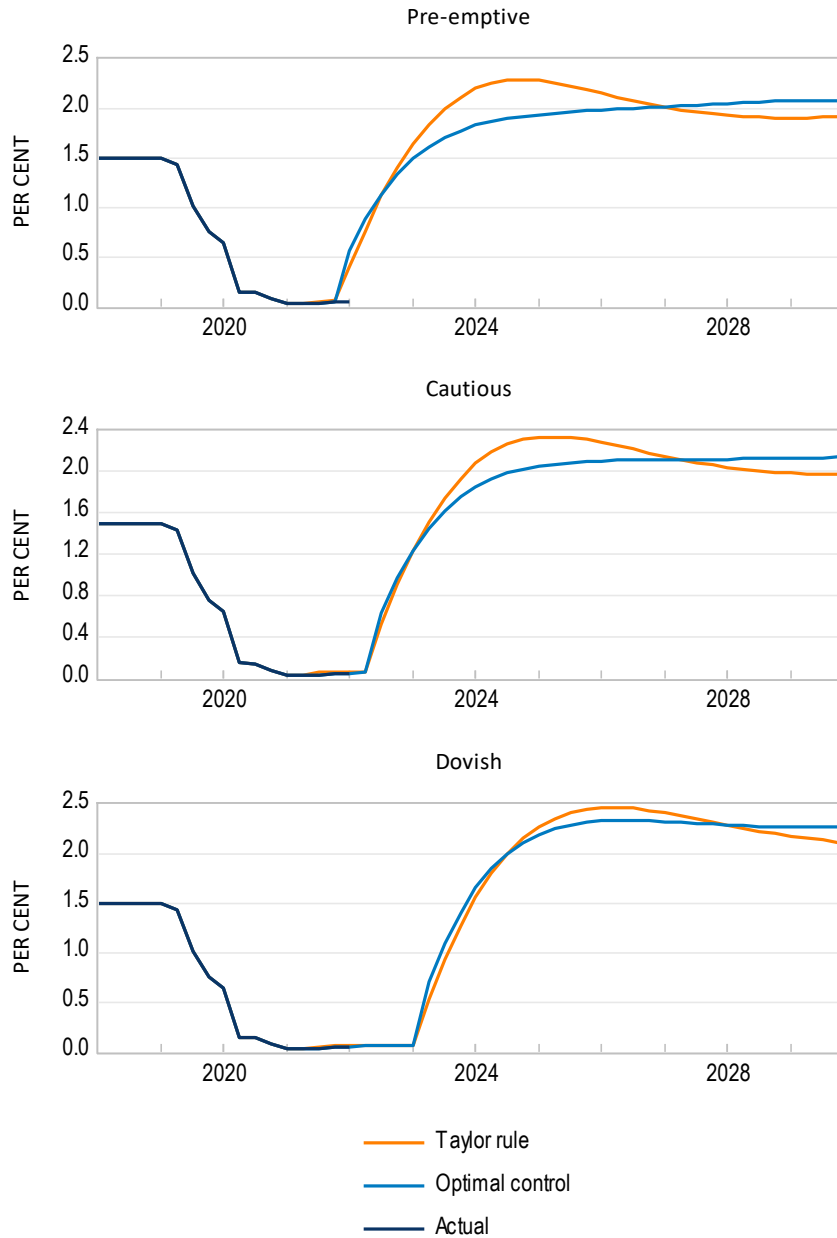
As a robustness check, I have compared these results to those from the following inertial Taylor rule.

$$i_t = 0.85\, i_{t-1}\ + 0.15\left(rstar_t\ + pistar_t\ + \ (pi_t\ -\ 2.5)\ -(u_t - nairu_t)\right)$$

Where *I* is the cash rate, *rstar* is the real neutral interest rate, *pistar* is inflation expectations, *u* is the unemployment rate, and *nairu* is the non-accelerating inflation rate of unemployment (NAIRU).

The results are similar to those from the optimal control exercise.

RBA Cash Rate Scenarios

Pre-emptive

Cautious

Dovish

- Taylor rule
- Optimal control
- Actual

Source: QTC, Refinitiv Datastream, RBA

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