

## Non-technical summary for 'Credit Spreads, Monetary Policy and the Price Puzzle'

By Benjamin Beckers

Correlation does not equal causation. Nevertheless, many discussions of economic policy often appear to focus on correlation rather than causation. This is a particular problem for monetary policy where, in the short run, interest rate cuts are often followed by *deteriorating* economic conditions and *decreasing* inflation while interest rate increases are often followed by *improving* conditions and *rising* inflation. The fact that these short-run correlations between policy rates and inflation run in the opposite direction to what theory predicts – the so-called 'price puzzle' of monetary policy – presents a challenge for communication about policy effectiveness. If these observed correlations are mistaken for the causal effects of the policy change, this may lead observers to question the effectiveness or success of the policy decision. To measure the success of the monetary policy intervention, it is therefore important to disentangle the true causal effect of monetary policy on inflation and other macroeconomic indicators from other confounding economic forces at play.

The most common explanation attributes the observed positive correlation between cash rate changes and future inflation to the forward-looking behaviour of central banks. Because monetary policy operates on inflation and other economic variables with long lags, central banks need to set policy not on the basis of what is happening today, but on the basis of what they think will happen in the future. For Australia, the Reserve Bank typically raises its policy rate – the cash rate – when it expects inflation to rise above its target range in the future, and lowers the cash rate when it expects inflation to fall below the range. Likewise, the Bank also adjusts the cash rate to support a maximum level of employment in the future. This behaviour may explain why, in the short run, a cash rate cut is often followed by lower rather than higher inflation.

To identify the true causal effects of monetary policy on inflation, it is thus necessary to account for the Bank's economic outlook that motivated the cash rate change in the first place. In other words, the researcher needs to identify cash rate changes or parts of these changes that are not motivated by the Bank's outlook. Using such changes in the cash rate (so-called monetary policy 'shocks'), one should then be able to resolve the price puzzle and identify the true causal effects of monetary policy. However, and in contrast to this prediction, previous Bank work by Bishop and Tulip (2017) has found the price puzzle to persist even when taking the Bank's own inflation forecasts into account.

In this paper, I argue that the price puzzle in Bishop and Tulip (2017) results from an additional but omitted response of the cash rate to changes in credit and money market conditions. Tighter credit market conditions lead to an economic contraction and lower inflation. To offset this contraction, the Bank lowers the cash rate when credit spreads – a popular indicator for credit market conditions – increase. Important for my explanation of the price puzzle found by Bishop and Tulip (2017) are, however, two additional facts. First, the cash rate responds to tighter credit market conditions *over and above* what the Bank's macroeconomic forecasts would suggest. Second, the Bank's inflation forecasts do not fully capture the inflationary effect of easier credit conditions. As a result, controlling for the Bank's own inflation forecasts is not sufficient to resolve the price puzzle. As the cash rate cut is motivated by credit conditions becoming more contractionary, the future decline in inflation is then wrongly attributed to the cut in the cash rate rather than to the omitted tightening in credit conditions.

Accordingly, I find that taking into account the cash rate's response to credit market conditions resolves the price puzzle. Monetary policy works as expected and in line with the Bank's and conventional macroeconomic thinking. A lower cash rate *increases* inflation and output growth, and *lowers* the unemployment rate. Specifically, I find that a 100 basis point decrease in the cash rate increases output by 0.8 per cent and lowers

the unemployment rate by around one-third of a percentage point after around one year, and leads to a 0.7 per cent increase in consumer prices over the course of two years. Reciprocally, a higher cash rate lowers economic growth, increases unemployment, and helps to lower inflation over the medium term.

### **Reference**

**Bishop J and P Tulip (2017)**, 'Anticipatory Monetary Policy and the "Price Puzzle"', RBA Research Discussion Paper No 2017-02.