Discussant remarks by Michele Bullock[1] on 'Gazing at *r**: A Hysteresis Perspective' by Paul Beaudry, Katsiaryna Kartashova and Cesaire A. Meh

Thank you Paul for providing a very interesting perspective on what seems to have been the defining characteristic of interest rates and monetary policy over the past decade or so. In my remarks I am going to do two things:

- Give a bit of perspective on Australia's experience with inflation and real interest rates over our own inflation targeting period.
- Provide some thoughts on what a low *r** might mean for the Reserve Bank, in particular now that there is going to be a review. What are the implications of Paul's thesis for the monetary policy framework?

Australian perspective

Just as Paul documents for the G7 countries, we have similarly seen a decline in real interest rates since the early 1990s. This graph shows a different measure of the real 10 year yield to Paul's – it is the yield on inflation indexed bonds and, thus, represents a long-run real rate of return available to investors. It shows the same trend – since the early 1990s there has been downward trend in real yields.

So what is the context in which this has been occurring? Well Australia's inflation targeting regime started in the early 1990s. It was an agreement between the Governor and the Treasurer for the Bank to achieve 2-3 per cent inflation, on average over time. This doesn't mean that it must be always within this band. Rather, the point with 'on average, over time' emphasises that there may be periods when it is outside the band in either direction.

In the initial period of the agreement, this seemed to be largely achieved. Despite fluctuations, some above and some below, on average the inflation rate was within the band for the 1990s and 2000s. In this respect, Australia was unlike some countries where the target was seen as a hard upper limit. That is, we did not operate an aggressive inflation targeting regime as described by Paul in his paper – at least

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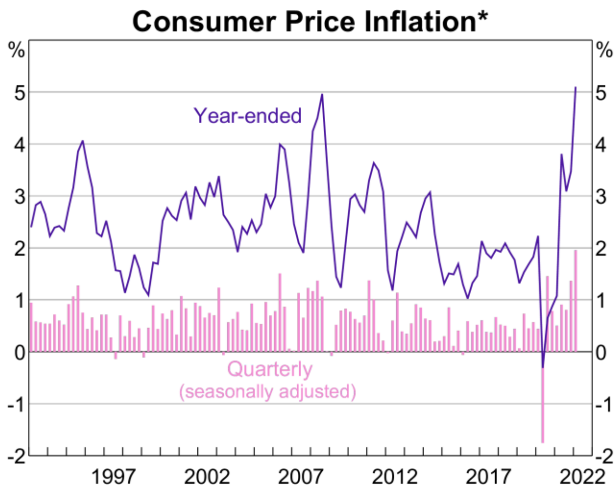
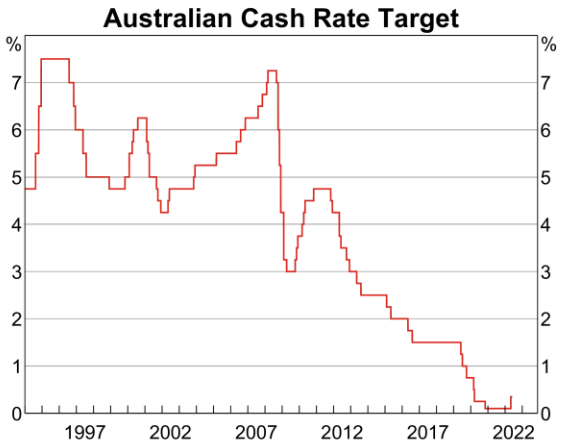
relative to some other countries. Despite this, from around 2013, there was a tendency for the inflation rate to be consistently on the lower side and below the bottom of the band for extended periods. In response the cash rate (the Bank's policy rate) was lowered steadily over a number of years. But until recently, inflation remained stubbornly on the low side.



* Excludes interest charges prior to the September quarter 1998; adjusted for the tax changes of 1999–2000.

Sources: ABS; RBA



Source: RBA

This raises the question of whether the neutral real interest rate has in fact declined and we were therefore not lowering nominal interest rates quickly enough to keep up. Estimates of the neutral real policy rate are necessarily uncertain – especially in real time and even in hindsight. Our most recent published work on this though suggest that this too has declined substantially over the past decade – from around 2–3 per cent in the 1990s to between ½ and 1 ½ per cent by 2017. While contemporary assessments prior to the pandemic suggested that the cash rate was at a level that would be expansionary, perhaps our uncertainty about *r** put us in the region where Paul suggests our policy responses might cause the economy to converge to the low-inflation, low *r** equilibrium.

What might low r mean for us?*

So with that background, let me turn to Paul's thesis and what it might mean for us. The essence of Paul's paper is that through our inflation targeting regime, we may have lowered the equilibrium real interest rate, therefore making it difficult to operate expansionary monetary policy when inflation is below our desired target.

I haven't done the careful analysis on Australian household's asset accumulation decisions that Paul has for the US, so I am unsure if we observe the same sort of saving behaviour in Australia in response to interest rate changes. And I am therefore unsure whether the mechanism underlying the model's prediction of two (or more) equilibrium real interest rates is reasonable for Australia. But perusing the graphs you could argue that there was a large decline in the real interest rate post 2008, and maybe the conclusion about there being multiple equilibriums is valid even if the mechanism might be slightly different in Australia.

So what does the paper's thesis say about the way inflation targeting is implemented. In Paul's model, the central bank's response is driven by the Taylor principle and the more aggressively the central bank responds to inflation, the more likely it is to end up in a low real interest rate equilibrium. This argues that above target inflation should be met with a response that obeys the Taylor principle but which is not too aggressive.

Having said that, as I sit at the RBA Board table in a week's time, I have to come to a view on how best to respond to an inflation rate that is higher than it has been during any time of the inflation targeting period and forecast to go higher. We have been at emergency low interest rate settings for a couple of years and with inflation high and the economy growing strongly it is appropriate that we start to tighten monetary policy. As you know the process has already started with a 25bp increase in the policy rate in May and a further 50bp increase in June. But the future is uncertain – how far and how fast interest rates should rise is a matter of judgement drawing on the information available. One reaction, and we are seeing this in New Zealand and the United States, is to tighten monetary policy quickly and sharply to curb inflationary expectations and hopefully bring inflation back down to the target as soon as possible. With this paper in mind, however, should the board be following a tightening path that is less aggressive, resulting in higher inflation for a time but might ultimately result in a higher r^*. The risk in this is higher inflation expectations and ultimately stronger action to get inflation back down.

Furthermore, a point that isn't really covered in the paper is the potential implications of the run up in debt for financial stability. The paper highlights asset accumulation but commensurate with that there has also been a run up in debt, at least in Australia. The household debt to income ratio is around where it was the last time we raised interest rates but it is at an elevated level. With interest rates low and unemployment low, serviceability isn't really a concern. But there are potential systemic risks in a rising interest rate environment, particularly if accompanied by falling asset prices. Furthermore, there is a real question about what the transition path from the low r^* equilibrium to the high r^* equilibrium looks like. As interest rates rise, asset values decline – as is currently happening with stocks, bonds and house prices – and this could be a source of instability. This all adds to the uncertainty of the speed and extent of interest rate rises.

In the end though, if Pauls' thesis is correct and there is a tendency to end up in a low r^* world under this framework, is inflation targeting a little self-defeating, leaving central banks in the position of very little interest rate firepower in the event of low inflation and one of the only ways out being a large inflation shock on the upside? Do we need a different framework? Perhaps this is one argument in favour of smoothing interest rate changes – this would cause expectations to do some of the work in response to shocks, such that nominal interest rates don't need to move as much. But that doesn't necessarily deal with the difficulty of discerning the level of r^* in real time when these things might be changing. I have no doubt that the monetary policy framework will be thoroughly examined in the upcoming review.