

# *Discussion*

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## **1. Ian M. McDonald**

The aim of Malcolm Edey's paper is to review the debate on alternative monetary-policy systems as they apply to Australia and to give a general rationale for the system we have, which is the inflation target. The paper focuses on the choice between policy systems and not on the detailed parameters of individual systems. Discussion of those details is in other papers of the conference. Four types of monetary-policy systems are compared. These are money-supply-setting systems (such as the Friedman monetary rule), final-targeting systems using the interest rate as the intermediate target, exchange-rate-setting systems, and *laissez-faire* or free-banking systems. Inflation being one of the possible final targets of monetary policy, the inflation-target system is one example of a final-targeting system.

In this comment I will focus on the rationale or case that Malcolm Edey puts forward for the inflation-target system. I will then discuss the implications for the level of activity of an inflation-target system. This latter topic is an important one which should influence our evaluation of the inflation-target system and yet gets little comment in Edey's paper.

### **The rationale for an inflation-targeting system**

Edey argues that the advantage of final-targeting systems over money-supply-setting or exchange-rate-setting systems is that they 'encompass' these other systems and therefore can outperform them. Consider for example the money-supply-setting system known as the Friedman rule. This provides a particularly stark comparison with final-targeting systems. Under the Friedman rule the money supply is set for each period independently of any information about how the economy is performing. Edey's argument is that a final-targeting system, by allowing the setting of monetary policy to be adjusted in the light of information about developments in economic performance, can do at least as well as and generally better than the Friedman rule.

Edey observes that final-targeting systems can yield complex rules. Indeed it is the complexity of these rules which gives them the potential to outperform the simple rules of the other systems considered. Complex rules offer the flexibility to adjust monetary policy in the light of economic developments. But, argues Edey, simple rules have the advantages of 'transparency' and 'credibility'. Edey emphasises that these advantages are not the commitment of monetary policy since the monetary authority can commit to a complex rule. They are instead the advantages of fostering public understanding about the behaviour of the economy and about the operation of the policy framework. For example, the Reserve Bank of Australia's inflation target, by emphasising a narrow range of two to three per cent, will encourage the formation by the public of an expected rate of inflation of two to three per cent, provided of course a track record of inflation in the two to three per cent range is established. Thus the simplicity of the inflation target can help to anchor inflationary expectations. It can reduce the responsiveness of the public's expected rate of inflation to changes in the actual rate of inflation.

I am in agreement with Edey's argument. The role of the inflation target in fostering public understanding and in anchoring inflationary expectations, provided it is backed up by achievement, is a far more persuasive argument for using an inflation target to set monetary policy than the idea that central bankers need to be committed to low inflation outcomes. I do not see central bankers as irresponsible inflators who will attempt, in Barro and Gordon (1983) fashion, to trick the public into increasing their labour supply above privately optimal levels. The minor role of commitment in Edey's rationale for the inflation target is underlined by Edey pointing out that an observer would have difficulty in monitoring ongoing compliance by the Reserve Bank of Australia with the inflation target because the system requires the Reserve Bank to respond to forecasts. Forecasts are not 'objective' and so it would be hard to say at the time that the Reserve Bank is not doing its best to meet the inflation target.

### **What does an inflation target imply for the performance of economic activity?**

If there is a unique natural rate of unemployment, or NAIRU, then following an inflation target will automatically cause monetary policy to expand when the rate of unemployment is high. This automatic expansion may be slow in coming and follow a significant period of time during which the rate of unemployment is high but eventually this automatic response would occur. This is because an unemployment rate in excess of the natural rate will create downward pressure on the rate of inflation. This downward pressure will cause the rate of inflation to fall. Eventually the rate of inflation and the forecast of future inflation under unchanged monetary policy will fall below the target range and this will require the Reserve Bank of Australia to expand monetary policy in order to meet the inflation target. However in practice it appears that the natural rate of unemployment is not well defined and may not be unique. Consider the following evidence.

From a study on inflation and unemployment for the United States for the period 1961 to 1995, Staiger, Stock and Watson (1997) conclude that their 'estimates (of the natural rate of unemployment) are imprecise' (p. 46). They find that forecasts of inflation are similar whether the natural rate of unemployment is assumed to be 4.5, 5.5 or 6.5 per cent. The 95 per cent confidence interval on their estimate of the current value of the natural rate of unemployment is 4.3 per cent to 7.3 per cent. One can argue that their estimates are even less precise than they suggest. In their estimating procedure they use a polynomial in time which allows their estimate of the natural rate to follow to some extent the path of the actual rate of unemployment. From their Figure 2, p. 38, it appears that the point estimate of the natural rate was about 5 per cent in 1966 and about 7 per cent in 1980. This variation is driven, not by the supply-side factors on which the concept of the natural rate is based, but by the path of the actual rate of unemployment. Thus, if this variation was dropped then the imprecision of the Staiger, Stock and Watson estimates of the natural rate of unemployment would be even greater.

For Australia the imprecision of estimates of the natural rate of unemployment is even greater than for the United States. In a recent study, Crosby and Olekalns (1996) find, using Australian data for the period 1959 to 1995, the natural rate of unemployment varying between 2.3 per cent and 9.5 per cent. The Murphy model of the Australian

economy estimates, using Australian data for the period 1976 to 1991, the natural rate of unemployment as 7.1 per cent (Powell and Murphy 1995, p. 107). However the 80 per cent confidence interval of this estimate places the natural rate for the Murphy model in the range of 0 per cent to 22.2 per cent (McDonald 1997). A 95 per cent confidence interval would yield an even larger range and would not rule out the possibility of a negative natural rate of unemployment! The reason the Australian estimates of the natural rate of unemployment are less precise than the United States estimates is probably related to the larger range of variation of the actual rate of unemployment in Australia. This reason is suggested by the tendency of natural rate estimates to follow the actual rate of unemployment.

The imprecise estimation of the natural rate of unemployment reflects a weak or non-existent tendency for the rate of inflation to respond to different rates of unemployment. Note that it is different rates of unemployment which have little effect on the rate of inflation. *Changes* in the rate of unemployment do appear to cause changes in the rate of inflation, as first documented by Phillips (1958) and labelled the Phillips loops. Of particular importance for economic policy is the fact that persistently high rates of unemployment do not cause a decreasing rate of inflation. This is shown most dramatically for the interwar period, during which high rates of unemployment persisted for years – over 20 years in the UK – without generating a decreasing rate of inflation (see for evidence on this McDonald 1995, pp. 102–113).

The weak or non-existent downward effect on the rate of inflation is a plausible reason why inflation persisted so long after the increase in inflation the early 1970s. Central bankers were not, in Barro and Gordon fashion, seen by the public as irresponsibly pushing unemployment below the natural rate. Instead they were (responsibly) reluctant to keep on increasing unemployment as long as inflation was high

The imprecise estimates of the natural rate of unemployment imply that the automatic tendency under an inflation target for monetary policy to eventually offset high unemployment is weak or non-existent. This weakness suggests a case for the activity target to be included with the inflation target as the guide for monetary policy. Of course the imprecision of the estimates of the natural rate also suggests that it is impossible to specify with much certainty the level of activity at which policy makers should aim. In view of this, the activity target is perhaps best incorporated in the following fashion:

- set monetary policy to minimise the rate of unemployment; and
- subject to not violating the inflation target.

For an example of how this policy may have worked in practice consider the experience in Australia from the trough of the recession in December 1992 to the end of 1996. During 1993 and 1994 the rate of unemployment fell. This followed the progressive easing of monetary policy which had begun, albeit from a tight base, in 1990. However following the first quarter in 1994, the rate of wage inflation as measured by the percentage rate of change of average weekly earnings increased. In the second half of 1994, to stop the rise in inflation by slowing the speed of the upswing, the Reserve Bank tightened monetary policy. Following this monetary tightening, the fall in the rate of unemployment slowed down in early 1995 and then, in mid 1995, ceased. At the same time, from the beginning of 1995, the rate of wage inflation fell. The underlying rate of inflation went above the 2–3 per cent range in the later half of 1995 but fell back into the

range by the end of 1996. This pattern of inflation and unemployment is an example of a Phillips loop.

It appears that over the 1992 to 1996 period a decline in the rate of unemployment was achieved with only a temporary increase in the rate of inflation. Given that the rate of inflation at the end of 1996 was no greater than it had been at the end of 1992, it would appear that the decrease in the rate of unemployment can be reasonably regarded as a permanent decrease. Can a further decrease in the rate of unemployment from its current rate of about 8.5 per cent be achieved with similar success with regard to the rate of inflation? This raises the following questions about expansionary policy.

Does the inflation target help by reducing the size of variations in inflation in the Phillips loops? By anchoring inflationary expectations the inflation target may reduce the size of the fluctuations in the rate of inflation associated with the Phillips loops. This would increase the probability of success of non-inflationary, expansionary monetary policy.

Would a more clearly stated aggressive policy work better? The more convinced are firms that an expansionary phase will be cut off if inflation rises, the more resistant will they be to conceding large wage increases. Firms have a strong incentive to avoid being saddled with high wages relative to their competitors when growth declines.

When the rate of unemployment hits the minimum equilibrium rate, can monetary policy be reversed before the expected rate of inflation increases? Given that the formation by the public of price expectations tends to be backward-looking, the answer to this question is probably yes. If it were not the case the implications for macroeconomic performance would be bleak indeed, for it would require the RBA to restrict monetary policy before the rate of unemployment is at its minimum equilibrium rate. Note that under such a restrictive policy it would be pretty difficult to know what is the minimum equilibrium rate.

To answer these questions we need to know more about the theoretical causes of the Phillips loops. For example, if the decrease in unemployment in an upswing is caused by workers underestimating the rate of inflation, as for example in the model of loss aversion where the reference-wage is last period's real wage, see McDonald and Sibly (1997), then under rational expectations an expected monetary expansion will flow entirely into wages and prices with no reduction in the rate of unemployment. By contrast an alternative reference-wage specification based on the wages of other workers is shown by McDonald and Sibly (1997) to allow an upswing even if expansionary monetary policy is expected.

As noted above, in his case for an inflation target Malcolm Edey emphasises the role of the inflation target in fostering public understanding about the conduct of monetary policy. Although not spelt out by Edey, this educative role may come to have its greatest value in highlighting the link between economic efficiency and the achievement of a healthy level of activity, a link which exists if people are concerned about the real value of their wages. With monetary policy being set to achieve an inflation target it is easier to see that acts which increase the price level at a given level of activity have an 'employment cost' in that they provoke a deflationary monetary response. Thus the award of a higher minimum wage for a group of workers in excess supply will, through the monetary response, tend to increase the rate of unemployment. A postponement of

tariff cuts will do the same. On the other hand, acts which lower prices at a given level of activity can be seen to have an ‘employment benefit’ in that they provoke an expansionary response. (Not of course artificial reductions achieved by price ceilings). Tariff cuts, by lowering prices will encourage the choice of expansionary monetary policy and thus aid the reduction of unemployment. Seen this way, the inflation target highlights the link between microeconomic reform and the achievement of better employment outcomes. If the public (and the politicians) can understand this link then perhaps there would be a sea-change in attitudes to economic policy.

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## 2. General Discussion

Discussion of the papers by Rick Mishkin and Malcolm Edey focused on three issues:

- the advantages and disadvantages of different monetary-policy frameworks;
- the presence of output in the objective function of the central bank; and
- whether or not an inflation target is better specified as a band or a point.

Inflation targeting was seen as an encompassing framework for monetary policy which nested other frameworks as special cases. In some countries it has served a particularly useful role in locking in low inflation. However, some participants thought that inflation targets had yet to be fully tested. They argued that when a large adverse supply shock occurs, it was likely that narrow inflation targets would be seen to be inferior to a system in which medium-term price stability was achieved through the

operation of a rule like that proposed by Bryant, Hooper and Mann (see the papers by McKibbin and de Brouwer and O'Regan in this volume).

Some participants considered that the value of an exchange-rate target was understated in Mishkin's paper. Arguably, such a target has better transparency and accountability properties than an inflation target, although it was generally agreed that a fixed exchange rate was not appropriate for Australia. Furthermore, the recent experience of countries with exchange-rate targets appears to have been fairly similar to that of countries with inflation targets. Some participants argued that the international evidence was not clear as to whether inflation targets achieved price stability with less variability in output than did other policy frameworks; others noted that the appropriate framework depended very much on the particular circumstances of each country.

There was little support for a nominal-income target over an inflation target. A nominal-income target was felt to be less effective in tying down inflation expectations. It also suffers a large disadvantage *vis-à-vis* an inflation target, in that the value of nominal income itself is prone to frequent (and occasionally large) revisions. Other difficulties discussed included the difficulty of explaining to some members of the public the differences between real and nominal magnitudes, and the fact that a nominal-income target requires the monetary authorities to estimate and explicitly indicate their estimate of the potential growth rate of the economy.

Some participants thought that an inflation-targeting framework did not place sufficient weight on output considerations. In particular, it was argued that a system in which price stability was the only goal of monetary policy was unlikely to take appropriate account of the possibility of hysteresis effects: if these effects exist, pursuing an inflation target too vigorously might lead to an increase in unemployment in the medium term.

Others noted that a forward-looking inflation-targeting framework will always pay attention to fluctuations in output and employment, as these fluctuations affect inflation. The horizon of the policy rule (that is, how quickly inflation is returned to the targeted level after a shock) will determine exactly how much policy reacts to these fluctuations, but in general, in an inflation-targeting framework, monetary policy will always be endeavouring to move output back towards its potential level. Clarifying this is important in building and retaining public support for an inflation target.

Finally, some participants thought that the current specification of the inflation target in Australia was too vague. They argued that the use of a 'thick point', rather than a target band, created uncertainty about the Reserve Bank of Australia's tolerance of fluctuations in inflation. Others responded that a band might need to be quite large if it was intended that inflation was to be within the band almost all of the time. It was also noted that announcing a band may result in the public's inflation expectations focusing on the upper edge of the band, rather than the midpoint.