

# Introduction

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Medium-term price stability is widely accepted as the appropriate ultimate goal for monetary policy. This reflects two ideas. The first is that high rates of inflation distort decision-making, ultimately leading to slower economic growth. The second is that monetary policy is the most effective instrument in influencing medium-term inflation outcomes. By pursuing a strategy that ensures that inflation does not distort decisions concerning investment, production and savings, monetary policy is best able to contribute to sustainable improvements in living standards.

A variety of monetary-policy frameworks is consistent with achieving this objective, although there has been a shift over recent years to forms of inflation targeting. Even in countries without an explicit inflation target, there is often a strong commitment to an implicit medium-term inflation objective. Further, countries that have chosen to fix their exchange rate have typically done so against a country with some form of implicit or explicit inflation objective.

While the move to inflation targets has made the ultimate goal of monetary policy more transparent, it has not meant that central banks have eschewed all attempts to mitigate cyclical fluctuations in output and employment. Indeed, most central banks aim to reduce the amplitude of the business cycle, not only because this often helps the task of inflation control, but also because steady, sustained growth is likely to lead to better medium-term outcomes than is a process of ‘stop-go’ growth.

The focus of monetary policy on price stability has contributed to a remarkable convergence of inflation rates; most OECD countries now have inflation rates of around 3 per cent or less, with the differences between countries currently smaller than at any time since the early 1960s. This convergence of outcomes has also been helped by the generally benign international economic environment over recent years and the processes of international integration and product- and labour-market reform. However, while these developments have contributed to the recent low inflation outcomes, they do not by themselves ensure a continuation of low inflation. This remains the responsibility of monetary policy.

The papers in this volume were commissioned by the Bank to examine how this responsibility may best be met. The papers in Part I examine the arguments for and against various operational frameworks for monetary policy, including a fixed exchange rate, a money-supply target, and implicit and explicit inflation targets. The papers in Part II examine in more detail the history of the Australian monetary-policy framework, as well as discuss a number of specific proposals for reform of the current arrangements. Finally, the papers in Part III examine how short-term interest rates should be changed in response to various events.

## Monetary-policy Frameworks

Most monetary-policy frameworks, or systems, are underpinned by some form of inflation objective. The most obvious case is a system in which the central bank’s only

objective is to ensure that the annual inflation rate remains within a narrow band. But other systems also have (sometimes implicit) inflation objectives. For example, in a system based on monetary aggregates, there is a target for inflation implicit in the allowable growth rate of money. Also, fixed-exchange-rate systems are often used by countries to achieve a similar inflation rate as that applying in the country against which they are fixing. Finally, in systems in which the central bank uses some form of Taylor rule (or more accurately a Bryant-Hooper-Mann rule<sup>1</sup>) to guide the setting of short-term interest rates there is a specific inflation target which the central bank expects to achieve on average.

In evaluating these systems, two issues are important:

- Does the system achieve the inflation objective without unduly adding to output and employment fluctuations?
- Is the system transparent, and does it make the central bank sufficiently accountable?

The answers to these questions will vary from country to country, depending upon the structure of the economy, the type of shocks that occur, the nature of the financial system and the public's perception of monetary policy. For example, given Australia's relatively large terms-of-trade changes, a fixed-exchange-rate system is likely to generate greater output fluctuations than those currently experienced. Similarly, while a system based on monetary targets might be able to tie down the medium-term inflation rate, the relatively high frequency of large, unexpected changes in the demand for money mean that a fixed-money-growth rule could generate instability in output. The same result is likely in an inflation-targeting system in which the inflation rate must be controlled within a very narrow band.

These considerations point to the adoption of a medium-term inflation target, of which the Australian system is one example. A medium-term target ties down the expected average inflation rate, but in a way that does not exacerbate the amplitude of the business cycle. The framework acknowledges a trade-off between the variability of inflation and the variability of output, and implicitly recognises that the benefits of medium-term price stability are not sacrificed by some degree of variability in the annual inflation rate. This allows monetary policy some scope to be directly concerned with the size of the swings in output and employment, independent of their effect on inflation. To some extent, these swings can be moderated without prejudicing the ultimate goal of monetary policy.

The adoption of inflation targets has played an important role in anchoring inflation expectations. Also, inflation targets have provided central banks and governments with a vehicle for clearly communicating and justifying monetary-policy decisions. This may have reduced some of the political-economy problems that are sometimes associated with monetary policy and has made policy more transparent and central banks more accountable. The adoption of inflation targets has also helped institutionalise the commitment to low inflation, making it less likely that monetary-policy decisions are driven by the objectives of particular individuals.

The current debates about the design of inflation-target systems have centred on the issues of what degree of variability in inflation is acceptable, and what, if any, procedures

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1. By this rule, interest rates are raised above the estimate of 'neutral' when inflation is above target or output above potential.

should be implemented if inflation moves too far away from target. In some countries, governments have specified review procedures which are triggered when inflation moves outside specified bands, while in others, the emphasis is on a process of ongoing review.

The type of review mechanism that delivers the best results will only become evident in time. Some see triggered reviews as critical in ensuring that the central bank is not tempted to tolerate higher inflation to obtain faster short-run employment growth. Others argue that such reviews are likely to be ineffective as the public is unlikely to criticise, or penalise, the central bank for not having had higher interest rates. Some go a step further, and argue that triggered reviews are unnecessary since a competent forward-looking central bank with a medium-term inflation objective knows that tolerating higher inflation, and allowing a rise in inflation expectations, will inevitably require a period of slow growth and rising unemployment to get inflation back to target.

## **Australian Monetary Policy**

Over the past decade and a half, the monetary-policy framework in Australia has evolved through three stages. First there was a loose form of monetary targeting. This was abandoned in the mid 1980s and replaced with a system without explicit intermediate targets or objectives, with monetary policy often playing a supporting role to other policy instruments. Then from the late 1980s the system evolved into one with a much sharper focus on price stability, with an explicit inflation target being adopted in 1993.

Unlike in some other countries, the Australian inflation target was implemented only after inflation had been reduced. While it is sometimes argued that announcing an inflation target reduces the cost of disinflation, the real benefit of an inflation target appears to be that it makes it easier to maintain low inflation once it has been achieved. By anchoring inflation expectations and improving the public's understanding of how monetary policy works, inflation targets reduce the risk of events that cause surges in inflation. Also, when these events occur, their effect on inflation should be smaller and their propagation weaker.

Experience suggests that a reduction in inflation expectations takes a long time to occur, with a track record of good performance the critical ingredient. In Australia, despite an average inflation rate over the past seven years of around 2<sup>1</sup>/<sub>2</sub> per cent, it is only recently that many people have recognised that low inflation is once again an important part of the economic landscape. This slow adjustment of expectations has made the task of monetary policy more difficult than it otherwise would have been. But substantial progress in reducing inflation expectations has been made, and continues to be made, with public recognition of the inflation target playing an important role.

To some extent, the recent success of inflation targets in Australia and elsewhere has been helped by the absence of events on the supply side that push up inflation; if anything, supply-side factors have been working in the opposite direction. It cannot be assumed that this favourable situation will continue indefinitely; at some future point there is a significant likelihood that an event will cause inflation to rise and output to fall. Such an outcome would be a challenge for all monetary-policy frameworks, as the higher interest rates needed to reverse the rise in inflation would exacerbate the decline in output.

However, by anchoring inflation expectations, an inflation-targeting system may help in the adjustment.

The critical question here is how quickly inflation is brought back to the target. A system based on a narrow target band would likely require either a rapid return, probably at the cost of a large decline in output, or a temporary suspension of the target. The system of inflation targeting as practised in Australia would permit a more moderate return. In assessing how quick that return should be, the behaviour of inflation expectations is crucial. If inflation expectations increase by only a small amount, a relatively slow decline in inflation may be possible. However, if medium-term expectations look to be moving up in line with actual inflation, a more rapid response may be required. The appropriate speed of adjustment is a matter of judgment; having a medium-term inflation objective should help anchor expectations and allows this judgment to be made in such a way that price stability can be restored without unnecessarily amplifying the business cycle.

Some commentators on the Australian framework view this flexibility as undesirable. They seek more rigid rules that reduce the discretion of policy-makers to tolerate deviations of inflation from a target range. Others make a broader criticism, seeing an increased role for fiscal policy in the management of output fluctuations, and thus implicitly in the control of inflation; the argument is that this would allow *aggregate* price stability to be achieved, and at the same time reduce *relative* price variability and interest-rate volatility. Whether or not such an outcome is possible in practice is an interesting area for future research.

## Setting Short-term Interest Rates

Unlike some other monetary-policy regimes, an inflation-target regime does not specify the monetary-policy instrument or how it should be set, although in most countries with an inflation target the instrument is the overnight interest rate. Exactly how central banks should determine the appropriate level of this interest rate, and how frequently it should be changed, are areas of ongoing research.

This research has generated a number of simple suggestions that have become known as interest-rate ‘rules’. These rules have interest rates changing in response to actual or expected inflation and actual or expected deviations of output from full capacity (the output gap). A number of points stand out from this research.

First, if interest rates respond to *expected* inflation and the output gap, the variability of inflation and output will be considerably less than if policy responds only to current values of these variables. Good policy needs to be forward-looking. If policy is restricted to reacting only to current-dated variables, then any variable which provides information about future inflation – such as wages or the exchange rate – should enter the policy-makers’ reaction function.

Second, there is a trade-off between the variability of output and the variability of inflation. If the central bank wishes to keep inflation within a narrow range, it is likely that this will come at the cost of larger fluctuations in output.

Third, if monetary policy is credible, with inflation expectations anchored by the central bank’s inflation target, both the variability of output and inflation can be reduced.

Fourth, even if the central bank cares only about the variability of inflation (and does not care about the variability of output), it should still attempt to offset some of the variability in output. The reason is that the shape of the business cycle has a major influence on the evolution of inflation. By reducing fluctuations in output, the central bank can mitigate the inflation cycle.

Some economists have proposed a much more complicated procedure for setting interest rates than these simple rules. They suggest that the central bank should map out a complete path of future interest rates, with this path minimising some combination of the expected variability of inflation and the output gap. Having done this it should implement the first interest rate on that path and then repeat the procedure each month. One interesting feature of this approach, and of the simple interest-rate rules, is that it generates considerably greater variability in short-term official interest rates than has been seen in practice.

In practice, central banks appear to be averse to large changes in official interest rates. While the trend towards announcing and explaining changes in official rates may have strengthened this preference, the reasons for it are rarely articulated. In part, it can be explained by the combination of uncertainty and the perception that large changes in official interest rates, and frequent directional changes, are costly. It appears that central banks avoid making interest-rate changes that they expect might be reversed within a short period of time. If interest rates were to be moved in larger steps than is currently the case, directional changes would become more common. This could make it more difficult for financial markets and the public to understand the central bank's strategy. By moving interest rates in small steps, the probability of having to make a near-term reversal is reduced. It is also possible that infrequent and relatively small changes in official interest rates make the transmission mechanism more effective, although there is little empirical evidence either in support of, or in conflict with, this view.

One final question is whether the setting of monetary policy should be influenced by changes in asset prices. The most frequent answer is no. It is possible, however, that rising asset prices lead to an increase in expected future inflation in the prices of goods and services, and thereby indirectly cause an increase in interest rates. But in this case, policy would be reacting to expected future inflation, not to current asset-price inflation.

The one major qualification to this answer arises from the interaction of asset prices and the financial system. Rising asset prices create collateral for additional loans. This is exactly as it should be if the asset-price increases are based on fundamentals. But if the increases are not driven by fundamentals, financial institutions can incur substantial losses when the inevitable correction in prices occurs. These losses can amplify any downturn in the business cycle. The end result is that rises in asset prices that are not sustainable can set in train deflationary pressures that might only be felt some years down the track. Whether or not monetary policy can resolve this problem is an area of ongoing research; the current consensus is that these are mostly issues for prudential policy.

## **The Conference**

The Conference was held at the Bank's H.C. Coombs Centre for Financial Studies at Kirribilli on 21 and 22 July 1997. The papers were commissioned by the Bank and the

40 invited participants came from Australian academia, the public sector and private business, as well as overseas central banks, international institutions and the Reserve Bank of Australia.

The papers by both Rick Mishkin and Malcolm Edey examine various monetary-policy frameworks, and conclude that, for most countries, some form of inflation targeting represents the best method for achieving the goal of medium-term price stability. The paper by Andy Haldane discusses a number of design features of inflation-targeting systems; in particular, the appropriate level of an inflation target, the choice of targeting horizon and the need for transparency.

The paper by Stephen Grenville examines the evolution of the Australian monetary-policy framework over the past decade and a half, tracing the move from monetary targets to inflation targets. Various perspectives on the current framework are then presented in the papers by Warwick McKibbin, John Quiggin and Peter Stemp. Warwick McKibbin makes the case that policy-makers need to be able to respond flexibly to different events, while John Quiggin argues that fiscal policy should play a more active role in the management of the business cycle and that real interest rates should be more stable than they have been in the past. In his paper, Peter Stemp calls for a more precisely defined inflation objective with clearer definitions of success and failure.

The paper by Frank Smets examines the implications for the setting of short-term interest rates of changes in asset prices. In particular, it examines how movements in asset prices might affect forecasts of inflation. The papers by Gordon de Brouwer and James O'Regan and by Philip Lowe and Luci Ellis examine various 'rules' for setting interest rates. The first of these papers examines the degree to which policy should respond to deviations of output from potential and inflation from its target, as well as looking at the benefits of forward-looking policy, while the second paper examines the causes and effects of interest-rate smoothing.

Discussants' comments and summaries of the conference discussions are included after each paper, while summaries of the papers themselves are at the back of this volume.