Summaries of the Papers

Strategies for Controlling Inflation

Frederic S. Mishkin

This paper discusses the advantages and disadvantages of four strategies – exchange-rate pegging, monetary targeting, inflation targeting and 'just do it' – for controlling inflation. It concludes that inflation targeting is the preferred strategy in most situations.

The paper begins by arguing that the consensus for low inflation rests on two propositions. First, activist monetary policy which is too ambitious about reducing unemployment is likely to lead to higher inflation and higher unemployment in the longer term. Second, long-run price stability promotes a higher level of economic output and economic growth. High inflation distorts relative-price signals, causes over-investment in the financial sector and, through its interaction with the tax system, leads to less efficient, and lower, investment.

Exchange-rate pegging provides a nominal anchor for the economy and, because monetary policy is on 'automatic pilot', removes the time-inconsistency problem. An exchange-rate target is also easily understood by the public. It can be particularly useful in stabilising inflation quickly after bouts of very high rates of inflation. However, one of the main disadvantages is the loss of autonomy in monetary policy so that the policy-maker is unable to respond to developments in the domestic economy that are not present in the country to which the currency is pegged. Also, for some countries, there is no obvious currency to peg to.

Monetary targeting enables a policy-maker to take account of domestic developments in setting policy. It is also reasonably easily understood by the public, and it is easy to determine relatively quickly whether the target is being achieved. However, successful monetary targeting is reliant on the relationship between the targeted aggregate and the goal of monetary policy remaining stable, and the aggregate being controllable by the central bank. The failure of these two conditions in a large number of countries has led to the widespread abandoning of monetary targeting.

Inflation targeting avoids the problem of an unstable relationship between the goal and the intermediate target by focussing directly on the final goal. It also is easily understood by the public, and, in practice, has been associated with a significant increase in the transparency and accountability of monetary policy. However, a disadvantage of inflation targeting is the difficulty of directly controlling inflation. Moreover, the long and variable lags in monetary policy and the absence of a simple rule may make it difficult for the public to monitor the performance of the central bank in a timely manner.

Finally, the 'just do it' strategy of maintaining low and stable inflation can be used to describe the monetary-policy strategy of the US Federal Reserve in recent years. No explicit strategy is articulated, but it is similar to inflation targeting in its forward-looking behaviour. It has generally been successful but the paper argues that it might be overly dependent on particular individuals and therefore may not be a successful long-term strategy for monetary policy.

The Debate on Alternatives for Monetary Policy in Australia

Malcolm Edey

This paper reviews the arguments for and against various monetary-policy frameworks for Australia. Four broad possibilities are considered: quantity-setting systems based on the control of a monetary aggregate; final-targeting systems with an interest-rate instrument; exchange-rate or commodity standards, and a *laissez-faire* approach.

Three criteria are used to assess the relative merits of the different systems. First, does the system provide an anchor for inflation in the long run? Second, does the system have desirable short-run stabilisation properties? Third, does the system provide appropriate discipline on the monetary-policy decision-making process?

Most variants of the first three systems meet the first of these criteria.

The stabilisation properties of the different systems vary with the type of shocks that hit the economy. The prevalence of money-demand shocks and terms-of-trade shocks in Australia means that systems based on monetary aggregates or a fixed exchange rate would likely generate quite large business cycles. The argument against a fixed exchange rate is strengthened by the weak or negative correlation between terms-of-trade shocks in Australia and those in any country to which Australia might potentially peg its exchange rate.

Exchange-rate and monetary targets have the benefit of simplicity and transparency, but may constrain the discretion of policy-makers in an undesirable way. An inflation target can be regarded as 'constrained discretion' where a realistic balance is struck between simplicity and the ability to respond flexibly to shocks. By allowing policy to respond to all available information – and not just to the monetary aggregates – an inflation target allows discretion at the level of interpreting information, but subject to the constraint that the goal is achieved.

The paper also examines monetary-policy frameworks in other countries. The most obvious distinction between the various frameworks adopted by the industrial countries is that between the exchange-rate-pegging countries in Europe and the inflation-targeting countries. Amongst the inflation-targeting countries, the main difference is in the degree of inflation variability that the different approaches tolerate.

The paper concludes that theory, empirical evidence and international experience all argue in favour of a final-targeting system such as the inflation-targeting approach adopted in Australia. Such a system strikes a reasonable balance between a rigid rule and complete discretion.

Designing Inflation Targets

Andrew G. Haldane

This paper discusses three aspects of the design of inflation targets: the appropriate mean rate of inflation; the horizon of the inflation target, and the effects of increased central bank transparency.

There is broad consensus that standard measures of consumer price inflation overestimate actual inflation; typical estimates of the size of the bias are around 1 per cent a year. Abstracting from the issue of bias, an assessment of the appropriate rate of inflation depends on the welfare costs of operating at an inflation rate different from first-best and the disinflationary costs of moving to first-best.

The empirical evidence suggests that very high rates of inflation lower the growth rate of output. However, for countries with single-digit inflation rates, inflation appears to reduce the *level*, rather than the *growth rate* of GDP. Typical estimates of the sacrifice ratio suggest that the present value of the gains from lowering inflation from current levels to complete price stability exceeds the costs of doing so. However, the paper cautions that current estimates of the sacrifice ratio are derived from a period of moderate, not zero, inflation. A number of factors suggest that at zero inflation the sacrifice ratio may be higher. The first is that zero inflation implies that the real interest rate must be non-negative, and there may be times when real rates should be at or below zero. The second is that rigidities in the labour market may prevent falls in nominal wages, reducing real-wage flexibility. The third is that the fall in output required to move to complete price stability may have costly hysteretic effects on unemployment.

In assessing how forward looking monetary policy needs to be, two issues are relevant. The first is the length of the transmission lags between policy and its effect on output and prices. If policy-makers underestimate the transmission lag, monetary policy may generate cycles of its own. The paper also notes that as the inflation rate falls, the lags of monetary policy may become even longer. The second issue is the extent to which the authorities are prepared to trade off increased variability of output for reduced variability of inflation. If, after a shock, the central bank wishes to quickly return inflation to target, the cost may be greater variability in output.

The move to inflation targeting has seen an increase in the transparency of monetary policy. One aspect of this is the publication of forecasts for inflation. This ought to enhance credibility, as it allows the public to monitor the central bank's feedback rule. Empirical work for the United Kingdom indicates that the publication of the Inflation Report has helped reduce inflation expectations and reduced the volatility of the term structure of interest rates.

The Evolution of Monetary Policy: From Money Targets to Inflation Targets

Stephen Grenville

This paper traces the evolution of Australian monetary policy over the past decade or so. In particular, it examines how the monetary-policy framework has changed over this period and the reasons for the changes.

The paper discusses four phases in the evolution of Australian monetary policy: the end of monetary aggregates; the 'check-list' period in which policy was attempting to simply 'hold the line'; the period of rapidly rising asset prices; and the period of falling and low inflation. Each phase is discussed in terms of the degree of discretion that policy-

makers had, the Bank's view of the transmission mechanism, and the broader macroeconomic context within which monetary policy was operating.

In explaining why Australia did not make more progress in reducing inflation in the 1980s, the paper argues that inflation reduction was seen as less important than remedying some of the structural imbalances that existed at the time. In addition, there was a general unwillingness to accept the loss of output involved in getting inflation down.

By the late 1980s there was growing concern that high inflation was having adverse effects on the economy. As a result, monetary policy became increasingly focused on reducing inflation. The unexpected depth of the early-1990s recession locked in lower inflation outcomes by reducing the community's inflation expectations. The adoption of an inflation target in 1993 has also helped in this regard.

The current framework has a clear specific final objective, with no intermediate objective or operational rule. The transmission mechanism is via output to inflation, although the exchange rate and price expectations also have central roles. Monetary policy acts as a 'stand-alone' instrument, directed principally at achieving price stability. Enhanced transparency and independence are also important elements in the current monetary-policy framework.

Which Monetary-policy Regime for Australia?

Warwick McKibbin

This paper examines the lessons for Australian monetary policy of the large volume of work undertaken on monetary-policy regimes by the Brookings Institution. The primary conclusion is that no simple monetary-policy rule dominates for all types of shocks or for all structures of the economy. The choice of policy regime depends upon a number of trade-offs between time consistency and credibility issues on the one hand, and the types of shocks that are expected, and one's assessment of how the economy actually works, on the other.

Given the nature of the Australian economy and the type of shocks that occur, monetary and exchange-rate targets are dominated by other policy frameworks. The current policy framework of 'targeting inflation over the cycle' is close to a rule from the class of Bryant-Hooper-Mann rules (also known as Taylor rules) that the Brookings project found to dominate other simple rules. These rules have short-term interest rates responding to deviations of inflation from target and output from potential.

The paper notes that there may be some advantage in the Reserve Bank of Australia being more explicit about how much it will adjust interest rates when inflation and output are away from their target values. It also notes that sticking to any simple rule at all costs will probably be suboptimal. On occasions, large shocks will occur which may require a re-assessment of the appropriate 'rule' for implementing monetary policy. The necessary changes will only be able to be made quickly if the central bank and others continue to improve their understanding of the Australian economy and its place in the global economy.

The Welfare Effects of Alternative Choices of Instruments and Targets for Macroeconomic Stabilisation Policy

John Quiggin

Over recent decades monetary policy has played an increasingly important role in macroeconomic stabilisation policy, while the role of fiscal policy has declined. This paper questions the desirability of this change, arguing that while monetary policy might stabilise aggregate activity, it does so at the cost of adding to the variability of individuals' consumption.

Macroeconomic policies should be concerned with maximising society's welfare. From a microeconomic perspective this means stabilising individuals' consumption, not macroeconomic aggregates. While monetary and fiscal policy may be able to achieve the same degree of macroeconomic stabilisation, they can have quite different effects on individual welfare.

Monetary policy influences the economy by changing the real interest rate, i.e. the relative price of consumption today compared to consumption tomorrow. While variation in this relative price through time might stabilise aggregate demand it can reduce individual welfare by making individual consumption more, not less, volatile. In contrast, fiscal policy operating through changes in tax rates can simultaneously stabilise individual consumption and aggregate demand.

While the use of fiscal policy for stabilisation purposes was common in the 1950s and 1960s, it would only be feasible in the present environment if the political obstacles to increases in tax rates were removed. Given the costs involved in changing tax rates, a reasonable strategy would be to allow one tax cut in a given contraction, with any further stimulus delivered through more frequent adjustments in government expenditure. The microeconomic analysis in the paper suggests that if such an option is unavailable, policy-makers should be extremely cautious about using monetary policy as a substitute.

The Australian Government's Current Approach to Monetary Policy: An Evaluation

Peter J. Stemp

This paper argues that the Reserve Bank of Australia (RBA) should have a single objective for monetary policy focused on a legislated inflation target. The case for this approach rests on three broad arguments. First, finetuning the business cycle is problematic given the difficulties of forecasting economic activity, and the long and variable lags of monetary policy. Second, inflation imposes costs upon the economy and inevitably is followed by a period of costly disinflation. Third, if monetary policy is concerned directly with employment, the authorities might target an outcome that is too high leading to rising inflation, but ultimately to no gain in employment.

In evaluating the RBA's approach to monetary policy, an index of independence and accountability is calculated. The index shows a substantial improvement in independence and accountability for the RBA between June 1987 and June 1997, although on all

criteria used, the Reserve Bank of New Zealand and the Bank of England rank as high, or higher than the RBA.

The paper contains a number of proposals for the operation of monetary policy in Australia. Inflation should be the sole objective of monetary policy and the current inflation objective should be clarified so that it is clearer whether or not the objective is being met. There should be clearly defined review procedures if the specified target is not met, although there should also be an appropriate override clause in the case of a significant supply shock. Monetary-policy decisions should be delegated to an individual, or group of experts, who should be clearly independent of government. Finally, if policy decisions are taken by a group of experts, rather than an individual, minutes of the meetings of that group should be published.

Financial-asset Prices and Monetary Policy: Theory and Evidence

Frank Smets

This paper examines the appropriate response of monetary policy to changes in financial-asset prices. It argues that in an inflation-target regime, the basic principle should be that policy reacts to financial-asset prices if they affect forecasts of inflation.

A structural model is developed to show that changes in asset prices can affect expected inflation in two ways. The first is that a change in asset prices can directly affect aggregate demand. For example, rising asset prices increase wealth and the value of collateral for new loans. As a result, aggregate demand is likely to increase, and this might add to inflationary pressures. Second, even if changes in asset prices have no direct impact on aggregate demand, they may contain useful information about current and future economic conditions. For instance, a rise in stock prices might indicate a favourable supply shock and, all else constant, reduced inflationary pressures.

The paper also discusses the advantages and disadvantages of monetary conditions indices (MCI). It argues that while using an MCI as an operational target might be useful in terms of practicality and transparency, it does have a number of disadvantages. The concept of an MCI depends on a simple view of the transmission mechanism which may not be a good approximation to the actual working of the economy. Also, if asset-price movements occur in response to changing fundamentals, they need not be offset by changes in interest rates.

The paper's empirical assessment of the monetary-policy responses to asset prices in Australia and Canada, suggests that the Bank of Canada systematically responds to exchange-rate changes while the Reserve Bank of Australia does not. This is explained by the different types of shocks that affect each country. In Australia, terms-of-trade movements are a principal source of shocks to the exchange rate; the central bank does not attempt to offset these since changes in the exchange rate dampen the effects of the terms-of-trade shocks. In contrast, in Canada, nominal shocks to the exchange rate are more common; since these have an unambiguous effect on inflation, the central bank responds to them by changing interest rates.

Evaluating Simple Monetary-policy Rules for Australia

Gordon de Brouwer and James O'Regan

In pursuing the objectives of low inflation and the maximum rate of sustainable economic growth, most central banks use an overnight interest rate as their instrument of monetary policy. This paper examines various simple rules that might be used to determine the appropriate level of this interest rate.

These rules specify an interest-rate reaction function for the central bank in terms of a small number of variables, such as current or future output and inflation. Seven different policy rules are compared in terms of the outcomes on output and inflation variability. These include rules in which policy reacts to deviations of the price level and inflation from target values and rules which target the *level* and *growth rate* of nominal income. Also examined is a Taylor rule, in which interest rates respond to the weighted-average deviation of output from potential and inflation from target. To compare the various rules, a simple but data-consistent model of the economy is simulated using shocks representative of those that have hit the Australian economy in recent history.

The paper finds that the Taylor rule is the most efficient; that is, for any given degree of output variability, it minimises the variability of the inflation rate. Moreover, if the only objective of policy is to minimise the variability of inflation, policy should still respond to swings in the business cycle. This result arises because the variability of inflation is determined, in part, by the variability of output; reducing the variability of output reduces the variability of inflation.

The paper also examines the effect of changing the reaction coefficients on output and inflation in the Taylor rule. It finds that moving the interest rate by a larger amount in response to deviations of output from potential reduces the variability in both output and inflation up to some point, but excessively activist monetary policy can increase variability. The trade-off between output and inflation variability is convex: at relatively high levels of inflation variability, the costs to output stabilisation of reducing the variability in inflation are small, but they increase as inflation variability declines.

A forward-looking policy rule improves efficiency, relative to a simple backward-looking rule. In this respect, the inclusion in the policy rule of any variable with information about the future movements in output or inflation will improve efficiency. Greater credibility of an inflation target is also shown to reduce output and inflation variability.

The Smoothing of Official Interest Rates

Philip Lowe and Luci Ellis

Central banks tend to smooth changes in official interest rates. This involves changing interest rates relatively infrequently; moving interest rates in a sequence of steps in the same direction; and keeping rates unchanged for a relatively long time before reversing direction. This paper examines the reasons for, and the effects of, the practice of interest-rate smoothing.

The paper uses an empirical model of the Australian economy, where the forward-looking central bank aims at minimising expected deviations of inflation from target and output from potential. The effect of interest-rate smoothing is examined by adding a cost of interest-rate changes to the central bank's loss function and then varying that cost. The primary result is that a moderate degree of smoothing need not add appreciably to the variability of inflation and output. The main explanation for this result is that the lags involved with monetary policy mean that the current level of activity is influenced by the entire path of interest rates over the previous couple of years; making that path more volatile, but without changing the average interest rate very much, has little effect on output and inflation variability. However, the results suggest that while interest-rate smoothing has little effect on standard measures of output and inflation variability, it does lead to considerably longer cycles in both output and inflation.

One justification for interest-rate smoothing discussed in the paper is that larger and more frequent changes in interest rates might adversely affect the monetary-transmission mechanism; variable-rate debt would become less important and the announcement effects of monetary-policy changes would probably be weakened. Such changes would themselves likely reduce the desirability of large changes in interest rates. Although evidence of non-linearities is hard to find, the paper presents some evidence that changes in interest rates have a non-linear effect on consumer sentiment.

Another explanation of interest-rate smoothing discussed in the paper is that policy-makers are uncertain about the future state of the economy and view frequent changes in the direction of interest rates as costly. To a large extent these costs arise from the adverse impact that frequent interest-rate reversals would have on the ability of the central bank to justify its actions to the public. By moving in small steps, the possibility of frequent reversals is reduced and the monetary authorities can more clearly explain their policy actions. This is important for monetary-policy transparency and accountability.