

Monetary Policy Regimes: Past and Future

Opening Address by the Governor, Mr I.J. Macfarlane, to the 26th Conference of Economists, Hobart, 29 September 1997.

Introduction

It is a pleasure to be speaking at this year's Conference of Economists on a subject which has been central to my own career. I thought of calling the speech 'Monetary Regimes I Have Known', but that would have given too historical an emphasis. While history is extremely important, and provides a useful antidote to excessively abstract thinking, more is needed to satisfy the conference theme of 'policy challenges of the new century'. I have therefore attempted to respond in a forward looking way, by drawing some conclusions about the direction in which monetary policy regimes are likely to evolve.

Historical Overview

In broad outline, Australia's post-war monetary policy experience has much in common with that of other countries in the developed world. Certainly the starting point – a fixed exchange rate under the Bretton

Woods System – was the same, and several of the subsequent phases have been common to a significant number of countries. We can usefully divide the post-war monetary policy experience in Australia into four main parts:

- the fixed exchange rate period, which lasted until the early 1970s;
- a period of monetary targeting between 1976 and 1985;
- a transitional period which followed the demise of monetary targeting and lasted until the early 1990s; and
- the inflation targeting regime, in place since around 1993.

While every country has its own particular story to tell, something similar to this four-part schema, with suitable adjustments as to timing, could probably be applied to quite a wide range of other countries over the same period. In making this classification of policy regimes, it is wise to avoid being overly precise about dates. Sometimes regime shifts are quite dramatic and can be precisely dated – for example, the ending of US dollar convertibility into gold, and the United Kingdom's exit from the European Exchange Rate Mechanism – but this is not invariably the case. In Australia, the movement between regimes has tended to be evolutionary, and it is not always possible or helpful to date them precisely.

How did these four regimes perform, and what were the critical factors that led to the move from each regime to its successor? To

answer these questions we need to have in mind some criteria against which the performance of a monetary policy regime can be assessed. Most practitioners and theorists would, I think, agree on two desirable characteristics of a monetary policy regime. First, policy needs to provide a nominal anchor for the economy: the policy regime must have the characteristic that it systematically resists excessive inflation or deflation, and thereby delivers a satisfactory degree of price stability in the long run. The second objective is to provide a degree of stabilisation in the short to medium term in response to shocks, which includes resisting adverse shocks to output and employment. This objective might be met either through the capacity of a regime to undertake deliberate policy responses when shocks occur, or through automatic stabilisers inherent in the regime.

The Fixed Exchange Rate Period

The longest lasting of the four regimes, by a large margin, was the fixed exchange rate, also known as the Bretton Woods System, or the gold exchange standard. At the start of the post-war period, the Australian currency had already been fixed to sterling at an unchanged rate since 1931. Subsequently, there were only two major changes to Australia's international parities until the 1970s: the first, in 1949, when Australia followed a sterling devaluation against gold and the US dollar, and the second, in 1967, when sterling was further devalued, but Australia did not follow. Thus, Australia's exchange rate against sterling remained unchanged from 1931 to 1967, while the rate against the US dollar – which is more important for current purposes – was unchanged from 1949 to 1971. As was the case for most other countries, the Bretton

Woods System of 'fixed but adjustable' exchange rates was operated in practice in Australia in the 1950s and 1960s as a firm commitment to fixed parities. The fixed exchange rate was effectively the linchpin of the monetary policy regime.

While it is not possible to pinpoint an exact date at which this ceased to be the case, parity adjustments became much more frequent after the next Australian dollar realignment occurred in 1971. Rather than being the anchor of policy, the exchange rate henceforward was increasingly viewed as an adjustable policy instrument. There were six parity changes in the years from 1971 to the adoption of the crawling peg system in November 1976; and this more flexible system, in turn, gave way to the float in December 1983. The history can thus be characterised as involving essentially fixed parities up until 1971, followed by a gradual transition to greater flexibility and a stronger internal policy focus in the years that followed.

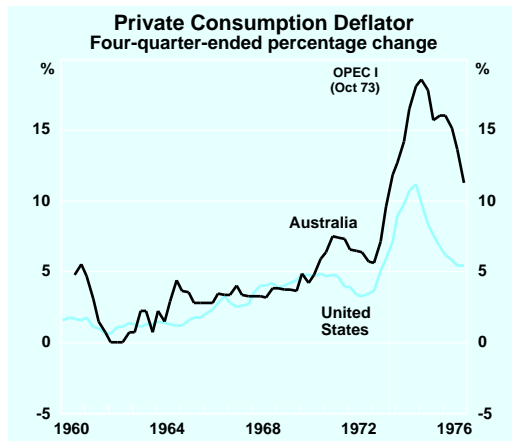
An important characteristic of a fixed exchange rate system, of course, is that it provides a nominal anchor, as long as the monetary policy of the country to which the exchange rate is fixed is itself conducted in a way that is consistent with reasonable price stability. This was indeed the case for most of the period up to around 1970. Under the Bretton Woods or gold exchange standard, most currencies were pegged to the US dollar, whose value was in turn tied to gold.¹ The central role of the US dollar in the system placed a strong discipline on the macroeconomic policies of other countries. Unless countries were prepared to make significant unilateral exchange rate adjustments, which happened only rarely, their inflation performances in the longer run were effectively determined by US monetary policy.

As I have argued elsewhere (Macfarlane 1997), this system worked reasonably well until the second half of the 1960s. The United States for the most part conducted conservative monetary and fiscal policies that

1. Under this system, the US government agreed to exchange US dollars for gold at \$35 per ounce with other governments. Individuals did not have the same rights and, in fact, were prohibited from holding monetary gold in many countries, including Australia.

kept budgets close to balance and inflation low, and this underpinned a period of sustained low inflation in other countries. In Australia, apart from some periods influenced by sharp commodity price movements, inflation was generally low and close to US rates (Graph 1).

Graph 1



This situation began to change from around the mid 1960s. Tax cuts in the 1964 and 1965 budgets, and subsequent increases in defence spending associated with the Vietnam War, shifted US fiscal policy to an expansionary position. Inflation began to increase, albeit from very low levels, after about 1965, and balance of payments deficits run by the United States meant that a number of other countries began accumulating substantial dollar reserves. This fed the process of money creation in these countries and relaxed the constraints on their domestic macroeconomic policies, with the result in many cases that inflation rates increased. Causes of the eventual breakdown of the Bretton Woods System in the face of these pressures have been much debated, but the core of most explanations is that the system lost its capacity to provide effective policy discipline. This, in turn, reflected the loss of suitability of the US dollar as the system's nominal anchor, the role it had played so effectively over the two previous decades.

It is interesting to note that the policy debate in Australia in the 1950s and 1960s paid little or no explicit attention to the nominal anchoring role of the monetary regime. That is not because the problem of inflation was thought to be unimportant – on the contrary, the need to control inflation was well recognised.² Nonetheless the main focus, both of practitioners and of the economics profession more widely, was on the second of the two roles of monetary policy that I outlined earlier, namely its role in responding to shorter-term shocks. In fact, many commentators talked of monetary policy as though it was totally discretionary and free to pursue whatever domestic objective it thought most worthy (see next section on Phillips curve).

Perhaps the most important reason for this misapprehension was that the existence of the long-run anchor was *simply taken for granted*. Policy did not need to focus on achieving a good longer-run inflation performance because the fixed exchange rate regime delivered this result in a semi-automatic fashion. In this environment it was natural to focus on shorter-term objectives, with the balance of payments serving as an important barometer of the need for policy action: whenever domestic demand was too strong, this would quickly show up in a payments deficit which needed to be corrected by tighter policy, and *vice versa*. In this way, the policy regime ensured that actions taken in response to short-term demand pressures had the effect of consistently tying the economy in to the long-run anchor.

The eventual failure of the fixed exchange rate system to ensure continued good macroeconomic performance reflected a combination of circumstances. The expansionary shift in US policy, to which I have already referred, meant that the external anchor became increasingly a source of inflationary pressure rather than of price stability. This was the case not just for Australia, but worldwide. In Australia's case, however, the effect was amplified in the early

2. A good example is Coombs' 1959 speech on the problem of creeping inflation.

1970s by the related phenomenon of rising commodity prices, which had a disproportionate effect on Australia, given our high commodity export exposure. The effect was to relax the balance of payments constraint and allow a further loosening of domestic policy discipline, with the result that the rise in Australia's inflation rate soon overtook that in the United States. The role of the 1973 oil shock in all of this was also important, but it should be remembered that inflation in Australia had already reached double-digit rates before the oil shock occurred.³

The Rise and Fall of the Phillips Curve

The early to mid 1970s was a period of re-evaluation of the earlier conventional thinking about monetary policy, prompted by the experience of a number of years of rising inflation. It is interesting to focus on the nature of that re-evaluation because it remains relevant to policy today.

In the 1960s, the conventional thinking was summed up in the widely influential notion of a stable downward-sloping Phillips curve. Inflation was thought of in terms of demand-driven processes that would move the economy along the curve, so that high levels of demand would produce a combination of high inflation and low unemployment, and low levels of demand the reverse. The role of policy was to manage aggregate demand so as to achieve a preferred combination of outcomes, taking the position of the Phillips curve as given.

Of course, not all economists subscribed to this simplistic world view, but I think it is a fair representation of the consensus among those economists who were most influential

and among a broad range of other policy-makers, politicians and journalists. There was considerable confidence for a time that policy could effectively manage the trade-off.⁴ Policy before about 1970 had been quite successful: periods of clearly excessive inflation had been rare, and were quickly reversed when they occurred. But there developed a general tendency among policy-makers in the late 1960s and early 1970s to try to exploit the trade-off to extract more growth, in the belief that the cost in terms of inflation would not be too great.

The experience of the 1970s – the simultaneous rise in inflation and unemployment, and their persistence at high levels – proved this understanding of the economy to be too simplistic and an inadequate guide for policy. To a mindset based on the stable Phillips curve, the combination of high inflation and high unemployment could not be readily explained. Indeed, it appeared internally contradictory, since inflation was thought of as a symptom of excess demand while high unemployment signalled that demand was deficient.

Two factors needed to be brought into the conventional model in order to understand the 1970s experience. The first, which had been emphasised both by Friedman and by Phelps, was the role of expectations. The short-run Phillips curve was to be thought of not as a permanent trade-off, but as conditional on the expected rate of inflation. Expansionary demand conditions were associated with *higher-than-expected* inflation, rather than high inflation *per se*, so the trade-off of higher inflation for lower unemployment could only be exploited over the limited period in which inflation expectations did not fully adjust to the new higher rate. In the longer run, when expectations had adjusted, high inflation would have no stimulatory impact. In Friedman's words, 'a rising rate of inflation

3. The first OPEC price increase was in October 1973. Over the year to the September quarter 1973, the increase in the CPI in Australia was 10.4 per cent. Inflation rates in other countries had also risen well above 1960s levels by then, reaching 6.9 per cent in the United States, 12.6 per cent in Japan, 6.9 per cent in Germany and 9.2 per cent in the United Kingdom.
4. Many economists thought that the conventionally defined business cycle had become extinct. See, for example, Zarnowitz (1972).

may reduce unemployment, a high rate will not' (Friedman 1968, p. 11). The operation of this principle had not previously been observable because inflation had never stayed high for long enough to be built into expectations.

The second, and related, factor to be brought into the conventional model was the importance of supply shocks. These could be thought of as shocks which reduced the sustainable levels of output and employment consistent with steady inflation. For much of the world the quintessential supply shocks were rises in oil prices but, for Australia, the real wages shock of 1974 was probably at least as important. Recognition of the importance of supply shocks implied a corresponding recognition of the limitations of what could be achieved through conventional demand-management policies.

Although economic thinking has advanced in a number of ways since the 1970s, these two basic lessons from the period remain relevant, and often need repeating. While the economics profession was quick to take up the stable Phillips curve, it was also quick in dropping it as a policy prescription.⁵ But there are still some in the policy debate – particularly among politicians, lobbyists and journalists – who think of the economy in terms of a stable Phillips curve, and who would like us to choose a higher inflation rate on the assumption that this would produce a sustained lift in growth and employment. But that is not the choice we face. Higher inflation can deliver at best only a temporary stimulus to growth and, in the longer run, is more likely to be detrimental.

The Move to Monetary Targeting

In the light of the early 1970s experience, economists stopped assuming a stable Phillips curve and started looking for ways to anchor monetary policy decisions. The Friedman

suggestion of a steady growth of the money supply sufficient to accommodate normal economic growth and low inflation found favour in a number of countries. Several had been focusing on monetary aggregates since the early 1970s and, by 1975, a number, including the United States, Germany, the United Kingdom and Switzerland were announcing monetary targets. Australia followed suit in 1976 by beginning to announce forecasts for the growth of M3. These were subsequently announced each year in the federal budget until the practice was discontinued in 1985.

The nature of the targets was somewhat different to what is often assumed in the textbooks or in the somewhat idealised notions of monetary theorists. In no country were targets adhered to with the sort of mechanical precision envisaged in Friedman's *Program for Monetary Stability*, the classic statement of the case for monetary targeting. They were usually seen as guides to policy, and as vehicles for explaining the rationale of policy actions, rather than being binding constraints on the policy-maker.

Monetary targeting regimes had a moderate degree of success in achieving their intermediate monetary objectives, and somewhat greater success in terms of the ultimate objective of reducing inflation. In the heyday of monetary targeting around the world, roughly from 1975 to 1985, some substantial reductions in inflation were achieved. Australia's inflation rate was reduced during this period, but was still a lot higher than the OECD average by the mid 1980s.

It would be a mistake to attribute the differences in inflation performance across countries primarily to differing degrees of rigour in the pursuit of monetary targets. The countries that brought inflation under control most quickly were not particularly more successful in hitting their monetary targets than the rest. The general pattern, summarised in Table 1, was that countries achieved their targets about half the time.⁶ Australia's success

5. For a review, see Leeson (1996).

6. Japan, which is excluded from the table, had a much higher success rate, but only because the targets (or really forecasts) were not announced until roughly three-quarters of the way through the year to which they applied.

Table 1: Monetary Targets and Projections

Country	Period	Average absolute deviation from target midpoint	Proportion of years within target range Per cent
Australia	1977–85	2.6	33.3
Canada	1976–82	1.3	71.4
France	1977–96	2.5	50.0
Germany	1975–96	1.8	54.5
Italy	1975–96	2.7	31.8
Switzerland	1975–96	2.6	47.6
United Kingdom	1976–96	2.7	52.4
United States M2	1975–96	1.5	63.6
United States M3	1975–96	1.8	40.9

Source: Edey (1997)

rate was a bit less than that, about a third. On another measure – the average deviation from the target midpoint – Australia’s record was quite similar to that of several other countries.⁷

The achievement of inflation reduction was a product not so much of the technical merits of monetary targeting as of the general shift in the policy-making consensus towards inflation control. What was critical was the willingness of the authorities to run policies that put a consistent downward pressure on inflation over a period of time. But, that said, the targets did serve a useful purpose. They focused policy on the need to anchor the nominal magnitudes in the economy, and they helped in communicating the anti-inflation strategy to the public and marshalling public acceptance of the required policy actions. The Volcker disinflation period in the United States was a good example of how useful targets could be in this role. Alan Blinder described the monetary target as a ‘heat shield’ which enabled the Fed to maintain a much tougher disinflationary stance than the public would normally have found acceptable.⁸ As a result the United States was able to make a definitive transition to low inflation at an early stage.

Monetary targeting was always subject to two well-known problems, both of which were important in the Australian experience. The first was the problem of controllability. The fact that targets were often missed was an indication that close control was either not possible, or would have required undesirable movements in the policy instruments. The second was the instability of the relationship between money supply and the ultimate objective of policy such as inflation or nominal GDP. It was this second problem that was decisive in causing most countries to abandon monetary targeting as the basis of their monetary policies.

By the mid 1980s, the problem of instability was coming to the fore. The relationship of money to ultimate objectives had always been imprecise, but had been judged to be sufficiently stable to serve as a useful guide to policy. But the structural changes in the financial system that followed deregulation were sufficiently large that this was no longer the case. In Australia, in the mid 1980s, the newly deregulated banks were able to win back market share from other institutions, and the financial system as a whole began to grow

7. Excluding the massive overshoot in the year when targets were finally abandoned, the average absolute deviation from the midpoint was just under two percentage points.

8. Blinder (1987, p. 77). As Goodhart put it, ‘central banks appreciated the function of a monetary target in providing them with a “place to stand” in warding off calls for a premature easing of policy’ (1989, p. 296).

more rapidly. To some extent, this was to be expected, but it meant a lengthy period in which the behaviour of the monetary and financial aggregates diverged from inflation or nominal income. In 1985, growth of M3 reached 17.5 per cent, at a time when domestic inflation had been falling.

The problem was not unique to Australia. By the time our targets were suspended in February 1985, many other countries had downgraded or abandoned them, for much the same reasons. In the words of Canadian central bank Governor Bouey, 'we didn't abandon the monetary aggregates, they abandoned us'.

The Transitional Period

The move away from monetary targets was followed by a period of transition when policies became more pragmatic and there was a search for alternative guiding principles. Once again, Australia's experience was by no means unique. Virtually all countries were downgrading their monetary targets to one degree or another, and there was no immediately clear direction as to what should be put in their place. Theory offered little help.⁹ Some of the alternatives being put up by critics either had already proven unsatisfactory for us – like a return to fixed exchange rates or forms of monetary targeting – or were unrealistically radical.¹⁰ Most countries with floating exchange rates developed a pragmatic approach that, broadly speaking, tried to resist excessive inflation and to have some stabilising influence on economic activity in response to shorter-term shocks.

Policy in Australia through this transitional period has been criticised for lacking a clear conceptual framework and allowing too much scope for central bank discretion, and there is some validity in these criticisms. In Australia,

the policy 'checklist', which entered the discussion for a few years following the abandonment of monetary targets, comprised a wide range of variables which were to be consulted in assessing economic conditions and making policy decisions. The list of variables included interest rates, the exchange rate, the monetary aggregates, inflation, the external accounts, asset prices and the general economic outlook – in short, an amalgam of instruments, intermediate and final policy objectives, and general macroeconomic indicators. The checklist conveyed the idea – sensible as far as it goes – that policy needs to look at all relevant information. What was missing was some framework for evaluating that information and converting it into an operational guide for policy.

Another way of expressing this is to say that monetary policy needed a 'nominal anchor'. Pure pragmatism was not enough because it could lead to monetary policy aiming to achieve a desired result for a 'real variable', which in the long run would be self-defeating. For example, if monetary policy was solely designed to achieve a given unemployment rate (as to some extent it was in the late 1960s/early 1970s in many countries), it would be continually eased whenever the actual unemployment rate was above the desired rate. But if the desired rate was too ambitious, this would be a recipe for continued easing and, in time, continuously rising inflation. At the same time, there would be no guarantee that monetary policy alone would be able to achieve the desired unemployment rate if structural factors were important. Similarly, indeterminacy would arise if monetary policy was directed at the current account of the balance of payments, as a lot of discussion in the late 1980s seemed to suggest. If the current account was too large, should monetary policy be tightened to reduce domestic demand (and imports), or should it be loosened to lower the exchange rate and hence increase competitiveness?

9. Goodhart (1989), for example, wrote of the 'increasing divide between a state-of-the-art macro theory and practical policy analysis'.

10. Among the latter were proposals for strict monetary-base control, a currency board, and radical schemes for a commodity-linked currency or competing privately issued monies.

These sorts of discussion led policy-makers and academics to again ask the question about what monetary policy can achieve in the long run. The nearly unanimous answer was that it could achieve a desired rate of inflation, but could not, of itself, achieve desired outcomes for real variables like the unemployment rate, the rate of growth, or variables like the balance of payments. Monetary policy can have an influence for good or bad on real variables, particularly in the short run, but it was not appropriate to target it at these variables. As a long-run target, what was needed was a nominal variable like inflation, nominal GDP or the money supply.

With the money demand function recognised as being unstable, and nominal GDP being too abstract a concept for easy public perception, attention turned to monetary policy regimes that centred on inflation. Two main alternatives presented themselves:

- a system where the instrument of monetary policy was operated to achieve a desired result for inflation, without the need for an intermediate target; or
- a system where the exchange rate was fixed to that of another country which had a good record of maintaining low inflation.

In short, the two alternatives which satisfied the condition of providing a 'nominal anchor' were inflation targeting or fixing the exchange rate (sometimes called the hard currency option). Australia went down the first path, while most of Europe (including the United Kingdom for a time) went down the second path by tying their currencies to the Deutschmark.

Some would argue that this two-way classification of the options is too narrow and that monetary targeting remains a viable third option, at least for some countries. Germany is often cited as an example. This view ignores the reality that the Bundesbank has moved a long way away from strict monetary targeting in recent years, as is evident from the way they

move their policy instrument. There is evidence to suggest that prospective inflationary developments are more likely to trigger a monetary policy move than is a deviation of money supply from its target.¹¹

Inflation Targeting

Unlike the experience in some other countries like the United Kingdom or New Zealand, where inflation targets came into force in dramatic regime shifts, the elements of Australia's inflation-targeting regime were put in place gradually. There were a number of reasons for this. While inflation targets had considerable conceptual appeal, the models adopted in the pioneering countries – New Zealand and Canada – seemed to us excessively rigid with their narrow bands and low target midpoints. The fact that these were the only working models available at the time tended to polarise debate, and it took some time for the Bank to develop its own more flexible version. Also important was the need to build public support, including political support, for a target, and again this happened gradually rather than in a single, decisive act.

Some of the key elements of the inflation-targeting approach were in place quite early. The conceptual basis of such an approach, with a focus on inflation as the policy objective, no intermediate objective, interest rates as the instrument, and a transmission process that works via the effect of interest rates on private demand, had been analysed in a number of pieces that the Bank published in 1989, including its conference volume.¹² What we now consider one of the key elements of the policy framework, the explicit announcements of cash rate changes, with explanations of the reasons for each change, began in January 1990. Over time, the Bank's published commentaries on monetary policy

11. This has been observed by practitioners for years and is now being incorporated into the literature. See Clarida and Gertler (1996), Mishkin and Posen (1997), Bernanke and Mishkin (1997) and Laubach and Posen (1997).

12. See Macfarlane and Stevens (1989), Macfarlane (1989) and Grenville (1989).

and the economy became more detailed and developed a stronger inflation focus. The numerical objective of 2–3 per cent inflation began appearing in public statements by Governor Fraser in 1992 and 1993. The cumulative effect of all these developments was to establish an inflation-targeting regime broadly comparable to those being developed in a number of other countries around the same time. While there was no individual decisive event, international comparative tables such as those published by the BIS date the change in Australia from 1993.¹³

A final element was added with the joint statement on the conduct of monetary policy, made by myself and the Treasurer on my appointment as Governor. The statement gave the Government's formal endorsement to the independence of the Reserve Bank as contained in its Act and to the 2–3 per cent target. It also provided for enhanced accountability through semi-annual statements and parliamentary appearances.

Several other countries adopted inflation targets around the same time as Australia. A recent survey by the BIS counts seven inflation targeters, making this currently the most numerically popular regime among medium-sized OECD countries (Table 2). As had been the case with previous regime changes, the immediate reason for change in many cases was either a breakdown of a previous regime or dissatisfaction with its performance. In the United Kingdom, Sweden and Finland, the trigger was the collapse of fixed exchange rate commitments in 1992. New Zealand and Canada adopted their targets in a deliberate strategy of inflation reduction. Australia was somewhat different in that there was no crisis that needed to be responded to, and the target was developed to cement in place an inflation reduction that had already been achieved.

The move to inflation targeting completed a significant conceptual leap from the regimes that had prevailed in the earlier decades. Instead of a focus on *intermediate* objectives, like the exchange rate or the money supply, the operational framework of policy was now

Table 2: Inflation Targets

Country	Target adopted	Current target %
New Zealand	Mar 1990	0–3
Canada	Feb 1991	1–3
United Kingdom	Oct 1992	2 ^{1/2}
Sweden	Jan 1993	1–3
Finland	Feb 1993	2
Australia	1993	2–3
Spain	Summer 1994	0–3

Source: BIS 1996 *Annual Report*, updated to incorporate recent changes to targets in the United Kingdom and New Zealand

built around a *final* objective, inflation. In describing inflation as the final objective in this context, I should make clear that inflation control is viewed as a means to an end rather than an end in itself. The reason monetary regimes have been set up to aim for low inflation is that this is the best contribution monetary policy can make in the longer run to growth in output, employment and living standards.

In principle, this approach re-establishes a clear nominal anchor while avoiding the main problem of the intermediate-targeting regimes – namely, that the target variables did not have a sufficiently stable relationship with the final objectives. The approach also preserves, from the transitional period that I described earlier, the commonsense notion of using all relevant information: the difference is that there is now a clear criterion – the impact on the inflation outlook – for assessing what the information means for policy.

Another property of inflation targets, not always well-recognised, is that they provide scope for counter-cyclical action. This is automatically built into the policy framework if a central bank takes seriously, as we do, both the upper and lower bounds of the target. When the inflation forecast is above the target, the framework requires policy to be tightened, as was the case a couple of years ago, and,

13. BIS 1996 *Annual Report*.

when it is below target, policy has to be more expansionary, as at present. In this way the policy framework incorporates a systematic resistance to cyclical demand pressures. I have described this previously by saying that the policy aims to allow the economy to grow as fast as possible, consistent with low inflation, but no faster.

Aside from these operational characteristics, an important dimension of the economic rationale for inflation targets is their role as a discipline on the policy process. The academic literature lays great store on this – particularly in the time inconsistency literature – although it tends to focus rather too narrowly on the idea of constraining the policy-makers. The targets are seen as correcting an inflationary bias that would otherwise arise from the temptation of central bankers to go for short-term expansion. In this literature, rule-based regimes are said to be superior to discretion because they allow pre-commitment to non-inflationary policies, and thereby overcome the assumed short-termism of the policy-makers. Central bankers are very sceptical of this line of analysis because we do not see ourselves as inherently inflation-prone.¹⁴

But while I think this particular argument for a rule-based approach somewhat misses the point, the ability to specify policy in terms of a relatively simple rule does have some important advantages. In particular, simple rules provide a ready vehicle for accountability and for public communication: they require policy actions to be explained in terms of a clear target, and they help central banks to resist calls for excessively expansionary policies. Also important is that, over time, a simple rule like an inflation target can provide a focal point for inflation expectations by making clear what the central bank is aiming at.

One of the reasons that inflation targets have proven attractive to so many countries is that they seem to strike a workable balance, between having these advantages of a simple rule, and retaining a necessary degree of flexibility. The framework has simplicity in terms of an easily communicated objective,

at the same time as having flexibility in the interpretation of information and operation of the policy instrument – a combination of characteristics that Mishkin refers to as ‘constrained discretion’ (Mishkin 1997).

While the essential characteristics of inflation targets are common to all the practitioners, there are some interesting variations across countries in the detailed design features. These involve characteristics like the target midpoint, the width of fluctuation bands and the timeframe for evaluating performance. Australia’s system differs from the early models (particularly New Zealand) by focusing on a midpoint of 2–3 per cent (which really means ‘about 2½’) rather than a range. The most common target midpoint is 2 per cent: Australia and the United Kingdom are slightly higher at 2½ and New Zealand lower at 1½ (having originally been at 1). There is also a difference concerning the meaning of the upper and lower bounds. In the original New Zealand and Canadian models, inflation was meant to be always within the band, but in our variation that was never the intention.

At this level of detail there is no single consensus model as to how an inflation target should be designed. To some extent, the variations reflect the different historical circumstances of each country. For example, New Zealand, which had the first and the most tightly specified system, also had one of the poorest track records on inflation and therefore the clearest need to signal a regime shift. Notwithstanding these differences, the essentials – a numerically specified target linked to procedures of public explanation and accountability – are common to all the inflation targets.

The Future

To the best of my knowledge, inflation targeting was not seriously canvassed as a

14. There are also some well-known academic critiques of this literature. See Blinder (1995) and McCallum (1995).

monetary policy option until the 1980s. By the end of that decade, however, as I have described earlier, there were only two monetary policy regimes that held out the promise of being achievable and of providing a nominal anchor – the first was the hard currency option and the second was an inflation target. It is my view that, as we approach the next century, the field will narrow further, and that inflation targeting will become the dominant monetary policy regime. This would be a remarkable change for a system that was virtually unheard of until the second half of the 1980s.

The reason for this change is that the biggest group of countries that have chosen the hard currency option – the members of the European Monetary System (EMS) – are scheduled on 1 January 1999 to achieve monetary union. On that date, there will be one European currency – the Euro – and one European Central Bank – the ECB. What will be the monetary policy regime pursued by the ECB? It cannot be the hard currency option because the Euro will be a floating currency. My guess is that, whatever the ECB chooses, it will rather closely resemble inflation targeting. An alternative view is that in order to impress markets that the Euro is as sound as the Deutschmark, the ECB may follow something akin to the German practice of monetary targeting. As I said earlier, this would not alter the picture very much as current German practice seems to be at least as much like inflation targeting as it is like monetary targeting.

In this new world, there will be three major currencies, which will float against each other – the US dollar, the yen and the Euro. Of course, none of these are in the group of countries that has an explicit inflation target, but I have argued elsewhere that if you had to fit the United States into one or the other of the formal monetary policy regimes, the one that comes closest is inflation targeting. The target is not explicit, but the Fed makes no secret of the fact that it is its assessment of inflationary pressures and the outlook for inflation that is the major determinant of

whether US monetary policy is adjusted.¹⁵ The Fed's behaviour over the last month has made that abundantly clear. Japan is a more difficult case to classify, but the evidence is that with inflation virtually non-existent, interest rates have been reduced to about the lowest conceivable level (the cash rate is 1/2 per cent).

Thus, among the traditional OECD countries, we have a group of explicit inflation targeters and another group – the big three – who have systems which could most appropriately be called implicit inflation targeters. Outside the OECD area, there is still room for countries to choose the hard currency option – Hong Kong for the past 13 years and Argentina (for a considerably shorter time) – fit this description. But recent events in Asia as well as in other regions such as Eastern Europe may have made the fixed exchange rate option less attractive.

If we take an even longer sweep of history, we can see that we entered this century with the most irrevocably fixed exchange rate system yet devised, namely the gold standard. As we enter the next century, we enter a world where floating exchange rates are the norm, and where the role of nominal anchor will be predominantly played by an inflation target, whether it is explicit, much as our own, or implicit as is the case in the United States.

Bibliography

- Bernanke, B.S. and F.S. Mishkin (1997), 'Inflation Targeting: A New Framework for Monetary Policy?', *Journal of Economic Perspectives*, 11(2).
- Blinder, A.S. (1995), *Central Banking in Theory and Practice*, Marshall Lectures presented at the University of Cambridge.
- Blinder, A.S. (1987), *Hard Heads, Soft Hearts*, Addison-Wesley, Massachusetts.
- Clarida, R. and M. Gertler (1996), 'How the Bundesbank Conducts Monetary Policy', *NBER Working Paper No. 5581*.
- Coombs, H.C. (1959), 'A Matter of Prices', Presidential Address, Thirty-fourth Congress, ANZAAS, reproduced in H.C. Coombs, *Other People's Money*, Australian National University Press, 1971.

15. There have also been proposals in the United States for adoption of an explicit inflation target.

Duisenberg, W.F. (1997), 'Strategies for Monetary Policy in EMU', address on the occasion of the Board meeting of the Banking Federation of the European Union, Maastricht, March.

Edey, M.L. (1997), 'The Debate on Alternatives for Monetary Policy in Australia', in P. Lowe (ed.), *Monetary Policy and Inflation Targeting*, Proceedings of a Conference, Reserve Bank of Australia, Sydney.

Friedman, M. (1968), 'The Role of Monetary Policy', *American Economic Review*, 58.

Goodhart, C.A.E. (1989), 'The Conduct of Monetary Policy', *Economic Journal*, 99(396).

Grenville, S.A. (1989), The Operation of Monetary Policy, presented at the First Annual Melbourne Money and Finance Conference, November.

Laubach, T. and A.S. Posen (1997), 'Disciplined Discretion: The German and Swiss Monetary Targeting Frameworks in Operation', *Federal Reserve Bank of New York Research Paper No. 9707*.

Leeson, R. (1996), 'The Rise of the Natural Rate of Unemployment Model', *History of Economics Review*, 25.

Macfarlane, I.J. (1997), 'The Economics of Nostalgia', Reserve Bank of Australia *Bulletin*, March.

Macfarlane, I.J. (1989), 'Policy Targets and Operating Procedures: The Australian Case', in *Monetary Policy Issues in the 1990s*, Federal Reserve Bank of Kansas City, Kansas City, Missouri.

Macfarlane, I.J. and G.R. Stevens (eds) (1989), *Studies in Money and Credit*, Proceedings of a Conference, Reserve Bank of Australia, Sydney.

McCallum, B.T. (1995), 'Two Fallacies Concerning Central Bank Independence', *American Economic Review*, 85(2).

Mishkin, F.S. (1997), 'Strategies for Controlling Inflation', in P. Lowe (ed.), *Monetary Policy and Inflation Targeting*, Proceedings of a Conference, Reserve Bank of Australia, Sydney.

Mishkin, F.S. and A.S. Posen (1997), 'Inflation Targeting: Lessons from Four Countries', *Economic Policy Review*, Federal Reserve Bank of New York, August.

Phelps, E.S. (1967), 'Phillips Curves, Expectations of Inflation and Optimal Unemployment Over Time', *Economica*, 34.

Zarnowitz, V. (ed.) (1972), 'The Business Cycle Today', National Bureau of Economic Research General Series No. 96. ↗