Mr King explores lessons from the UK labour market

Text of the Employment Policy Institute's Fourth Annual Lecture delivered by the Deputy Governor of the Bank of England, Mr Mervyn King, held in London on 1/12/98.

It is both an honour and a challenge to deliver the fourth EPI lecture. It is an honour to follow in such distinguished footsteps, and it is a challenge to tackle the subject of the link between monetary policy and the labour market. Few subjects are as emotive. Wages, jobs and unemployment feature as frequently in the popular press as they do in academic articles. The Bank of England must learn from one in order to convey our message in the other. And we are fortunate in that labour economics is a field in which British economists have been – and continue to be – at the forefront of research. That I can say objectively because I am not myself a labour economist. So tonight I shall be exploring lessons from the labour market for the Monetary Policy Committee. The Employment Policy Institute has played an important role in bringing together those undertaking research on labour markets and those involved with policy decisions. In particular, its Employment Audit provides a valuable commentary on current developments.

The labour market is unlike any other market. Indeed, for many people the very language of economists – equilibrium unemployment, market-clearing wages – seems incompatible with the human dimension of unemployment and deprivation. Are the 16 million unemployed people in the European Union merely an equilibrium, on the one hand, and a statistic, on the other? But for most people the labour market is the market where – for better or worse, in sickness or in health – they sell their time and their skills at a market price. That price determines, in large part, their opportunities and economic welfare. Wage rates have a much greater significance in influencing the distribution of real incomes than do the prices of almost anything else. As a result, the labour market cannot be divorced from broader social and political considerations.

If their terminology and language are sometimes insensitive, what do economists have to offer by way of ideas about unemployment? The prize for the most important idea and most insensitive terminology surely goes to Milton Friedman for the concept of the natural rate of unemployment. I shall discuss shortly the significance of this idea for monetary policy. But for a more elegant advocacy of a similar position it is necessary to delve further back in history.

This month sees the 75th anniversary of the publication of what Milton Friedman described as John Maynard Keynes' best book: *A Tract on Monetary Reform*. It is undoubtedly one of the most persuasive polemics ever written on the subject of monetary policy. To coincide with publication in December 1923, Keynes gave a lecture to the National Liberal Club in which he talked about "the triple evils of modern society". From the notes he used for that lecture – printed in his Collected Writings – we can see that Keynes regarded the evils as, first, the "vast enrichment of individuals out of proportion to any services rendered"; second, the "disappointment of expectations and difficulty of laying plans ahead"; and, third, "unemployment". Fat cats, short-termism and the jobless society: Keynes was ahead of his time. All these, Keynes argued, were "mainly due to instability of the standard of value". Over the past 20 years, Britain faced the same three problems. The income distribution widened and the rewards for those with special talents, and even for some with no apparent talent, increased significantly more than earnings for the unskilled. Both inflation and expectations of inflation were high and unstable, making it more difficult for firms to plan for the long term. And the unemployment rate rose to double-digit levels.

Keynes argued that the way to prevent those triple evils from undermining society was price stability. Central bankers should be as vigilant in countering deflation as in preventing inflation. The link between unemployment and inflation has been a central theme in macroeconomics for the remainder of the century.

Following the publication of *A Tract on Monetary Reform*, Keynes received a letter from none other than the Deputy Governor of the Bank of England. "Dear Keynes," he wrote, "I write to you in this familiar fashion because we are both old Kings' Scholars, though not of the same election." So far, so good. Regrettably, however, the then Deputy Governor's only comment on the book appeared to be that he was grateful to Keynes for writing in a style which an educated man could read with pleasure, and for having the book printed in a particularly attractive style.

This Deputy Governor has learned a great deal from Keynes' book. I refer to it in almost every lecture I give. In this lecture I shall discuss three aspects of the significance of the labour market for monetary policy. The first of these concerns the link between unemployment and inflation in the transmission mechanism of monetary policy.

The second issue is how the Monetary Policy Committee uses the available empirical information about the UK labour market when deciding on interest rates. How do unemployment figures and earnings data enter the MPC's decisions?

The third issue is the way in which unemployment enters the objectives of monetary policy. With an explicit inflation target, is it true that the MPC neither cares about unemployment nor takes it into consideration when setting interest rates?

The labour market and the monetary transmission mechanism

The theory of unemployment has spawned more concepts, and – without doubt – more acronyms, than almost any other field of economics (apart, perhaps, from measures of price inflation). I shall return to the language of unemployment later. But I want first to discuss the two concepts which are at the heart of any discussion of monetary policy and the labour market. They are the natural rate of unemployment and the rate of unemployment consistent with stable inflation, usually known as the NAIRU.

The concept of the natural rate of unemployment introduced by Milton Friedman and Edmund Phelps 30 years ago is the level of unemployment that – as Friedman famously described – would be "ground out by the Walrasian system of general equilibrium equations" reflecting the structural characteristics of the labour and product markets. Friedman was the first to recognise that this natural rate of unemployment was neither constant over time nor immune to policy influences.

The natural rate hypothesis implies a vertical long-run Phillips curve. In other words, if the monetary authorities attempted to "peg" the level of unemployment below the natural rate, then this in time would cause the inflation rate to rise indefinitely. The work of Friedman and Phelps soon proved highly relevant. The futility of using monetary policy to choose between different combinations of unemployment and inflation became only too apparent in the 1970s. Monetary shocks can – and in the early 1980s and 1990s did – cause unemployment to deviate from its natural rate, but only for a period. As inflation expectations catch up with the consequences of the monetary shock, unemployment returns to the natural rate.

But the responses of unemployment and inflation expectations to monetary shocks are far from immediate. Indeed, Friedman speculated that the full adjustment to an unexpected change in inflation might take up to "a couple of decades". Such long lags in the dynamics of the labour market mean that there is unlikely to be a simple relationship between deviations of unemployment from its natural rate and changes in the inflation rate. Chart 1 shows that it did indeed take almost 20 years to bring inflation and inflation expectations (implied by financial market returns on indexed and conventional gilts) down from double-digit levels to the current target of 22%, accompanied by a large rise and subsequent fall in unemployment.

The idea of the NAIRU can be thought of as a conceptual response to inertia in the system which means that the response of the economy to shocks will be protracted. In 1975 Franco Modigliani and Lucas Papademos introduced the concept of the non-inflation rate of unemployment – the NIRU – defined as "a rate such that, as long as unemployment is above it, inflation can be expected to decline". Note in passing that more appropriate terminology would be the non-increasing inflation rate of unemployment (NIIRU). Modigliani and Papademos recognised that the NIRU would be affected by macroeconomic shocks. They argued that there was evidence to suggest that "over the last two decades the NIRU [in the US] was held down by a favourable trend in the terms of trade between the private nonfarm sectors on the one hand and imported goods and farm products on the other. A termination or reversal of this trend would tend to raise the NIRU, at least temporarily."

It is ironic that two of the most prominent economists of countries synonymous with art and beauty – Italy and Greece – (one a future Nobel prize winner and the other a future central bank governor) should have given birth to an unattractive acronym that has spawned so many even more unappealing cousins. The first, and most feted, offspring – the NAIRU – was introduced by James Tobin five years later. NIRU, NIIRU, NAIRU – tongue twisters for the *Financial Times* Christmas quiz, or measures of the Inflationary Trigger Point? Take your choice. For the sake of simplicity I shall adopt the conventional term, NAIRU, to represent the entire family.

So what is the relationship between the natural rate of unemployment and the NAIRU? The natural rate of unemployment and the NAIRU are quite different concepts. The former describes a real equilibrium determined by the structural characteristics of the labour and product markets – the grinding out of Friedman's Walrasian general equilibrium system (modified, if necessary, by non-Walrasian features of labour markets such as imperfect competition, search behaviour and efficiency wages). It exists independently of the inflation rate. In contrast, the latter, as well as being affected by these structural characteristics, is also affected by the gradual adjustment of the economy to past economic shocks that determine the path of inflation. Because it is defined as the unemployment rate at which there is no immediate pressure for a change in the inflation rate, it is a reduced form – not a structural – variable.

This difference is reflected in the methods used to generate empirical estimates of the two concepts. The natural rate of unemployment can be estimated only by reference to a structural model of the labour market which has explicit microeconomic underpinnings and which can be used to identify the characteristics determining the natural rate. Empirical estimates of the natural rate would typically be related to inflation only in the long run when the effects of shocks average out. In contrast, the NAIRU is estimated using a system of time-series equations relating inflation to past and present economic shocks. The sole criterion for judging the success of estimates of the NAIRU is their short-term correlation with inflation. Indeed, the NAIRU as defined here – and in recent work by Estrella and Mishkin (1998) – is the level of unemployment such that the difference between it and the current rate of unemployment is all that is necessary to describe short-run inflationary pressure.

Although the NAIRU will tend towards the natural rate of unemployment in the long run, there is no reason to expect there to be a close relationship between the two measures in the short run. The natural rate is likely to move only relatively slowly over time in response to changes in its structural determinants. In contrast, the NAIRU will vary both with changes in the natural rate and in response to macroeconomic shocks. So those who argue that estimates of the NAIRU are too time-varying to be plausible are, I think, in danger of missing the point.

The NAIRU can be used as an ex-post device to describe the level of unemployment at which inflation started (or would have started) to increase. But the usefulness of these estimates as an ex-ante predictor of future inflationary pressure depends critically upon the economic environment. In particular, for estimates of the NAIRU to be a good predictor of future inflation, the natural rate would need to be relatively stable, and the magnitude of likely shocks would need to be small. This perhaps goes some way to explaining why estimates of the NAIRU in the recent past have appeared to contain more ex-ante information about future inflation in the US than they have in Europe.

More fundamentally, the distinction between the natural rate and the NAIRU illustrates the difficulty of using those concepts for the month-to-month implementation of monetary policy. The natural rate, although clearly relevant to the dynamics of inflation, is not sufficient to explain changes in the inflation rate. The NAIRU, which is defined to be a measure related to short-run inflationary pressures, requires knowledge of the reduced form of the transmission mechanism and the history of shocks to the economy. But that knowledge is required also for a forecast for inflation, and so the NAIRU itself provides no additional information over that contained in the forecast. Indeed, estimates of the NAIRU could be described as a by-product of the process of forecasting inflation.

As an example, consider the impact of the appreciation of sterling from mid-1996 until late 1997. Retail price inflation can be thought of as a weighted average of domestic and imported inflation. The substantial real appreciation of sterling since mid-1996 has for a while reduced the imported component of UK inflation and so, in turn, retail price inflation, below the level that it would otherwise have reached. In essence the NAIRU fell relative to the natural rate. That restraining effect on inflation will gradually wear off and begin to be reversed if sterling continues to fall. The issue of whether the domestic inflation component would fall to a level consistent with the inflation target by the time this temporarily depressing effect wore off was central to the monetary policy debate during the summer.

The example of sterling's appreciation shows how a macroeconomic shock, entirely independent of the labour market, can affect the relationship between the rate of unemployment and the rate of inflation. The rise in sterling is likely to have reduced the NAIRU via two separate channels. First, in the short run, the relationship between domestically generated inflation – of which wage inflation is a substantial element – and retail price inflation shifts because of lower imported inflation. Second, the temporary improvement in the terms of trade that followed the rise in sterling in 1996 reduced the wedge between the real consumption wage – which is of relevance to employees and which reflects a mix of both domestic and imported inflation components – and the real product wage – which is of relevance to employers and which reflects the prices only of domestically produced goods. That reduction in the wedge is likely to have reduced the pressure on nominal wage growth for any given level of unemployment.

So it is quite possible to believe that the NAIRU has fallen even if the natural rate has not. But this is likely to be temporary. As the impact of sterling's appreciation on wages and prices wears off, the NAIRU will, other things being equal, rise towards the natural rate. But other more

lasting changes may reduce the natural rate (and hence the NAIRU). For example, a range of government policies, including changes to the Jobseekers Allowance, the New Deal and the new Working Families Tax Credit, have increased incentives to work. The National Minimum Wage works in the opposite direction. Assessing the impact of these structural factors on the natural rate is no easier than calculating the effect of macroeconomic shocks on the NAIRU. But it is useful to distinguish the two concepts, not least because they can move quite differently in the short run.

Enough of this theory, some of which may appear largely semantic. None of it is, of course, either new or original. But understanding the language of unemployment matters. Richard Rogerson, in the *Journal of Economic Perspectives* last year, posed the question: "Have the language and concepts developed by economists in their study of unemployment served their role of fostering clear communication of findings and allowing issues to be sharply defined?" Professor Rogerson's conclusion, you will perhaps not be surprised to hear, was a resounding no. Neither the natural rate nor the NAIRU are terms well chosen to win friends and influence people. After all, there is nothing natural about the natural rate.

Whatever we call them, it is crucial to recognise that there is considerable uncertainty about the location of both the natural rate of unemployment and the NAIRU. Even in the United States, where there appears to be no obvious trend in the natural rate, estimates of the 95% confidence interval for the NAIRU are typically from 5% to 7.5%. In the UK where both structural reforms and macroeconomic shocks have had a larger impact than in the US, the range of uncertainty is even greater. Perhaps the most honest answer to the question of what is the natural rate was that given by Milton Friedman to the *Wall Street Journal* in January 1995: "I don't know what the natural rate is, neither do you, and neither does anyone else."

The labour market and monetary policy in practice?

How do these concepts affect monetary policy in practice? And what role does analysis of the labour market play in the Monetary Policy Committee's decisions on interest rates?

Using the language of unemployment developed earlier, the MPC has to assess whether the current level of unemployment differs significantly from the NAIRU and, as importantly, whether it is likely to remain so in the future. It may do that explicitly by taking a view on the level of the NAIRU, or it may do it implicitly by producing a forecast for inflation. In practice, we focus directly on an inflation forecast.

But the need for policymakers to focus on the level of unemployment and the level of output each time they assess the stance of monetary policy is unavoidable. Alan Greenspan has to do it. MPC members have to do it. Knowing that the growth rate of GDP is (or is likely to be) above or below its trend rate of increase is of little value unless one also knows where the level of output is relative to potential. This is a basic, but fundamental, point. If, for whatever reason, the level of unemployment is below the natural rate, a rise in unemployment is unavoidable. That may be undesirable. But any attempt to avoid it will simply result in a longer, or more pronounced, correction at a future date. In order to hit the inflation target the MPC needs to minimise deviations in the level of output from potential, not in the growth rate of output from its trend.

The need to focus attention on the level of economic activity is of course well understood by the academic community. It is now standard practice in the literature on monetary policy to assume that the authorities seek to minimise a social loss function, defined in terms of the deviation of the level of output or unemployment from their equilibrium values, and in terms of the deviation

of inflation from its desired value. But if this is so obvious, why, in discussions of the economic conjuncture and economic policy, is so much attention placed on growth rates rather than on levels? Why are commentators and pundits so concerned with whether economic growth is going to be above or below its trend rate, or even whether it is likely to be above or below zero? That is not what matters for economic policy nor, more importantly, for social welfare.

An excessive focus on growth rates of output and employment, rather than on their levels, may reflect a rather natural, but dangerous, optimism about the degree of spare capacity in the economy. After all, is not the belief that we could always achieve lower unemployment without an increase in inflation the mark of a kinder, gentler, altogether more civilised approach to economic policy? Or is it simply wishful thinking? As Greg Mankiw put it:

"Wishful thinking is one reason that monetary policy has historically been excessively inflationary… To my mind, wishful thinking is as worrisome a problem for monetary policy as time inconsistency."

Genuine concern for the unemployed means a recognition that sustainable reductions in unemployment require a combination of monetary stability on the demand side and microeconomic reforms such as the New Deal on the supply side. As Alan Blinder has reminded us, we need soft hearts and hard heads, not the other way round.

Despite suggestions to the contrary, the MPC does have soft hearts and hard heads, and does not base its assessment of the labour market – never mind its decisions on interest rates – solely on estimates of the growth of average earnings. An assessment of the overall tightness of the labour market requires all the available data – both quantity and prices – to be analysed. The wealth and diversity of published labour statistics means it is rare for them all to point in the same direction. The MPC's analysis of the labour market is like the construction of a jigsaw puzzle. The pieces of data are assessed alongside each other in order to build up as clear a picture as possible. No single piece of data is interpreted in isolation. And no single piece of data is, in itself, decisive.

The growth of wages and salaries is an important indicator of domestically generated inflation. But this does not imply that there is some magical threshold defining "acceptable" and "unacceptable" rates of earnings growth. In the short run, the link between earnings growth and inflation is complicated by a whole host of factors, including exchange rate movements, cyclical variations in productivity and profit margins, irregular bonus payments, and one-off adjustments to tax rates and other "wedge" effects. It is true that given the UK's historical levels of annual productivity growth of around 2% and the inflation target of 22%, it would be a cause for concern to the MPC if average earnings increased by much more – or much less – than 4.5% a year over a prolonged period without there being a corresponding change in trend productivity growth. That is not because the Committee has a view about the appropriate level of pay awards. It is not our job to second-guess what businesses should or should not pay their employees. Nor is it because we think earnings growth causes inflation – inflation is a monetary phenomenon. Rather it is because sustained earnings growth much above or below these rates may indicate that the level of utilisation in the labour market has reached a level inconsistent with the inflation target.

The June meeting of the MPC drew particular attention to the rise in headline earnings growth as measured by the Average Earnings Index. But that should be viewed against a background of increasing concern about the tightness of the labour market. In its meeting in April, the Monetary Policy Committee noted that "labour market data on quantities were signalling a tighter position than the price [earnings] data". At that time, the Labour Force Survey and claimant count

measures of unemployment had both fallen below their previous troughs recorded in the spring of 1990, and were still declining. This position was evident across all categories of unemployment, as can be seen from chart 2 which shows the various measures of joblessness reported in the EPI's Employment Audit. In addition, employment and total hours worked were rising quite strongly; recruitment intentions were at their highest level for nine years, with the level of vacancies at Jobcentres, and the average duration of these vacancies, both well above their 1988/89 peaks; and survey measures of recruitment difficulties were also at high levels.

The underlying rise of the Average Earnings Index had increased to 42% by the beginning of 1997, but was little changed by the end of the year. If I had been asked to deliver the third Annual EPI lecture, rather than the fourth, the main question you might have expected me to grapple with would have been why earnings growth had not at that point risen by more, given the 1.0 million fall in unemployment and the 1.4 million rise in LFS employment since the end of 1992. As a Committee, we discussed at some length during the spring of this year why the changes in the quantity measures had not fed through to higher earnings growth. We discussed whether the natural rate of unemployment (and the NAIRU) might have declined due to an increase in trend productivity or improvement in the functioning of the labour market. We also considered whether there had been independent influences on the NAIRU stemming from falls in inflation expectations or the effects of sterling's appreciation.

It is against this background that the MPC's decision to raise rates in June should be seen. The increase in headline earnings growth to 4.9% in February, from an upwardly revised 4.6% the previous month, appeared consistent with other labour market indicators. But we were fully aware of the evidence suggesting that the rise in earnings growth had been, and for a couple of months would continue to be, affected by unusually large bonus payments. If this was true, earnings growth might well have fallen back once the bonus effect had dropped out. Given the uncertainties in this area, the Committee concluded that it should not place too much weight on the latest numbers. Instead, it stepped back and examined the underlying trend in the labour market over the previous two years. We noted that private sector earnings growth had been rising throughout this period and that reported wage settlements displayed a similar profile. Given this longer-term perspective, the Monetary Policy Committee concluded that capacity constraints in the labour market were threatening the attainment of the Government's inflation target.

Of course, since then, the earnings data have been successively revised, rebased and suspended – a piece of the jigsaw has temporarily gone missing. As you can see from chart 3, the profile of the old series showed a steady rise in earnings growth from around 33% in mid-1995 to nearly 52% or so by the spring of this year. In sharp contrast, the revised and rebased data (before they were suspended) followed roughly the shape of a slightly squashed capital N. From a trough of 3% at the end of 1995, earnings growth was estimated to have risen to a peak of over 53% in February and March 1997 before falling back below 4% in early 1998 and then bouncing back above 5% again by May.

How would the MPC's analysis of the labour market have changed if the revised (but now suspended) data had been available six months earlier? That question is not easy to answer. The quantity data would still have suggested that the labour market was both tightening and, by historical standards, tight. The MPC would therefore have had the unenviable task of trying to understand why the steady tightening in the quantity measures had produced a zigzag path for measured earnings growth. We would also have had to try to understand why the zigzag profile of the new Average Earnings Index was not visible in other measures – shown in chart 4 – of nominal earnings growth, such as wage settlements and private surveys. As I have said

elsewhere, trying to reconcile the new earnings series with other labour market data is far from easy.

The Chancellor wrote to Giles Radice, the Chairman of the Treasury Select Committee, on 23 October announcing that he had asked Sir Andrew Turnbull and myself to conduct a review of the revisions to the average earnings figures. The review, which is considering both methodological and managerial issues, is being carried out by Martin Weale of the National Institute, supported by Peter Sedgwick of the Treasury. Martin and Peter have made an enormous effort over the last month or so to finish the review as quickly as possible. However, exactly when the Report will be finished and what it will conclude are, I am afraid, still not known. As a result, the ONS has yet to decide when to resume publication of the average earnings series. All I can say today is watch this space.

The labour market and the objectives of monetary policy

In the final part of my talk, I want to turn to the question of what this analysis of the labour market implies for monetary policy. One of the – perhaps the – most important economic and social problems facing Europe is the high level of unemployment: 16 million unemployed people throughout the European Union, a rate of over 10%, with young people under 25 accounting for almost a quarter of this total. That represents a major failure of economic policy. But is it a failure of monetary policy? To go one step further, should the objectives of monetary policy – whether enshrined in the Maastricht Treaty or in the Chancellor's remit for the Monetary Policy Committee – be altered to include an explicit reference to unemployment? Many think so. For example, the new German Finance Minister, Oskar Lafontaine, has said that his aim was a "European monetary policy that supported growth and employment as well as price stability". Nearer to home, the TUC has called for the MPC to be given a wider remit to include employment as well as inflation. And several newspaper editorials have argued for a broader remit for the MPC.

The fact that the proposition appeared in a newspaper does not of course mean that it is necessarily compelling. As my newsagent told me the other day: "Don't believe everything you read in the newspapers – they are all in the hands of the media."

The argument for including employment explicitly in the formal remit of the Monetary Policy Committee is often bolstered by reference to the objectives of the Federal Reserve in the United States, which is charged by statute with promoting "the goals of maximum employment, stable prices, and moderate long-term interest rates". At first sight, this appears to contrast with the remit of the MPC which is: "(a) to maintain price stability and (b) subject to that to support the economic policy of Her Majesty's Government, including its objectives for growth and employment". But what matters most is the intellectual framework underlying the behaviour of the central bank. The Federal Reserve's remit does not make clear if the FOMC is supposed to try to exploit some long-term trade-off between employment and inflation. But the practice is clear. Under Alan Greenspan's leadership, the FOMC has firmly rejected the notion that by accepting a somewhat higher rate of inflation it is possible to achieve a permanently higher level of employment.

It is conventional to express the implications of a vertical long-term Phillips curve in terms of the statement that unemployment can be held below the natural rate only by accepting accelerating inflation – or, to be more precise, an inflation rate higher than anticipated by wage bargainers. Equally, however, the statement can be turned the other way round. If the central bank is successful in pursuing, over a number of years, a constant rate of inflation, then unemployment

cannot remain above the natural rate indefinitely. Not only can central banks not bring unemployment down below the natural rate for long, neither can they be accused of keeping unemployment persistently above the natural rate. Monetary policy cannot influence levels of employment in the long run. There should be no surprise about this. A central bank can use its chosen instrument – interest rates – to hit a nominal target – such as an inflation target, or a target for the exchange rate or even the growth of nominal GDP – but it cannot use a nominal instrument to target some desired level of a real variable, such as the growth rate of output or the level of unemployment.

None of the above means that monetary policy has no impact on unemployment. To the contrary, monetary policy does affect the movements of employment and unemployment over the business cycle. And the remit of the MPC makes clear how we should take this consideration into account – as I explained a year ago in a lecture at the LSE. By aiming consistently and symmetrically to hit the inflation target, the MPC should ensure that inflation is, on average over a number of years, close to the target of 22%. Shocks of various kinds will mean that inflation will often deviate from the target and the MPC is required to take action to bring inflation back to the target. But it will do so gradually, if to do otherwise would have damaging consequences for employment or output. By looking ahead and aiming to bring inflation back on track over a horizon of two years or so, the MPC should be able to avoid undesirable volatility of employment and output. That is part of our remit.

Conclusions

Let me briefly draw two conclusions from my analysis tonight. First, the concept of a natural rate of unemployment, and the existence of a vertical long-run Phillips curve, are crucial to the framework of monetary policy. They help us focus on levels of output and employment rather than simply their growth rates. They also mean that there may be times when, although a rise in unemployment is undesirable, it is unavoidable. But the natural rate is of much less help in operational decisions on interest rates made month by month. This is because the natural rate is determined by microeconomic structural factors that are not easy to observe, and which are likely to change over time, and may not bear any close relationship to inflationary pressures in the short run.

More easily observable in terms of its relationship to inflation and unemployment is the concept of the NAIRU. This differs from the natural rate when macroeconomic shocks affect the rate of inflation corresponding to any degree of excess demand in the labour market. Since the NAIRU represents the current reduced-form relationship between inflation and unemployment, it is possible to calculate the prospects for inflation without any need to refer to such a variable as the NAIRU. It is a convenient shorthand concept for purposes of exposition, but not a necessary tool for operational decisions on interest rates.

Second, the contribution of monetary policy to employment objectives is to promote economic stability in its broadest sense. I referred at the outset to Keynes' view that the "triple evils" of an unequal distribution of income, instability of expectations and unemployment were all related to an unstable and unpredictable monetary standard. The solution, Keynes suggested, was to set monetary policy to hit a target for prices, or a low and stable inflation rate. He argued 75 years ago that monetary policy should be devoted to regulating the supply of money so that "the index number of prices will never move far from a fixed point". Keynes went on to say that:

"The Bank of England since the war has always done exactly the opposite of what the latest science recommends. I conclude from this that their opposition comes, not from mere obstinacy

or conservatism, but from their not yet understanding the point. I am, therefore, optimistic about the future."

It took the Bank of England almost 70 years to get to that point and introduce an inflation target. The objective of stability is best achieved by an inflation target because it stresses both what monetary policy cannot do – reduce unemployment in the long run – and what it can do – react to shocks in order to minimise undesirable volatility in output and employment. To that end, the pursuit of an explicit and symmetric inflation target is the relevant objective of monetary policy. With an inflation target and, more recently, the new Monetary Policy Committee, both unemployment and inflation have fallen significantly. I hope and believe that, with these new institutional arrangements, although we shall certainly make mistakes in the setting of monetary policy, we should be able to avoid the instabilities of the past 30 years which did so much to damage Britain's economic standing.

We should never forget that – as Milton Friedman pointed out in his 1968 Presidential Address (quoting in turn John Stuart Mill) – monetary policy becomes important for society only when it goes badly wrong. That is the basis for my proposition that a successful monetary policy should be boring, and that successful central bankers should be seen as neither heroes nor villains, but simply as competent referees, allowing the game to flow and staying out of the limelight. In the end, a central bank is doing its job when no one notices that it is there. So if, over the past 40 minutes, I have been sufficiently boring then I promise to carry on in that vein. If not, then I promise to mend my ways.

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