Keynes's relevance in the new millennium

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ABSTRACT

This paper examines aspects of the economics of J M Keynes for the relevance that they may have to a number of current issues particularly those faced by central banks in the second half of 2008. In particular, we shall see that Keynes's view of the importance of uncertainty in monetary economies is well-illustrated by the dilemma posed by the coincidence of recession and rising inflation rates. We shall also see that his view about the relationship between demand and what is fashionably described as the 'natural rate' of unemployment (and output) requires a radically different response from the one that current policymakers are likely to pursue.

However, since the latest developments in macroeconomics, which will actually inform policymakers during this crisis, have been described as a 'consensus', which presumably incorporates 'the best' of Keynesian and other traditions in macroeconomics, we start by asking just how much 'Keynes' there really is in the new consensus macroeconomics.

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1. INTRODUCTION

The publication of Keynes's *General Theory of Employment, Interest and Money* in 1936 is often regarded as the marking the birth of macroeconomics. This paper examines aspects of the economics of J M Keynes for the relevance that they may have to a number of current issues. These have mainly to do with the treatment of uncertainty but there are also insights to be gained from Keynes's approach to the labour market.

The 'relevance of Keynes' is a subject that has often been debated, especially after the development of rival and usually hostile approaches to macroeconomics such as monetarism and 'new-classical' economics. However, it has suddenly re-emerged as an interesting question because of the emergence in the last ten years or so of a set of ideas referred to as the 'new consensus macroeconomics' which, as its name implies, appears to bring together aspects of these different positions. If this is a genuine consensus and if it brings together the most useful parts of rival schools of thought, then one might expect that whatever Keynes may have had to say about current conditions must be contained within it. However, a careful examination of the NCM shows that while there is one big concession to the Keynes of the *General Theory* this is based upon very un-Keynesian foundations and, beyond that, much of Keynes is simply ignored.

So, we begin, in the next section, with a look at the NCM in more detail. Then, in section 3, we shall look at the basis in the NCM for changes in aggregate demand to affect the level of output. We shall see that while the responsive of output (and employment) to changes in demand *looks* decidedly Keynesian, it is based on foundations which were rejected by Keynes.

In section 4 we shall look at Keynes's views about uncertainty and the central role that this plays in a monetary economy. We shall see that what bothered Keynes about uncertainty is extremely relevant to the current (mid-2008) state of the economy and that the failure of the NCM to treat uncertainty seriously means the NCM is able to offer little practical guidance in present circumstances.

In section 5 we shall see that the NCM's acceptance of a 'natural' rate of unemployment (or level of output) is profoundly unKeynesian. It should also be of little operational significance but if experience is anything to go by it will encourage central banks to follow inappropriate deflationary policies with severe welfare losses.

Section 6 summarises and concludes.

2. THE 'NEW CONSENSUS'

As its name implies, the NCM claims to bring together elements (presumably the most useful elements) of several approaches to macroeconomics. This consensus has largely been built, on a pragmatic basis, from the trial and error of practical monetary policy-making. It is almost as though experience has led the way and theory has followed up with a rationale (one that sometimes looks decidedly *ad hoc*). In the light of what follows, it is worth noting that this experience has been acquired during a period of relatively benign economic conditions.

Charles Bean (2007) gives the following as the key features of the NCM. The close connection with policy-making is immediately obvious:

- In the long run, monetary policy has no real effects;
- In the short-run, nominal rigidities create a trade-off between output and inflation
- Monetary policy is the principal means of influencing aggregate demand;
- Policy outcomes are improved under an independent central bank;
- Ends (a specific inflation target) matter more than means (intermediate targets);
- The management of expectations is critical;
- The policy instrument is the short-run nominal interest rate set by the central bank.

Formally speaking, the NCM is usually represented by three equations[1] which are sometimes referred to collectively as the *IS/PC/MR* model. The first of these is an **IS equation**:

$$Y_{t+1} = A - \phi r_t \qquad \dots 1$$

where Y_{t+1} is output in the next period and A is autonomous demand and r_t is the real rate of interest, both in the present period.

The second is the short-run **Phillips curve**:

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[1] This representation of the model is based on Carlin and Soskice (2005). The same model is explained more briefly in Carlin and Soskice (2006) while a very similar model is in Bofinger, Mayer and Wollmerhäuser (2006). Attentive readers will notice that this version of the model incorporates only one lag, from the setting of the interest instrument to a change in the output gap. In other words, the model assumes a contemporaneous link between the output gap and inflation when another lag would probably be more realistic.

$$\pi_{t+1} = \pi_t + \alpha(Y_{t+1} - Y^*) \qquad \dots 2$$

wherein the rate of inflation depends upon the rate of inflation in the previous period together modified by the degree of aggregate demand pressure shown by the difference (positive or negative) between the actual level of output and some 'equilibrium' or 'natural' level, Y*

      We then require a third equation which sets the interest rate r_t. This could take the form of a Taylor rule or it could be written more generally as the rate of interest that minimises a loss function of the kind:

$$L = \quad - \quad + \lambda \ \pi \quad - \pi \qquad \dots 3$$

subject to the Phillips curve in eqn. 2. Notice the significance of the term λ here. With λ = 1 the policymaker suffers equal losses when output or inflation deviate from target. With λ > 1, greater weight is given to inflation than output losses. The policymaker is 'inflation averse'. By substituting the Phillips curve into the loss function and differentiating with respect to *Y*, we have:

$$\frac{\partial}{\partial} \quad - \quad - \quad + \alpha\lambda \ \pi \ + \alpha \quad - \quad - \pi \ = \qquad \dots 4$$

Substituting the Phillips curve back into this equation gives:

$$(Y_{t+} \ - \quad = -\lambda\alpha \ \pi \ - \pi \qquad \dots 5$$

This is the third equation of the model, known as the ***MR-AD* equation**,[2] where *MR* stands for 'monetary rule'. It shows the equilibrium relationship between the level of

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[2] So called because the curve links the rate of inflation with a level of output and thus resembles an aggregate demand curve. But it is important to bear in mind that the relationship traced by the MR curve is chosen by the policymaker. This contrasts with the conventional aggregate demand curve whichrepresents the behaviour of agents in general.

output (chosen by the policymaker in the light of preferences and constraints) and the rate of inflation.[3]

These equations can be usefully represented in a two-panel diagram like figure 1.

Figure 1

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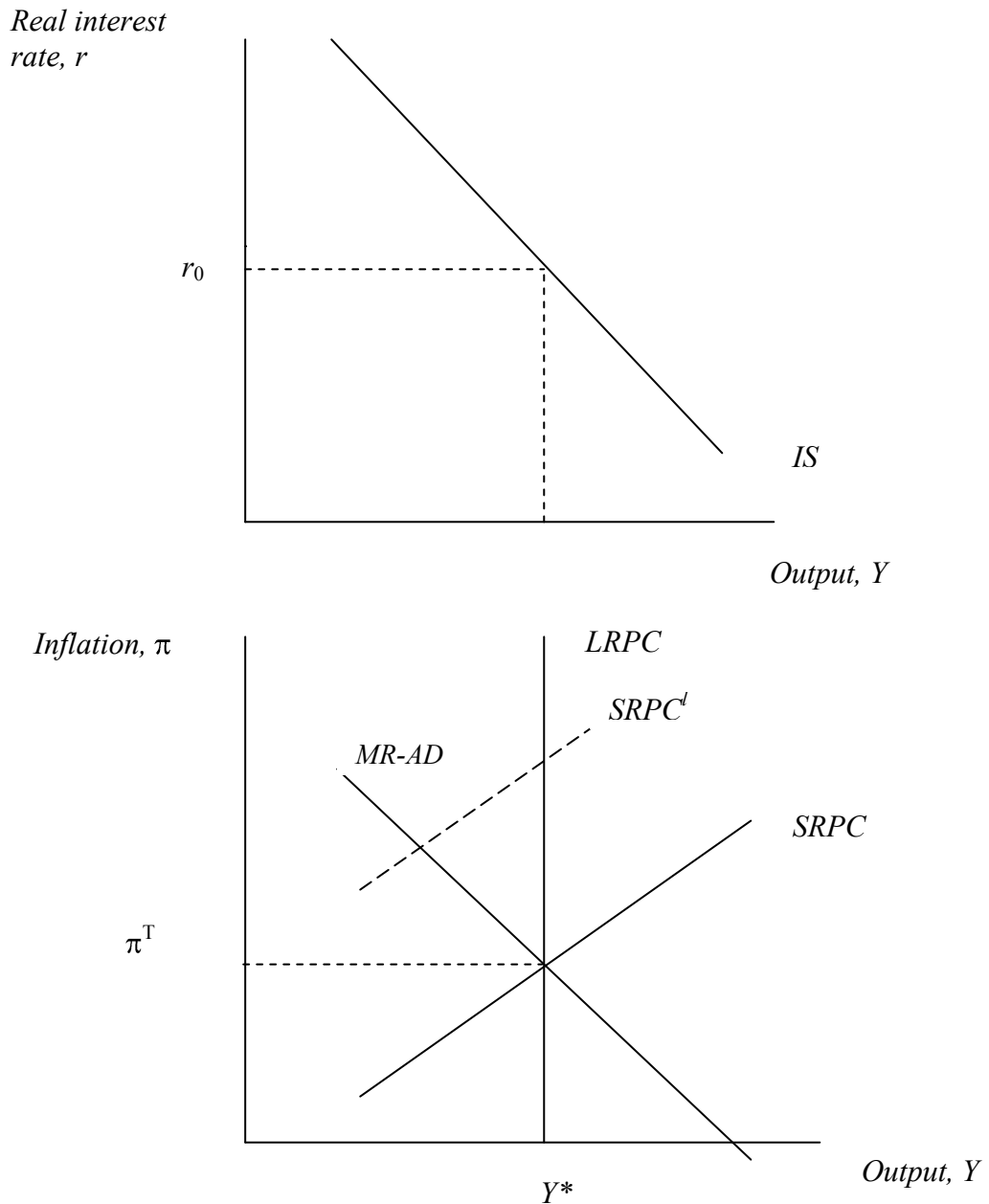
[3] The MR curve will shift (and change slope) every time the policymaker has a change of preferences.

As drawn, figure 1 shows an economy in full equilibrium. At the rate of interest, r_0, the level of aggregate demand (read from the *IS* curve) is just sufficient that output is at its long run, natural level. There is no inflationary or deflationary pressure. Furthermore, inflation is at its target rate, π^T, which tells us that inflation must be stable at the target rate since this coincides with inflation in the previous period. Since the short-run Phillips curve is drawn for a given value of lagged inflation, this is drawn so that it cuts the *LRPC* at π^T. At the moment, the *MR-AD* curve is redundant. But if we introduce an inflation shock (suppose that the *SRPC* moves to *SRPC¹*) the *MR-AD* curve tells us the combination of output and inflation (on the new *SRPC*) the policymaker would choose as the first step in reducing inflation to its target rate. From this intersection we can read off the *IS* curve the rate of interest necessary to achieve this level of deflation.

How, if at all, does this relate to the economics of Keynes?

The most obvious point is that policy-induced changes in aggregate demand *can* change the level of output. Indeed, the very explanation of inflation in this model relies upon changes in aggregate demand and output. There is simply no way in which the authorities can maintain a stable price level *without* adjusting demand and output. Bearing in mind that most central banks have, in practice, adopted the habit of changing the interest rate by small increments of 25 basis points, one might almost say that the model accommodates the very finest degree of fine-tuning. Notice also that while the model incorporates a supply-side determined 'natural' level of output, aggregate demand can achieve levels of output in excess of the natural level at least for short periods. That output varies with aggregate demand and that policy can be used to adjust the level of demand is a major concession to Keynesian thinking, whatever its basis.

Another apparently Keynesian feature of the model is the recognition that the policy instrument is a rate of interest: strictly speaking the rate of interest at which the central bank supplies liquidity to the banking system. *Given* the use of this interest rate as the policy instrument then the money supply is endogenously determined. In the *General Theory*, as is well-known, Keynes appears to treat the money supply as an exogenous variable. However, as Dow (1997) has pointed out, there is a difference between assuming a variable to be *given* for purposes of exposition, and assuming that it can be moved to any given position by the hand of an external agent. One of the

major themes of the *General Theory* was the way in which uncertainty can play a major role in monetary economies and one channel through which this occurs is the demand for money. In order to explain this, it suited Keynes to hold the quantity of money fixed but a major cost of this was the subsequent assumption that the money supply was, in principle at least, exogenously determined. This was built into the *LM* component of the *IS/LM* model by Hicks (1937) and Hansen (1953, ch.7) with the result that two generations of students learned, erroneously (a) that central banks could vary the quantity of broad money by adjustments to the monetary base and (b) that the transmission mechanism of monetary policy centred on 'real balance effects'. That Keynes was fully aware that banks created broad money through lending and that the monetary policy instrument is the *price* and not the *quantity* of money is apparent from the *Tract on Monetary Reform* (1921)*,* the two volumes of *The Treatise on Money* (1930), his contributions to debates in the Macmillan Committee (1931) and his essay on the 'Economic Consequences of Mr Churchill' (1925). In offering students a version of 'macroeconomics without the *LM* curve' the *IS/PC/MR* model and the new consensus are closer to the spirit of Keynes,[4] to say nothing of their recognition of the reality of policy-making.

2. DEMAND AND OUTPUT

We have just seen that the new consensus is built around a recognition that policy can have real affects and that policymakers will have to exploit these real effects in the pursuit of price stability. In the NCM these effects are described as occurring 'in the short-run' and are represented by a 'short-run' Phillips curve which slopes upward in inflation/output space. This was shown in eqn 2:

$$\pi_{t+1} = \pi_t + \alpha(Y_{t+1} - Y^*) \qquad \dots 2$$

where α is the slope and the position of the curve changes with the rate of inflation inherited from the previous period.

Rearranging (2) to find the level of output, gives us eqn. 6, which is more instantly recognised as a short-run aggregate supply curve:

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[4] Given more space, the case might also be made that the *IS/PC/MR* model is more sensitive to Keynes's stress upon the importance of time, while in *IS/LM* everything is determined simultaneously. We have simplified the description of the model here by allowing only one time lag but there is no major issue involved in adding a second lag from output to inflation.

$$Y_{t+} = + \frac{1}{\alpha}\left(\pi - \pi_t\right) \quad \dots 6$$

in which output varies as a result of the gap between inflation in two adjacent periods.

It is instructive to see how the role of this inflation gap is explained in the new consensus and then to compare it with Keynes's reasoning in the *General Theory*. There are essentially two ways in which differential inflation rates can be linked to the level of output. Although both produce the same end result (and might therefore be regarded as amounting to the same thing) they are both quite different in detail and also, maybe, in plausibility.

If, in eqn. 6, we replace the current inflation rate, π_t, with the *expected* inflation rate, π^e, then we have the Lucas 'surprise' aggregate supply curve. In this reasoning, agents expect a given rate of inflation and make contracts (including wage contracts) on that basis. The real wage at which they are aiming is assumed to be the equilibrium real wage, at which the labour market clears and there is no involuntary unemployment. If it turns out that the rate of inflation they subsequently encounter (the *actual* rate) is higher than the expected rate, then this amounts to a lower real wage than was intended and so, while for so long as the real wage is depressed below the intended (and equilibrium) rate, employment will be higher and so to will be output.

Notice that output differs from its equilibrium because agents are 'surprised' by the rate of inflation that they encounter. 'Surprise' here has two meanings. Firstly, and obviously, there is the expectational error. But 'surprise' is relevant again when we ask how this error comes about. Behind the Lucas aggregate supply curve is the belief that agents make every effort to use all relevant information in order to form expectations since a failure to do results in lost opportunities and therefore violates the assumptions of rational and maximising agents (Lucas, 1972). Defining expectations formed in this way as 'rational expectations' means that under rational expectations agents will make no *systematic* errors in their forecasts which should therefore, on average, be correct. So, there should normally be no expectational errors. However, widespread errors will creep in if the policymaker can spring a 'surprise' in the *conduct of policy*. This may mean an expansionary policy where none was anticipated, for example. But it is of the essence of rational expectations that

agents learn and learn quickly so that surprises (in both senses) become increasingly scarce. Eventually, people cannot be fooled.

The weakness with this particular line of argument is that it predicts that any fluctuations in output should be random and serially uncorrelated while the evidence tells us that booms and recessions do occur and are persistent, and also that policy changes do have an effect and these effects do not seem to have diminished over time as one would expect if agents were learning about them. Furthermore, this remains true even in age when information about the state of the economy, including the rate of inflation and the current policy stance, is much more widely and cheaply available than it used to be. As Goodhart (1989, p. 312) put it, nearly twenty years ago, 'No one seriously proposes... that unemployment, output cycles, etc. can be significantly ameliorated by providing more frequent and comprehensive data on price movements!'

More recently, attention has turned away from the idea that agents may have deficient knowledge towards the possibility that, even though well-informed, they may not be able to put their beliefs into action, or at least that it may be costly to do so immediately. There are several strands to this literature including the idea of menu costs (Mankiw, 1985) and the practice of 'staggered' price adjustments (Taylor, 1999; Calvo, 1983). If these causes of 'sticky prices' are then combined with the behaviour of firms operating under conditions of some degree of monopoly then it can be shown that these nominal price rigidities can cause quite large output adjustments when there are changes in demand (Blanchard and Kiyotaki, 1987).

Given that an upward-sloping aggregate supply curve has a distinctly 'Keynesian' character, how does the NCM explanation of sticky prices plus monopolistic competition compare with Keynes's original argument? In fact, there are few points of contact, if any. It has long been a criticism of the *General Theory* that it has 'weak microfoundations'. As regards the significance of monopolistic competition, for example, we know that Keynes felt market structures were irrelevant to the main thrust of his argument. On p.245 of the *General Theory* takes 'as given' the degree of competition, implying that market structures are in principle irrelevant.[5]

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[5] Harcourt reports that in correspondence with Keynes after the publication of the *General Theory*, Bertil Ohlin commented that it almost seemed that Keynes had never talked to Mrs [Joan] Robinson, or read her theory of imperfect competition. Harcourt continues '...Keynes said that he was very puzzled about his comments on this since he had shown his proofs to Mrs Robinson and she had never

Price stickiness was no more relevant either, but to show this requires us to review the heart of Keynes's argument. This was that modern economies were characterised by two obvious features. One was the use of money and the other was that (for the vast majority of workers) 'employment' meant being hired by a firm, i.e. selling one's labour in a market place. In the aggregate, firms would hire a given volume of labour provided they thought that expected receipts would at least cover the costs of employment. The start of the problem was that as the volume of employment increased the *expected* receipts would fail to keep pace with *required* receipts because saving would increase as a function of income. This would be no problem if the saving were *automatically* converted into investment spending (the basis of 'Say's Law') but in a monetary economy there was no guarantee of this because saving could take the form of money holding. *Effective* demand – the money receipts that firms expect from a given volume of employment, becomes deficient. Add to this the fact that monetary exchange opens up all sorts of possibilities regarding uncertainty (which we look at in more detail in the next section) then 'liquidity preference' could prevent the rate of interest brining savings and investment decisions into equality. We have, in effect, what Leijonhufvud (2006) calls two co-ordination failures, both to do with money. On the one hand there is the problem of interest rates and the saving-investment nexus; on the other, while workers may wish to work at the going real (and money) wage rates, so long as they are unemployed and lack *money* income firms do not wish to hire them.[6]

How does this relate to wages and prices? Keynes says explicitly: '…for every value of [employment] there is a corresponding marginal productivity of labour in the wage-goods industries; and it is this which determines the real wage... The propensity to consume and the rate of new investment determine between them the volume of employment, and the volume of employment is uniquely related to a given level of real wages – *not the other way round'*. (emphasis added) (1936, p.29). If the level of employment is below the full-employment level. Then, in a labour market diagram drawn with the real wage, workers will certainly be off their supply curves and the real wage will be 'too high'. There will be many workers willing to work at a lower real wage, which is equivalent to saying that there will be many workers willing to

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suggested imperfect competition, and he did not see how it was relevant.' (Harcourt, 1992, p.3). See also Shapiro, 1997.

[6] By contrast, in a barter economy, workers would be offering to work in exchange for the goods employers' produced. This particular co-ordination problem disappears.

take work at the going *money* wage, if say the price level were to rise, which it would if there were an increase in effective demand – since firms are on the upward sloping portion of their average cost curves. The alternative – reducing the real wage by cutting money wages – could easily make matters worse since (a) this merely reduces the spending power of existing workers with the result that effective demand might actually fall and (b) a general deflation raises the real value of debts and almost certainly has a negative effect on expectations. There is no suggestion here that a change in aggregate demand affects output and employment because prices are sticky: quite the opposite in fact.

3. MONEY AND UNCERTAINTY

In his *Treatise on Money* (1930) Keynes had argued that fluctuations in economic activity were partly to be explained by swings of optimism and pessimism. In an upswing, the returns on investment *expected by* firms would run ahead of the market rate of interest while the market rate lagged behind. Although investment decisions might have the appearance of a rational foundation (the discounting of a future stream of income in order to find its present value) the problem was that the future income stream was not known and therefore had to be anticipated. Such a future stream of income was uncertain and this allowed psychological factors to enter the calculation.

Since Keynes himself had earlier (1921) published a *Treatise on Probability* in which he distinguished different types of uncertainty, it is natural to suppose that this was the basis for the emphasis that he later paced upon it in his attempts to unravel the business cycle. But, as Laidler (2006, p.46) points out, Keynes made little use of these ideas in the 1920s and by the time he returned to them in 1930, Frederick Lavington (1922) had raised such issues specifically in a business cycle context. Lavington pointed out that the longer the horizon of the investment decision, the more prone to error it was likely to be and that errors of optimism and pessimism alike would be correlated across agents and might have consequences that generated serial correlation, or persistence, as well.

These ideas come to the fore in ch.12 of the *General Theory* where Keynes argues that the characteristics of modern financial markets are likely to make these problems worse. The main problem is that markets in which shares can be actively and cheaply traded and in which there is a high degree of liquidity, enables people to make savings available without having to make a long-term commitment. On the face of it, this is a

benefit since it is likely to encourage saving. But on the downside it also means that short-term prospects for gains and losses as a result of market fluctuations come to dominate agents' views about how to save, at the expense of a consideration of the long-term prospects for investment projects. This is the basis of Keynes's famous remark that when investment decisions are mad by a casino, the job is likely to be done badly.

Another issue raised by Keynes in ch.12 is what precisely we mean by uncertainty. There is the uncertainty surrounding, for example, the outcome of tossing a coin (an activity widely used as an introduction to uncertainty in financial markets). In this case, the degree of uncertainty can be captured accurately by reference to the mean and standard deviation of a repeated number of experiments. If we *know* that the mean value *must* be 0.5, the sense in which the outcomes are uncertain is extremely limited. The uncertainty is almost trivial. In Keynes's words '…we have, as a rule, only the vaguest idea of any but the most direct consequences of our acts… I accuse the classical theory of being one of those pretty, polite techniques which tries to deal with the present by abstracting from the fact that we know very little about the future' (Keynes, 1937/1973, pp. 112-13).

By contrast, when it comes to investment decisions, many of the uncertainties will be of a fundamentally different kind, not susceptible to probabilistic calculation. This was hinted at by Lavington in his remark that decisions became more error-prone as the time horizon increased. But it is also to do with the repeatability or uniqueness of events (the extent to which the world is 'ergodic' or 'non-ergodic' in Paul Davidson's terminology). Keynes used the example of the possibility of a future European war but had we been writing just over a year ago, we might have asked how do businesses form a judgement about the possibility of the current credit boom coming suddenly to an end, and when? At the moment, an even more powerful illustration comes immediately to hand. There is widespread uncertainty about the future trend of interest rates over the next year because of the sudden coincidence of rising inflation with a sharp slow down in economic activity. This uncertainty stems from central banks' own, widely-admitted, uncertainty about future developments. It could be that the negative effects of the credit crunch will have a major deflationary effect, rising commodity prices notwithstanding. This would imply the need for interest rate stability or reductions. On the other hand it might not. The negative effects might be smaller themselves, or their impact upon demand may be less than we might

anticipate, in which case inflation will dominate and we may regret not having raised interest rates in 2008. Bear in mind that a change in interest rates *now*, has its full effect eighteen months to two years in most central bank models. There is simply no way to make a probabilistic calculation about a conjugation of events which is effectively unique.

How do agents cope in these circumstances? According to Keynes, two reactions are commonplace. One is to rely upon convention and to assume that the future will replicate the past, though this is not very helpful when we find ourselves, as above, in uncharted territory. Another is to follow the herd, to feel that there is safety in numbers. This was the basis of Keynes's famous comparison between financial decisions and the beauty contest. The winner is the person (investor) who selects not the prettiest face (best long-term asset) but the face (equity stock) that everyone else thinks is best. And also of his remark that it is not worth paying 25 for an investment which you think to be worth 30 if you have reason to believe that the market will value it at 20 tomorrow. (Keynes, 1936, p.155)

Going with the herd, or relying on convention, are what behavioural economics would refer to today as 'heuristics' (Mullainathan and Thaler, 2001). These are 'rules of thumb' used by decision-makers to fall back on in very complex and difficult settings or where decisions have to be made very rapidly. Many of them have their origin in experimental psychology. Two important heuristics, now well-established, are 'conservatism' (Edwards, 1968) and 'representativeness' (Tversky and Kahneman, 1974). Together they show (as the result of experimentation) that people are slower to modify or update their understanding than is warranted by the evidence but that once they cross this threshold, they regard what maybe random occurrences as confirming a pattern. The classic experiment involves the tossing of a coin which is *known* to the experimental subjects to be unfair in the sense that it has (say) a 70:30 bias. But the subjects do not know in which way it is biased – 70 per cent heads or 70 per cent tails. So far as the subjects are concerned, therefore, the probability of each bias is 0.5. The experimenter then begins tossing the coin (which we will assume is heads-biased). At each successive toss the outcome is the same and subjects are asked after each toss to give their estimate of the probability that the bias is indeed heads. Predictably, their estimate of the probability, beginning at 0.5, rises quite quickly in the face of repeated outcomes of heads. But the striking thing is that in the early stages it does not rise as quickly as it 'should' if the subjects were following truly

Bayesian principles. Equally interesting is the discovery that after a few tosses the underestimate of the Bayesian probability switches to an overestimate. The early tosses in a series seem not to have the impact that they warrant, while the later ones are seized on as evidence that the world is more certain than it really is. The first is evidence of 'conservatism': news has to be repeated until its real significance is appreciated. The second is evidence of the 'representativeness': if news recurs often enough, it is treated as belonging to a pattern and the possibility of randomness is discounted.

It is not difficult to see how these tendencies could be translated to a financial context. For example, we assume that investors have a particular view about a company and the value of its stock. They then receive news about the firm to which their response is less than would be the case if they acted according to true Bayesian principles. But the news keeps coming and eventually is interpreted, falsely, as part of a trend which is going to continue forever. In the first phase, investors underreact to the news and in the second phase they overreact.

Evidence that this is in fact what happens comes from numerous studies but the easiest to understand are those where a stock which experiences a sustained period of poor news subsequently outperforms stocks which have been the subject of good news. This evidence suggests that the firm with consistent good news and earnings has become overvalued while the stocks with a run of bad news are undervalued. Investors can therefore earn abnormal returns by betting against this overreaction to news by buying the bad news stocks and selling the good news stocks. The best known of these studies was carried out by De Bondt and Thaler (1985) who, for each year since 1933, constructed a ('losers') portfolio of the worst performing stocks and a ('winners') portfolio of the best performing stocks judged by their performance in the three previous years. They then computed the performance of each portfolio in the five years following its formation. Averaging the results across the approximately fifty 'winner' portfolios and fifty 'loser' portfolios showed a clearly superior return for the 'loser' portfolios. It is impossible to avoid the conclusion that the good news portfolios had been overvalued while the bad news portfolios were undervalued.

The relevance of such heuristics to the present situation are obvious. Firstly, the idea that current financial market valuations represent a rational, well-informed, calculation of fundamental values is most unlikely. If the 'inertia/overreaction' heuristic is correct, it is much more likely that agents were slow to respond to

repeated signals that credit markets and their participants were in difficulty in late 2007 and now, having finally recognised this information as negative but being unable to evaluate it sensibly, have overreacted.

4. The 'long run' and the 'natural rate'

We have already remarked that the new consensus appears to incorporate a major piece of Keynesian thinking – that changes in demand will cause changes in employment and output – if only in the short-run and based upon very unKeynesian reasoning. The major point of conflict remains, however, in the model's insistence that in the 'long run', output is limited to a 'natural' level. Increases in aggregate demand that attempt to push output beyond this level must, eventually, result in an increase in the rate of inflation and a return of output (an employment) to its natural rate. How and why this adjustment takes place depends upon which of the mechanisms is responsible for the upward sloping *SRPC*. If it is erroneous expectations that lead to a reduction in the real wage, output will return to its natural level as soon as expectations adjust and agents strike bargains which restore the intended (higher) real wage. If, however, it is sticky prices rather than information that is the problem, then output will return to its natural level when the losses from leaving prices unchanged exceed the costs of making the adjustment. It is at this point that the consensus strikes a bargain with Classical economics: money is neutral – at least in the long run.

Keynes's view about the infamous long run is well-known – better known than most of his economics in fact.

> This *long run* is a misleading guide to current affairs. *In the long run* we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again. (1923, p.65, emphasis in original).

This appears in the *Tract on Monetary Reform* where Keynes's macroeconomics still relied upon Marshall and the quantity theory of money. But it shows that he was becoming irritated with the focus of contemporary economics on long run equilibrium conditions which severely limited its relevance to policy.

Now there are two ways of looking at this which we might distinguish as the historical and the logical. The first lies behind the innocent student's question 'how long is the long run?'. This is treating the long run as a genuine period at which we

may eventually arrive even if it may be a long way in the future. This *may* be what Keynes meant in 1923. These ideal conditions may come to pass at some time in the future, but we don't when, it might be a long time and we have to do something practical in the meantime. This is a position that may well appeal to *some* central bankers and policymakers who feel that they are always operating in the short-run, buffeted by one shock after another, and that while the existence of long run, natural, levels and rates is an interesting possibility, what matters here and now is the slope and position of the *SRPC*.

The alternative meaning, which Keynes may have been expressing tongue in cheek, is that the concept of the long run is a logical device for ensuring that you win your argument by *entailing* the truth of your conclusion by virtue of the assumptions that you make. Looked at like this, the 'long run' refers to 'that state in which all my initial assumptions hold true'. It has nothing to do with chronology and the question of whether we are moving towards it and how long this might take. If the 'long run' is just a portmanteau term (in this context) for perfect information and foresight, perfectly flexible prices, market clearing etc… then of course full employment will be the norm. It cannot be otherwise. Economics has become a branch of logic rather than practical science. And in this meaning of the long run, we are certainly all dead.

Whichever meaning Keynes may have had in mind, he was clearly sceptical about the ability of propositions about the 'long run' to be of much help in practical policymaking. At best, one imagines that he would have been with the practical policymakers referred to above and simply ignored the long run, concentrating on what needed to be done here and now. This would have left him with the major problem that we emphasised in the last section: namely, that we are profoundly uncertain about how the conjunction of rising commodity prices and the credit crunch is likely to work itself out over the next year or two. However, in his *Essays in Persuasion* (1932), Keynes described unemployment as unjust and inflation as inexpedient, but said that 'it is worse in an impoverished world to provoke unemployment than to disappoint the rentier'. In the uncertain situation that we have described, it seems reasonable, therefore to assume that Keynes would have been on the side of those arguing for interest rate cuts to protect against the possibility that recession would otherwise dominate.

This, of course, is flatly at odds with the way in which monetary policy has been conducted in the eurozone (and the UK and USA) for the last ten years. In practice,

central banks have followed remits which make price stability the only (or at least the dominant) objective. And this has been justified by the insistence that ultimately (i.e. in the 'long run') output is limited by a natural rate of unemployment which itself is determined by labour productivity and structural factors. It seems highly likely therefore that Keynes's arguments for a relaxation of monetary policy today would be met by arguments of this kind. (Ironically, as Laidler (2006, p.56) has pointed out the concept of the 'natural rate' has many of the characteristics that Keynes so unfairly attributed to classical economics in the *General Theory*).

The problem with the argument that there is *natural* rate of unemployment which sets a limit to output, is that it is not natural at all. As Thirlwall (1983 and 2007) has shown, both labour productivity and structural unemployment are sensitive to levels of aggregate demand. This is why attempts to estimate a 'natural rate' from an expectations Phillips curve always produce estimates which are close to the current level of unemployment (so we are always, apparently, close to the natural rate). It also explains why the Federal Reserve describes the natural rate as 'imprecise and time-varying'. These are not the characteristics of a long-run equilibrium. The concept of the natural rate of unemployment is a theoretical construct with no operational significance. But this does not prevent central banks, the ECB in particular, from using it to defend an unnecessarily deflationary monetary policy.

5. SUMMARY AND CONCLUSION

Anyone with a sound knowledge of Keynes's *Tract on Monetary Reform, Treatise on Money* and *General Theory* and per haps a few other writings, would have little difficulty anticipating some of the comments that Keynes might very likely have made about the current state of the global economy. He would have seen the current dilemma facing central banks as a perfect illustration of what he meant by the *fundamental* nature of certain types of uncertainty whereby past experience and statistical probability is of little if any help. He would also have been intrigued by recent developments in behavioural economics and finance which have taken up his ideas about how agents make decisions in these circumstances. We can also be fairly sure that, faced with the need to advise on this dilemma, he would have counseled policymakers to guard against recession (even at the risk of inflation). And he would certainly have been intrigued that his opponents in this debate would be drawing on

arguments that are at least as 'classical' as anything that he claimed in the *General Theory.*

What is just as interesting is to compare these hypothetical responses with those derived from the new consensus macroeconomics – since the consensus referred to includes the alleged incorporation of some at least of Keynes's major insights. What we find is that the NCM recognizes not just the possibility that policymakers might vary the level of demand and output but that they will be obliged to do so in the pursuit of price stability. So, in the short-run at least, the NCM certainly has some Keynesian characteristics. However, on closer inspection, we find that the upward sloping aggregate *SRPC* that justifies these adjustments to demand is based on foundations that Keynes rejected. The rest of the NCM is largely hostile to what we think would be Keynes's reactions to the present situation.

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