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Monetary Policy*

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Abstract

Mainstream theory and the practice of monetary policy have been identified as converging on a 'new consensus', which focuses on the role of the interest rate in a neutral-money framework, with an independent central bank pursuing an inflation target. There are dissenting voices – Monetarists continue to focus on monetary aggregates, while Keynesians focus on the non-neutrality of money and consider a wider range of monetary policy instruments. The interest rate is nevertheless seen by all as the predominant tool of monetary policy. Each approach can be distinguished by the mechanisms of transmission of monetary policy, as the official interest rate impacts on expectations in asset markets and asset pricing on the one hand, and real social experience on the other. It is argued here that there is a disconnect between these two broad channels of transmission; it is through the latter that monetary policy has its real effects. Current issues in the literature are considered, notably those surrounding credibility, expectations, and the relevance of monetary aggregates. The chapter concludes by outlining unresolved issues for the future.

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Introduction

The theory of monetary policy has gone through marked changes over the last fifty years, with the focus changing in turn from liquidity (in the Radcliffe approach) to the money supply and money targeting (in the Monetarist approach) to the money supply and inflation targeting (the New Classical approach) to the current emphasis on the interest rate within an inflation-targeting framework, relying heavily on the forward-looking expectations of market participants (the New Keynesian approach). This latter approach has been dubbed the ‘new consensus’, reflecting a convergence of view among theorists and also a convergence between theorists and policy-makers. This view is also embedded in the institutional arrangements for monetary policy, whereby policy is made by a committee within an independent central bank. Yet there are still alternative viewpoints, notably the continuing emphasis by Monetarists on monetary aggregates, and the Keynesian focus on the interdependence of real and financial variables. There is, further, some evidence of a weakening of the consensus, as doubts emerge as to the capacity of interest rate policy to control inflation.

The theoretical analysis and much of the policy analysis are couched in macroeconomic terms, ie in terms of variables which aggregate individual experience, and emphasise outcomes rather than processes. Macroeconomic analysis illuminates general relationships between data series, providing a clue to possible underlying relationships at the level of experience, at the same time as capturing something of the macroeconomic backdrop of individual experience. The latter is important in particular for the formation of expectations which guide social and individual action. Yet further analysis is required in order to attempt to uncover the causal processes which underpin

real experience. This is the main argument of critical realists, that focusing on event regularities distracts from real causal mechanisms which underpin processes within an open social system (Lawson 1997).

The purpose of this chapter is to consider the theory of monetary policy in terms of real social experience. Monetary policy provides a particularly interesting case study, in that a significant channel for monetary policy is to influence expectations, as a means of influencing real behaviour. Other channels directly impact on real experience; a rise in mortgage rates following a rise in the official rate, for example, reduces household disposable income and therefore the capacity of (particularly low-income) households to maintain their standard of living. Or banks may be less willing to lend to finance the start-up of a new business, for example. Yet the conventional view in recent years has been that ideally monetary policy will have minimal impact on real experience, operating rather through price-setting behaviour according with an inflation target. In what follows we will focus on the distinction between transmission of monetary policy which does not impact directly on social reality, and that which does.

Of course, monetary policy-making is itself a real social experience for policy makers. In attempting to influence real behaviour, they employ theoretical ideas, conveyed with the rhetoric of expertise, to communicate with market players. They also do so within an institutional framework which itself reflects a particular set of ideas (in particular the neutrality of money). Yet, as Niebyl (1946) has demonstrated, ideas, institutional design and real practice can get out of phase with each other (reflecting power relations), to the detriment of effective monetary policy. We will explore how this has occurred in modern times.

We start by reviewing the theoretical literature on monetary policy, focusing on the transmission mechanisms implied, and also the more eclectic central bank literature. The issues as currently perceived are then reviewed, drawing out the extent to which monetary policy has its effect at the level of financial markets rather than real experience. Finally we outline the outstanding issues for monetary policy theory and practice which remain to be addressed.

The Evolution of the Theory of Monetary Policy

The theory of monetary policy against which Monetarism reacted in the 1970s was Keynesian. The role of monetary policy had been seen as providing a stable financial backdrop for investment planning, so that the focus was on low and stable interest rates, without reference to monetary aggregates. Keynes (1936), and his interpreters Minsky (1975), Davidson (1972, 2002), Chick (1973, 1983) saw money as non-neutral (ie interdependent with the real economy) at a range of levels. Money arises through the creation of credit which is a counterpart to spending plans, while the demand for money depends on a variety of real, nominal and expectational factors. So money is non-neutral (ie it can affect real variables) in the short-run operation of the economy, and is non-neutral in the long-run, which is a series of short-runs. It is also non-neutral in the long run in a more fundamental way. Money is a social relation which is integral to the functioning of a capitalist economy, facilitating debt and labour contracts, and in general providing a refuge from uncertainty, as the asset of most stable value. Thus money is integral to the real activity of consuming, producing, employing etc. Monetary policy,

which is designed to influence monetary relations in some way, was therefore addressed at the functionality of market processes, ie at the level of real experience.

The Monetarist argument promoted by Friedman (1968) was that this policy of aiming for financial stability had allowed growth of the money supply in such a way as to cause inflation, disrupting monetary stability. A strong statistical correlation between nominal income and the money supply was interpreted in terms of a causal link from money to nominal income (through prices). Monetary policy should therefore be addressed to controlling monetary aggregates as a way of controlling inflation. While Friedman (1953) had argued that it was predictive success by which theories should be judged, not their content, he nevertheless articulated a transmission mechanism. The transmission of an attempt to reduce inflation by reducing growth of the money supply (relative to a stable demand for money) was that expenditure on goods, services and assets would all be curtailed directly by attempts to restore money balances, or indirectly by the counterpart to monetary tightening, a rise in interest rates. Given the crucial assumption that the norm was full employment ensured by market competition, a fall in money supply growth would feed through into a fall in the growth of prices rather than output. Money was neutral. The term 'real' was reserved for deflated values.

But implementation of Monetarist policy proved to be problematic, not least since the process of controlling the money supply itself proved to be difficult. Aggregates of real deposit totals are difficult to control directly, far less the new money assets which banks introduce (in line with Goodhart's Law¹), in turn far less the perceived liquidity which is the variable which most affects expenditure plans according to Radcliffe (1957). The evident real effects of the introduction of monetarism in the US and the UK in 1979

(increasing unemployment) encouraged amendment to theory to allow money to be non-neutral in the short-run (due to slow market adjustment), although long-run neutrality was preserved.

In the meantime New Classical theory had reintroduced expectations into the analysis, in the form of the rational expectations hypothesis. Agents are modelled as forming expectations in exactly the same way as the model; rational expectations theorists argue that this is an ‘as if’ assumption, accepting that it does not reflect the real process of expectations formation. The focus was then on the speed of expectations adjustment; the greater the speed, the closer was money to being neutral. This development had two major impacts on the theory and practice of monetary policy. First, Sargent and Wallace (1975) put forward the policy-ineffectiveness theorem, by which active monetary policy could not have any real effect even in the short run if agents are rational and employ the same stochastic model as the policy-maker – only a random monetary policy could have any impact. All policy-makers could do was to set – and announce – a rate of growth of money and this would feed through to inflation directly, as prices were adjusted automatically to that rate of growth, since rational expectations (on the part of wage and price setters) would be based on the idea of money’s neutrality. Ideally there would be no real impact.

The second strand of thinking was Kydland and Prescott (1977) and Barro and Gordon’s (1983) time-consistency argument, that monetary policy needed to provide a credible basis for expectations. This encouraged the search for optimal policy rules which could be followed by central banks, with the full knowledge of market participants. The Taylor (1993) rule was arrived at by empirical analysis of historical data for the US as

what appeared to have guided monetary policy, and was turned round in the theoretical literature to be an optimal rule for policy. This rule specified monetary tightening if actual output was high relative to full employment output and if inflation was high relative to target inflation (the differences being the ‘output gap’ and ‘inflation gap’, respectively). The aim was to achieve an equilibrium official interest rate with output at the full employment level and inflation at the target level.

These ideas fed into a change in institutional framework for those central banks which were not independent of government. In Europe in particular, as part of the institutional arrangements for European Monetary Union, there was a requirement for central banks to be independent of government, including withdrawal of the requirement to administer government debt. The norm now is for monetary policy to be made by a committee, with a view to achieving an inflation target set by government. This separation institutionally embeds the idea of monetary neutrality: it is based on confidence that central banks can control inflation in a way which is separable from the real economy, which is the business of government. The requirement to bear in mind the government’s goals for output and employment does however apply to many central banks.

While the Taylor rule may have been consistent with US policy, central banks themselves are unwilling to express their decisions (at least in public) in relation to any rule, not least because it has proved difficult to operationalise such concepts as the output gap (Goodhart 1999). The inflation target itself acts as the nominal anchor. Indeed central banks have become explicit about the various forms of uncertainty they face. The most fundamental of these is model uncertainty: uncertainty as to the best model to use as the

basis for policy-making. Here we see a divergence between the theoretical literature and the central banking literature: the theoretical literature generally presumes that there is such a thing as a correct model, but that policy-makers face stochastic errors in identifying it (see for example Hansen and Sargent 2004). This follows from the mainstream literature's inattention to fundamental uncertainty (unquantifiable risk) as opposed to quantifiable risk (Dow 2004). Policy-makers themselves tend to discuss the limitations of modelling in a wider sense and emphasise the role of judgement (see for example Bank of England 1999).

The Taylor rule in fact fitted well with the emerging New Keynesian approach to monetary policy, which carries forward many features of New Classical analysis (such as rational expectations, and the Monetarist view that monetary policy acts on prices through its influence on aggregate demand), but emphasises the welfare-reducing effects of information asymmetries in the labour market and financial markets. The New Keynesian Phillips curve reflects wage bargaining which leads to sticky prices which persist over time, encouraging a forward-looking interpretation of monetary policy by price setters, further focusing analysis on expectations. Market behaviour thus factors in expectations of the consequences for inflation of current monetary policy announcements. Further the New Keynesian approach reintroduced the welfare-enhancing effects of low and stable inflation. While New Classics had seen inflation as independent of the real economy, now low inflation targets are seen as another element of supply-side policy.

This emphasis on expectations has encouraged increasing transparency in monetary policy-making (see Geraats 2002 for a review). The mainstream theoretical

literature has generally been in favour of central banks revealing the thinking behind their decisions as a way of ensuring that market expectations are as consistent as possible with those of the central bank. This is aimed at minimising the real consequences of monetary policy. Given the inflation target, and the central bank's credibility in achieving it, monetary policy is no longer a matter of shocks (the only way of having any effect, according to New Classical analysis) but of promoting consistency of expectations. As a result, there is now a lively literature on central bank communication (see for example Amato, Morris and Shin 2000). But central bankers themselves have encouraged doubts about transparency which follow from their greater awareness of the uncertainties they face about the state of the economy and the effects of policy (see eg Mishkin 2004, Eusepi 2005).

It is the expectations of financial markets which have been pivotal, since it is these which react most immediately to policy announcements (although there is awareness of their relevance also for expectations in labour markets, and property markets). Indeed, the Monetary Policy Committee of the Bank of England explicitly incorporates financial market expectations of monetary policy (derived directly from asset pricing) into the forecasts on which their policy is based. There is a presumption that efficient financial markets will then feed through any rise in the official rate to yields on other assets with longer term. The official rate is now generally (in the US, the UK and the euro area for example) the 'repo rate', which is the rate implied by short-term sale and repurchase agreements between banks and the central bank.

But in the meantime, the New Keynesian focus on imperfections in financial markets has encouraged some to analyse the channelling of monetary policy through the

credit market, emphasising more the segmentation of financial markets, at least for some borrowers. In particular, if borrowers cannot substitute other forms of finance for bank loans, then the reaction of banks to a change in the repo rate is all the more powerful. This in turn has drawn attention to structural matters, with the credit channel behaving differently in countries with different banking structures, for example (de Bondt 2000). Since the interest rate is now the main policy instrument, it follows that the money supply is endogenous, encouraging attention to the supply of credit of which money is the counterpart. Endogenous money has long been a tenet of Post Keynesian monetary theory. While the New Keynesian analysis has focused on information asymmetries in the credit market, the Post Keynesian structuralists have focused more widely on the factors which influence supply of credit within different institutional arrangements. This approach is distinct from horizontalist Post Keynesians, who see the banks as more passive in the face of credit demand (see Dow 2006). Horizontalists are so-called, because they posit a horizontal money supply curve, at the official rate (see eg Moore 1988).

The feedthrough of policy from the repo market to actual financial conditions, quite apart from wage and price setting behaviour, is therefore not as straightforward as the conventional aggregative macroeconomic analysis has presumed. Indeed the diversity of channels by which monetary policy is transmitted to those who set prices has become a focus of concern among those who express doubts about the effectiveness of the current approach to monetary policy. Even central banks have made it apparent that they are not confident about their understanding of the transmission mechanism. Further doubts refer to the capacity to meet the inflation target, but also to the absence of any damaging

effects on output and employment which is characteristic of mainstream theory. Post Keynesians, who have consistently anticipated real effects of monetary policy, have been demonstrating this empirically (see for example Arestis and Sawyer 2004).

Current Issues

Credibility

The general mainstream consensus is that the current approach to monetary policy has been reasonably successful, in that inflation targets have been more or less met (Bernanke *et al.* 1999), but there are growing concerns about whether this success is likely to continue. In the UK for example, at time of writing, inflation has come uncomfortably close to the ceiling of the target range at a time of monetary tightening. While energy prices are falling back and immigration is exerting downward pressure on wages, labour costs nevertheless have shown some signs of accelerating. The actual inflation experienced by households (the Retail Price Index, or RPI, which includes taxes and housing costs) and which is most commonly used as the benchmark for wage settlements, is running significantly ahead of the inflation index to which the 2% target applies (the Consumer Price Index, or CPI). The MPC's credibility is under threat. If the central bank successfully persuades economic actors that inflation is under control, then that is factored into wage settlements, contributing to control of inflation. But if expectations take hold of above-target inflation, then wage settlements reflect this, making it much more difficult to meet the target.

We saw just this scenario in Germany following unification, which disrupted labour market norms, and damaged the Bundesbank's reputation for inflation control. If it

it becomes apparent that the central bank is not in fact in a position to control inflation (other than by persuasion) then real experience was in this case an effective challenge to the conventional neutral-money theory. It was an unfortunate accident of history that, in the meantime, the EU had adopted the Bundesbank model for its own central bank, in the expectation that this would deliver the same success as the Bundesbank had experienced under more favourable conditions.

Central banks have recently become more explicit about their need to improve and update their understanding of the transmission mechanism (eg Federal Reserve Bank of New York 2002). This concern is made explicit in the concept of model uncertainty (uncertainty as to which is the best way to model the economy and the effects of monetary policy), a concept which has also spawned a series of central bank research publications (Dow 2004). Indeed this is just one of the many uncertainties which central banks face, such as data uncertainty, which have been expressed by central bankers in a more modest presentation of their capability to control inflation than was customary in the past (see eg King 2004). While the mainstream theoretical literature purports to address these uncertainties, it provides minimal guidance for central bankers since the formal mathematical approach employed cannot handle fundamental uncertainty. These efforts to persuade the public not to expect too much of central bankers could be seen as an effort to maintain credibility in the face of reduced success in targeting inflation. Alternatively it could be seen as evidence that central bankers themselves simply accept the limits to the scope for monetary policy to control inflation.

The Virtual World of Expectations

Arguably financial markets do not operate in the belief that central banks can actually control inflation, as mainstream theory suggests, although the neutral-money rhetoric is commonplace among commentators (Forder 2006). While mainstream theory has advocated a convergence of analytical understanding between policy makers and markets, an alternative interpretation of real market behaviour is that markets are motivated solely by the need to correctly anticipate changes in the repo rate. Their concern with central bank analysis is therefore not so much with whether it correctly explains real economic behaviour but by the signals it sends about monetary policy. Financial markets in this sense can be said to operate in a virtual world of economic analysis, where the operative reality is the cost of borrowing liquidity and corresponding movements in asset prices and the exchange rate. The relevant context is financial markets – real experience is only relevant insofar as it encourages policy makers to change the repo rate. Nevertheless, the outcome, in the form of the cost and availability of credit, can have real consequences which may or may not influence inflation.

But there is also a more direct channel for transmitting monetary policy through expectations. Not only is the aim to influence expectations in financial markets, but also expectations in labour markets, the housing market and among consumers. Public pronouncements by policy-makers can achieve headline news about the inflation rate against which wage settlements are to be made. Further, predictions about the housing market, if persuasive, can be self-fulfilling in terms of house prices, but also in terms of perceived wealth; headline predictions of a weakening in the housing market, for example, can dampen consumer demand directly and also dampen banks' valuation of collateral for consumer loans. The fact of a rise in the repo rate can raise such

expectations of rising borrowing costs (although the connection is not a necessary one) and thus of falling disposable income, that consumption plans are curtailed. Similarly, the expectation among firms of rising borrowing costs, and associated weakening consumer demand, can adversely affect plans for investment and/or expanding production. If expectations are 'rational' (in the rational-expectations-hypothesis sense of coming to the same conclusions as the central bank), then the inflation target is achieved with minimal real consequences. But the monetarist transmission mechanism would allow some real consequences in the short run as one means by which monetary policy is transmitted.

Expectations therefore can have real consequences. And sometimes reality breaks through, confounding expectations. Indeed this is what Post Keynesian analysis would suggest, since expectations are subject to uncertainty, and can vary, and since money is seen as inherently non-neutral, being integral to economic relations. Thus, for example, depending on the banks' reactions, a fall in the repo rate may not feed through into lower borrowing costs, or a rise in the rate may reduce the availability of credit, at whatever cost, to households facing debt problems. Reality can also break through in asset markets themselves. Quantitative risk-based valuations cannot take account of the possibility of a structural crisis, yet such crises do occur. The current possibility of a structural crisis, given the high leveraging of household debt and the opaqueness of risk in the credit derivatives market, poses a real issue for monetary policy.

There has been debate as to whether monetary policy makers should be concerned with asset prices. Inflation in the housing market in particular has attracted policy-makers' attention because of its expansionary effect on consumer demand. This has also drawn attention to the risks attached to a potential turnaround in house values, and the

consequences for consumer demand. Since speculation in the housing market is related to speculation in other assets (having taken off in the wake of weakness in equities in 2001), there is a more general awareness of risks of more general instability in asset markets. Further, the development of the credit derivatives market has involved the bundling and selling of default risks in such a way that it is virtually impossible to assess how far risks in any portfolio are spread. For monetary policy, the issue is that a rise in the repo rate, and the policy pronouncements around such a rise, hold the potential to destabilise asset markets, causing multiple defaults, and inducing a recession.

Financial instability has not been a feature of the mainstream transmission mechanism, although it is featuring increasingly in central bank commentary and the discussion among media experts of monetary policy. However, the Keynes/Radcliffe approach to monetary policy placed financial stability at its heart. If strong and stable investment is the key to macroeconomic progress, then firms require a stable financial environment to encourage investment in spite of uncertainty about its outcome. This focus on financial stability was built on by Minsky (1982), whose financial instability hypothesis addressed the dangers posed by increasing financial fragility as unreasonably confident expectations of asset price rises took hold in a boom, encouraging excessive credit creation. In particular, when gearing is high and there is reliance on capital gains for covering borrowing costs, markets are vulnerable to any rise in borrowing costs.

With the focus now on inflation targeting, against a backdrop of rising asset prices and rapid credit expansion, there is therefore a risk that its dramatic effects on asset markets could induce a global recession. Palley (2006) points out that, while central banks have increasingly learned to increase liquidity in order to limit downturns in asset

prices in crisis situations, this creates a moral hazard in favour of the kind of asset price inflation which threatens financial stability. He goes on to argue, along Minskian lines, for inflation targeting to be supplemented by a regulatory approach to limiting the credit expansions which facilitate asset price inflation.

Monetary Policy, Monetary Aggregates and Fiscal Policy

As Forder (2006) explains, the view continues to be widespread that money, and thus monetary policy, are neutral, in the long run if not in the short run. But, even without structural instability in asset markets, monetary policy addressed to an inflation target has been shown empirically to have real effects, not only in the short run but also in the long run (Arestis and Sawyer, 2004). Monetary policy is transmitted to the rest of the economy by altering the terms of borrowing and lending, and of buying and selling across the exchanges. The real effects on production, employment, investment and consumption then follow, with producers' responses in setting the prices of goods and services determining the effect on inflation. Expectations play an important part. But if money is not in fact neutral, then expectations will reflect this, and cannot be counted on to deliver neutrality.

This set of chains is complex, indirect, and context-dependent, in terms of the overall conjuncture, but also in terms of particular market segments. The real effect of a rise in the repo rate on borrowing and borrowing costs is therefore indirect. It depends on banking structure, and on the market power of borrowers (which also determines the availability of alternative forms of finance). Such a perspective follows naturally from an

application of the Keynesian view of money as integral to the workings of a market economy.

However within the mainstream central banking literature there is an emerging debate on the merits of returning attention to monetary aggregates on the one hand (as in Laidler 2006, and the ECB conference in December 2006 on ‘The role of money: money and monetary policy in the twenty-first century’) and analysing monetary policy purely in real terms, and in relation to fiscal policy on the other (notably as in Woodford 2003). While Post Keynesians emphasise the interdependence of the monetary and the real, therefore, the mainstream debate is dichotomised between thinking of inflation as a monetary phenomenon on the one hand and inflation as a real phenomenon on the other. The European Central Bank, or ECB, has been most consistent in retaining monetary analysis as one of its ‘two pillars’ analytical approach, but other central banks have been drawing attention lately to monetary aggregates (as in the MPC’s *Inflation Report*). Tighter monetary policy is being justified in part by the accelerating growth in monetary aggregates.

But meanwhile Woodford has synthesised the new consensus in a model apparently without money and without the banks whose liability most money is. This explicitly Wicksellian analysis focuses on the bank rate in relation to the natural rate of interest, but gives it much more general application than did Wicksell (Laidler 2006, Mehrling 2006). The aim of monetary policy is that the repo rate doesn’t deviate from the natural rate, so that there is nothing to transmit. This natural rate corresponds to society’s time rate of discount and the real long term return on capital. In a neutral-money model with perfect markets, trading ensures that the real bank rate converges on the natural rate,

where the rate of inflation is arbitrary. Where there are market imperfections, and thus monetary policy has real effects, the central bank's task is to set the nominal rate in such a way as to promote convergence of actual rates to the natural rate, in the process setting the rate of inflation. This monetary policy requires the support of a Ricardian fiscal policy, reflecting an emerging renewed interest in fiscal policy in relation to monetary policy.

So the theoretical literature, as represented by Woodford (2003), emphasises the real (as opposed to nominal) economy, with inflation simply one supply-side variable. Yet central banks still, to some degree or other, retain a focus on monetary variables (see eg Bank of England 2006: 10). The resulting conflicting analyses within central banks has contributed to diversity of opinion, and thus uncertainty, in monetary policy-making. As doubts have emerged about the capacity for central banks to routinise monetary policy based on modelling, attention has shifted to the decision-making framework, and the communication of decision making. There is minimal debate now about central bank independence, which institutionalises the widely-held idea of money's neutrality. Yet there is debate about the size and composition of monetary policy committees, the frequency of meetings, the publication of deliberations and of voting patterns. This debate reflects the fact that, quite apart from what goes into the making of the repo rate decision, the manner in which the decision is communicated can have profound effects on expectations, and thus on the transmission of monetary policy to prices, but also to real output, expenditure and employment.

The Future of Monetary Policy

It is conventional now to see the interest rate as the single policy instrument addressed to an inflation target. Yet the increasing emphasis on central bank communications has raised the possibility that it is these which in fact have become the main instrument, addressing expectations directly (see eg Bank of England 2007: 3). Certainly these expectations are held with respect to central bank actions, but a circularity has emerged between central bank forecasts based on market forecasts of what the central bank will do. Further, the transmission channel from central bank pronouncements directly to price and wage setting is increasingly emphasised. The current analysis of transparency and communication is thus likely to continue.

The focus on the interest rate dates back to Poole's (1970) discussion of the interest rate and the money supply as the two alternatives. But historically central banks have used a wider range of instruments, in particular credit controls and other portfolio restrictions. Credit controls became less feasible as banking systems became more sophisticated and thus more able to evade them. Rather than aiming at a direct effect on the capacity of firms and households to borrow (and thus spend), the real consequences were rather the availability of new financial instruments for investors. But Post Keynesian analysis, drawing on Minsky's financial instability analysis, would suggest that a strategy is required to address directly the massive expansion of credit (particularly for households, and also to finance the credit derivatives market) which currently threatens financial stability. This could take the form of limiting the multiple of earnings allowed for mortgage loans, and increasing the transparency of the credit derivative market so that risk is more easily identified by investors. The key regulatory instrument

introduced to deal with a similar problem in the 1980s, capital adequacy ratios, suffer from the flaw that banks are not capital-constrained in a rising market.

Financial innovation has served to fuel the scope for financial instability. The derivatives market evolved initially as a means of firms hedging against risk (in the form of futures contracts on currencies in which they traded, for example). But past experience of excessive credit expansion in the 1970s and 1980s, the resulting bad debts, and the imposition of capital adequacy requirements aimed at preventing a recurrence of excessive credit expansion, all encouraged banks to become proactive in a range of non-traditional functions to protect their profits. One of these functions was engagement in the derivatives market, which was taking on a life of its own, independent of the needs of producing firms. Credit derivatives started as a means for banks to protect themselves against risk of default by borrowers; the risk could be sold off. But now banks themselves are actively engaging in this market too, as traders with a view to profit-making. The market is notoriously opaque, such that it is extremely difficult to identify actual risk embodied in a derivative which bundles up risk from a range of borrowers (where their risks may or may not be correlated, or even double counted when these bundles are repackaged in further derivatives). This market is adding significantly to the fragility of the global financial system.

The relationship between financial stability and monetary stability could indeed become a key issue. The latter has lately been seen as the primary concern of central banks, to such an extent that bank supervision has in some cases (such as the UK) been moved to a separate institution. There is potential for conflict between the two. For example, feeding liquidity into the market to defuse a fall in asset prices would run

counter to attempts to tighten liquidity with an eye to an inflation target. Nevertheless, this is an area where reality can force the issue. There is a distinct possibility of another global financial crisis which would threaten the economic process in a more fundamental way than inflation, so that financial stability would need to be given priority. Although such a crisis would have its origins in the virtual world of financial markets, it would have real effects if it sparked off a global recession, with declining output, employment and living standards.

A financial crisis, leading to a recession, is precisely what the Keynesian approach to monetary policy is designed to avoid. Keynes was not concerned to curtail economic expansion as such, but to prevent recession. Booms therefore had to be managed in such a way as to prevent a build-up of financial instability. A stable macroeconomy with steady growth requires stable financial conditions. In times of instability, money is preferable to real assets whose value is uncertain, making it more difficult for firms to finance investment.

A financial crisis is an extreme case of unquantifiable risk, ie uncertainty. Central banks have increasingly been referring to uncertainty as being relevant to their analysis, and indeed to economic behaviour more generally (see for example Bank of England 2007: 12-3). Since the methodology of the mainstream literature means that it cannot address uncertainty (only quantifiable risk), it is not providing adequate guidance. The Post Keynesian literature does have the theory from which to provide guidance. But this literature also challenges the predominant view on the neutrality of money and the related separation of monetary policy from fiscal policy as well as bank supervision. It remains an issue how far the mainstream rhetoric, which dominates the public discourse, will

preclude attention to this alternative literature. But if Post Keynesians are right that it is not in fact in the power of central banks to control inflation, and developments are such that central bank credibility is seriously dented, then reality might force a rethink about the theory of monetary policy.

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¹ Goodhart’s Law states that, whenever the authorities try to control money by one definition, the financial sector innovates to create new money assets, so that that definition of money is no longer adequate.