Central Banking in the 21st Century

Sheila Dow

For presentation to the '40 Years of the *Cambridge Journal of Economics*' conference,
12-13 July 2016 McGrath Centre, St Catharine's College, Cambridge

Abstract

The Bank of England's mission is to promote 'the good of the people of the United Kingdom by maintaining monetary and financial stability'. The purpose here is to explore what is meant by monetary stability and financial stability, how they promote the good of the people, and how they should be achieved. Transformations in the financial sector over the last few decades and in the wake of the crisis pose huge challenges for central banks in meeting their aims. Here we focus on different understandings of the fundamental principles of central banking in order to consider how to apply them in the modern context, in the face of these challenges. We consider recent use of 'unconventional tools' of monetary policy and a range of current proposals for reform of money, banking and central banking in light of these principles.

Key words: central banking, inflation targeting, central bank independence

JEL codes: E02, E5, E44, E61

Division of Economics
University of Stirling
Stirling FK9 4LA
Scotland, UK
e-mail: s.c.dow@stir.ac.uk

and

Department of Economics,
University of Victoria
3800 Finnerty Road
Victoria, BC V8P 5C2
Canada

June 2016

Introduction

The Bank of England's website describes the Bank's mission as being 'to promote the good of the people of the United Kingdom by maintaining monetary and financial stability.'[1] This statement is not in itself very controversial as a statement of purpose of a central bank. What is potentially controversial is how monetary stability and financial stability are understood, how they promote the good of the people, how they should be achieved and whether they can be achieved.

The practice of central banking has been transformed since the onset of financial crisis in 2008 and its future continues to be the subject of considerable debate. Indeed the discourse has been opened up to radical ideas for monetary reform. There is no longer anything like the 'new consensus' in macroeconomics, with its core implications for central banking, which dominated in the period before the crisis. It is the purpose of this paper to take stock of this discourse, considering it in relation to the fundamental purposes of central banking, based on a Post Keynesian interpretation of the Bank of England mission statement. While the logic of central banking is presented as universal at one level, the particular historical, political, legal and cultural context is important for the implications of this logic in any one context. While the analysis is made concrete by referring to the Bank of England, it would be different for other central banks with their different histories, cultures and institutional frameworks.

We start by revisiting the theory of central banking, particularly with respect to its purpose. As in all other areas of theory, how the subject matter is understood at an ontological level is shown to be critical to understanding differences within central banking theory. The principles of central banking which will provide the basis in this paper for looking forward will follow from an ontology of the social world as an open system within which money as a safe asset plays an essential part and which limits the scope for the separability of money and finance from real economic processes, and thus of central banking from other areas of public policy.

The third section is devoted to considering the various new developments in central banking over the last decade. This requires discussion of changes in the conduct of monetary policy, the introduction of macro-prudential policies and changes in governance structures, using the UK's Bank of England as a case study. This is followed by a consideration of some of the current ideas for monetary reform of money and banking in relation to central banking, as well as ideas for central banking itself. This consideration needs to take account of the evolution of structures and practices in the financial sector through which the central bank has its influence. While this evolution, like that of central banking, has followed a certain historical logic, the implications of particular developments need to be given careful consideration in relation to the future possibilities for central banks.

[1] http://www.bankofengland.co.uk/about/Pages/onemission/default.aspx, accessed 14 May 2016.

Central Banking Theory and Practice

The theory of central banking is unusual in the degree to which it has undergone a series of transformations over the years, reflected in changing goals and functions[2] of central banks (as documented e.g. by Goodhart 2011, Singleton 2011, White 2013 and Dow 2015). The transformation from the 1970s up to the recent crisis was particularly significant because of its methodological turn. Until then central banking theory could be classified as falling within political economy. It addressed the practice of central bank activity and the banks on which it operated, drawing on a range of sources and methods (including drawing on economic history) and considering a broad range of central banking functions. Different theoretical positions were taken, ranging from the Banking and Currency Schools in the nineteenth century (see Arnon 2011 and Goodhart and Jensen 2015) to the Keynesian Radcliffe approach (Committee on the Working of the Monetary System 1959) and free banking theory (see e.g. Hayek 1978) in the twentieth century, depending on how banking and the economy were variously understood.

But the mathematical formalisation of mainstream economic theory in the post-war years spawned a bifurcation between the macroeconomic modelling and political economy approaches to central banking theory. The former was privileged by policy-makers in government establishing the institutional framework for central banking, and indeed in the rhetoric of central bankers in a mutually-supportive relationship with the prevailing neoliberal agenda. While practice was seen to require other methods ('arts'), this was not thought to be the concern of economic theorists who provided the principles for application (Colander 1992). Within macroeconomic modelling in the 1990s, central bank activity came to be represented solely by an inflation target pursued by control of the official interest rate by an independent central bank.[3] Indeed monetary policy became synonymous with macroeconomic policy, whereby the 'good of the people' was seen to be served by a low and stable rate of inflation.

This 'new consensus' thus focused entirely on monetary stability, ignoring the pursuit of financial or economic stability (Arestis and Sawyer 2008; see further Arestis and Sawyer 2010). It reflected a change from Monetarist and then New Classical theory in its return to the traditional interest rate tool, given the failure of attempts at money supply control.[4] There was also a new acknowledgement of (model) uncertainty, given evidence of the predictive inadequacies of large macro models (Dow 2004). But Fontana (2007) demonstrates that the 'new consensus' approach shared with its predecessors a neutral-money (closed-system) ontology. Within this approach, money is simply a technical input into exchange, financial markets are efficient, inflation is a

[2] Historically, central bank functions have included some or all of: bank regulation, monitoring and supervision of the banking system; managing the payments system; exchange rate management; debt management; lending to government as required, subject to maintaining the value of the currency; and at times promoting economic development through credit directives.

[3] The unidirectional causal framework was expressed in terms of targets and instruments.

[4] While this implied acceptance that the money supply is endogenous, this was only in the fairly limited sense of changing the mechanism by which the central bank chooses a point on the money demand curve. Money supply endogeneity was explicitly acknowledged as a process by the Bank of England publication McLeay, Radia and Thomas (2014), but ultimately still judged to be subject to control via the official rate.

monetary phenomenon and it is in the power of central banks to control it. Monetary stability was to be pursued to facilitate markets in generating financial and economic stability. Where there is debate over central banking from this perspective, as we shall see below, it focuses on the degree to which central banks contribute to, or impede, the free operation of markets.

The implementation of 'new consensus' monetary policy was reinforced by being conducted within a changed institutional framework suggested by the theoretical framework. In the UK for example, the Bank of England was made independent of government in 1997, shedding the functions related to being the government's bank. Institutional change also substantially altered the Bank's role as a banker's bank. The Bank's remit from the Chancellor in 1997 was first and foremost to target inflation, and then to support government policies insofar as this did not jeopardise monetary stability.[5] Then in 2001 bank monitoring and supervision at the micro level were divested to the new, separate Financial Services Authority (FSA). This encouraged inattention to the banks on the part of the Bank of England and an erosion of expertise among Bank staff who had traditionally moved between departments within the Bank during their careers. While a tripartite committee (involving the Bank, the FSA and the Treasury) was set up to address systemic financial stability issues, the actual resources devoted to such issues within the Bank were significantly depleted. This period in the decade before the crisis which began in 2007 with the run on Northern Rock Bank was thus historically abnormal in the degree to which the scope of central banking was narrowed down (see for example Goodhart 2011, Epstein 2012 and Cobham 2013).

The Post Keynesian approach to central banking follows Keynes, who envisaged the role of the central bank as supporting government efforts to stabilise the economy, but with only limited power in itself. Monetary policy involved manipulation of the long rate through open market operations (with an inevitable tie-in with fiscal policy) as part of investment policy (which would also address potentially inflationary supply constraints), while maintaining a steady, low short rate to promote financial stability (Tily 2007: ch. 7). As Radcliffe (Committee on the Working of the Monetary System 1959: 17) later put it: 'it is … no longer appropriate to charge the monetary authorities with unambiguous tasks that can be sharply differentiated from other government action'.

The Post Keynesian departure from a monetary theory of inflation, and more generally from a simple targets-instruments framework, followed from an open-system ontology whereby money is non-neutral at different levels. First, changes in money holdings arise endogenously, in an economy generally at less-than-full-employment, as the counterpart to new debt undertaken to finance the purchase of assets or goods and services; money is thus associated with (rather than causing) changes in output and employment both in the short run and in the long run. Further, when the uncertainty which is endemic in an open social system is particularly high, money is

[5] http://www.bankofengland.co.uk/monetarypolicy/Documents/pdf/chancellorletter970506.pdf, accessed 14 May 2016. The Chancellor's current remit to the Bank of England specifies that the monetary stability goal is encapsulated in an inflation target and is 'absolute' (http://www.bankofengland.co.uk/monetarypolicy/Documents/pdf/chancellorletter160316.pdf, accessed 14 May 2016).

hoarded to satisfy increased liquidity preference, constraining demand and tightening credit conditions. There is therefore no simple relationship between money and the price level; even *if* the money supply could be controlled, this could not ensure monetary stability. Inflation targeting is thus a misconceived basis for central banking. Yet the financial instability which follows from credit cycles and cycles in liquidity preference exacerbates real economic instability (and thus monetary instability). That instability can be ameliorated by central bank operations on the long term rate of interest, with its influence on investment, but also with bank regulation (see e.g. Kregel 2014). Financial stability and economic stability are therefore the more appropriate primary goals of central bank policy, alongside government, from which price stability would follow.

Awareness has been growing that central bank activities have real consequences not only at the aggregate level but also in distributional terms (Fontan et al 2016; see also Coibion et al. 2012). Interest rate increases favour creditors over debtors. But further, since banks respond to monetary policy by changing the availability as well as the price of credit to particular classes of borrower, there are distributional consequences also as between different types of creditors and debtors. This proposition has been explored most fully in the regional finance literature, which shows national monetary policy having differing real effects on different regions (see e.g. Rodriguez Fuentes 2006). Social justice issues arise even more clearly when considering the fiscal austerity policies introduced to address the fiscal cost of the banking crisis. It has therefore become clear to many that central banks need to take into account the government's goal of social stability.[6]

Money is also non-neutral in the more fundamental sense that society requires a safe asset, money, as the basis for contracts and transactions, and thus financial and economic development.[7] Far from just being a technical input to exchange, money is a social relation (Ingham 2004), and its management by central banks is therefore inevitably a matter of social relations (Dow 2013, 2015). Monetary stability thus involves stable social relations which may be disrupted by a crisis independently of what is happening to the price level.

Central banks generally have a monopoly of legal tender denominated in the unit of account, but not of other assets expressed with reference to this unit which also act as a means of payment and a store of value. But there are varying degrees to which the value of these other assets may deviate from par valuation in terms of the unit of account, i.e. varying degrees of liquidity, creating a hierarchy of money assets (Bell 2001).[8] This variation applies across the spectrum of financial assets but also over time: in the long run with financial innovation and in the short run with financial instability. Central banks have been critical in ensuring the stable value of the closest

[6] While Carney (2014) explains how monetary and financial stability promote social goals, referring to the redistributional effects of post-crisis monetary policy, the distributional effects of central bank actions extend beyond periods of instability.

[7] Money is also fundamentally non-neutral in the sense that financial accumulation can be an important motivating factor in economic activity, something encouraged by, and encouraging, financialisation.

[8] Liquidity is the ease with which an asset can be exchanged for other assets where 'ease' refers both to institutional arrangements and to perceived risk of capital loss; money is the most liquid asset. Assets have money attributes if they have a low elasticity of substitution with other liquid assets, low carrying costs relative to liquidity, and a low elasticity of production (Keynes 1936: ch. 17).

asset to cash: retail bank deposits. Sovereign debt has played a key role as (apparently) safe assets backing bank liabilities.

Chick (1993) details how central banking evolved to address the growing use of bank notes or deposits as money. Having started in many cases as bankers to government, central banks increasingly took on the role of bankers' banks. In order to maintain confidence in the convertibility of bank liabilities into cash at par, central banks supported banks with the lender-of-last-resort facility in exchange for banks accepting regulatory and supervisory restrictions.[9] This allowed fractional reserve banking, which created credit in advance of saving. As long as there was confidence that banks would not fail (or at least if they did then deposits would be insured) their liabilities could be treated as being on a par with cash. But success meant that the non-bank financial intermediaries, which grew on the security of bank deposits as their reserves, were able to provide assets which were also liquid. This was a competitive threat to the banks which then lobbied successfully for deregulation, and thus a breaking down of the mutual arrangement with the central bank. The ensuing explosion of credit and resulting periodic debt crises encouraged central banks to introduce ever more onerous capital adequacy requirements. These served to encourage even more financial innovation, designed to avoid the need to raise more capital. These innovations added greatly to the conflagration of the latest crisis which occurred while central banks continued to keep their focus on inflation targetting (Chick 2013).

Over time therefore the range of assets with money attributes has expanded.[10] Recently there has been considerable expansion in shadow banking (a market-based credit system) which has provided an alternative source of credit on a massive scale (Mehrling 2011). It has also generated liquidity in the form of its counterpart, shadow money. This phenomenon is not new (Mehrling et al 2013), but requires central banks' renewed attention to the need to provide liquidity when necessary to the market-makers in the collateral backing shadow money. While a hierarchy can be identified within alternative money assets, allowing a range of definitions of shadow money, Gabor and Vestergaard's (2016) analysis focuses on repos (repurchase agreements with marketable collateral) as the most liquid outside the net of central bank regulation and support. Their analysis addresses the risks associated with bank liabilities as well as their assets; the increased recourse of retail banks to wholesale market funding (relative to deposits) was a notable factor in the crisis. The significance of repos lies in the fact that confidence in repos (and thus their liquidity) is directly and explicitly tied to their collateral on a mark-to-market basis. The valuation of collateral is a general determinant of degree of liquidity of assets, but a collapse in valuation of repo collateral has an immediate effect on availability of liquidity and the moneyness of shadow money, and thus the capacity of the system to create credit.[11] Financial instability threatens the monetary system itself.

[9] See Goodhart and Illing eds (2002) for a range of accounts and analyses of the lender-of-last-resort facility.
[10] This is most evident in the expanding range of definitions of money in central bank statistics.
[11] How this feeds into the banking system during a crisis depends on regulation and financial structure (Gabor and Vestergaard 2016).

Central Banking and the Crisis

From a Post Keynesian perspective, the crisis was a consequence of the abdication by central banks from their function of promoting financial stability, supported by theory which denied the relevance of the function and by the global reach of neo-liberal forces. But central banks' macroeconomic focus on targeting inflation meant that they were ill-equipped to deal with the crisis. There was the immediate prospect of systemic bank failure. The new consensus view was so well-entrenched however that the initial reaction to the possibility of bank failure was to refuse support on the grounds that this would reinforce moral hazard. Indeed two months before the Northern Rock crisis, the Governor of the Bank of England had pondered how central banks should respond to the growing market turmoil which had (apparently) resulted from various market imperfections (King 2007). He re-emphasised the inflation target and warned of moral hazard should institutions be given protection from the excessive risks they had undertaken. But the systemic nature of the problem became apparent very quickly such that central bank policy shifted towards liquidity support for the banking system as a whole, i.e. the pursuit of financial stability. Yet those central banks under inflation targeting regimes were still required to prioritise monetary stability.[12] Macroeconomic policy after the crisis continued to rely heavily on monetary policy; after the initial fiscal stimulus to ward off recession, fiscal policy has generally been in retrenchment.

The monetary policy tools available to central banks remained as before, but their use changed with the crisis. The primary tool is the setting of the official interest rate (normally the repo rate) as a lever to manipulate the spectrum of market rates. Along with the liquidity support for the banking system went falls in official rates, which have remained historically low ever since the crisis. This policy was rationalised by low inflationary expectations because of continuing weakness of economic conditions, still expressed in terms of inflation targeting. Many analysts perceived a market imperfection in the form of the 'zero lower bound'[13] which would prevent rates falling to a negative equilibrium level (see e.g. Blinder 2000). Yet some central banks (Denmark, Sweden, Switzerland, Japan and the ECB) have reduced official rates below zero because of fears of deflation. But negative rates are being applied only to a class of bank reserves; banks have not passed on this cost to retail depositors in the form of negative deposit rates, but rather have responded by curtailing portfolio growth and/or acquiring riskier (higher-return) assets. Applying a carrying cost to bank deposits themselves would make them less acceptable as money and drive depositors elsewhere in the search for alternative money assets. Indeed this was Keynes's (1936: 353-8) argument against Gesell's (1916) proposal of negative interest rates as a permanent measure to discourage hoarding. Arguably negative interest rates on deposits would not have this effect in times of crisis when the availability of alternative money assets is more restricted. But at the same time negative interest rates might add fuel to any tendency for bank runs.

[12] This is evident from the Minutes of policy-making bodies like the UK Monetary Policy Committee. Indeed the Chancellor's current remit to the Bank of England specifies that the inflation target is 'absolute' (http://www.bankofengland.co.uk/monetarypolicy/Documents/pdf/chancellorletter160316.pdf, accessed 14 May 2016).

[13] The zero lower bound is seen as a logistical floor to nominal rates. A liquidity trap, with which it is often confused, can occur at any rate whenever there is an overwhelming expectation that the rate will not be reduced.

Continued concern that there was effectively a zero lower bound to interest rates encouraged recourse to the second tool of monetary policy: open market operations in government debt. Because of central bank independence these operations cannot be directly with government but rather with the bond market. Open market purchases have been used on a massive scale, under the rubric of 'quantitative easing', to inject liquidity into the banking system in particular, to encourage lending to the non-bank sector. An innovation has been to extend open market operations to bank debt and non-bank corporate debt in an effort further to influence the yield curve to encourage more investment. Within EMU this strategy was necessitated by the prohibition on dealing in government debt. But there has also been a lessening of trust in states with fiscal problems to stand behind sovereign debt which used to provide core support for fractional reserve banking. Indeed, the shortage of good collateral, particularly sovereign debt, has compounded banks' liquidity problems (Gabor 2010). In the UK in practice quantitative easing was focused almost exclusively on government debt. Although the Bank of England does not deal directly with government, quantitative easing has operated like old-fashioned open-market operations, but on a massive scale. It is notable how little correlation there has been between this massive increase in the money supply and the rate of inflation; of greater concern is the low correlation between bank reserves and new credit.

The third tool of monetary policy which had become increasingly important even before the crisis is central bank communications, or 'signalling', designed to influence expectations (see e.g. Geraats 2002). Presented as an exercise in increased transparency, enhanced central bank communications in fact play their part in the endogeneity of monetary policy; not only is monetary policy conditioned on current expectations about monetary policy, but central banks now try to manage these expectations. The crisis made clear the scope for expectations to exacerbate financial instability. Further the broadening of the functions of central banks necessitated by the crisis needed to be presented in such a way as to enhance their effectiveness. In the UK, the Governor of the Bank of England emphasised the role of expectations, enshrining communications in the function of 'forward guidance' (MPC 2013). At the same time he has widened the remit for central bank communications to such matters as the effects of climate change and constitutional change, indicating the extent to which it is now more widely accepted that central bank concerns and activities (including communications) are relevant for a wider range of economic and social issues; but these concerns are still all addressed with respect to the maintenance of monetary stability.

At the same time central banks were forced by circumstances to pay renewed attention to financial stability issues. Since the 1980s, spurred on by the debt crisis of 1982, central banks (under the guidance of the BIS) started imposing capital requirements on banks and other financial institutions in order to curb credit expansion (reserve requirements clearly not acting as an effective constraint). In other words this policy tool was originally seen as another mechanism to support inflation targeting. But the crisis drew attention to the need for bank capital as a prudential measure to support banks in times of asset price collapse (Admati and Hellwig 2013). Capital requirements have thus been strengthened significantly in the wake of the crisis. While welcome up to a point, the effectiveness of capital requirements is limited in a variety of ways: lagged accounting information, incentives to innovate to avoid raising capital, etc (see e.g. Blundell-Wignall, Atkinson and Roulet 2014). Nevertheless capital requirements stood at the centre of a new set of

macroprudential policies designed to promote financial stability. These policies are potentially dynamic in that, for example, required portfolio ratios such as capital adequacy requirements could be varied to dampen the credit cycle (Tucker et al 2013).

The importance of addressing financial stability was enshrined in the establishment of the international Financial Stability Board and in the reorganisation of national central banks. In the UK, prior to the crisis, the arrangement of making financial stability the concern of the tripartite committee proved to be woefully inadequate. But the framework has been radically changed (Murphy and Senior 2013). Now macroprudential policies are designed and implemented by the Financial Policy Committee (FPC) of the Bank of England, which addresses systemic risk issues and coordinates with the Monetary Policy Committee (MPC). The FPC in turn draws on the Prudential Regulation Authority which conducts microprudential bank supervision. (The new independent Financial Conduct Authority attends to financial institutions' conduct in customer relations.) This institutional change cements the recognition of the interdependence between monetary stability and financial stability, and between macroprudential regulation and microprudential regulation.

Macroprudential policies are designed to reduce the recurrence of crisis by ensuring that banks are better protected from falling asset values and funding shortages by holding more capital. But there is also a push for bank funding through contingent convertible ('coco') bonds which would in times of crisis convert debt into equity. This reflects the mainstream view that equity markets are efficient while debt imposes constraints on market forces. Indeed there has been a push along these lines towards 'bailing-in' as a general alternative to bailing out. But Avgouleas and Goodhart (2014) point out the inability of bailing-in to address asset price collapse in a systemic crisis – indeed bailing-in would exacerbate the crisis. It has been a continuing refrain among critiques of mainstream analysis of the financial sector that bank failures should not be analysed as isolated incidents, given their tendency to occur in systemic fashion.

There is attention now to the warning signs of systemic risk. Bank portfolios are now being monitored periodically by means of stress tests which have some chance of picking up systemic tendencies. These tests reinstate in a more formal way the regular monitoring of individual banks which had been a staple function of central banks before the 'new consensus' period. While this is welcome, the output is what we might call 'information'. In order to fully pick up warning signs, these tests need to be supplemented by the broader 'knowledge' to be gleaned from close contact with bank operations and innovations which strengthens the capacity to address an uncertain future. Coordination between macroprudential regulators and microprudential regulators is thus crucial.

Finally banks have been required to make plans (in the form of living wills) in case macroprudential policies do not provide adequate protection. The mindset has been to anticipate bank failure in the future and indeed, for some, to welcome it as a sign that market discipline is working to counteract moral hazard (King 2009). This runs counter to the core principle which has guided Post Keynesian analysis of money and banking, which is that society needs money, this money is provided mainly by banks, and the duty of the central bank is to ensure that that money is sound, i.e. that banks do not fail.

A major motivation for the introduction of macroprudential policies, as well as the willingness to contemplate bank failure, has been to limit the need for large-scale bail-outs of the type used to resolve the 2008 crisis. The fiscal consequences were such as to cause governments to reverse the initial fiscal stimulus and introduce draconian fiscal austerity measures designed to repair government finances. The rationale was that sovereign debt was being devalued by financial markets as governments' fiscal positions worsened. This compounded the weakness of other asset values, eroding the safety of sovereign debt as bank reserves. The system came to lack good collateral (Gabor 2014, Dow 2014). While the traditional policy tool for stemming systemic bank failure was to supply liquidity to the market, in the extreme through the lender-of-last-resort function, the scale of the 2008 crisis was such that this solution was deemed no longer acceptable.

The scale of the bail-out was due to the scale of bank failures which resulted from the extension of banks' activities, notably to include investment banking, following the deregulation which started in the 1970s (Chick 2013). This meant that the central bank was effectively required to protect much larger banking institutions (universal banks) than before. But it also fed into a much enhanced interconnectedness within the financial sector. The most obvious incidence of this arose from the investment on a global scale in opaque structured products whose value depended ultimately on low-grade US mortgages. But this was just the tip of an iceberg of interconnectedness within which shadow banking has become a major factor (Gabor and Vestergaard 2016). The result was a systemic crisis on a global scale threatening the survival of massive banking institutions. Much thought has therefore gone into measures to reduce that interconnectedness. In the UK the Vickers Commission proposed the ring-fencing of retail banking within banking organisations, subjecting it to stricter reserve and capital requirements but to which the lender-of-last-resort facility would apply (Independent Commission on Banking 2011). While implementation is underway, it remains to be seen how strictly the Vickers principles will be applied in the face of opposition from the banks.

Current Ideas for Central Banking

So where do we currently stand on the role of central banks? The different possible directions that central banking might take raise a host of complex technical and logistical issues, particularly if considering the context of more than one national central bank. Here we focus on the principles of central banking from a Post Keynesian perspective and consider the different options at that level. The options we consider refer much more to structural issues than to the exclusive focus of the 'new consensus' on monetary policy addressed to monetary stability defined in terms of the price level.

A series of structural proposals for promoting financial stability (and monetary stability) addresses the nature of the money asset itself, drawing on old proposals for monetary reform. At one end of the spectrum, free bankers propose that central banks cease to exist, such that all money is provided by the private banking system (drawing e.g. on Hayek 1978; see also Dowd 2009). Without central bank intervention (with associated fiscal costs), it is anticipated that depositors themselves would

discipline banks to be prudent in their asset allocations; imprudent investment behaviour would threaten the value of deposit liabilities and, left uncorrected, would lead to bank failure.[14] But the free banking proposal fails to meet the basic requirement that the banking system provide a stable money asset; bank liabilities in this system would vary in value in line with the bank's assets (Dow 1996). The same argument applies to modern proposals for limited purpose banking, whereby all assets including money would take the form of mutual funds (Kotlikoff 2010). But in fact the experience of the crisis which began in 2007 was so unnerving that confidence in the banking system to operate successfully without any central bank direction at all has been seriously challenged. Indeed historical experience tells us that a successful private sector banking system will in any case evolve its own central banking system (Dow and Smithin 1992).

Much more attention has been given recently to proposals for the other end of the spectrum whereby central banks would be given complete control over the supply of money and the government would not be required to bail out banks.[15] Some proposals, like that for narrow banking, are restricted to the central bank setting the money supply while eliminating fractional reserve banking by requiring 100% reserves (full reserve banking). But history has shown it to be impossible for the state to operate an effective monopoly on what is *treated as* money, even when taxes can only be paid in state money. But in any case, by focusing on money supply control, these proposals ascribe a causal role for money (held only for transactions purposes) with respect to inflation consistent with 'new consensus' thinking. But if demand for money (in its various forms) is unstable due to shifts in liquidity preference, controlling the supply of money would not control inflation even if it was logistically feasible.

But some full reserve banking proposals, while subject to the same critique, differ in crucial respects from the 'new consensus' approach. They envisage money entering and leaving the system by means of government expenditure and taxation, i.e. a very explicit link between fiscal and monetary policy (Jackson and Dyson 2012, Benes and Kumhof 2013). This echoes the 1930s Chicago and Social Credit proposals; the mechanism by which Douglas's (1924) government money would enter the economy, for example, was a 'social dividend' paid to all citizens, an idea being revived now in the form of basic income proposals. But the full reserve banking proposals envisage *all* money being a counterpart to fiscal policy, i.e. money effectively corresponding to M_0, compounding the challenge of deciding on the amount of new money to be set.

But there is no reason why monetary financing of government expenditure more generally should be tied to a central bank monopoly on money, with all its problems. A range of different alternatives to the current form of quantitative easing have been put forward, all designed to boost aggregate demand more directly (see van Lerven 2016). Proposals for 'people's quantitative easing', or directing new money to green projects, or infrastructure projects more generally, would

[14] A variant of this proposal is to return to the gold standard, whereby the market monetary system would be anchored by the requirement for convertibility into gold.

[15] A representative range of these proposals is reviewed by van Dixhoorn (2013), Dow, Johnsen and Montagnoli (2015), Kroll (2015) and Laina (2015).

be a mechanism for injecting new liquidity into the economy in a way which supported government policy. Proposals for 'helicopter money' envisage central banks injecting new money into the economy more generally to boost demand, but not necessarily associated with social goals. Indeed Friedman (1969) introduced the concept as a fictional representation of an exogenous increase in the money supply (rather than acceding to the endogenous money argument that most new money enters the economy alongside credit-financed spending decisions).

Starting from a critique of the full-reserve-banking form of state control of money, Kroll (2015) proposes instead a Partial Sovereign Money system whereby the central bank stimulates an underemployed economy by means of direct injections of new money to finance expenditure rather than transactions in securities, while commercial banks can continue to operate in a fractional reserve system which is heavily constrained by regulation. As with Kroll's proposal, a Post Keynesian approach regards fractional reserve banking as a great opportunity to finance investment in advance of saving, to promote economic development, rather than a danger to be eliminated. If the seeds of the latest crisis were sown by deregulating banking and raising doubts about central bank support, the prevention of future crises requires a return to the mutual arrangement between banks and central banks whereby the former accept portfolio restrictions in return for the ability to expand portfolios with central bank support. Of course the financial sector has moved on in other ways too, in particular in its capacity for sophisticated evasion of regulatory restrictions. But that is no reason to give up on restrictions – rather to keep updating them in light of financial innovations.

The Vickers proposals and the efforts to bring financial stability oversight back more firmly into the Bank of England are welcome moves in that direction. Further, since reliance on macroprudential policy alone carries the risk of officials lacking the knowledge necessary to revise policy in light of developments, the fact that microprudential regulation (by the FPA) is back within the Bank is very welcome. Central banks need to engage directly with the banks whose liabilities are money. Not only does such engagement keep the central bank apprised of new products and practices, but it would also allow it to engage more effectively on matters of bank culture. Much has been made, in analyses of the crisis, of the encroachment of an inappropriate investment banking culture into retail banking. Restoring an appropriate culture is not an easy matter, and it is a great pity that the government did not use the opportunity of public ownership of failed banks to establish exemplars of good culture for the rest of the banking system. Bank supervision needs to be conducted at both the micro and the macro levels.[16]

Finally, there are further proposals for changing the structure of banking motivated by the need for credit to be directed in particular ways in order to serve economic goals (e.g. New Economics Foundation 2016). The premise of the economic argument is that market-driven credit allocation is inefficient, given that it is governed by the distorted knowledge basis of a concentrated commercial banking system (objective quantitative risk measures not being available given uncertainty). A change in bank culture could encourage private sector banks to promote social

[16] Progress is being made on some fronts, e.g. on CEO pay; Carney (2014) notes efforts to change bank culture.

justice, even if it damages short-term profitability. But, as reinforcement, there would be scope for a return to credit directives to steer bank lending towards particular sectors or regions, or in such a way as to offset the redistributional effects of the current system. Inevitably there would be some unintended consequences, but that is the case with all government intervention and is not *per se* a reason to abandon it. In addition, public sector initiatives can aim to plug gaps left by the commercial banks, such as the Green Investment Bank set up in the UK in 2012, and financial help (seed funding, special tax treatment etc) for small businesses. But more clearly could be done.

The UK is unusual (relative for example to Germany, France, Spain, the Netherlands and Austria) in the dominance of banking by commercial banks, compared to co-operative financial institutions, and in the absence of public savings institutions. The Bank of England could take a lead in examining the scope for supporting cooperative institutions (particularly credit unions) and for fostering the growth of not-for-profit local savings banks. The regional finance literature supports the idea that local banks have a comparative advantage in assessing loan applications, but face liquidity challenges relative to national banks (see e.g. Chick, Dow and Rodriguez-Fuentes 2013). Bone (2016) for example advocates (for Scotland) the establishment of not-for-profit People's Banks within a People's Banking Network; these would be supported by a National Investment Bank which would help fund infrastructure projects more generally.

The final issue to address is central bank independence. This was an arrangement promoted by the 'new consensus' approach to central banking which, with its narrow focus on inflation targeting, has been found wanting by the crisis. Central banks perforce had to engage actively in government debt markets, bring financial stability concerns to the fore, and engage in monetary policy ostensibly still addressed to the inflation target but in fact to address real economic problems. The interconnectedness of monetary stability and financial stability with fiscal policy and other government goals, e.g. with respect to social inclusion, could no longer be ignored. Central bank independence was shown to be a misguided theoretical construct. Looking forward, this interconnectedness needs to be recognised more formally so that an inflation target is no longer, as the Chancellor puts it, 'absolute' (as if it were separable, and even attainable). Indeed the broader (even if sometimes conflicting) goals of central banks should no longer be treated as subsidiary, but brought into clearer focus. Just as central banks and commercial banks need to recover a more explicitly cooperative relationship with each other, so do central banks and governments. Central bank independence has always been a rather slippery concept anyway. It is time that it was not itself regarded as an absolute. Central banking needs a new framework.

Conclusion

We have addressed the question of how central banking should now develop by going back to the principle that central banks should ensure that a safe money asset is provided. Rather than interpreting this principle in terms of a monetary theory of inflation over which the central bank has oversight, the Post Keynesian perspective interprets it as the core element of a stable financial system which generates credit to finance real economic activity in such a way as to support

government policies with respect to such goals as reducing income inequality and conserving natural resources.

Here we have pursued the implications of the financial system being inherently unstable on the one hand but of money being neither separable from real activity nor controllable by central banks on the other. Rather, because it arises as the counterpart to credit, money is not separable from real economic activity. Because liquidity preference varies discretely with shifts in uncertainty, demand for the safest assets is unstable, but what constitute the safest assets changes with expectations about the value of assets which back money-assets. The crisis demonstrated the inefficiency of financial markets in pricing assets compounded by the pretence that risk was quantifiable. Central bank support for retail bank deposits, as next to cash in the hierarchy of money assets, is therefore crucial. But with financial innovation we have seen that the central bank's responsibilities for providing the system with adequate liquidity applies to a wider range of assets.

The financial sector has wielded considerable power in holding back regulatory constraints. Yet the analysis here suggests that the alternative of central banks wresting all power over creating money from the banks is not the answer. In particular, shadow banking has demonstrated the capacity for the financial system to develop its own credit mechanisms and shadow money which only meets the requirements of money assets when the associated collateral's value is stable; shadow money loses the attributes of money when collateral value collapses. The fractional reserve banking system rather can be harnessed by ensuring its viability, returning to a separation between retail banking from investment banking, with macroprudential regulation, close supervisions at the bank level, and a guarantee of central bank support for retail banking.

At the same time the pretence of independence between fiscal and monetary policy represented by quantitative easing needs to be dropped and a more sensible mechanism restored for monetary financing of deficits when required. Too much responsibility has been placed on central banks for macroeconomic policy when in fact fiscal policy is the more appropriate way of dealing with recession – supported by the central bank. But central banks can also support government's industrial, environmental, regional and general redistributional policies through their influence over bank behaviour. It can also join with government in changing the structure of banking, e.g. using subsidies to support a layer of local and cooperative banking to fill the gaps left by the retail banks – and indeed to engage in banking itself. None of this is at all easy; central banking inevitably involves handling tensions with the private sector as well as cooperating with it. But what the last few decades demonstrate is the importance of having a strong political will to counter the vested interests in finance. Governments need the courage to acknowledge the interdependence of the role of central banks with their own policies and embrace it in order to promote 'the good of the people … by maintaining monetary and financial stability'. We need a new framework for central banking for the 21st century.

References

Admati, A. and Hellwig, M. 2013. *The Bankers' New Clothes: what's wrong with banking and what to do about it,* Princeton: Princeton University Press.

Arestis, P. and Sawyer, M. 2008. A critical reconsideration of the foundations of monetary policy in the new consensus macroeconomics framework, *Cambridge Journal of Economics*, vol. 32, no. 5: 761–79.

Arestis, P. and Sawyer, M. 2010. What Monetary Policy After the Crisis?, *Review of Political Economy*, vol. 22, no. 4: 499–515.

Arnon, A. 2011. *Monetary Theory and Policy from Hume and Smith to Wicksell: Money, Credit, and the Economy,* Cambridge: Cambridge University Press.

Avgouleas, E. and Goodhart, C. A. E. 2014. A Critical Evaluation of Bail-in as a Bank Recapitalisation Mechanism, *CEPR Discussion Paper* no. 10065, July.

Bell, S. 2001. The role of the state and the hierarchy of money, *Cambridge Journal of Economics*, vol. 25, no. 2: 149-63.

Benes, J. and Kumhof, M. 2013. The Chicago plan revisited, *IMF Working Paper* WP/12/202.

Blinder, A. S. 2000. Monetary Policy at the Zero Lower Bound: Balancing the Risks, *Journal of Money, Credit and Banking*, vol. 32, no. 4, part 2: Monetary Policy in a Low-Inflation Environment: 1093-9.

Blundell-Wignall, A., Atkinson, P. and Roulet, C. 2014. Complexity, Interconnectedness: business models and the Basel system, in C. Goodhart, D. Gabor, I. Ertürk and J. Vestergaard (eds), *Central Banking at a Crossroads: Europe and Beyond*. London, New York and Delhi: Anthem Press, pp. 51-74.

Bone, E. (2016) Banking for the Common Good. London: New Economics Foundation, Friends of the Earth Scotland, Move Your Money and Common Weal *Discussion Paper*, 10 March.

Carney, M. 2014. 'Inclusive capitalism: creating a sense of the systemic', paper presented at the Conference on Inclusive Capitalism, London, 27 May.

Chick, V. 1993. The Evolution of the Banking System and the Theory of Monetary Policy, in S. F. Frowen, ed., *Monetary Theory and Monetary Policy: New Tracks for the 1990s*, London: Macmillan, pp. 79-92.

Chick, V. 2013. The current banking crisis in the UK: an evolutionary view, in G. Harcourt and J. Pixley, eds, *Financial Crises and the Nature of Capitalist Money: Mutual Developments from the Work of Geoffrey Ingham*, London: Palgrave Macmillan, pp. 148–61.

Chick, V., Dow, S. C. and Rodriguez-Fuentes, C. 2013. Good Banks and Bad Banks, Centralised Banks and Local Banks and Economic Growth, *Ekonomiaz*, vol. 84, no. 3: 110-27.

Cobham, D. 2012. The past, present and future of central banking, *Oxford Review of Economic Policy*, vol. 28, no. 4: 729–49.

Coibion, O., Gorodnichenko, Y., Kueng, L. and Silvia, J. 2012. Innocent Bystanders? Monetary Policy and Inequality in the U.S., NBER *Working Paper*, no. 18170.

Colander, D. 1992. The Lost Art of Economics, *Journal of Economic Perspectives*, vol. 6, no. 3: 191-98.

Committee on the Working of the Monetary System. 1959. Report ('Radcliffe Report'). London: HMSO, Cmnd. 827.

Dixhoorn, C. van. 2013. *Full Reserve Banking: An Analysis of Four Monetary Reform Plans*, Utrecht, Sustainable Finance Lab.

Douglas, C. H. [1924] 1933. *Social Credit*, 3rd edition, London: Eyre and Spottiswoode.

Dow, S. C. 1996. Why the Banking System Should be Regulated, *Economic Journal*, vol. 104, no. 436: 698-707.

Dow, S. C. 2004. Uncertainty and Monetary Policy, *Oxford Economic Papers*, vol. 56: 539-61.

Dow, S. C. 2013. The Real (social?) Experience of Monetary Policy', in J. Pixley and G. C. Harcourt (eds), *Financial crises and the nature of capitalist money: Mutual developments from the work of Geoffrey Ingham*. London: Palgrave Macmillan, pp. 178-95.

Dow, S.C. 2014. The relationship between central banks and governments: what are central banks for?, in C. Goodhart, D. Gabor, I. Ertürk and J. Vestergaard (eds), *Central Banking at a Crossroads: Europe and Beyond*. London, New York and Delhi: Anthem Press, pp. 229–43.

Dow, S. C. 2015. Monetary Policy, in J. B. Davis and W. Dolfsma (eds) *The Elgar Companion to Socio-Economics* (second edition), Cheltenham: Edward Elgar, pp. 533-47.

Dow, S. C., Johnsen, G. and Montagnoli, A. 2015. A Critique of Full-reserve Banking, *University of Sheffield Department of Economics Working Paper*, March.

Dow, S. C. and Smithin, J. 1992. Free Banking in Scotland, 1695-1845, *Scottish Journal of Political Economy*, vol. 39, no. 4: 374-90.

Dowd, K. 2009. Moral hazard and the financial crisis, *Cato Journal*, vol. 29, no. 1: 142–66.

Epstein, G. 2013. Developmental central banking: winning the future by updating a page from the past, *Review of Keynesian Economics*, vol. 1, no. 3: 273–87.

Fontan, C., Claveau, F. and Dietsch, P. forthcoming. Central Banking and Inequalities: Taking Off the Blinders, *Politics, Philosophy & Economics.*

Fontana, G. 2007. Why money matters: Wicksell, Keynes, and the new consensus view on monetary policy, *Journal of Post Keynesian Economics*, vol. 30 no. 1: 43-60.

Friedman, M. 1969. The optimum quantity of money, in *The Optimum Quantity of Money and Other Essays*, Chicago: Adline Publishing, ch. 1.

Gabor, D. 2010. The ECB and the Political Economy of Collateral, in C. Goodhart, D. Gabor, I. Ertürk and J. Vestergaard (eds), *Central Banking at a Crossroads: Europe and Beyond*. London, New York and Delhi: Anthem Press, pp. 157-76.

Gabor, D. and Vestergaard, J. 2016. Towards a theory of shadow money, UWE and DIIS *mimeo*, https://ineteconomics.org/uploads/papers/Towards_Theory_Shadow_Money_GV_INET.pdf.

Geraats, P. M. 2002, Central Bank Transparency, *The Economic Journal*, vol. 112: F532–F565.

Gesell, S. 1916. *Die natürliche Wirtschaftsordnung durch Freiland und Freigeld*. Les Hauts Geneveys: Selbstverlag, published in English as *The Natural Economic Order* (trans. P. Pye), 1929

Goodhart. C. and Illing, G., eds. 2002. *Financial Crises, Contagion, and the Lender of Last Resort: A Reader*, Oxford: Oxford University Press.

Goodhart, C.A.E. 2011. The changing role of central banks, *Financial History Review*, vol. 18, no. 2: 135–54.

Goodhart, C. A. E. and Jensen, M. A. 2015. A Commentary on Patrizio Lainà's 'Proposals for Full-Reserve Banking: A Historical Survey from David Ricardo to Martin Wolf'. Currency School versus Banking School: An Ongoing Confrontation, *Economic Thought*, vol. 4, no. 2: 20-31. http://www.worldeconomicsassociation.org/files/journals/economicthought/WEA-ET-4-2-GoodhartJensen.pdf

Hayek, F. A. 1978. *Denationalization of Money: The Argument Refined*, London: Institute for Economic Affairs.

Independent Commission on Banking. 2011. *Final Report and Recommendations*. London: HMSO, September. http://webarchive.nationalarchives.gov.uk/20131003105424/https:/hmt-sanctions.s3.amazonaws.com/ICB%20final%20report/ICB%2520Final%2520Report%5B1%5D.pdf, accessed 19 May 2016.

Ingham, G. 2004. *The Nature of Money*, Cambridge: Polity Press.

Jackson, A. and Dyson, B. 2012. *Modernizing Money: Why our monetary system is broken and how it can be fixed*, London: Positive Money.

Keynes, J. M. [1936]1973. *The General Theory of Employment, Interest and Money*, *Collected Writings*, vol. VII, London: Macmillan, for the Royal Economic Society.

King, M. 2007. Turmoil in Financial Markets: What Can Central Banks Do?, paper presented to the Treasury Committee of the House of Commons, 12 September http://www.bankofengland.co.uk/publications/Documents/other/treasurycommittee/other/paper070912.pdf, accessed 19 May 2016.

King, M. 2009. Speech to Scottish Business Organisations in Edinburgh, 20 October, http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2009/speech406.pdf, accessed 1 June 2016.

Kotlikoff, L. J. 2010. *Jimmy Stewart is dead: Ending the World's Ongoing Financial Plague with Limited Purpose Banking*, Hoboken, N.J.: Wiley.

Kregel, J. 2014. Minsky and Dynamic Macroprudential Regulation, *Levy Institute Policy Brief* no. 131.

Kroll, M. 2015. The Monetary System in Crisis: Monetary reform proposals, and a simple suggestion for a more effective monetary policy, World Future Council, *Future Finance – Discussion Paper* No. 1, 07/2015, http://www.worldfuturecouncil.org/inc/uploads/2016/01/WFC_2015_The_Monetary_System_In_Crisis.pdf, accessed 21 May 2016.

Laina, P. 2015. Proposals for Full-Reserve Banking: A Historical Survey from David Ricardo to Martin Wolf, *Economic Thought*, vol. 4, no. 2, 1-19.

McLeay, M., Radia, A. and Thomas, R. 2014. Money creation in the modern economy, *Bank of England Quarterly Bulletin*, Q1: 1-14.

Mehrling, Perry. 2011. *The New Lombard Street, How the Fed became the Dealer of Last Resort*, Princeton, New Jersey: Princeton University Press.

Mehrling, P., Poszar, Z., Sweeney, J., and Neilson, D. H. 2013. Bagehot was a Shadow Banker: Shadow Banking, Central Banking, and the Future of Global Finance

Monetary Policy Committee. 2013. Forward Guidance, 7 August http://www.bankofengland.co.uk/monetarypolicy/Pages/forwardguidance.aspx, accessed 19 May 2016.

Murphy, E. and Senior, S. 2013. Changes at the Bank of England, *Bank of England Quarterly Bulletin*, Q1: 20-8.

New Economics Foundation. 2016. *Our friends in the City: Why banking's return to business as usual threatens our economy*. http://b.3cdn.net/nefoundation/b45df453702219060e_h8m6y71zc.pdf, accessed 1 June 2016.

Rodriguez Fuentes, C.J. 2006. *Regional Monetary Policy*, London: Routledge.

Singleton, J. 2011. *Central Banking in the Twentieth Century*, Cambridge: Cambridge University Press.

Tily, G. 2007. *Keynes's General Theory, the Rate of Interest and 'Keynesian' Economics: Keynes Betrayed*, London: Palgrave Macmillan.

Tucker, P., Hall, S. and Pattani, A. 2013. Macroprudential Policy at the Bank of England, *Bank of England Quarterly Bulletin*, Q3: 192-200.

van Lerven, F. 2016. Public Money Creation: Outlining the Alternatives to Quantitative Easing. London: Positive Money. http://positivemoney.org/publications/guide-public-money-creation/, accessed 1 June 2016.

White, W. R. 2013. Is Monetary Policy a Science? The interaction of theory and practice over the last 50 years. Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute *Working Paper* No. 155, http://www.dallasfed.org/assets/documents/institute/wpapers/2013/0155.pdf, accessed 1 June 2016.