

Department of Economics

**THE RELATIONSHIP BETWEEN CENTRAL BANKS  
AND GOVERNMENTS:  
WHAT ARE CENTRAL BANKS FOR?**

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**Abstract**

In order to consider the problem of the relationship between central banks and governments, it is necessary to go back to first principles and consider what society needs from central banks. The role of the central bank is explored as being to provide a stable financial environment as a basis for real economic activity. This involves the provision of a safe money asset; an appropriate level and composition of lending to the corporate sector to finance capital investment; and lending to government as required, subject to maintaining the value of the currency. The evolution of this traditional role in relation to banks and government is analysed in terms of collateral, emphasising their interdependencies. The argument developed here is that the problem of insufficient collateral for the financial system is a product of weak economic conditions and financial instability which has eroded confidence in the valuation of assets, and that this has been compounded by central bank independence. As a result, it is argued that central banks should not be independent of government, but rather that the traditional constructive mutual relationships between central banks and government (and retail banks) be restored.

**May 2014**

**Keywords:** central banks, monetary policy, bank regulation

**JEL Classifications:** E5, E61, E42

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# THE RELATIONSHIP BETWEEN CENTRAL BANKS AND GOVERNMENTS:

## WHAT ARE CENTRAL BANKS FOR?<sup>1</sup>

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### **Introduction**

The specification of central banking functions and the institutional arrangements within which these functions are performed are open for discussion. The need for changes in central bank goals and operations in the face of the financial crisis has opened up issues which, during the ‘great moderation’ period, had been regarded as long settled.

One of these issues concerns the goals of central banks. While inflation targeting had been applied for some time by many central banks, the new economic environment seems to many to warrant an alternative; candidates for an alternative include nominal GDP targeting, unemployment targeting and promoting financial stability. But here we consider the merits of a range of goals pursued simultaneously, with potential conflicts addressed by means of judgement. Further, while we will emphasise the importance of the role of central banks, it will be recognised that they cannot exercise direct control, either of macroeconomic aggregates or of the financial sector. In attempting to achieve their goal(s), central banks have always had to tailor their policy instruments to the changing character and strength of financial markets. The liberalisation, reregulation and globalisation of finance since the 1970s, and then the financial crisis, dramatically altered both the scale and sophistication of financial markets and the

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<sup>1</sup> This paper is a draft contribution to 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. It has benefitted from comments made by participants at the Central Banking at the Crossroads Conference, Copenhagen, January 2013, and by Victoria Chick.

relationship between central banks and financial institutions. But, while such developments challenge the effectiveness of traditional instruments of monetary policy, care must be taken not to exaggerate the power previously exercised by central banks. Even before the 1970s central banks could only influence the level of credit and money in the economy, not control it.

A further issue concerns the institutional arrangements within which central banks pursue their goals and in particular the case for central bank independence. The return of central banks to major open market operations in sovereign debt has eroded previous efforts to separate monetary policy and fiscal policy. At the same time, central bank activities have had their own direct political consequences, including substantial redistribution of income. There are good reasons therefore to revisit the presumption that central bank independence is beneficial. We will explore this issue in the light of recent experience. But rather than limiting our discussion to the interdependence between fiscal policy and monetary policy, we extend the discussion to an issue which lay at the heart of the banking crisis: the role of the state in providing for society's need for money and credit, which brings us back to the goals for central banks. What are central banks for?

We will see that how we discuss the role of central banks and the appropriate design of institutional arrangements depends crucially on the theoretical framework employed. The general equilibrium approach which has dominated the economic literature on monetary policy and institutional design is ahistorical, founded on assumptions of well-informed, atomistic, narrowly rational behavior within a stable equilibrium system; the Classical Dichotomy, which separates the real from the financial, has been a critical feature of this approach for analysis of central banking. Attention will be drawn here, rather, to the significance of social conventions, both in terms of expectations about the behaviour of institutions, but also in terms of markets valuing

assets under uncertainty. This alternative approach embeds interdependencies between real and financial variables, between fiscal policy and monetary policy. The first approach treats the complications of policy practice as separable from, but nevertheless directed by, theory (Colander 2002), while we will consider them as a necessary element in theory which is to be useful for policy and institutional design (see further Dow 2012a).

We will consider these pressing current issues for the future of central banking by taking a historical approach, revisiting the rationale for central banking and its relations with the state on the one hand and banks and society more generally on the other. In the process we will consider the role of collateral and in particular the possibility of sovereign debt no longer being regarded as a safe asset. This is part of the more general problem of an insufficiency of good collateral, given the fiscal problems of governments and the massive size of the financial superstructure. Put another way, there is not enough reason for confidence in the value of assets.

A major factor in the build-up to the crisis was an over-confidence in the value of assets which was unwarranted given the weak knowledge base on which such valuations rested. But the fall in capital values during the crisis meant that there was good reason to be concerned about the exposure of retail banking to risk and the requirement for government involvement in bailouts; reasonable doubts about value thus spread to some sovereign debt. We will thus consider the role of central banks in relation to government in terms of collateral. In the process we consider collateral broadly, as an asset which may be intangible and where claims on it may not be legally enforceable (such as the source of value of bank deposits). We thus focus on collateral as the basis for confidence in the financial system.

## **Banking History and the Role of Collateral**

It is important to understand the history of banking and central banking, not only in order to understand how we arrived at the current situation but also because past experience has been a crucial factor in determining social conventions, in particular the degree of trust and confidence (in collateral, broadly defined) which lie at the heart of a successful system (see further Chick and Dow2013).

In many countries, retail banking and then central banking arose from the sovereign's need to borrow, but in others they emerged (where there was a sufficient basis of trust) in response to society's need both for an alternative to specie and for credit. Banks were able to supply the need for banknotes, and then chequing deposits, through the provision of credit. Money thus arose from the social relation between borrower and lender, which included crucially an assessment of default risk (whether or not protected by collateral<sup>2</sup>). As confidence in lenders increased, this new money in the form of notes, and then chequing deposits, was inside money because there was a matching liability on the part of the bank. There was confidence in lenders' liabilities, based on the nature of bank assets: specie, secured and unsecured loans, and corporate and government debt. But these assets were limited as collateral because they were not all liquid; fractional reserve banking meant that not all demands to liquidate deposits could be met. The system nevertheless worked as long as there was further collateral in the form of confidence in bank money as a social relation (based on confidence in the banks' capacity to manage risk and thus to convert deposits to cash on demand), such that the redeposit ratio was high. This kind of

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<sup>2</sup> It was the securing of debt by collateral which Heinsohn and Steiger (2006) identify as the sign of monetisation of the economy; the collateral was both productive in itself and also generated new credit.

confidence is not calculable, as in mainstream theory, but is a social convention, based on experience.<sup>3</sup> In time the obligation to redeem deposits with specie lapsed.

Chick (1986) explains how central banking evolved to support the emergence of a banking system. The banking system as a whole could face a crisis if there was a shortage of liquidity in aggregate such that, even with an interbank market, the banks would be unable to meet their liabilities. Because of the risk of contagion in expectations, runs could occur on some banks because of problems identified with other banks. Confidence in banks to honour their liabilities in cash meant that bank liabilities are not generally called in but rather continue in circulation. But the valuation of bank assets rests ultimately on judgement, since there are no demonstrably true measures of default risk. So revisions of judgements with respect to some banks' assets might reasonably alter judgements about other banks' assets. Further the valuation of bank assets which reassured depositors was more generally endogenous to the system: if loans were called in and collateral acquired on an economy-wide scale, asset values would fall, increasing default risk and reducing protection against it. A liquidity problem can turn into a solvency problem.

To protect themselves from more minor calls on their assets, the banks held some assets regarded as comparatively or perfectly safe from collapse in capital value: short-term government debt and deposits with the central bank. The latter, together with central bank notes, were regarded as outside money. The central bank had a matching liability, but this was disregarded because, if there was risk of default, the central bank could call on the resources of government. The relationship was mutual. Where central banks managed government debt and

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<sup>3</sup> It was a notable feature of the banking crisis beginning in 2007 that there was very limited public knowledge of the system of deposit insurance; the safety of bank deposits was taken for granted. Only when the risk of default became real did the safety of bank deposits become a matter of any calculation.

the government's bank account, governments could avoid default by borrowing from the central bank. The central bank was thus the lender of last, if not first, resort for the government. But, following recent experience of central bank independence and the withdrawal of the facility, the fiscal position of governments has become a substantial concern for the viability of commercial banks. Until now the lender-of-last-resort facility was generally the subject for debate only as a matter between central banks and commercial banks; now it is also an issue for governments.

The role of collateral in sharing risk up until recent decades was relatively well defined, though it was still subject to variations in the value of collateral. It was a major element in bank loan contracts whereby the specialised knowledge of the borrower on the part of the lender led to a mutually satisfactory agreement as to how the borrower would compensate the lender in the event of default. Otherwise collateral in the form of state support for banking and for the economy more generally was imperfectly specified, but nevertheless inspired the convention of confidence. The success of the banking system, supported by the central bank, thus provided a good foundation for the massive growth of non-bank financial intermediaries and securities markets, based on confidence in the value of sovereign debt, the practices of the central bank and the real assets of the economy.

But now the role of collateral in bank lending contracts is more diffuse and also more complex in the relations between the state and the private sector. Debt valuation came to rely less on the types of client relationship previously at the core of bank lending and more on pricing based on quantified risk models; transactions costs fell accordingly, encouraging a much wider participation in lending. The securitisation encouraged by the introduction of capital adequacy requirements in the 1980s distributed the risk away from the originator of loans. Collateralised debt obligations and credit default swaps further redistributed risk, such that the knowledge of

the original borrower and collateral became ever more diffuse. Further, the globalisation of finance meant that the collateral ultimately backing assets could be located in a wide range of countries of which borrowers might have limited knowledge, rendering the ultimate borrower even more anonymous. This diffusion was compounded by the sheer scale of the financial superstructure relative to the collateral base represented by the real economy and the support of the state.

In retrospect, markets realised the weak knowledge base on which these assets had been acquired and bets placed; the connection between structured product valuation and the value prospects of the underlying assets was very tenuous such that the valuation relied more on an amorphous (and as it turned out unwarranted) confidence in financial sector pricing.<sup>4</sup> When that confidence was punctured, the value of collateral fell dramatically across the board. Contrary to the conventional view based on the Efficient Markets Hypothesis and the Capital Asset Pricing Model, that any deviation of prices from their ‘true’ value would be reversed by market processes, defaults and the freezing of markets in particular assets ensued; these were discontinuities which further eroded confidence. The social conventions which had been built up to support the financial system thus broke down, resulting in a financial crisis. This challenge to confidence in market forces refocused attention on central banks for a solution to the crisis. Central banks were thus forced to address the policy goal of financial stability rather than inflation control and to design new instruments fit for this purpose.

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<sup>4</sup> In retrospect, blame was placed on credit rating agencies as having been incentivised to misrepresent risk.



## Central Banks and Financial Stability

While maintaining financial stability had continued to be one of the formal roles of most central banks during the ‘great moderation’ period, in practice it had taken a back seat to the primary role of inflation targeting, a development dubbed historically ‘idiosyncratic’ (Epstein 2013) or an ‘aberration’ (Cobham 2012).<sup>5</sup> Indeed the content of, and emphasis on, a range of different functions of central banks has varied over the decades (Goodhart 2011, Buiter 2012, Cobham 2012). These functions have included the provision of a safe money asset; regulation, monitoring and supervision of the banking system; exchange rate management; debt management; and lending to government as required, subject to maintaining the value of the currency.<sup>6</sup> These functions can be summarised as promoting financial stability as the basis for private sector decision-making. But in addition, as Epstein (2013) points out, central banks in developed and developing countries have also played an active part in supporting and indeed promoting economic development, in particular by encouraging commercial bank lending to finance investment in particular sectors and regions. Measures have included credit controls, capital controls, exchange rate management and financing the state.

Central banks have thus historically played an important part in promoting economic goals alongside financial stability.<sup>7</sup> Following the narrowing of central bank functions in recent decades around the inflation targeting function, central banks have now reverted to a much wider range of functions in order to address the current crisis; while the form of the instruments may

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<sup>5</sup> Even where central banks had additional formal goals, along with inflation targeting (with respect to financial stability and economic stability for example), the potential conflicts between these goals tended to be resolved in recent decades (up to the crisis) by giving primacy to the inflation target.

<sup>6</sup> Goodhart (2011) includes in the latter function constraining the financing of the state in normal times.

<sup>7</sup> The degree of central bank interventionism has waxed and waned over time. There has tended to be a pattern of a less interventionist stance before a crisis, followed by arguments for a more interventionist stance to resolve the crisis; Epstein points out that current debates on the role of the central bank mirror those in the 1930s, when events similarly required interventionist central banking.

differ, the principles arguably are close to what was normal in many countries before the ‘great moderation’.

The focus on inflation targeting had meant inattention in particular to the role of banks and how their practices may impact on the financial system and on the real economy. Deregulation had meant that, while retail banks had traditionally held loan contracts along with (primarily sovereign) debt, now they had securitised loans and also extended their asset base to include structured products which had a weak backing of collateral. Bank regulation had become focused almost exclusively on capital adequacy ratios, based on an assumption that the risk profile of bank assets was measurable and that the assets counted as capital were of sound value. But violent swings in asset prices, and thus valuation of collateral, challenged these assumptions and damaged confidence in the operations of the financial sector. If the role of the central bank as promoting financial stability founded on the provision of a safe money asset is to be taken seriously, then the first task is to ensure a sound retail banking system which inspires confidence in their liabilities.

Because many have identified the root of the banking crisis in the development of universal banking following deregulation dating from the 1970s, there is much support for some kind of ring-fencing of traditional retail banking operations from other financial activities. According to the Report by the UK’s Independent Commission on Banking (2011: the ‘Vickers Report’), for example, only retail banks would have the liquidity support of the central bank, but with the *quid pro quo* of strict regulation e.g. of levels of liquidity and capital. Retail banks could thus continue to reap the benefits of fractional reserve banking, which gives them the capacity to engage in medium- and long-term debt contracts in advance of deposits, thus financing increased capital expenditure. But this privilege comes at a cost, associated with regulatory restrictions on

portfolios and the cost of higher liquidity holdings and capital than in recent decades. It was because of the costs of retail bank regulation and the increasing competition from non-bank financial intermediaries that banks pressured governments to deregulate them. Indeed the build-up to the crisis was a symptom of a shift in power from central banks to commercial banks.

For some commentators a reversal of that shift to the *status quo ante* is not enough. Other proposals have thus been aired which would put the provision of money more or less completely into the hands of the central bank, effectively putting an end to fractional reserve banking altogether (see for example Kotlikof 2010; Jackson, Dyson and Hodgson 2013). If the cause of the crisis is identified as being too much credit, the solution is seen to be the removal of the capacity of retail banks to create credit. Yet it is credit to finance speculation, causing asset bubbles, which has been seen as the problem rather than credit to finance productive activity. Full nationalisation of banking could ensure direction of credit to productive purposes only (an opportunity missed currently in the UK, where two major retail banks have substantial public ownership). Nevertheless credit would still be provided outside retail banking, even if not created in advance of deposits. Indeed even outside the net of liquidity support from the central bank, what can be classified as ‘shadow banking’<sup>8</sup> has already increasingly provided substantial proportions of total credit and narrow banking proposals would if anything encourage even more recourse to shadow banking.

The role of the central bank can be seen partly in terms of redistributing risk. Much of the discussion of bank reform with respect to the ‘too-big-to-fail’ problem has been focused on reducing the risk exposure of the public sector. Beyond that, the proposals to segment retail from investment banking, with the lender-of-last-resort facility available only to the former, aim to

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<sup>8</sup> There is a range of opinion as to how exactly to define shadow banking, e.g. whether it includes investment banking.

minimise its risk, even at the expense of increasing it in the latter. In effect according to this view central banks should aim to protect retail depositors by providing collateral in the form of access to liquidity in the repo market. At the same time central banks should aim to provide retail banks with sufficient protection to encourage them to lend to business. But the danger is that the interconnectedness of financial markets would spread instability from non-retail banking to retail banking, threatening the provision of a safe money asset and the capacity to lend to business. There is the danger of a fallacy of composition such that, at one end of the spectrum, there could be a systemic collapse of asset values across the board, while at the other end there could be a run on retail banks for which fractional reserves provide inadequate protection. While separating off retail banking has been presented (e.g. by King 2009) as a mechanism for making banks small enough to fail, to contemplate retail bank failure would subvert the goal for central banks of providing a safe money asset (without the need for calculative assessment by the general population). The goal rather should be to have banks too well regulated and supervised to fail.

Nevertheless separating off retail banking (either in the private sector or moving it into the public sector) would not be a solution to the possibility of systemic collapse in asset markets. The success of retail banking in the past provided a secure foundation on which all the rest of the financial superstructure grew, and grew exponentially. As Chick (1986) explains, it was the success of mutual support between central banks and retail banks which encouraged the growth of non-bank financial intermediaries; but then retail banks lobbied, successfully, for deregulation to allow them to compete. Investment banking was then increasingly conducted alongside retail banking within 'universal' banks and subject to its own regulation. But shadow banking added a further, largely unregulated, layer to this inverted pyramid, stoking the boom in asset markets and paving the way for the crisis. The success of retail banking, when combined with

deregulation, thus carried the seeds of its own destruction. As Minsky (1986) had argued, stability breeds instability. The danger continues to lie particularly in the capacity of shadow banking to take up the slack left by the ring-fenced retail banks but without the liquidity support of the central bank. Successfully ring-fenced retail banking would ensure that a safe money asset was provided, but it would still leave the wider scope for financial instability. Therefore, while ring-fencing would be a step in the right direction, it would not on its own be enough to prevent a further crisis.

It is insufficient therefore to aim to redistribute risk, but in addition the aim for central banks should be to reduce risk in aggregate. Macroprudential policies aim to reduce aggregate risk by stabilising bank portfolios directly, e.g. by countercyclical capital adequacy requirements or by limiting leverage ratios. Such policies carry their own risks; as Minsky had explained in Schumpeterian terms, regulatory constraints are a spur to innovation. Haldane (2012) accordingly argues for macroprudential regulation to be as simple as possible (e.g. limits on the size of institutions) because of the danger of unintended consequences, what he calls the ‘risk of backdoor complexity’. Even ring-fencing retail banking might be subverted in a way which even complex regulation would find it difficult to control.

Admati and Hellwig (2012) identify bank capital as the fundamental weakness which threatens to spread risk around the system (increasing systemic risk), and thus advocate markedly higher capital requirements. Again, while increased capital would encourage more confidence in banks’ capacity to absorb losses and thus reduce the risk of banking crises, it is by no means sufficient to prevent or resolve crises caused by liquidity constraints (Tymoigne 2010). In particular it does not address the problem of financial activity outside the regulatory net, which

stricter regulation of course encourages, and its capacity to create unwarranted swings in asset prices and thus liquidity problems.

Frydman and Goldberg (2011) argue that the focus of monetary policy should be on stabilising asset markets, given that imperfect knowledge prevents markets from equilibrating themselves. Mehrling (2011) also sees the potential for risk spreading across the system, arising from unstable asset prices and even frozen asset markets. Shadow banks, which provide capital markets with essential credit, operate matched books with the aid of derivative products (unlike fractional reserve retail banks) but are still vulnerable to price swings beyond the risk measures of derivatives. He argues therefore that central banks should act as ‘dealer of last resort’ in order to provide liquidity to a range of asset markets and to stabilise asset prices. Just as we argued above that the capacity for credit creation provided by fractional reserve banking potentially performs a vital social function, so potentially does the rest of the financial system. But this potential is only reached if unstable asset markets do not divert financial activity into self-reinforcing asset bubbles (and crashes).

But it is important not to confine the discussion to financial institutions and financial markets. The risk of value fluctuations (particularly in a downward direction) also arise from real economic activity. While uncertainty prevents markets from identifying ‘true’ asset values, such that conventional valuations prevail, these valuations are not purely subjective. While these valuations may take on a life of their own for a considerable time (as in the long boom prior to the crisis), eventually reality (particularly in the form of defaults but also new data on real economic conditions) breaks through. Against this backdrop of conventional valuations, the state of banks’ expectations about real conditions influences their willingness to extend credit to business activity rather than financial activity. Expectations with respect to the real economy,

and actual levels of output and employment, are also influenced by the government's fiscal stance, which in turn is influenced by market pressures. Aggregate risk can thus be addressed by increasing confidence in asset valuation, not just on the basis of financial market behaviour, but grounded in evidence of public sector efforts to support the economy, which can include the efforts of the central bank.

Fiscal policy is relevant, not only in terms of its effect on real economic conditions, but also in terms of the sustainability of sovereign debt. The rapid growth of the financial superstructure had increased the need for collateral as a way of giving confidence to asset holders. At the same time the crisis eroded confidence in a range of assets which might have inspired confidence, and this has extended to sovereign debt. There is a particular problem for the Eurozone: that its design allowed for a range of sovereign debt of varying quality, while maintaining a common interest rate policy. This has been a concern from the start (see e.g. EC 1990), but it was overridden by the priority to proceed with monetary union. This priority can be seen as primarily political, yet there was an argument current in the early days of discussion of monetary union by those dubbed the 'monetarists' that monetary union itself would generate the forces for economic convergence. The Maastricht Treaty sided with the 'economist' argument that convergence was a precondition for monetary union. But arguably the practice, in the form of granting entry into the Eurozone, accorded more with the 'monetarist' position.<sup>9</sup> The resulting varying perceived quality of sovereign debt within the Eurozone has caused a crisis situation, to be addressed by the European Central Bank (ECB). Some of the doubts about the value of sovereign debt arise from the necessity, given central bank independence, for any central bank

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<sup>9</sup> While the expectation was that European Monetary Union would itself promote convergence, there have been arguments that, by reducing segmentation in the provision of finance, it could in fact promote divergence (see for example Dow and Rodriguez Fuentes 2003).

involvement in government finance to require public negotiation and dispute. We therefore turn now to the issue of central bank independence.

### **Central Bank Independence**

While central banks have perforce become more interventionist again in order to deal with the crisis, the institutional framework is very different from before the great moderation in that central bank independence in some form is now the norm.<sup>10</sup> When central banks were not independent, intervention was generally designed by government and implemented by central banks. Thus for example Goodhart (2011: 140) characterises the role of the Bank of England during the period of the 1930s to the 1960s as being to provide policy advice, to administer a system of controls and to manage markets. It was accepted that there is a simple and fundamental accounting relationship between fiscal policy, its finance by borrowing from the central bank or by central bank issuance of sovereign debt, central bank management of the stock of public debt, and monetary policy; the resulting scope for conflict had to be managed.

But the new era of intervention is being implemented within a sometimes uncomfortable process of negotiation between governments and independent central banks. For those who anticipate a continuing need for intervention, or simply accept the necessary accounting interdependencies between fiscal policy and monetary policy, independence poses problems, particularly for systems of governance (as in the UK) which are otherwise highly centralised. In contrast, for those who regard the current era of intervention as a temporary response to an exogenously generated crisis, normality (including inflation targeting) can soon be restored,

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<sup>10</sup> The US is a notable exception, its central bank always having been independent.. But there governance is dispersed among a range of agencies to allow a system of checks and balances in a way which would be difficult to achieve in other, more centralised, systems. Among other countries, the degree of independence is highly variable.



including full central bank independence. It is time to revisit the reasons why the norm of central bank independence was promoted in the first place.

The Maastricht Treaty provided the impetus for central banks in Europe to be made independent, even if, as in the UK, membership of European Monetary Union (EMU) was not pursued. The rationale, as provided in the summary of European Community research on EMU (EC 1990), was that an independent central bank was more likely to achieve price stability, because it would be free from the political temptation to try to engineer a boom for electoral purposes. Political independence would thus enhance credibility in inflation targeting. The Maastricht conditions specified that, in order to make central bank independence sustainable, governments would need to accept restrictions on fiscal deficits. The argument was that either financing large deficits or dealing with a financial crisis if governments were forced to default would threaten central bank independence; this would damage the capacity of the central bank to meet its inflation target.

The argument for central bank independence (and for fiscal constraints on governments) was accordingly expressed in terms of the primacy attached to the inflation target.<sup>11</sup> The foundation for this argument is general equilibrium theory, which portrays real outcomes (production levels, employment etc.) as determined in the long run by real productive capacity. Because fiscal policy in general is seen as interfering with equilibrating market forces, thus reducing growth, limits on fiscal policy are seen as having beneficial real consequences. Money and prices are seen as separable from the real, but having the capacity to interfere with real equilibrating forces in the short run by confusing expectations; an unexpected increase in the money supply for example could raise false expectations of conditions which warrant increased

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<sup>11</sup> While this was the main rationale, other possible rationales include preventing governments distorting fiscal policy because of their ability otherwise to borrow easily and cheaply from the central bank.

production levels and new investment, which later need to be reversed. The inflation which is assumed to follow inevitably from an increased rate of growth in the money supply thus imposes costs which reduce growth.

The central bank independence literature has thus been focused almost exclusively on measuring success in relation to controlling inflation.<sup>12</sup> The ultimate test is taken to be how far inflation is lower in countries with more independent central banks. While the EC (1990) research reported the outcome of these studies as ‘clearly’ indicating a positive relationship between degree of independence and success in inflation control, there has in fact been a conflicting range of conclusions drawn from the data in the many subsequent studies. Indeed, in any case, questions arise as to the direction of causation between central bank independence and inflation. Thus even judged in narrow terms against the inflation target, the case for central bank independence is by no means unassailable.

The primacy of the inflation target also distracted attention from the central bank goal of financial stability which in many cases continued as a formal requirement, even if abandoned in practice as unnecessary, given the presumption of efficient markets (see further Borio 2011). There was a concern that pressure to set interest rates with an eye to financial stability could conflict with inflation targeting (see e.g. Goodhart and Schoenmaker 1995). While there is inevitably scope for conflict between the two goals, the response in terms of institutional arrangements was conditioned by a second theoretical separation, between monetary policy and bank regulation. The former was based on general equilibrium macroeconomic theory, which

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<sup>12</sup> Quantifying the degree of independence has required particular attention, given the different organisational arrangements and conventions in different countries.

dealt in aggregates without reference to financial institutions,<sup>13</sup> while bank regulation was taken to refer to microeconomic theory of banks as firms and/or institutional theory. The outcome was thus an institutional separation between monetary policy on the one hand and bank regulation and supervision on the other, just as monetary policy had been institutionally separated from fiscal policy.

But these separations broke down in the face of the crisis, exposing the weakness of their theoretical foundation. Monetary policy in the form of setting the official (repo) rate proved to be powerless in the face of escalating rate premia on interbank lending and even of the drying up of the interbank market. Banks' collateral in the repo market was viewed as involving the real possibility of default risk in an environment of collapsing asset values and highly leveraged portfolios and thus brought about high risk premia as a mark-up on the official rate. Monetary policy-makers turned to asset purchases (quantitative easing) in an effort to drive down long rates – without the effect on inflation predicted by general equilibrium theory. While these purchases included private sector debt, the bulk took the form of sovereign debt. Given the fiscal costs of bank bailouts and the fiscal effects of the recession arising from the bank crisis, this surge of central bank funding proved to be crucial. While in the past sovereign debt had been regarded as a safe asset for underpinning credit creation by banks, now the risk of sovereign default had become a real possibility, further undermining banks' own collateral. It was central banks' actions which formed a backstop insofar as they could inspire confidence in their capacity to manage the crisis together with governments; this confidence provided the broad collateral which has allowed the financial system to survive the crisis (so far).

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<sup>13</sup> As Borio (2011) points out, these models were effectively real rather than monetary models; see further Morgan (2009).

But the process of addressing interdependencies was made more difficult by the institutional separation between monetary policy and fiscal policy on the one hand and between monetary policy and bank supervision on the other. This has been the case particularly in the Eurozone, where overcoming institutional separations requires multilateral international negotiations. If in fact the crisis was in part at least caused by these institutional separations, then the case is even stronger to develop new formal institutional arrangements which address the inevitable interdependencies between monetary policy, fiscal policy, debt management and bank regulation and supervision, as well as more generally between real and financial variables. To do so requires an articulation of a different type of theoretical framework which takes seriously the real experience of monetary policy and bank regulation and the importance of institutional arrangements, as in the body of work of Goodhart, Haldane and Borio, and work in the Post Keynesian tradition, of which a few examples are Arestis and Sawyer (eds) (1998), Bibow (2009), Chick (2013), Dow (2013c), Dymski (2010), Gabor (2011), Kregel (2009) and Morgan (2009).

Any theory abstracts by setting conceptual boundaries, e.g. between the macro and the micro levels. But where these separations are not mirrored in reality, any policy advice based on these separations may be seriously misguided. The Classical Dichotomy, purported to hold between real and financial variables, had been critical for institutional (and policy) design, yet the evidence of the financial and economic crisis has demonstrated that this dichotomy does not hold in reality. This general equilibrium approach, which provided the rationale for independent central banks, is expressed in terms of the rational expectations view that monetary policy in the form of interest-rate setting would be transmitted to the general price level by means of expectations which accorded with rational expectations general equilibrium modelling itself.

Any financial instability would be the result of some external shock. Such shocks have been explained variously as real technology shocks, or some kind of irrationality captured by the terms ‘uncertainty’ or ‘animal spirits’, or even by sunspots (see further Dow 2013a, 2013b). According to this approach, the central bank can promote stability by efforts to keep expectations as close as possible to long-run equilibrium values, which are themselves determined by other, real forces. Indeed financial instability had previously been explained by deviations of money supply growth from its equilibrium path, something which central bank independence was explicitly designed to prevent.

New Keynesian theory has reinforced the importance of central bank communications as a means of ensuring that information is as far as possible symmetric. According to this view, the current financial crisis is explained by various factors which distorted markets and their capacity to equilibrate naturally. Of these the main distortions have been identified as asymmetric information about risk, on the one hand, and the moral hazard created by the lender-of-last-resort facility provided by central banks on the other. The aim is to make the subject matter as close as possible to the general equilibrium world, so that markets may themselves promote financial stability. The role of the central bank remains one of interest-rate setting in order to meet an inflation target, such that real expectations are not distorted by inflation uncertainty. For New Keynesians the Classical Dichotomy holds, at least in the long run. There is no reason for the central bank not to be independent.

But we have seen the central role played by confidence (in banks and in the central bank) in the successful functioning of the financial system and in the economy it serves. Confidence is only robust if backed up by real experience, and the most profound recent real experience has been of financial and economic crisis. This experience has made clear the interdependencies

between the government's fiscal stance and the value of sovereign debt, restrictions on and monitoring of bank behaviour, monetary policy and the viability of the banking system. More generally this experience has demonstrated the interdependencies between financial stability and economic stability. Confidence is only now gradually being restored by experience of central banks intervening in sovereign debt markets, attempting to direct bank lending and being more actively engaged in promoting financial stability by designing new macroprudential policies.

While in some countries, as in the UK, institutional change has already occurred in recognition of the need for central banks to be more actively engaged with the goal of financial stability, the need for more formal recognition of the need for coordination between government and central banks has not been addressed. Yet, the importance of sovereign debt as collateral for the banking system, and thus of debt management, means that central banks are dependent on the fiscal stance of governments when aiming to provide a secure financial system as well as pursuing monetary policy. At the same time, in pursuing their goals with respect to growth and economic development, governments are dependent on central banks. During the great moderation period, this was taken to mean dependence on central bank success in meeting an inflation target. The crisis has demonstrated that such success cannot prevent financial instability and indeed that prioritising inflation control may actually facilitate a crisis (Borio 2011). Once the potential contribution of the financial sector to growth and development is more fully recognised and understood, there is scope for considering a range of policy instruments for central banks, such as a more active role in directing credit.

The new scepticism about the capabilities of market forces in allocating credit paves the way for considering how central banks might produce more socially beneficial outcomes. Indeed such thinking is already evident in the actions of many central banks. But then, since it was

inflation targeting which was the basis for central bank independence, a move towards wider goals addressed to economic as well as financial conditions calls for the relationship between central banks and governments to be reconfigured in order for these goals to be pursued as effectively as possible. This is not to argue that central banks should be completely subservient to government. Central banks could be assigned a goal like financial stability, for which they can then be advocates; as Borio (2011) argues, a financial stability goal may require central banks insisting on ‘taking away the punchbowl’ in the face of booming asset markets, something which may be politically unpalatable to government. Rather it is a matter of designing institutional arrangements to both reflect and manage the real interdependencies between fiscal policy, debt management, monetary policy and financial regulation.

Within this more complex account of behavioural and institutional interdependencies, it is misguided to seek a ‘better’ macroeconomic model or to seek an alternative singular quantitative target and policy instrument (Morgan 2009). Rather models and policy instruments should be regarded as simply some of the tools available to central banks, in a pluralist approach to knowledge and to policy. For this purpose it is important to draw on theory which recognises interdependencies in real economic relations and the importance of institutional arrangements for processes. Further the institutional arrangements and logistics of policy design and implementation require input from theory as to behaviour within institutions and as to the role of judgement. Policy is more effective the more robust the knowledge base and the mechanisms for communication, implying recourse to microeconomic theory of financial market behaviour as well as attention to signs of systemic instability at the macro level. Finally if, as this line of argument suggests, central banks go beyond the pursuit of a single quantified target set by

government, then they are engaging in active policy-making, such that independence from the democratic process becomes an important issue again.

## **Conclusion**

The urgent need for a policy response to the crisis highlighted the limitations of a central bank being required to put a priority on inflation targeting and relying on official rate setting as the policy instrument. The crisis demonstrated that central banks needed to return to their traditional attention to bank behaviour and the need to regulate and monitor it, as well as to their traditional role of government finance and managing the public debt, thus internalizing the interdependencies with monetary policy. The provision of a safe money asset and the capacity for banks to finance capital investment requires a sound basis for depositors to redeposit and for banks to lend, i.e, good collateral on the part both of banks and their customers. This requires good bank regulation and monitoring, reliable sovereign debt and a sound economy; these in turn rely on financial stability. In other words, the central bank and the government are interdependent. Central bank independence, designed explicitly for inflation targeting, is no longer fit for the expanded purposes of central banks, given their interdependencies with government policy.

Returning to a broader set of functions will inevitably involve conflict and therefore the exercise of judgement. Markets prefer clarity and the absence of uncertainty. But economic processes are complex and central bank knowledge is inevitably uncertain. Further central banks can only influence developments; attempts to control them by regulation will generally prompt innovation designed to subvert them. It is important therefore to adopt a ‘belt and braces’ approach to promoting financial stability, with a range of regulatory measures acting alongside



efforts to stabilise asset prices. Reducing risk in aggregate is the most effective way to deal with a massive financial superstructure built on a limited stock of real capital, i.e. to address the problem of insufficient collateral. Further, central banks can use their capacity to influence real economic developments to support government efforts to increase the real stock of capital, and thus the supply of collateral. Success would provide a sound basis for private sector decision-making and thus for economic growth.

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