

Financial Institutions and the State: A Re-examination¹

A contribution to L-P Rochon and M Seccareccia (eds), *Contemporary Financial Capitalism: Analyses of the Recent Financial Crisis, Its Current Transformation, and Its Future Prospects*

Abstract

The purpose of the paper is to revisit the relationship between the British State and the banks in the light of the crisis. This requires a historical treatment of the evolving relationship between these parties in providing society's money and facilitating credit creation. We then focus on how the previously supportive relationship was changed decisively in 1971 and consider implications for the future. Rather than making banks increasingly like non-bank financial intermediaries, we argue for a renewed relationship of mutual trust and obligation between the banks and the state as a means of reducing the future incidence of crises.

Victoria Chick
Department of Economics
University College London
Gower Street
London WC1E 6BT, England, UK.
e-mail: v.chick@ucl.ac.uk

and

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

October 2011

¹ We contribute this paper in the spirit of affection for Alain Parguez and appreciation for his unstinting efforts to inject more sense into money-macro theory and policy. This paper is the product of chains of thought which for both authors were given a distinct boost by presentations to the ISMEA Seminar which Alain hosted in Paris on June 14-15, 1985.

Introduction

Alain Parguez always has a new slant on old problems. In this case, we are stimulated by his idea, expounded in recent papers (see for example Parguez 2011), that interest-bearing liabilities issued by the State provide the banks with an unnecessary subsidy, to look again at the relationship between the State and the financial institutions – a relationship that is constantly evolving. The Circuit and Post-Keynesian approaches focus particularly on credit relations between banks and the rest of the private sector, but here we want to draw the role of the state in banking to the surface. Our concern is not so much the traditional chartalist concern with the relationship between the means of payment and tax obligations to the state but more with how the evolving relationship between the state and banks facilitated the dominance of money provision in the form of private sector bank deposits.²

We are acutely aware that the system within the Eurozone has evolved in a peculiar manner that deserves a separate enquiry, but here we examine features of British financial institutions, contrasting the period from the end of the Second World War to the early 1970s with some of the key changes after 1971 that led to the crisis that began in 2007.³ Two more different landscapes are hard to imagine. The British one is characterised by substantial institutional specialisation, cartelisation, and a network of subsidies, privileges and responsibilities that knit the private financial institutions, the Bank of England and the Treasury into a mutually dependent system. Much of this network was unravelled gradually after 1971, some as a consequence of EU legislation, some home grown. The effect has been to leave much to ‘the market’ that had previously been consciously managed. We argue in particular that ‘the authorities’ (the Treasury and the Bank) relinquished responsibility for the control of credit and the money supply that had once been a central concern. This represents an entirely new position of the State vis-a-vis the nation’s money.

It is a curious feature of British monetary debate that the role of the State in respect of the money supply has never really been debated, not even by the Banking and Currency Schools, who instead occupied themselves with what should count as money. This has meant an absence of debate about the responsibilities of the State, the Bank and the private banks, all of which issued a form of money as we would recognise it today. This is in sharp contrast to the United States, where the dominant side of the debate around the time of framing the Constitution regarded money as exclusively the responsibility of the State and banks as potential usurpers of that power. In the UK, the State unquestionably had responsibility for determining the unit of account, the volume and quality of coin, and what constitutes legal tender, but there were always money-substitutes, such as tallies and goldsmiths’ receipts, which co-existed with coin. By the 20th century we had coin, for which the Mint, an arm of the Treasury, was responsible; notes,

² See further Tymoine and Wray (2006) for a brief account of a modern chartalist approach to money and banking.

³ In what follows, we draw variously on Capie (2010), Checkland (1975), Davies (2002) and Sayers (1968). These authors are not responsible for our interpretations of the facts they present.

issued exclusively by the Bank of England;⁴ and deposits, the vast bulk of the money supply, issued by private institutions.

The process by which the banks became the chief providers of British money was itself full of twists and turns. They issued notes, rather like goldsmiths' receipts, but the Bank of England was given a monopoly of the note issue in England and Wales in 1844. This turned the banks to creating deposits. (Perhaps this was a privilege granted in exchange for services rendered to Government over the many years since the Bank's foundation. The Bank was founded in 1694 to fund a war-chest at a time when the credit-rating of the Crown was at a low ebb, and for a long time it lent only to the Exchequer.) This was the first acknowledgement of a shared responsibility for money provision: coin by the Treasury, notes by the Bank. In the Bank Act of 1844 the ability of the Bank to issue notes was, in principle if not, as it turned out, in practice, strongly governed by rules set by Government. Government, having let the cat out of the bag for a brief period of independent exercise, tried to stuff it back in: Government now allowed the Bank to produce money, but only under rules it determined. This is the first example of what one of us has called 'franchising' (Chick 2011): using a non-government institution (the Bank of England was a private institution at this time) to produce money, according to principles determined by Government.

But the power to produce money was to shift from the Bank of England to private banks, despite the Bank's best efforts to stifle competition (e.g. by forbidding joint-stock banking within a 65-mile radius of London). The use of deposits as money was gradual, fraught with many bank failures, and long denied: Wicksell's 'pure credit economy' (1936 [1898]) was an economy whose money was exclusively deposits; in Hawtrey's *Currency and Credit* (1919), 'credit' meant deposits; and as late as 1930 Keynes spoke of 'money proper', meaning notes and coin, in contrast to deposits. But by the interwar period, a system of mutual responsibilities and cross-subsidies had grown up which persisted until the 1970s.

From the end of the Second World War to 1971

The Bank of England remained the Government's banker, monopoly note issuer and manager of the public debt. In the latter capacity it undertook open market operations, both to iron out the effects of sharp changes in government cash flows on the market for government debt and also to implement its interest rate policy. In the 19th century it also accepted the role of lender of last resort to the banking system (through the discount houses, which have now disappeared). As a counterpart to that responsibility, i.e. in order to avoid, as far as possible, 'last resort' calls on itself, the Bank kept a close eye on the balance sheets of banks and operated an informal but highly effective mechanism of control ('moral suasion').

Through its open market operations the Bank was able to keep an hourly watch on the liquidity needs of the system as a whole. In return, the London and Scottish Clearing banks kept

⁴ Except in specific parts of Britain, such as Scotland, Northern Ireland and the Channel Islands; where these note issues persist, they are virtually 100 per cent backed by holdings of Bank of England notes and are in effect a form of advertising.

substantial agreed ratios of ‘cash’ (8 per cent) and other liquid assets (20 per cent) to deposits. The first, largely consisting of deposits with the Bank, were a subsidy to the Bank in return for its daily operational provision of liquidity to the market and, where necessary, access to it as lender of last resort. Further deposits (‘Special Deposits’) could also be called for, when the Bank wanted to curb credit. The second ratio, other liquid assets, consisted mainly of money at call with the discount houses and Treasury bills. The relatively low-yielding Treasury bills were, in effect, a subsidy to Government, as the banks provided a predictable and substantial market for its short-term debt.

Banks also held a substantial volume of longer-term Government debt (gilts), as the more liquid part of their discretionary asset portfolios, thus balancing the need for liquidity against their more profitable but illiquid loan book. The Bank of England also subsidised Government with its holdings of Government securities, as did the discount houses. The discount houses had a further role to play: there was no direct interbank money market at this time. The discount houses were lent money at call by the banks with excess reserves, and outstanding loans to them were called in by banks short of cash; thus they served to redistribute cash around the banking system on a daily basis. They also served as a useful buffer when the Bank was called upon as lender of last resort, since the bank in difficulty did not suffer stigma, for it was shielded by having funds funnelled through these intermediaries.⁵

In addition to this system of subsidies, costs and mutual support, which to our knowledge has never been quantified, there is the role of Bank and Treasury cooperation in ‘macroeconomic policy’: setting Bank Rate, with the Bank ‘making it effective’ through daily operations in the market for Treasury bills, and managing the relationship between short and long rates of interest, partly through the timing of new issues of government debt of various lengths. ‘Macroeconomic policy’ can have many aims, and these may conflict: for example, low interest rates are favourable to investment (and the Treasury would be pleased) but may make the maintenance of the (then fixed) exchange rate untenable. And the macroeconomic aims must be balanced with the aim of keeping the banks liquid (but not too much so) and profitable, so that lending continues, but not too much. Credit ceilings were sometimes imposed, not only on the Clearers but ‘outside’ banks as well. At times, particular aspects became urgent – the balance of payments, and thus the exchange rate, was a continual problem in this period, and the Bank would from time to time direct the banks to make lending for export a priority. So closely articulated were the aims of the Bank and the Exchequer by this time that the originally private Bank was nationalised in 1946, and the phrase ‘the monetary authorities’ comes into use to mean the combined policy of Bank and Treasury.

There are refinements to this story which are important to the evolution of both policy and institutional structure. We will visit some of these in a moment, but here we wish to summarise the main idea: that both the Bank and the Treasury, or government as a whole, had in mind in this period a wide range of aims: economic growth, high employment, a stable exchange rate and a stable banking system whose credit-creation is monitored and controlled. These aims were pursued in an institutional context in which there was a large measure of cross-subsidy in exchange for a wide range of responsibilities. Government, largely through the agency of the

⁵ This important point was made by Roger Alford in a private communication.

Bank, took responsibility for the provision of money by the banks through wielding the stick of supervision, and even direct control of credit and its composition, while offering the carrot of liquidity provision.

Structural Issues

During the period we have just been analysing, British banking had a distinctive, but evolving, structure. Banks concentrated on short-term lending to industry and exporters, leaving a good deal of consumer lending to hire-purchase companies and mortgages to building societies. Deposits in building societies, technically 'shares', were not subject to cheque, though as the period progressed payments began to be made from them by the roundabout procedure of getting the society to write a cheque to the intended payee drawn on its own bank account. This inconvenience was balanced by the advantage that these accounts paid interest, which current accounts in banks did not.

As far as interest was concerned, the Clearing banks were a cartel: by agreement they paid Bank Rate less 2 per cent on deposit accounts and charged 2 per cent above Bank Rate on prime loans. Neither depositors nor borrowers had an incentive to shop around. Although it is difficult to assess its extent, one can safely say there was credit rationing.

The building societies began to chafe at the operational restrictions on their shares, and banks in their turn objected to the cost of maintaining the substantial portfolio of liquid assets, to which the building societies and banks outside the cartel were not subject.

Other banks, too, were organised so as not to be subject to these ratios. And, importantly, the 1960s saw an influx of American banks, evading the restriction on their growth caused by the ceiling on deposit interest (Regulation Q). Other foreign banks followed as the 'eurocurrency' markets became important. These developments greatly increased the importance of banks outside the cartel.

It was understood that there was a need to 'level the playing field', and many in the Bank and elsewhere favoured more competition amongst financial institutions. 'Competition and Credit Control' (CCC) (Bank of England 1971) substantially reduced the cash and liquid assets ratios and extended their reach across all the financial institutions. The cartel was broken up. The Bank was confident that under these new conditions it could control credit by acting on liquidity and interest rates alone, through open market operations. These were now to take place only in government paper of under one year to maturity: the gilts market would no longer be supported by the Bank. A little later, Bank Rate, renamed the Minimum Lending Rate, was also supposed to follow the Treasury bill rate rather than lead it.

Though the competition element certainly worked, control didn't quite work out as intended: it was only two years later that Supplementary Special Deposits were instituted to try to contain the expansion that the new framework had unleashed, including a boom and crash in property speculation, mainly by the 'secondary banks'. But that, to our eyes, was not the main significance of CCC. Rather it represented a new reliance on 'market forces' in what had been a

tightly, if unevenly, controlled financial sector. It was the beginning of the euphemistically named 'light regulation' regime that did so much to bring on the crisis of 2007-8. And it ushered in a new relationship between 'the authorities' and the banks.

From CCC to Basle I

Competition has had many unforeseen consequences for the structure of UK banking. The building societies gradually obtained powers to make their 'shares' as useful for making payments as bank deposits, and they continued to pay interest on them. In order to meet the increased demand for loans now that the ceilings had been lifted, the banks first competed strongly for wholesale deposits, but as building societies' liabilities became ever closer substitutes,⁶ they were forced to pay interest on most current accounts as well. They also began to compete on the asset side, by entering into mortgage lending, always thought a maturity transformation too far against a funding base of sight deposits.

With the increased cost of deposits and the squeeze on the margin with interest rates on loans as competition took hold, financial institutions reduced their liquid assets as much as they could, to restore their profit margins. This reduction was to some extent a world-wide phenomenon, as banks became more confident of central banks' willingness to manage liquidity and as required ratios were lowered, but the extent to which these assets were run off was especially marked in the UK.

Another major step in the free market revolution of financial markets took place in 1971: the breakdown of the Bretton Woods system of fixed exchange rates. Another question now for cooperation between the Bank and the Treasury was how much fluctuation of the pound to allow.

In the 1980s, monetary policy entered its monetarist phase. It accepted the monetarist proposition that prices were linked to the quantity of money and set up a series of targets of monetary aggregates, for which it had only interest rates as an instrument of control. The move from the earlier system of controlling the cause of monetary changes, that is, credit, to the consequences of credit-creation, with only an instrument to which all other interest rates responded because of competitive pressure, seemed doomed from the start, and so it proved (Bain and Howells 2003, pp. 338-40).

The last targets were set for 1986/7. After the policy was abandoned, the Bank sought to gain credibility for its anti-inflationary stance by first quietly shadowing the Deutschmark and then taking the pound into the Exchange Rate Mechanism (ERM). The (expensive) experiment with the ERM lasted only two years, after which the Bank then adopted a straightforward inflation target, rather than a single intermediate target. This allowed the Bank to take a range of factors into account, and the policy met with some success in bringing inflation down. But it is clear that in focusing policy on a few measures of a macroeconomic variable, the bank had now lost (it seems) not only an appreciation of the complexity of macroeconomic management but any sense

⁶ By 1986, when the last difference between bank deposits and building society deposits was removed, there was only the phase of de-mutualisation to go through for the two institutions to be indistinguishable.

of connection with the financial institutions and their operations as generators of the data in their sights – and their models.

Another piece of regulation came on to the books in 1988: the first Basle Agreement on capital adequacy controls. Intended, we assume, to reward a prudent portfolio, assets were roughly risk-weighted and a capital ratio set against this sum. The (we assume) unintended consequence was far-reaching. Banks had already, under competitive pressure, run down their liquid assets holdings to virtually nothing. Therefore the only source of liquidity was their ‘illiquid’ loan book. In the USA, banks had already developed a technique to shift the risk of a loan book to someone else: securitisation. With the incentive of Basle I, UK banks picked up this technique quickly. They had already been developing various services which did not appear on the balance sheet. With securitisation, risk could, from the perspective of a single bank, be shifted somewhere else and shared or spread, and a risky asset sent off the balance sheet did not need more capital.

The banks found profitable opportunities in derivatives markets beyond their usefulness in avoiding the Basle controls, and trade in derivatives soon took on a life of its own. The BIS adjusted the basis of capital requirements, substituting model-based risk assessments for the rule-of-thumb weights of Basle I. Since these models were founded on probability distributions based on past data, they served to reinforce the banks’ own risk assessments.

But a single bank’s perspective is not enough – this is where the Bank should have come in – the risks were still out there in the system, interlinked in ways that no-one understood. Securitisation also gave rise to Special Purpose Vehicles, a shadow banking system for which no-one was responsible. The crisis of 2007-8 begins here.

1997 and all that

In 1997 the then Chancellor of the Exchequer gave the Bank complete independence in the setting of interest rates but with the other hand took away two vital functions: the management of the public debt and supervision of the banking system. Now it was official: monetary policy had nothing to do with the health and functionality of the banking system, and the Government, in the shape of HM Treasury, had no responsibility for the money supply. We will return to these matters. It was now also official that the Bank of England had only one instrument, the interest rate, and one target, the inflation rate (and ‘subject to that’ the level of output and employment). One can see in these confirmations that CCC cast a long shadow, though other factors, such as the propensity of academic economics to ignore the particulars of institutions, fed into them.

Supervision of the banking system was given to a new institution, the Financial Services Authority (FSA). Unfortunately, even though many Bank of England staff who had been engaged in bank supervision transferred there, the orientation of the FSA was microeconomic: they promoted competition by transparency, full disclosure and the like but, according to the ideology which had motivated CCC in the first place and been reinforced over and over again, the market, i.e. ‘consumers’ of ‘financial products’ were left, supposedly fully informed, to do the real regulating. The ideas of contagion, systemic risk, functionality, performing loans as the

basis for a stable financial sector, did not feature in their thinking. These were ideas the Bank once understood full well, but had lost. From 1971 to 1997 is 26 years, nearly a generation.

Management of the public debt was hived off to a new executive arm of the Treasury, the Debt Management Office. The separation of debt management from the central bank was in line with EU policy that central banks must not be in a position to subsidise or monetise government debt. In effect the EU position was that governments should compete for funds on the same terms as everyone else, in an open market. It followed from the removal of this function from the Bank that they could not conduct open market operations to provide liquidity, because inevitably at the same time they are altering the government's outstanding debt portfolio and determining or at least influencing the prices of various debt instruments. The mechanism of repurchase agreements ('repos') was developed to provide liquidity, substituting reversible lending contracts for the outright purchases and sales of former times.

At the time of the Chancellor's decision, taking debt management away from the Bank might have been part of preparation for adopting the Euro (even though the Chancellor was against so doing). This provision meant, after the crisis broke, that the Bank had to get his successor's agreement to undertake 'quantitative easing', even though it is just the 'expansionary open market operations' of old.

The crisis

We believe that the forces unleashed by CCC and Basle I, with help along the way from successive deregulations, were the fundamental cause of the crisis (see further Chick 2008). Formerly heavily regulated but safe banks were asked to compete, and they did so with a vengeance, creating unaccountable instruments and institutions to which no one paid any attention. And they campaigned for yet more freedom - and got it. The search for profit in a competitive environment can lead financial institutions to do things that are dangerous to themselves and to the economy as a whole. It became clear in the crisis that the FSA had interpreted its brief far too narrowly, and bank supervision was returned to the Bank of England. The FSA is being dismantled.

But this is not the universal view. We have identified the source of the crisis in the withdrawal of the State from its traditional role with respect to money (and thus banks). But others have seen the continued role of the State as the source of the crisis. In particular, the support of banks in the form of the lender of last resort has been seen to have created moral hazard; banks were encouraged to take on excessive risk, confident that the authorities would provide the necessary liquidity as required. This argument has been made most forcefully by Free Bankers (notably Dowd 2009), who have long argued for the almost complete removal of the State from money and banking.⁷ While the argument rests particularly on apparently successful historical studies of episodes of free banking, it has been shown that private sector banking (in Mengerian fashion)

⁷ New Monetary Economists have gone even further in arguing for a complete removal of the State from money and banking, but as an extrapolation of recent but pre-crisis experience rather than the historical study of the Free Bankers (see e.g. Cowen and Kroszner 1994). See further Dow and Smithin (1999).

tends to create its own central banking system if the State does not do so (Dow and Smithin 1992). In contrast, the argument we have developed here about the integral role for the State in the provision of money implies moral obligations on all sides. Although bank regulatory reform is very much on the agenda at present, efforts are still being made to limit the role of the State by ensuring that banks become small enough to fail (King 2009, ICB 2011); this would relieve the State of its obligation to support the banks when insolvency threatens.

The Treasury, the Bank and the money supply, once again

What we hope to have achieved is to open a debate on the relationship between government, central banks and the financial sector which is best for the economy as a whole. To return to the question that we raised at the beginning, the current position is that the government, represented by the Treasury, appears to take no interest in its longstanding responsibility for the money supply. The rise of banks was chequered with many failures, but these were seen as a private-sector matter, as private bank notes and deposits were not understood to be money. In 1844 an attempt was made by government to reassert its responsibility for money as it was then understood by the winning (Bullionist) side: the note issue was delegated to the Bank of England under strict (too strict, as it turned out) constraints. The 1844 charter was largely irrelevant even at the time it was granted, because of the importance of bank liabilities, and it became increasingly so as banks continued to gain in importance.

Gradually both government and the Bank realised the dominance of bank liabilities in the money supply, and the system of mutual support that we have sketched above took shape. As financial institutions evolved in the 1960s, this shape was increasingly seen to be distorted, and Competition and Credit Control was the result. This policy represented a sharp shift toward the belief in market solutions in the financial sector. In a Bank of England memo putting forward the main points of what became CCC, J. S. Ffordge (1970), remarking that HM Treasury had been dragging its feet on regulatory reform, said,

...the shape of the banking industry should not be notably subordinated to the requirements of monetary policy. Banking is a legitimate commercial activity often inconvenient for the Government of the day. There is accordingly a persistent temptation to convert the banks into mere slaves of official policy. ...[T]his is a temptation which must be resisted. (p. 3)

And he declares his position:

He who argues for fundamental change must, to some degree, be preaching a faith. [I believe that] competition is capable of stimulating efficiency and innovation... (p. 6)

And so it can, but it is clear from these passages that, at least to one senior Bank official, creating credit and deposits is a commercial activity, not an activity of national importance and therefore subject to policy. This attitude won the day; the Bank washed its hands of responsibility for the money supply.

Is it not ironic, then, that monetary targeting came in a decade later? Well, not quite, for it was only through interest rates and markets that the Bank sought to influence the monetary aggregates. In fact the ‘hands off a legitimate commercial activity’ policy has remained in force even to this day, well after it has been seen to lead to disaster. Witness the unwillingness of the Treasury to give directions to the banks which, as a consequence of the crisis, they largely own, or their anxiety to sell their interest in these banks back to the private sector as soon as possible.

The essence of our argument is that government has given a franchise to the banks to produce our money, and that, for quite a time, it took some care to monitor the quality of the product. But in the run-up to the crisis, while the franchise was (and is) still in place, it gave its franchisees the freedom to do whatever they liked, while subsidising their borrowing costs through deposit insurance and the lender-of-last-resort facility. If the policy of freedom for the franchisee is taken to its logical conclusion, banks should *really* be seen as purely private enterprise and the subsidies withdrawn. Potential depositors should be issued with a warning: ‘*Caveat emptor*. The value of your deposit may go down, even disappear; it will be most unlikely to go up.’⁸ The privileged position of money produced by the authorities would then be experienced on a daily basis, instead of being revealed only on occasion of a run on a bank, as we saw in the 19th century and again at Northern Rock.

The alternative is for the State to resume its age-old responsibility and accept that a regulatory regime which controls the activities of the financial institutions is a necessary corollary. They show some small signs of doing this, but the proposals currently on offer (in the Report of the Independent Commission on Banking, 2011) are based chiefly on the desire to spare the Treasury any further bail-out costs rather than on principles such as those developed here.

The free-market stance that has governed policy in the UK since 1971 was reinforced by the rise of the Chicago school of economics; the increasingly agile avoidance of regulation by financial institutions, perceived as failures of policy; and the wonderful rhetorical device of labelling any restrictions on the financial sector as financial repression (Shaw, 1973; McKinnon, 1973), which foreclosed any cool-headed discussion of the issues involved in an alternative view. We hope we have shown that the alternative has virtues which need to be re-examined.

References

Bain, K. and P. Howells (2003) *Monetary Economics: Policy and its Theoretical Basis*, Basingstoke: Palgrave Macmillan.

Bank of England (1971) ‘Competition and Credit Control’, *Quarterly Bulletin*, June.

Capie, F. (2010) *The Bank of England, 1950s to 1979*, Cambridge: Cambridge University Press.

Checkland, S. G. (1975) *Scottish Banking: A History, 1695-1973*. Glasgow: Collins.

⁸ This is the essence of the Free Banking and New Monetary Economics position.

Chick, V. (2008) 'Could the Crisis at Northern Rock have been Predicted?: An Evolutionary Approach', *Contributions to Political Economy*, 27 (1): 115-24.

Chick, V. (2011) 'Banking Regulation Upside Down', <http://www.primeeconomics.org/?p=494>. Summarised in new economics foundation and Compass (2011), *The Good Banking Report*, p. 4.

Cowen, T. and Kroszner, R. (1994) *Explorations in the New Monetary Economics*. Oxford: Basil Blackwell.

Davies, G. (2002) *History of Money from Ancient Times to the Present Day*, Cardiff: University of Wales Press.

Dow, S. C. (2012) 'What are Banks and Bank Regulation For? A Consideration of the Foundations for Reform', *Intervention*, 9 (1): 39-56.

Dow, S. C. and Smithin, J. (1992) 'Free Banking in Scotland, 1695-1845', *Scottish Journal of Political Economy*, 39(4): 374-90.

Dow, S. C. and Smithin, J. (1999) 'Change in Financial Markets and the First Principles of Monetary Economics', *Scottish Journal of Political Economy*, 46(1): 72-90.

Dowd, K. (2009) 'Moral Hazard and the Financial Crisis', *Cato Journal* 29(1): 142-66.

Hawtrey, R. G. (1919) *Currency and Credit*, London and New York: Longmans, Green.

Keynes, J. M. (1930) *A Treatise on Money*, 2 vols., London: Macmillan.

Fforde, J. S. (1970) Memo to O'Brien and Hollom, 'Banking system (and credit control)', 24 December. <http://www.bankofengland.co.uk/about/history/bankhistory1970.pdf>

ICB (2011) Independent Commission on Banking *Report*, London: Domarn Group. <http://bankingcommission.s3.amazonaws.com/wp-content/uploads/2010/07/ICB-Final-Report.pdf>

Keynes, J. M. (1930) *A Treatise on Money*, 2 vols., London: Macmillan.

King, M. (2009) Speech to Scottish business organisations, 20 October 2009, www.bankofengland.co.uk/publications/speeches/2009/speech406.pdf

McKinnon, R. I. (1973) *Money and Capital in Economic Development*. Washington D.C.: Brookings Institute.

Parguez, A (2011) Could Euro-bonds stop the public debt black plague which is destroying Eurodom?, mimeo, for presentation to the Crisis in the Eurozone Workshop, 3-4 November, University of Texas at Austin.

Sayers, R. S. (1968) *Modern Banking*, 7th edn., Oxford: Oxford University Press.

Shaw, E. S. (1973) *Financial Deepening in Economic Development*. New York: Oxford University Press.

Tymoigne, E. and Wray, L. R. (2006) 'Money: An Alternative Story', in P. Arestis and M. Sawyer (eds), *A Handbook of Alternative Monetary Economics*. Cheltenham: Edward Elgar.

Wicksell, K. (1936 [1898]) *Interest and Prices*, trans. R.F. Kahn, London: Macmillan for the Royal Economic Society.