

Banking for the Public Good

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ABSTRACT

Bank shareholders cannot be expected to provide good stewardship to banks because there is a conflict of interests between the shareholder owners and a non-mutually owned bank's depositors; who provide the bulk of the funds in traditional retail banks and are willing to accept a lower return on their savings than shareholders, in return for lower risk exposure. Regulation is required to protect depositors where deposit insurance schemes are at best partially funded and underwritten by taxpayers, who in turn need to be protected, and to deliver financial stability, a public good. Once some banks become 'too big (to be allowed) to fail' (TBTF), they enjoy additional implicit public (taxpayer) insurance that enables them to fund themselves more cheaply than smaller banks, which gives them a competitive advantage. The political influence of big banks in the US and the UK is such that they can be regarded as financial oligarchies that have hitherto successfully blocked far reaching structural reform in the wake of the 'Global Financial Crisis' and lobbied successfully for the financial sector liberalisation that preceded it. The TBTF problem and associated moral hazard has been worsened by mergers to save failing banks during the crisis and as a result competition within a number of national banking systems, notably the UK, has been significantly reduced. Solutions alternative to making the banks small enough to be allowed to fail are considered in this paper, but it is difficult to be convinced that they will deliver banks that promote the common or public good. It is argued that regulating retail banking as a utility and pooling insurance against financial instability using pre-funded deposit insurance schemes, with risk related premiums that can also serve as bank resolution funds, should be pursued; and that capital leverage ratios and/or Financial Activity Taxes might be used to 'tax' the size of banks.

Keywords: common (or public) good, corporate governance, public goods, too big to fail, regulation, global financial crisis, leverage, oligarchy, taxation.

1. Introduction

The Global Financial Crisis (GFC) of 2007-09 can be regarded as result of the failure of bank management to impose effective internal risk controls and more generally of the regulation and corporate governance of banks¹ (Walker, 2009). There were many factors contributing to the GFC, including ‘global imbalances’, the ‘miss-pricing’ of risks by the credit rating agencies, and a ‘growth imperative’ (Greenspan, 2007; FSA, 2009; Rajan, 2010). These made the management banking risks more difficult following a period of progressive financial sector liberalisation and rapid financial innovation; culminating in the development of collateralised debt obligations (CDOs), which were initially designed to facilitate the management of credit risk exposures, but became risk enhancers (Tett, 2009).

Green, C.F. (1989, Abstract p.63), a banking practitioner, warned that deregulation and financial innovation, which was linked to wider technological innovation, were “sharpening ethical conflicts”. He went on to argue: that the “Bankers’ role is one of stewardship based on trust” by their depositors and that bankers have a “duty to lend responsibly”. The ethical conflicts arise because: “Banking is about rewards reflecting real risks and ethical considerations form an important part of our risk taking activities. The welfare of our borrowing customers in good times and bad is of major concern”. He goes on to say that: “We depend on people to run our businesses and to reflect our ethical standards”. He concludes: “A bank’s responsibility extends to Government, customers, shareholders, staff and the community” and that the increasingly complex banking environment would “test our resolve and commitment to ethical behaviour”. In the period leading up to the GFC, bankers failed to exercise good stewardship and lost public trust in the wake of it. Green, S. (2009) expresses similar sentiments. Walker (2009) criticises institutional shareholders for failing in their stewardship role.

Corcello (2009) postulated that well governed firms are more likely to serve the ‘common good’, as defined by John Rawls (see Andre and Valasquez, 1992), in the sense that general conditions are achieved that are to everyone’s advantage and they thus benefit society as a whole, or ‘the public good’. Shareholders would then seek a return on their equity investments that is commensurate with their riskiness.

¹ In this paper, we take the banking system to include retail, wholesale, and investment banking activities (Casu et al, 2006; Matthews and Thompson 2008) and ‘universal banks’ combine these activities.

Mullineux (2006) reviews literature on the corporate governance of banking firms, and concludes that institutional shareholders are unlikely to deliver good corporate governance, or 'stewardship' (FRC, 2010) of big banks in the interest of the public good. This is because they will seek a return on equity, and thus an exposure to risk, that exceeds the levels that retail depositors, traditionally the main funders of retail banks, desire. Retail depositors thus need to be protected and bank regulation is required. Depositor protection is commonly partially funded, and underwritten by taxpayers (Macey and O'Hara, 2007), and so the risk that shareholders face is in fact 'socialised' (Admati et al, 2010). This in turn creates a 'moral hazard' (Mishkin, 2009) that encourages shareholders to urge bank management to take even more risk, because it will be borne by others, including bank bondholders. To combat moral hazard, regulatory 'taxes', such as deposit insurance premiums, capital adequacy and liquidity ratio requirements, should be risk-related (Merton, 1977). Most taxes are, however, distortionary (Mirrlees, 2010) and risks are difficult to assess in a world of rapid innovation and uncertainty, in the sense of Knight (1921). Excessive regulation and miss-priced regulatory taxes are likely to discourage 'good' (transaction cost reducing) financial innovation (Mullineux, 2010) and to encourage the migration of banking business from the regulated sector to the more lightly regulated, 'shadow', 'parallel' or 'secondary', banking sector (Pozsar et al, 2010).

2. The 'Too Big to Fail' Problem

Some banks are deemed by governments and regulatory authorities to be 'too big (to be allowed) to fail' (TBTF) because their failure is likely to cause substantial damage to the banking and wider financial systems as a whole and to spark a panic, or full blown crisis; with disruption to the payments system, on which economic activity depends. Recently, such financial institutions, mainly banks, have been dubbed systemically important financial institutions (SIFIs) by the Financial Stability Board (FSB, 2012). This reflects the view that, since the demise of Lehman Brothers in September 2008, some banks, even if not too big, can be too interconnected with the wider banking and financial systems, or systemically important, to be allowed to fail. A distinction is drawn between domestic SIFIs and international, or global, SIFIs (G-SIFIs); the failure of which could threaten the stability not just the domestic banking or wider financial systems, but those of other countries too.

The GFC led to mergers of weaker with stronger banks, often encouraged by the financial authorities, in a number of countries, including the UK and the US. This aggravated the TBTF problem and reduced competition in the industry, particularly in the UK. Further, widespread government intervention to 'bail out' banks using taxpayers' money has potentially aggravated the moral

hazard problem by making it evident that a number of banks are indeed too big or strategically important, to be allowed to fail.

This ‘TBTF problem’ is perhaps the major challenge facing bank regulators (Mullineux, 2011). The most direct solution would be to break up the big and complex banks into smaller and simpler units that can be allowed to fail and to reduce complexity by separating different types of banking activities, such as investment banking from commercial banking, as required by the US Glass-Steagall Act (1933) following the major US banking crisis in the early 1930s. It was repealed in 1999 by the Gramm-Leach-Bliley Act that allowed the development of more complex ‘universal banking’ holding companies. Alternatively, retail banking could be ‘ring fenced’ in separate, more adequately capitalised, subsidiaries; as proposed by the UK’s Independent Commission on Banking (ICB, 2011a and 2011b) and to some extent by the EU’s Liikanen Report (2012). Additionally, bank size itself could be discouraged using progressive regulatory ‘taxes’, such as non risk weighted capital leverage ratios and Financial Activity Taxes (IMF, 2010)

3. Fundamental Restructuring of Banking Systems

It seems unlikely that a fundamental restructuring of the banking systems in the UK and US, or the EU, will be instituted by governments in the wake of the GFC. Indeed an IMF Staff Discussion Note (Claessens et al, 2011) has cautioned that, in comparison with previous crises, governments have moved slowly to restructure their banking systems and may have missed the ‘window of opportunity’ to substantially reduce the probability of another damaging crisis.

In the UK and the US, financial ‘oligarchs’, have particularly powerful connections with government (Johnson and Kwok, 2010; Cohen, 2011) and engage in extensive lobbying. It is widely believed in the US and the UK that ‘Wall Street’ and ‘The City’ have ‘comparative advantages’ (Ricardo, 1817) in the provision of financial services through their financial centres in New York and London, respectively. In recent years, particularly since the post 2001 ‘Enron crisis’ (McClean and Elkind, 2003) enactment of the Sarbanes-Oxley Act (2002) in the US, the two international financial centres have competed vigorously for business.

As the acute stage of the GFC abated from March 2009, the UK government expressed concern that the UK had suffered from the ‘Dutch disease’, in the sense that the success of The City had pushed up the value of the pound sterling to the disadvantage of other industries, particularly in the manufacturing sector; much as the rise in North Sea Gas production had done

in the Netherlands in the 1970s. There was talk of a need to ‘rebalance’ the UK economy in order to reduce its reliance on the financial sector. Prior to the crises, the UK financial sector yielded tax revenue proportionately much greater than its share of Gross Domestic Product (GDP). However, its contribution to GDP and its productivity in the boom times was overestimated, became a significant proportion of booked transactions and ‘deals’ in the end lost money during the financial crisis. The City was perceived to be a ‘golden goose’, and the banking oligarchs increasingly successfully argued that the proposed post GFC restructuring and re-regulation would kill it, to the detriment of the public good. Instead, they argued, bankers should be allowed to get back to ‘business as usual’ as soon as possible, and the government should take actions to protect the competitiveness of The City; particularly from proposals emanating from ‘Brussels’, such as the Financial Transactions Tax (FTT). To strengthen their case, a politically sensitive failure of SME lending to thrive despite various UK government initiatives and low central bank interest rates was blamed on regulatory tightening.

Restructuring proposals and tougher consumer product regulation, and other regulation of financial derivatives, were contained in the US Dodd-Frank Act (2010), but this too has been progressively weakened in response to the lobbying of senators and regulators tasked with operationalizing the Act. A similar process was underway in the UK, where the Independent Commission on Banking (ICB, 2011b) recommended the ‘ring fencing’ of the retail, or ‘utility’ banking (Mullineux, 2009) operations of UK banking conglomerates. Integrated universal banks, such as Barclays and Deutsche, regard the combination of investment and commercial banking, and perhaps also insurance, as providing efficiency enhancing economies of scale and scope and risk diversification opportunities. This is contested (Haldane, 2010), and the increased scale and complexity is in fact problematic from both managerial efficiency and regulatory perspectives. Werner (2013a,b) goes further in stressing the diseconomies of scale in banking resulting from increased bank size and concentration in banking, which is costly to the economy and society due to a decline in ‘productive’ lending and an increase in ‘unproductive’ lending to fund purely financial transactions; stoking asset price inflation which can inflate ‘bubbles’ and cause financial crises. Calomiris (2013), however, makes a strong case for retaining the efficiencies engendered by universal banking and advocates alternative means of dealing with the TBTF problem based on the issuance of contingent convertible (‘co-co’) bonds *inter alia*. Calomiris does, however, support restructuring aimed at increasing competition in banking and in an IMF working paper, Ratnovski (2013) takes a similar line in arguing that banking competition policy should be re-orientated to deal with the TBTF problem.

The UK banks further argued that fundamental restructuring will reduce The City's comparative advantage in finance and Barclays and other UK based international banks (Standard Chartered and HSBC) threatened to move their head offices to other financial centres if they were in danger of becoming 'over-regulated' or 'over taxed'. The big UK banks have been lobbying for a wide interpretation of retail banking because activities within the proposed 'ring fence' will implicitly be protected from failure.

The UK government's susceptibility to bank lobbying by the big banks was undone by the Payments Protection Insurance miss-selling and 'Libor' interest rate setting scandals in 2012. In response to the public outcry over the latter, it established a Parliamentary Commission on Banking Standards (PCBS), which pressed in its interim report (PCBS, 2012) for full implementation of the ICB (2012) recommendations and other measures to restore trust in banks and the professionalism of bankers.

In June 2013, the final report of the PCBS (2013) aimed to change the banking system so that it better served the common good and to restore public trust and confidence in banks. It proposed: making senior managers of banks legally accountable for their actions; making greater use of deferred remunerations, perhaps in the form of 'bail-inable' bonds with 'clawbacks' on pension rights; increasing competition in banking; removal of tax advantages to banks of issuing debt over equity; and using leverage ratios to limit overall bank borrowing. There was less emphasis than in the interim report on improving ethical codes, skills, knowledge and professionalism in banking, though the British Bankers Association (BBA), perhaps appropriately, had promised to work on a voluntary code of practice to achieve these goals.

Lord Turner (2009), when Chairman of the Financial Services Authority (FSA), and Justin Welby (2013), the Archbishop of Canterbury and a member of the PCBS, have separately called for new 'social contract (or compact)', as had Howard Davis (2008), a former head of the FSA, between banks and the government and its electorate, reminiscent of Burke (1790 (1993, pp 96-7)).

By allowing a fractional reserve banking system to operate, deposit taking banks are granted the power to profit from the creation of ('broad') money through lending or bank 'credit creation' (Werner, 2009), and in the UK they were also allowed to run the payments systems, on the understanding that they did so in the public good. The payments systems in the UK are 'natural monopolies' and thus have attributes of a utility and a public good (Mullineux, 1987). The Cruickshank Report (2000) recommended they be regulated accordingly. The associated supply of money and credit creation also have

attributes of a public good and commercial banks normally create about 95% of broad money in the UK. An alternative to fractional reserve banking would be to require 100% liquid reserve requirements so that money creation is based on 'narrow' money created by the central bank, but this might overly restrict the supply of bank credit and resulting economic growth; though there have been a number of prominent proponents of 100% reserve banking as a means of eliminating inflationary tendencies and fully stabilising banking systems (Mayer, 2103). The government's instigation of the 'Big Bang' liberalising reforms of The City in 1986 and parallel liberalising reform of the building societies, was taken by the London Clearing Banks to represent the tearing up by the government of the social contract that had underpinned the historic club rules in The City (Mullineux, 1987). Nevertheless, it left the big banks with oligopolistic control of the British payments systems and an overwhelmingly dominant share of the domestic commercial and retail banking markets.

In sum, the financial oligarchies in the UK and the US, and the EU, appear to have successfully persuaded their national governments not to undertake substantial banking sector restructuring, and banks that are TBTF will consequently continue to operate, and so will other bank and non-bank SIFIs. The TBTF problem is less acute in the US, where no bank is allowed to take over or merge with another if the resulting bank would have more than 10% of banking deposits; and so big banks are consequently smaller relative to GDP than in the UK, where the banking sector is much more concentrated. Lloyds Banking Group has more than 30% of British deposits, for example, and the banking sector as a whole is much larger as a proportion to GDP in the UK at around 400%, than in the US, where it around 80% . In the EU, the combined banking sector is around 380% of GDP.

The Bank of England, which is to resume responsibility for bank regulation² is well aware of the threat posed by such a large and concentrated banking system (King, 2012). The Bank also doubts that increasing in regulatory capital requirements will aggravate the 'credit crunch' by substantially reducing bank lending to households and small and medium enterprises (SMEs) and raising bank lending rates of interest excessively. Miles (2011), Admati et al (2010) and Admati and Hellwig (2013) share these doubts and argue that significantly higher capital requirements will, in contrast, reduce the cost of equity capital to banks and stimulate lending and economic growth as a consequence. Nevertheless, the UK and other EU member governments seemed increasingly

² Following the Financial Services and Markets Act (FSMA, 2000), 'micro prudential' and 'macro prudential' regulatory responsibility was transferred from the Bank of England to the Financial Services Authority (FSA). Under the Financial Services Act (2010), responsibility for 'micro prudential' and 'macro prudential' supervision will return to the Bank of England and a new Financial Conduct Authority (FCA) will assume the FSA's former market and financial products and services supervisory roles from 1 April 2013.

swayed by the UK banks' arguments, espoused most forcefully by the Institute for International Finance (IIF, 2011), the global association of international banks, that, if the new regulatory capital and liquidity requirements were too tough, or introduced too soon, the 'credit crunch' would be aggravated.

The cost of equity to banks and other enterprises is additionally distorted by the unequal treatment of debt interest payments, which can be set against tax, and the costs of remunerating equity (dividends etc), which cannot (IMF, 2010). To remove the distortion, interest 'deductibility' could be removed, or dividend deductibility introduced, or both, in order to bias financing towards loss absorbing equity (Haldane, 2013a) instead of debt, especially bonds in the case of banks.

Also influencing the UK government's stance on restructuring was its desire to sell at least some of its stakes in Lloyds Banking Group (LBG) and the RBS (Royal Bank of Scotland) Group, of 39% and 82% respectively (in June 2013), before the next general election. These stakes were taken as part of a bank rescue package in 2008, with the government arguably overpaying for the shares and eschewing the opportunity to fully nationalise and decisively restructure the banks. The European Commission (EC) responded by requiring LBG and RBS to divest some branches and other businesses to compensate for the distortionary effects on competition of their receipt of 'state aid'; but it too stopped short of requiring a substantial break-up of the two banking units.

The UK Government was concerned that a substantial restructuring would undermine the price at which its shares can be sold for, which remained (in June 2013) below the price paid for them, particularly for RBS. Given its stated objective of injecting competition into an evidently over concentrated banking system and the lack of credible 'challenger banks', after the sales of both sets of branches, by RBS to Santander, and by LBG to the Co-operative Bank, failed at the final hurdles in 2012 and 2013, respectively, the government appeared have missed the opportunity, of the sort identified by Ratnovski (2013), to inject competition; preferring instead to court short term political popularity. The PCBS however recommended an immediate Office of fair Trading investigation of competition in SME banking and suggested that a fuller investigation of the banking industry might be undertaken once the UK's new competition authorities were in place. It will be interesting to see how the government responds.

4. The Corporate Governance of Banks

The TBTF problem arises essentially because SIFIs, which are predominantly large banks, enjoy implicit insurance from the taxpayer above and beyond that

paid for through the deposit insurance schemes to which they contribute and through ready access to liquidity through central banks. This gives them a competitive advantage over smaller banks that can be allowed to fail by reducing the big banks' cost of raising equity and bond financing. If deposits at non TBTF banks are only partially insured by the national deposit insurance schemes to which they contribute, depositors and other funders regard TBTF banks as safer, and this in turn increases their attractiveness and reinforces their bigness. To combat this it is necessary to make it clear that all insured depositors are 100% insured up to some maximum amount and that in the case of bank insolvency, depositors have preference over all other creditors, including the most senior bondholders. The UK has adopted such a position post crisis and the EU followed suit in late June 2013. 'Depositor preference' is long standing in the US.

The expectation that TBTF banks will be 'bailed out' creates a moral hazard and the shareholders in big banks have an incentive to encourage their managers to take additional risk in pursuit of higher returns on equity given that any substantial losses will be 'socialised' and born by other creditors and taxpayers. The management should resist this pressure, as Green (1989) proposed, and focus instead on the interests of *all* stakeholders, in accordance with its fiduciary and wider social duties, and especially those depositors; not just those of shareholders.

Banks should thus put in place internal risk control systems and pursue a higher, cost efficient, return on (risk weighted) assets, rather than equity if another major financial crisis is to be prevented. However, institutional shareholder-led corporate governance, or 'stewardship', of banks cannot be relied upon to deliver an outcome that benefits *all* stakeholders, or the public good, and clearly failed in the run up to the GFC (Walker, 2009). Banks must thus be regulated to protect depositors, the major funders of retail banking, and taxpayers (Macey and O'Hara, 2003), who underwrite the deposit insurance system and financial stability; and to assure that all customers, including borrowers, are 'treated fairly' (FSA, 2008).

The GFC and the post 2010 'Eurozone' crisis (Mullineux, 2013) have starkly exposed the costs to taxpayers of underwriting partially funded national schemes that assure the deposits in banking systems that, in a number of cases, such as Iceland, the UK, Ireland, and Cyprus, where of a size that was a multiple significantly greater than one of GDP. Unless the big banks are broken up in systems with highly concentrated banking sectors, such as those identified above, the big banks are essentially 'too big to save' and the larger banking systems also need to be shrunk through comprehensive deleveraging.

5. Financial Stability as a Public Good

Financial exclusion notwithstanding, most taxpayers are both voters and bank depositors. ‘Bail outs’ of SIFIs are required to assure financial stability, which is an archetypical ‘public good’ (Samuelson, 1954) in the sense that consumption by one person does not reduce the amount to be consumed by another and there is a ‘collective action problem’ in its provision (Olsen, 1965) because once provided, potential users of the product or service cannot be excluded. There is thus an incentive for the consumer to try to avoid paying and to ‘free ride’, whilst others pay for the provision of the public good. Coercion in the form of taxation is required to fully, or partially, fund its provision. Financial stability is not costless to produce, because it requires regulation and supervision to deliver it, and once achieved, all will benefit from it, except perhaps hedge funds, which thrive on instability, even if they might not all be willing to pay for it. Regulatory efficiency is difficult to achieve, however, because regulation introduces distortions which favour the growth of less regulated ‘shadow’, secondary or parallel banking systems (Pozsar et al, 2010).

Further, it is difficult to provide insurance to depositors and other investors without aggravating moral hazard. All deposit insurance (DI) schemes should be pre-funded and charge risk related premiums (Merton, 1977), but the risks are impossible to measure precisely in a world of uncertainty (Knight, 1921) and continuous change, including financial innovation, as Green (1989) noted. Pre-funded DI with risk related premia collected from banks is required to ‘tax’ bank risk taking and build a fund to protect depositors. Non, or inadequately, pre-funded DI schemes that ‘pass around the hat’, asking for contributions from the surviving banks after one or more bank failures, are less fair and more likely to be met with a response from the surviving ‘sound’ banks that they cannot afford to contribute; leaving the taxpayer to pick up the bill as in the GFC and the subsequent Eurozone crisis.

However, over- regulation chokes off good, transactions cost and risk reducing, financial innovation, as well as potentially damaging, risk increasing, innovation. In the phase of widespread ‘adoption’ of an innovation (Sinkey 1992), however, financial institutions commonly ‘under price’ the risks entailed in new financial instruments (Mullineux, 2010), as appears to have been the case in the 2007-09 US subprime mortgage crisis.

6. The ‘Dutch-dyke’ problem

Who should pay for the production of the public good we call financial stability? There is a ‘Dutch-dyke’ problem (van Dantzig, 1956) to be resolved. How high should the defences (e.g. capital adequacy and liquid reserve requirements on banks, or dykes between the sea and the Dutch polder lands, or levees along the Mississippi river banks) be built, given that there are costs of erecting them? In banking, these costs may include reduced lending, and slower transactions cost and risk reducing financial product innovation. Is some non-zero probability of a flood or crisis acceptable to the public and how much is it willing to pay for security?

Given the potentially high costs of complete prevention through 100% liquid reserve requirements, and the consequent curtailment of bank lending and associated economic growth, it seems likely that a non-zero risk of another financial crisis occurring is acceptable, but the public may want to reduce the likelihood of the next crisis being as damaging as the GFC. In which case, the taxpaying depositors and voters must accept that they should co-insure, with the bank shareholders, and also the bank bondholders, against the risk of a major crisis. The balance to be struck is essentially a political one, but post crisis tightening of regulation has historically given way to progressive deregulation or liberalisation as time since the last crisis increases and the financial oligarchy persuades the politicians and regulators that ‘IT’, a major crisis (Minsky, 1982), will never happen again (Guttentag and Herring, 1986).

In a globalised financial system, the decision cannot be taken by one country and its electorate alone. International coordination is required. The greater the defences against crises, in the form of higher capital and liquidity requirements on banks, with supplementary requirements on SIFIs, as proposed by the Financial Stability Board (FSB, 2012), the more likely they are to reduce the scale and increase the cost of bank lending; unless this is offset by reduced costs of equity and other funding. There will be supplementary costs if reduced lending slows investment and economic growth, but over time debt financing via the bond markets may grow to fill the funding gap left by the deleveraging of banks.

Bond markets in the US are much more highly developed than in other countries, but disintermediation has been underway for some time in the EU and Japan, it should be noted (Murinde, Mullineux and Sensarma, 2010). If international co-operation fails, however, financial ‘fragmentation’ may take hold and reverse the globalisation (and ‘Europeanization’) of finance. Increasingly, national supervisors are requiring the subsidiaries of foreign banks to adhere to local capital and liquidity requirements and establish

separately capitalised subsidiaries. This has the benefit of levelling the playing field within countries, but might encourage regulatory competition between national authorities and regulatory arbitrage by banks and a ‘race to the bottom’, as feared by Kane (1987), which the Basel Committee on Banking Standards (BCBS) set out to avert by creating a level playing field for international banking.

7. Taxpayer Protection using ‘Co-co’ bonds and ‘Bail-ins’

Institutional shareholders (insurance companies, pension funds, and other investment funds) are increasingly expected, at least in the UK, to underpin the good corporate governance, or ‘stewardship’, of banking (FRC, 2010); but what about bank bondholders? A debate erupted in 2010/11 in connection with the debt crises in Ireland and Greece, over the extent to which bondholders should be forced to absorb losses, or take a ‘haircut’, in the case of a bank, default. It should be noted that banks, pension funds and insurance companies are commonly large holders of the ‘senior’, in the sense of having priority as creditors in cases of bankruptcy, bonds issued by banks. Less senior, bondholders face higher default risk, but they can ‘insure’ against it using financial derivatives such as credit default swaps. During the GFC, Iceland robustly imposed losses on the bondholders of its failed banks, whilst Ireland protected bank bondholders when it bailed out Allied Irish Bank (AIB), its biggest and most troubled bank, assisted of the ‘Troika’ (the International Monetary Fund (IMF), the European Central Bank (ECB) and the European Commission (EC)). Indeed, the ECB made this a condition of the bail-out.

Ireland’s taxpayers were thus lumbered with the burden of repaying the loans from the Troika whilst continuing to pay interest to bank bondholders (and the high salaries of the saved bankers). The fear expressed by the ECB and by Alan Greenspan (2007) at the outset of the crisis, was that forcing bank bondholders, especially the senior ones, to take losses would raise the cost of bank funding precipitously. Junior bank bondholders were however persuaded to take a ‘haircut’ as part of a funding package for the second Greek Bail-out by the Troika in 2012, the assistance package provided by the EU via the European Stability Mechanism (ESM) to Bankia in Spain in later in 2012, and the nationalisation of the SNS Reaal bank in the Netherlands in February 2013. These interventions set the precedent that creditors could be expected to share in the bail-out costs to spare taxpayers the full burden and opened the door for devising a system involving the ‘bailing-in’ of creditors that might fully protect taxpayers. Controversially, the Bankia package required small junior bondholders, effectively retail unsecured savers in the bank, which had been

formed by merging a number of troubled local savings banks (casa) following the collapse of the property market bubble in Spain following the onset of the GFC, to suffer losses.

The two major banks in Cyprus were proportionately large holders of Greek bank bonds and consequently suffered big losses as a result of the Greek haircut. As the Cyprus banking crisis unfolded in the first quarter of 2013, the Troika began to implement the evolving 'bail-in' policy being formulated by the EC. This entails giving EU governments the right to force uninsured creditors to take losses as part of a bank rescue operation in an attempt to both protect both insured depositors and taxpayers. A problem in Cyprus was that there were insufficient bank bondholders to bear the losses, and so large, often Russian, uninsured depositors also had to be forced to bear losses. Cyprus was a special case because other banking systems tend to utilise more bond financing, but the heightened 'bail-in risk' is likely to raise its cost. The Cyprus case also reinforced the importance of assuring the creditor seniority of insured depositors over senior bondholders and uninsured depositors.

Short of the potentially costly step of forcing senior bondholders to take 'haircuts' as part of 'bail-ins', banks could be required to issue a larger proportion of contingent-convertible ('co-co') bonds. These bonds convert automatically to equity when core equity capital falls below some 'trigger' level and this is the approach that Switzerland, where the biggest banks are even larger in relation to GDP than in the UK, has adopted. Meanwhile, Barclays bank has voluntarily gone further in issuing bonds that convert to first loss ordinary shares when its capital dips below regulatory requirements and has found a strong demand for these relatively higher yielding bonds. The 'Shadow Basel Committee' has long recommended that banks be forced to issue bonds in a sufficient proportion to their deposit funding to provide an incentive for bondholders to monitor bank risk taking in place of insured depositors; who lack the ability and the incentive to do so. More recently, it has adapted the proposals to require sufficient issuance of 'co-co' and other contingent bonds.

Such proposals compliment the solution increasingly preferred by the European Union, whose Finance Ministers came to an agreement on an interim proposal in late June 2013, about using creditor bail-ins along with ESM funds to protect taxpayers from bearing the cost of banking failures. The ESM is a nascent bank resolution fund that has, as mentioned above, been used, subject to conditions, to help recapitalise Bankia. The conditions for its use to recapitalise banks in the future remains uncertain and Ireland is pressing for its retrospective use to help relieve it of the burden it took on in bailing out AIB. To serve as a genuine EU, or Eurozone, wide bank resolution fund it would need to be expanded substantially. Both the bail in and the contingent convertible bond

proposals, or a mixture of the two, would raise the cost of bond finance to banks and potentially lead to restricted bank lending and higher borrowing costs; but wider use of contingent convertible bonds would allow the markets to absorb some of the losses and reduce the need to resort to enforced bail-ins. Calomiris (2013) and others propose conversion at a high trigger level to increase loss absorbency before crisis conditions take hold. The US seems set to force an adequate issuance of ‘bail-in able’ bonds, but it should be noted that this tendency conflicts with attempts to encourage banks to rely more heavily on equity financing and to reduce their leverage. The latter might be encouraged by removing tax deductibility of interest payments on bank bonds and/or allowing banks to expense dividend payments on equity (Haldane, 2013a).

8. Bank Recovery and Resolution Regimes and ‘Living Wills’

Instead of breaking big and complex banks up into units small and simple enough to be allowed fail, regulators in the UK and elsewhere have been exploring the possibility of establishing ‘special resolution regimes’ for big banks (FSB, 2011). These involve establishing ‘living wills’ that would allow big banks to continue to operate their core retail (utility) banking and payments system related functions whilst closing down at short notice, or divesting, peripheral separately capitalised investment banking, trading and wealth and asset management activities. A proposal for resolving failed banks over a weekend by Melaschenko and Reynolds (2013) in the June issue of BIS (Bank for International Settlements) Quarterly Review attracted considerable attention. It is predicated on agreeing a strict legally recognised hierarchy of creditors’ rights, including insured depositor preference, and ideally these would need to be agreed internationally so that resolutions involving cross-border banks (like Lehman Brothers) could be undertaken swiftly. This is a tall order as recent bail-ins, such as that proposed for the UK’s Co-operative Bank, are being strongly contested by bondholder groups. Difficulties are compounded when there is an interaction between bank and government debt, as in the Eurozone crisis, and creditor ‘collective action clauses’ cannot be made to stick, as in the case of Argentina 2012/3. The IMF is thus re-floating ideas relating to government bankruptcy procedures, especially in the light of the overburdening of Greece (IMF, 2013) with debt following its two government and banking system bailouts in 2010 and 2012 by the Troika.

Payments systems, it should be noted, have the attributes of a natural monopoly and historically such public utilities, or essential services, might have been run by a nationalised authority or industry. The UK banks’ ownership and control of the UK payments systems has long been a cause for concern (Mullineux, 1987) and the government is considering take action to regulate it as a public

utility following the aforementioned ICB and the PCBS investigations; howbeit, some years after essentially ignoring the Cruickshank Report (2000) recommendation to do just that!

As the Lehman Brothers debacle in September 2008 and the subsequent lengthy multi-year liquidation process demonstrated, the resolution of complex banks is difficult and the problem is even harder to resolve for banks with international operations based in a number of countries, as the Lehman Brothers case demonstrated. Money held in its London operation was quickly transferred to the bank's head office in New York ahead of the denouement and so there is a case for requiring subsidiaries of foreign banks to be separately capitalised; leading to 'fragmentation', as noted above. Complexity was added to the Lehman's resolution process by the need to work with different legal jurisdictions in countries with differing accounting standards. In the US, the resolution of troubled or failing small and medium sized banks is handled by the Federal Deposit Insurance Corporation, using powers of 'purchase and assumption' and 'prompt corrective action', drawing on the pre-funded deposit insurance scheme to which banks contribute through risk related premiums. Following depletions, replenishment contributions are required. The DI fund thus serves as a resolution fund, but it is not large enough to cope with failures of big banks; which remain underwritten by taxpayers, as the GFC demonstrated. Further, depositors' accounts can be transferred from failing to healthy banks, with little or no interruption to their access to their deposits.

9. Taxing Banks Fairly

Given that TBTF banks are unlikely to be broken up, the proposal by the ICB (2011) to 'ring fence' retail banking in the UK is a compromise that facilitates the operation of retail banking in separately capitalised subsidiaries and might help in the implementation of special bank resolution arrangements. However, this solution makes taxpayer support of retail banking operations explicit and implies that the wider universal banking activities are only implicitly insured. The extent to which separate parts of what effectively becomes a bank holding company can be separately capitalised and allowed to fail, as being proposed in the US, depends on the quality of the 'fire walls' separating them. These have yet to be tested. Nevertheless, such proposals have prompted the credit rating agencies to declare that the affected banks could have their credit standings downgraded because their implicit government, or taxpayer, support was being reduced. This would make it more costly for them to raise new equity and bond financing.

TBTF banks, or SIFIs, should contribute towards paying for the explicit or implicit insurance they enjoy above and beyond what they pay for by contributing to deposit protection schemes; which is essentially for the depositors of smaller banks. Whether SIFIs should pay in full for the production of the public good, finance stability, or share the cost with taxpayers, and in what proportions, is moot. The TBTF banks, and thus their shareholders, and, hitherto, senior bondholders, which benefit from the taxpayer insurance, should be treated on a par with those of smaller banks in order to assure a ‘level (competitive) playing field’; otherwise the big banks will enjoy cheaper funding and continue to attract the bulk of deposits because they are *de facto* safer.

A special tax on TBTF banks, aimed at extracting a risk related premium for the supplementary insurance they enjoy should be levied. This could be related to the Financial Activities Tax (FAT) of the sort proposed by the (IMF, 2010), but might be more ‘progressive’ in relation to the size of banks. The special levy should reflect banks’ risk exposures and be related to the size of banks relative to GDP; which reflects the ability of governments, and their taxpayers, to bail them out (Mullineux, 2012). The size of the implicit subsidy can be gauged using credit rating agency data, which builds in a credit rating bonus for banks supported by credit worthy governments. This approach is, however, potentially problematic, because countries with banks that are large relative to their GDP would need to levy proportionately more tax than countries, like the US, where big banks are restricted to be smaller relative to its GDP. The higher the levy, the more the domestic banks are likely to be handicapped in international competition. Capital leverage ratios could also be used, as long as the practice in the US, alongside the Basel III risk weighted capital adequacy requirements as a means of imposing a regulatory ‘tax’ on bank size. Such a tax could be more uniformly applied across countries and, if sufficiently progressive, would be more neutral across countries of different size. Given the revelations that banks apply very different risk weights in their models, a greater reliance on leverage ratios also seems justified (Haldane, 2013b); although the weights could be set by the regulators and not chosen by the banks.

Taxpayers should share the costs of the regulation and supervision of banks and the wider financial sector necessary to reduce the risk of financial crisis to a publically acceptable level (Mullineux, 2012). Special bank levies, along with supervisory fees and risk –related deposit insurance contributions set by the authorities, can be used to help defray the cost to the taxpayer and required co-bond issuance and bail-ins can be used to reduce taxpayers’ bank underwriting risks and increase the incentive of creditors to monitor bank risk taking. Taxpayer underwriting risk is however larger in the presence of TBTF

banks, and so taxpayers, and thus voters, need to reflect on the desirability of maintaining large, ‘flag carrying’, domestic banks. The Central and Eastern European countries, in which the banking systems have long been dominated by foreign banks, have got through the GFC without them. The national financial security argument for maintaining large national champion banks has thus been undermined somewhat.

10. Restrictions on Harmful Credit

Predatory or irresponsible lending lay behind the miss-selling of mortgages that generated the US house price bubble which presaged the GFC. Financially excluded sub-prime borrowers are also prey to ‘loan sharks’, ‘doorstep’ or ‘payday’ lenders’ that increasingly offer expensive credit over the internet. In the UK, the Financial Conduct Authority took over the regulation of consumer credit in 2013 and announced proposals to restrict the ability of such lenders to roll over loans more than once and to take funds, essentially as preferred creditors, directly from client bank accounts. It stopped short of imposing an interest rate cap, which a number of other countries, including France and Germany, and some US states have done.

Werner (1997, 2005), Benes and Kumhof (2012) and Turner (2012) go further in advocating regulators to monitor the allocation of bank credit with a view to restricting harmful lending for financial transactions that are non-productive and potentially increase financial instability. This would fall under the remit of the UK’s Prudential Regulatory Authority, which is responsible for the micro-prudential regulation of banks and other financial institutions, and Financial Stability Committee, which is responsible for macro-prudential regulation to assure financial stability. Werner (2005) reminds us that credit controls have a much longer and stronger track record in preventing asset price bubbles than the risk-related capital adequacy approach developed by the Basel Committee on Banking Supervision since the early 1990s.

11. Conclusions

Higher capital and liquidity requirements, as proposed under the Basel III international bank regulatory framework (BIS, 2011) can be regarded as non-revenue raising taxes on banking activity. These should at least in part be risk-related in order to ‘tax’ excessive risk taking and to curb moral hazard. Under the FSB (2012) proposals, systemically important banks will face supplementary capital requirements reflecting their degree of systemic

riskiness in order underpin financial stability and there is a case for an additional capital leverage ratio to 'tax' bank size, and this could be made progressive in relation to size and perhaps complemented with a FAT. To avoid 'over-taxing' banks, such supplementary regulatory taxes, which essentially create insurance funds held within banks to guard against financial instability, must be carefully co-ordinated with special bank levies designed to assure that the shareholders pay their fair share and cannot 'socialise' banking risks at the expense of other creditors and taxpayers.

In the UK, the Bank Levy was introduced in 2011 and amended in 2012 and 2013 to both raise general government revenue and to discourage wholesale money market funding by banks (Treasury, 2011). The Basel III and FSA (2012) bank liquidity requirements will also 'tax' bank wholesale deposit funding, and so 'double taxation' of bank wholesale funding will result; unless the basis of the Bank Levy is amended to focus on the systemic risks created by TBTF banks, but an enhanced leverage ratio can achieve that. The resulting tax revenue could potentially be 'hypothecated' to contribute to a banking system stability fund, but what would the normally idle fund be invested in? It should be noted that UK banks currently pay fees to cover the cost of their supervision by the Bank of England (Prudential Regulation Authority and Financial Stability Committee) and the Financial Conduct Authority (FCA), and previously by the Financial services Authority (FSA).

The continued existence of TBTF banks, and other SIFIs, creates powerful vested interests which make it difficult to see how banks can be governed by shareholders and regulators, and other stakeholders, in such a way that they pursue the public, or common good. Perhaps special bank resolution regimes involving increasingly international banks, and thus international burden sharing, will work; but this seems doubtful given the level of international co-operation and co-ordination required. The too big (or interconnected) to fail banks are in all likelihood simply too big or complex and politically influential and powerful, to serve the public good.

In addition to the ring fencing of retail banking proposed by the UK's Independent Commission on Banking, consumer protection regulation should be enhanced by establishing a dedicated retail banking (and insurance) 'utility' regulator of financial goods and services, which are increasingly regarded by consumers as 'essentials'. The UK government has instead created a Financial Conduct Authority (FSA, 2011), which mixes consumer protection with wholesale and securities market, or City, regulation and supervision. This is in contrast to the US, where there is a dedicated securities market regulator, the Securities and Exchange Commission (SEC) and consumer product regulation is now undertaken by a dedicated division of the Federal Reserve System, the

US central banking system as a result of the Dodd-Frank Act (2009); which seems preferable (Mullineux, 2009). The financial utility regulator would naturally take on the FSA's former financial inclusion (Mayo et al, 1998) and consumer financial education mandates, as well as consumer protection. Tougher regulation would raise the cost of providing retail banking products and services and perhaps encourage universal banks to divest themselves of their retail banking businesses; leaving it to specialists with an incentive to engage in old fashioned 'relationship' banking (Mullineux and Terberger, 2006), including emergent credit unions and CDFIs (community development financial institutions).

To avoid overburdening banks with a combination of regulatory taxes and special levies, the insurance principle of pooling risks should be employed more extensively. There is a strong likelihood that the Basel III requirements, along with domestic enhancements, such as proposed by the FSA for bank liquidity requirements, will lead to aggregate in-house holdings of liquid asset and capital reserves in excess of what is required to underwrite an acceptable level of financial stability. Indeed, the Eurozone crisis and the GFC have demonstrated that short dated government debt commonly held as liquid reserve assets, is far from riskless. For the public good, there is thus a strong case for government intervention to achieve greater pooling, through pre-funded deposit insurance with risk related premiums, for example, and an appropriate sharing of the costs of insuring against bank failures.

As well as public intervention to combat financial exclusion (Mayo et al, 1998), Mullineux and Terberger (2006) concluded that local co-operative and local municipality linked banks (Spärkassen) play an important role in serving the banking needs of households and SMEs in Germany. The associations representing these local German savings bank groups, supported by the European and World Savings Bank Institutes (ESBI and WSBI), have expressed concern about the extension of regulations, designed to stabilize large international shareholder-owned banks, to small not-for-profit local banks across the EU, and beyond. The new Eurozone Single Supervisory Mechanism (SSM) is to be operated by the European Central Bank (ECB) in conjunction with national bank supervisors; allowing, at least initially, for the local supervision of local banks. As argued in Mullineux and Terberger (2006), Germany should not seek to adopt a British-style banking system in which local banking has largely disappeared because big banks have absorbed and squeezed out the competition; requiring the government to try to encourage the emergence of new 'challenger banks' to compete with the big banks that dominate the retail banking markets.

The current UK government is also sponsoring a Credit Union Expansion Project to help develop a community-based household retail banking alternative to high street banks alongside community development financial institutions (CDFIs) that primarily provide finance to micro and small enterprises. The previous government provided 'seed corn' capital to stimulate the growth of the CDFI sector through its 'Phoenix Fund' initiative, and also introduced Community Investment Tax Relief to its capital providers. Archbishop Justin Welby has the high hope that credit unions will ultimately put payday lenders out of business!

The WSBI has also expressed concern about the EU's 'Banking Union' proposals, which would entail the pooling of funded deposit insurance schemes. In Germany, for example, the co-operative and savings bank groups (Sparkassen) each operate longstanding mutual guarantee schemes for the depositors of member banks. These are not pre-funded. Being forced to contribute to pooled national or Eurozone pre-funded schemes would be a costly burden for them that might jeopardise their viability and, along with over-burdensome regulations, threaten the mutual savings bank model.

In Europe, where cross border banking has proliferated in response to the policy of creating a single market in financial services, coordinated intervention is clearly required and the creation of a Banking Union is proposed (Beck, 2012). This would entail, as noted above, common supervision across the EU overseen by the ECB; a pooled, and pre-funded, with risk-related premiums, deposit insurance scheme replacing national schemes; and also a common bank resolution fund. Such a European deposit insurance and resolution fund could be modelled on the US Federal Deposit Insurance Corporation (Schöenmaker and Gros, 2012; Nieto and Garcia, 2012; Wihlborg, 2012) in which the deposit insurance fund also serves as the resolution fund, at least for the non-TBTF banks. In the US, the FDIC also covers the mutual savings banks, including savings and loan associations and credit unions; which tend to be charged lower premiums in line with their lower asset risk exposures. The greater the pre-funding of a federal European deposit insurance fund and the more accurate are the risk related the premiums charged to the banks, the less the taxpayer will be exposed to implicit bank underwriting risks.

References

Acharya, V.V., M. Richardson, S.V. Nieuwerburgh and L.J. White (2011), '*Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance*', Princeton University Press, New Jersey.

Admati, A. R, P.M. DeMarzo, M.F. Hellwig, F. Martin and P. Pfleiderer (2010), 'Fallacies, Irrelevant Facts and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Expensive', *Stanford GSB Research Paper, No.2063*, 2010, Stanford University.

Admati, A. and M. Hellwig (2013), '*The Bankers' New Clothes*', Princeton University Press, Princeton and Oxford.

Andre, C. and M. Velasquez (1992), 'The Common Good', *Issues in Ethics*, 5(2), pp45-60.

Beck, T.H.L. (ed) (2012), '*Banking Union for Europe: Risks and Challenges*', Centre for Economic policy research (CEPR), London (VoxEU.org)

Benes, J. and M. Kumhof (2012), '*The Chicago Plan Revisited*', 7 February 2013, Washington: IMF, <http://www.stanford.edu/~kumhof/chicago.pdf>

BIS (2011), 'International Regulatory Framework for Banks', *Bank for International Settlements*, Basel, Switzerland, www.bis.org/bcbs/basel3.htm

Burke, E. (1790), '*Reflections on the Revolution in France*', Ed L.G. Mitchell (1993), Oxford University Press, New York,

Calomiris, C. (2013), 'Should Big Banks Be Broken Up?', 14/06/2013, www.economist.com

Casu, B., C. Girardone and P. Molyneux (2006), 'Types of Banking', Chapter 3 in '*Introduction to Banking*', Pearson Education, Harlow, UK.

Classens, S., Pazarbasioglu, C., Laeven, L., Dobler, M., Valencia, F., Nedelescu and K. Seal (2011), *IMF Staff Discussion Note*.

Cohen, W.D. (2011), '*Money and Power: How Goldman Sachs came to rule the world*', Allen Lane, Penguin Group, London.

Cruickshank Report (2000), '*Competition in Banking*', H.M. Treasury, London.

van Dantzig, D. (1956), 'Economic Decision Problems for Flood Prevention', *Econometrica*, 24(3), July, pp276-287.

Davis, H. (2008), 'Banking and the State: Changing the Social Contract', *LSE Research online* (<http://eprints.lse.ac.uk/21466/>)

Dodd-Frank Act (2009), '*Wall Street Reform and Consumer Protection Act*', *Pub.L. 111-203, 124 Stat., enacted July 21, 2010*

Financial Services Act (2010), (www.legislation.gov.uk).

FRC (2010), 'The UK Stewardship Code', *Financial Reporting Council*, London.

FSA (2008), 'FSA statement on the Treating Customers Fairly Initiative', *Financial Services Authority*, FSA/PN/130/2008, 12 November, London. (www.fsa.gov.uk).

FSA (2009), 'A Regulatory Response to the Global Financial Crisis', *Financial Services Authority*, London.

FSA (2011), 'The Financial Conduct Authority Approach to Regulation', *Financial Services Authority*, London, (www.fsa.gov.uk).

FSA (2012), 'How Basel III will be implemented – CRDIV, February, *Financial Services Authority*, London. (www.fsa.gov.uk).

FSB (2012), 'Extending the G-SIFI Framework to domestically systemically important banks', *Financial Stability Board*, www.financialstabilityboard.org.

FSMA (2000), *Financial Services and Markets Act*, (www.legislation.gov.uk/uk).

Glass-Steagall Act (1933), '*Banking Act*', *Pub.L.73-66, 48; 162 Stat., enacted June 16*.

Gramm-Leach-Bliley Act (1999), '*Financial Services Modernisation Act*', *1135 Stat 338*, Public Law, 106-1-2-November 12, 106th Congress, U.S.

Green, C.F. (1989), 'Business Ethics in Banking', *Journal of Business Ethics*, 8(8), 631-634.

Green, S. (2009), *'Good Value Reflections on money, morality and an uncertain world'*, Allen Lane, Penguin Group, London.

Greenspan, A. (2007), *'The Age of Turbulence'*, Penguin Press, New York.

Guttentag, J.M. and R.J. Herring (1986), 'Disaster Myopia in International Banking', *Essays in International Finance*, No. 164, Sept, International finance section, Princeton University.

Haldane, A. (2010), 'The \$100 Billion Question', *speech* by the Executive Director, Financial Stability, Bank of England, March, (www.bankofengland.co.uk/publications/speeches/2010/speech433.pdf).

Haldane, A. (2012), 'On Being the Right Size', *Speech* given at the Institute of Economic Affairs, 22nd Annual Series, The 2012 Beesley Lectures at the Institute of Directors.

Haldane, A. (2013a), 'Have We Solved 'Too Big To Fail'?', *VOXEU*, (www.voxeu.org/article/have-we-solved-too-big-to-fail).

Haldane, A. (2013b), 'Constraining Discretion in Bank Regulation', *Speech* given at the Federal Reserve Bank of Atlanta Conference on 'Maintaining Financial Stability: Holding a Tiger by the Tail(s)', Federal Reserve Bank of Atlanta. (<http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech657.pdf>).

Kane, E.J. (1987), 'Competitive Financial Regulation: An International Perspective', pp111-147 in R. Portes and A.K. Swoboda, (eds), *'Threats to International financial stability'*, Cambridge University Press, Cambridge.

ICB (2011a), 'Interim Report: Consultation and Reform', *Independent Commission on Banking*, 11 April, London, (<http://bankingcommission.independent.gov.uk>).

ICB (2011b), *'Final Report Recommendations'*, September, London (<http://bankingcommission.independent.gov.uk>).

IIF (2011), '*SIFI Surcharges: The Fundamental Issues and Empirical Estimates*', April, Washington DC, USA.

IMF (2010), '*A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20*', June, International Monetary Fund, Washington D.C.

IMF (2013), 'Greece: 2103 Article IV Consultation', *IMF Country report No.13/154*, International monetary Fund, Washington, D.C.

Johnson, S. and J. Kwok (2010), '*13 Bankers: The Wall Street Takeover and the next financial meltdown*', Pantheon Bank, New York.

Kane, E.J. (1987), 'Competitive Financial Regulation: An international perspective in R. Portes and A. Swoboda, (eds), '*Threats to International Financial Stability*', chapter 4, Cambridge University Press, pp 11-49.

Kay, J. (2009), 'Narrow Banking: The Reform of bank regulation', *CSFI Report Number 88*. September, Centre for the Study of Financial Innovation, London.

King, M. (2012), *Speech: 'The 2012 BBC Today Programme Lecture'*, 2 May, London, (www.bankofengland.co.uk/publications/speech).

Knight, F.H. (1921), '*Risk, Uncertainty and Profit*', Houghton Mifflin, Boston, USA.

Kotlikoff, L.J. (2010), '*Jimmy Stewart is dead: ending the world's ongoing financial plaque with limited purpose banking*', John Wiley and Son, Hoboken, New Jersey.

Liikanen (Group) Report (2102), '*Report of the European Commission's High-level Expert Group on Bank Structural Reform*', 9 October, (www.ec.europa.eu).

Macey, J. and M. O'Hara (2003), 'The Corporate Governance of Banks', *Federal Reserve Bank of New York Economic Policy Review*, 9(1), 01-107.

Malaschenko, P. and N. Reynolds. (2013), 'A Template for Recapitalising Too Big To Fail Banks', *BIS Quarterly Review*, June, pp25-39, Bank for International Settlements, Basel, Switzerland.

Mayer, T. (2013), 'A Copernican Turn for Banking Union', *Centre for European Policy Studies Policy Brief No. 290*, Brussels.

Mayo, E., Conaty, P., Doling, J., Fisher, T., and A.W. Mullineux (1998), 'Small is Bankable', *Rowntree Foundation Report*, York.

Matthews, K., J. Thompson (2008), 'Banking Typology', Chapter 14 in "*The Economics of Banking*", 2nd Edition, pp 51-60, Wiley, Chichester, UK

McLean, B. and O. Elkind (2003), '*The Smartest Guys in the Room: The amazing rise and fall of Enron*', Portfolio, New York.

Merton, R. C. (1977), 'An analytic derivation of the cost of deposit insurance and loan guarantees: An application of modern option policy theory', *Journal of Banking and Finance*, 1(1), pp 3-11.

Miles, D., J. Yang and G. Marcheggiano (2011), 'Optimal Bank Capital', External MPC Unit, *Discussion Paper No.31*, January, Bank of England, London.

Minsky, H.P. (1982), 'Can IT Happen Again', Chapter 1, pp 3-13 in "*Can IT Happen Again: Essays in Instability and Finance*", M.E. Sharpe, New York.

Mirrlees, J, A. (2010), 'Tax by Design: The Mirrlees Review Conclusions and Recommendations for Reform', November, *Institute for Fiscal Studies*, London.

Mishkin, F.S. (2009), 'The Economics of the Financial Structure', Chapter 8 in '*The Economics of Money, Banking and Finance*', 9th Edition, Addison Wesley, New York.

Modigliani, F and M. H. Miller (1958), 'The Cost of Capital and the Theory of Investment', *American Economic Review*, June, pp 261-292.

Mullineux, A.W. (1987), '*UK Banking after Deregulation*', Croom Helm, Reprinted in 2012 in Routledge Library Editions: Banking and Finance, Volume 23, London, New York, Sydney.

Mullineux, A.W. (2006), 'The Corporate Governance of Banks', *Journal of Financial Regulation and Compliance*, 14(4), 375-382.

Mullineux, A.W. (2009), 'The Regulation of British Retail Banking Utilities', *Journal of Financial Regulation and Compliance*, 17(4), 1358-1988.

Mullineux, A.W. (2010), 'Financial Innovation and Social Welfare', *Journal of Financial Regulation and Compliance*, 18(3), pp243-256.

Mullineux, A.W. (2011), 'Governing "Too Big to Fail" Banks', *Risk Governance and Control: Financial Markets and Institutions*, 1(2) pp 56-64.

Mullineux, A.W. (2012), 'Taxing Banks Fairly', *International Review of Financial Analysis*, 25, pp154-158.

Mullineux, A.W. (2013), 'The Eurozone Crisis: Escaping the Doom Loop', *Working Paper* (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2176670).

Mullineux, A.W., V. Murinde and R. Sensarma (2010), 'Convergence of Corporate financing Patterns in Europe', *Economic issues*, pp49-67,16, Part 2.

Mullineux, A. W, and E. Terberger (2006), 'The British Banking System: A good role model for Germany?' *Anglo German Foundation Report*, ISBN 1-900834-61-8.

Nieto, M.J. and G.G. Garcia (2012), 'The Insufficiency of Traditional Safety Nets: What Bank Resolution Fund for Europe?' *Journal of Financial Regulation and Compliance*, 20(2), pp116-146.

Olsen, M. Jr. (1965), *'The Logic of Collective Action'*, Harvard University Press, Cambridge, MA.

Parliamentary Commission on Banking Standards (2012), *'First Report'*, HL Paper 98, HC 848, (www.parliament.uk).

Parliamentary Commission on Banking Standards (2103), *'Changing Banks for Good'*, June 12, (www.parliament.uk).

Pozsar, Z, A. Tobias, A. Ashcraft and H. Boesky (2010), 'Shadow Banking', *Staff Report No.458*, July, Federal Reserve Bank of New York.

Rajan, R.G (2010), *'Fault Lines'*, Princeton University, Princeton and Oxford.

Ratnovski, L. (2013) 'Competition Policy for Modern banks', *IMF Working Paper*, WP/13/126, May, International Monetary Fund, Washington D.C.

Ricardo, D. (1817), *'On the Principles of Political Economy and Taxation'*, John Murray, London, (Full text5 of 3rd edition, 1821, available at (www.econlib.org)).

Samuelson, P.A. (1954), 'The Pure Theory of Public Expenditure', *Review of Economics and Statistics*, 26(4), 387-389.

Sarbanes-Oxley Act (2002), *'Public Company Accounting Reform and Investor Protection Act'*, Pub.L.107-204, 116 stat 75, enacted July 29, (www.sec.gov).

Schöenmaker, D, and D. Gros (2012), 'A European Report Insurance and Resolution Fund', *DSF Policy Paper No.21*, May, Duisenberg School of Finance, Duisenberg.

Sinkey, J.F. (1992), 'Innovation as a diffusion process: bank technological innovation, the payments system, and innovation processing', *The Financial Services Industry*, 4th Edition, MacMillan, New York, pp 111-143.

Tett, G. (2009), *Fools Gold: How unrestrained greed and corruption corrupted a dream, shattered global markets and unleashed a catastrophe*, Little Brown, London.

Turner, A. (2009), 'How to Tame Global Finance', *Prospect Magazine*, August 27th, (www.prospectmagazine.co.uk/magazine/how-to-tame-global-finance/).

Turner, A. (2012), 'Credit Creation and Social Optimality', *International Review of Financial Analysis*, 25, 142-153.

Walker, D. (2009), 'A Review of Corporate Governance in the UK Banks and Other Financial Entities: Final Recommendations', November 26th 2009, HM Treasury, London. http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/walker_review_information.htm

Welby, J. (2013), 'The City and the Common Good', May 7th, (www.res.org.uk).

Werner, Richard A. (1997), 'Towards a New Monetary Paradigm: A Quantity Theorem of Disaggregated Credit, with Evidence from Japan', *Kredit und Kapital*, vol. 30, no. 2, July 1997, pp. 276-309.

Werner, Richard A. (2005), *New Paradigm in Macroeconomics: Solving the Riddle of Japanese Macroeconomic Performance*, Basingstoke: Palgrave Macmillan

Werner, Richard A. (2013a), 'Towards a More Stable and Sustainable Financial Architecture – A Discussion and Application of the Quantity Theory of Credit', *Kredit und Kapital*, 46 (3), 353-389

Werner, Richard A. (2013b), 'Crises, the spatial distribution of economic activity and the geography of banking', (Commentary), *Environment and Planning A*, (forthcoming)

Werner, R. with J. Ryan-Collins, T. Greenham and A. Jackson (2011), *Where Does Money Come From?*, new economics foundation (nef), London

Wihlborg, C. (2012), 'Developing Distress Resolution Procedures for Financial Institutions', *SUERF Studies*, 2012/5, Vienna.

