

**The Macro-Prudential Authority:
Powers, Scope and Accountability**

By

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SPECIAL PAPER 203

LSE FINANCIAL MARKETS GROUP PAPER SERIES

October 2011

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Executive Summary

- A. Neither the achievement of price stability, via the MPC, nor the application of micro-prudential oversight, via the FSA, led to overall financial stability. There is a gap that needs to be filled by a macro-prudential authority (M-PA), FPC in the UK. The only macro-prudential instrument used heretofore has been the publication of Financial Stability Reviews (FSR). While worthy, these have been ineffective.
- B. The M-PA should have the following powers:
- 1) The power to alter the composition of Central Bank (CB) assets, by adding to (subtracting from) its holdings of claims on the private sector. The argument that such actions are 'quasi-fiscal', and should therefore not be undertaken, is not supported.
 - 2) The power to adjust margins (CARs, liquidity ratios, LTVs, etc.) to influence the conduct of financial intermediation. The argument that the use of such powers puts the FPC in a difficult conflict with the MPC is not supported.
 - 3) The power to propose (to the legislature) fiscal and structural amendments affecting financial intermediaries, and the duty to comment on such proposals emanating from other sources.

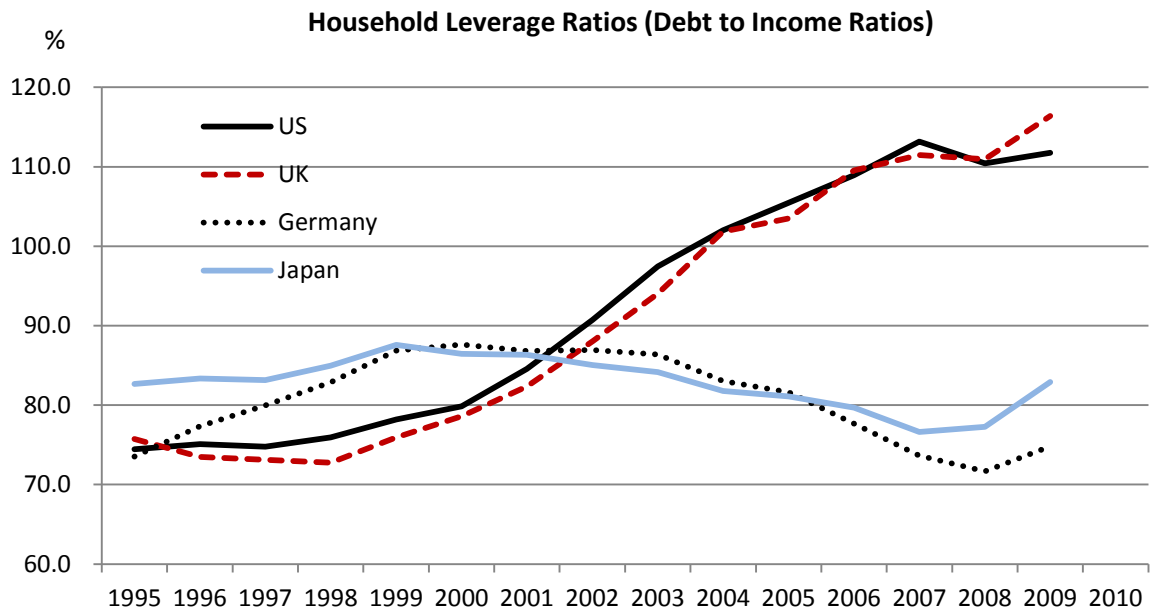
The M-PA should not be involved in the resolution of financial intermediaries.

- C. Because the provision of liquidity is simultaneously a key Central Bank function and an integral component of crisis prevention, the M-PA has to come under the aegis of the CB. Whether the micro-prudential authority (FSA) is also brought under the overall control of the CB + M-PA, or remains independent, will remain a matter of national preference and history, with arguments on either side. The more complicated question relates to where to place the regulation of financial markets. This should not be placed with the conduct of business regulator, as now proposed for the UK.
- D. Procedures for crisis prevention and crisis resolution should be separated. Crisis prevention should be undertaken by the CB + M-PA in an operationally independent manner, for exactly the same reasons as an MPC is independent. Crisis resolution involves the allocation of losses and should be the responsibility of the Treasury. The problem is how to make FPC accountable for its crisis prevention responsibilities. We advocate the adoption of a set of ‘presumptive indicators’, which, when triggered, require the FPC either to comply with remedial action, or to explain, in public, why there is no need to do so.

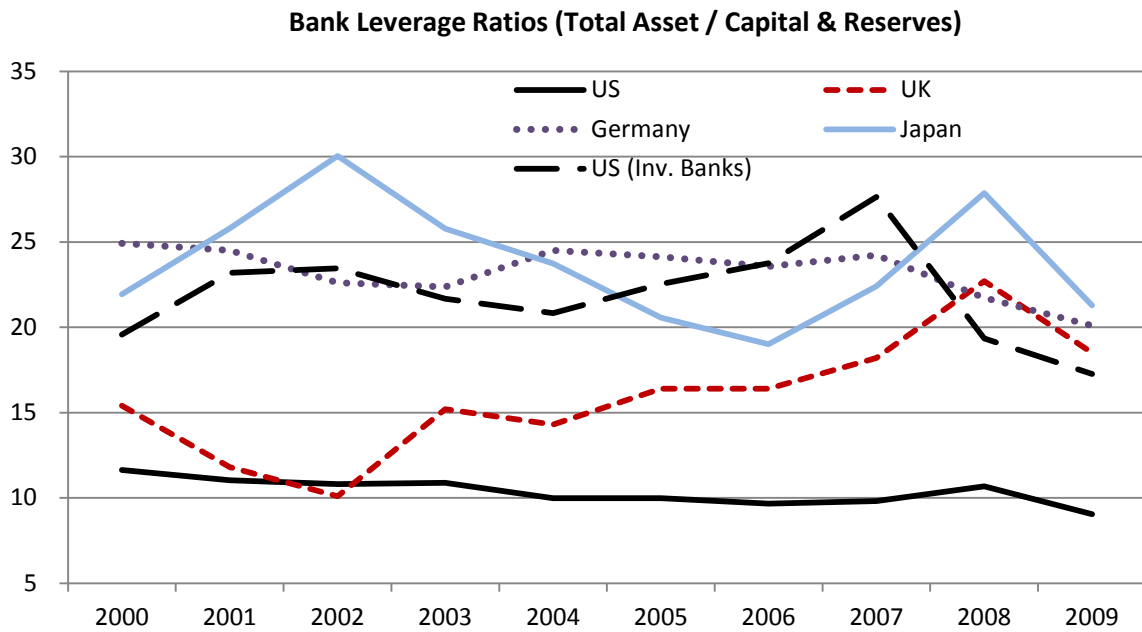
I. Introduction

The onset of the financial crisis, which began in the summer of 2007 and is still with us, led to a general realisation that there had been a missing link in the overall structure of financial regulation. Monetary policy had focussed (successfully) on price stability and general macro-economic stability. But this was not enough to ensure financial stability; indeed it might even be inimical to it, as Minsky had warned (1977, 1982, 1986). Micro-prudential regulation, as promulgated internationally by the Basel Committee on Banking Supervision (Goodhart, 2011) and operated nationally by a variety of official organisations, some within and mostly without their national Central Banks, had focussed unduly on the conditions and prospects of the individual financial intermediary, in particular the individual bank. Far too much weight was attached to the achievement and implementation of the Basel II Capital Accord for individual banks (and in the USA for the large investment houses). Particularly in conjunction with the increasing application of mark-to-market accounting, the regulatory apparatus had allowed the financial system as a whole to become dangerously procyclical. Leverage increased in many countries and in many guises, see Figure 1. Not only did regulators fail to appreciate the lurking dangers, but so did markets, as illustrated by the decline in major bank CDS rates to their low point in early 2007, see Figure 2.

Figure 1



Source : OECD.



Sources : US, Germany, Japan data from OECD,

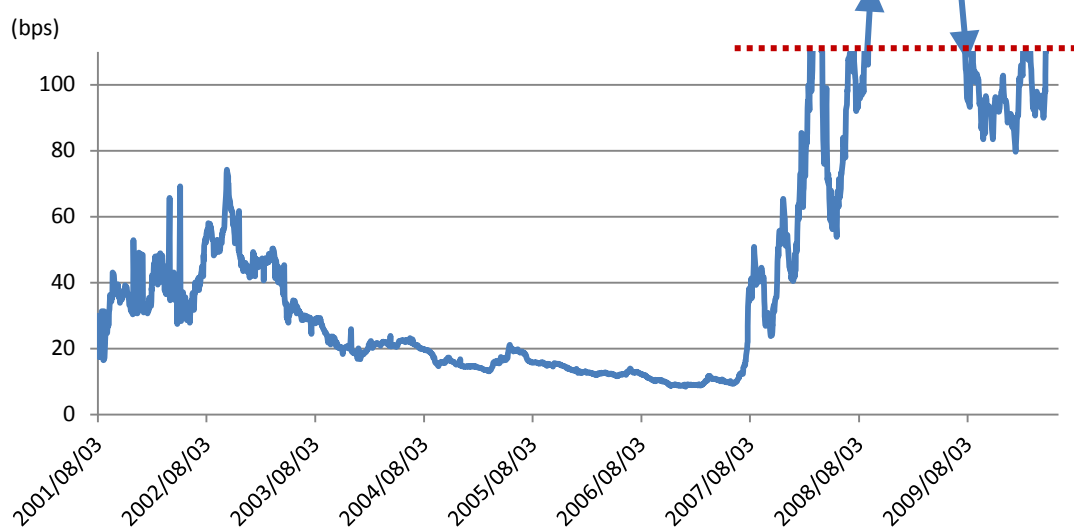
Japan 2009 data from World Bank,

UK data from World Bank,

US investment banks' (Weighted average of Goldman Sachs, JP Morgan, Morgan Stanley, Lehman Brothers (discontinues at 2008), Merrill Lynch) data from Bloomberg.

Figure 2

**Average of 5 year CDS prices for 30 major global banks*
(New York Intra-Day Prices)**



Source : Bloomberg

*30 major banks are American Express, BBVA, Banco Santander, JPMorgan, Bank of America, Wells Fargo, Citigroup, BNP Paribas, Societe Generale, Credit Suisse, Commerzbank, Deutsche Bank, Morgan Stanley, UBS, Goldman Sachs, Credit Agricole, HSBC Bank PLC, Barclays, ING, Lloyds TSB, RBS, Nomura, Standard Chartered PLC, Mitsubishi UFJ Financial, Intesa Sanpaolo SpA, Sumitomo Mitsui Banking, Mizuho Corporate Bank Ltd, Royal Bank of Canada, Macquarie Bank Ltd, UniCredit SpA

Even in terms of the resilience and stability of the individual bank, the Basel II requirements were flawed. Northern Rock and Anglo-Irish were Basel II compliant. The risk-weightings were as much subject to political pressures (notably for residential mortgages and sovereign debt; is it just accidental that these have been at the centre of the current crisis?) as to financial industry capture and manipulation. But the deeper problem has been that controls and reactions that seem appropriate at the level of the individual financial institution may become seriously damaging at the

level of the system as a whole. Thus, faced with adverse financial conditions, the reaction of the individual bank or other financial intermediary is to retrench, to hoard liquidity, to sell assets while the opportunity to do so remains open, and to become far more restrictive in extending credit. Micro-structural regulation often reinforces such tendencies, in part by encouraging all the regulated to act in the same way at the same time, as a herd (see Persaud, 2000, and Wagner, 2010).

The obvious answer to this apparent problem is to try to get the regulators and (market) commentators to think in systemic, rather than in individual, terms; this is particularly important because each separate institution will, and should, focus on its own individual position. It is the externalities arising from interactions amongst financial intermediaries, notably those that are systemically important (SIFIs), that should always have been the central core of regulation; the failure to recognise this has disfigured the conduct of financial regulation since its earliest days.

Following shortly after the onset of financial crisis in 2007, this theme has been argued (Brunnermeier, et al., 2009) and has been now widely accepted. A new approach, macro-prudential, is to be adopted by the authorities, with the relevant macro-prudential organisation bridging the (now revealed) gap between the Central Bank, in its role as monetary policy authority, and the micro-prudential authority. Such macro-prudential institutions are springing up, like field mushrooms after September rain, in a wide range of countries; the Financial Policy Committee in the UK, the Financial Stability Oversight Committee in the USA, the European Systemic Risk Board; J.-C. Rochet and I have separately been involved in proposing the adoption of a similar macro-prudential authority in Sweden (Goodhart and Rochet, 2011).

Central Banks already in most countries had some titular responsibilities for financial stability, usually since their foundation. Apart, however, from their ability to provide liquidity to banks, and occasionally to other entities, in the form of Lender of Last Resort (LOLR) loans, and/or emergency

liquidity assistance (ELA), they have had few 'macro-prudential' powers. To try to fill this lacuna, if only partially, Central Banks have sought to use the powers of publicity, in order to warn both financial institutions, markets and the public of impending dangers. The first Financial Stability Report/Review was published by the Bank of England in 1996. Since then its example has been followed by most other major Central Banks, and the IMF, see M. Cihak (2006). It would be an interesting research exercise, though one that has not (to our knowledge) yet been done, to try to assess whether such Reports/Reviews attempted forward predictions, and, if so, their relative accuracy. In any case such Reviews/Reports usually took the form of generalised warnings, with little, or no, expected follow-up in the shape of specific action. Consequently financial intermediaries and markets took far less heed of such FSRs than they did of Monetary Policy Committee pronouncements (Minutes, Inflation Reports, etc.). If the new macro-prudential authority is to have some bite and ability to provide systemic financial stability, it needs to be given the requisite powers to do so. We discuss in Section II what these powers might be.

There has been insufficient discussion about what these powers might be. In contrast, there has already been extensive discussion of the organisational framework within which such a macro-prudential authority might operate. Politicians enjoy rearranging power structures, and so there has been much discussion and reallocation of the division of powers, especially between the Central Bank, the macro-prudential, and the micro-prudential authority, and also of the roles, in relation to systemic stability, of the Ministry of Finance (Treasury), and of the authority that resolves failed financial intermediaries, notably whether the latter should be separate from the Central Bank and/or the macro-prudential authority. We reprise this discussion in Section III.

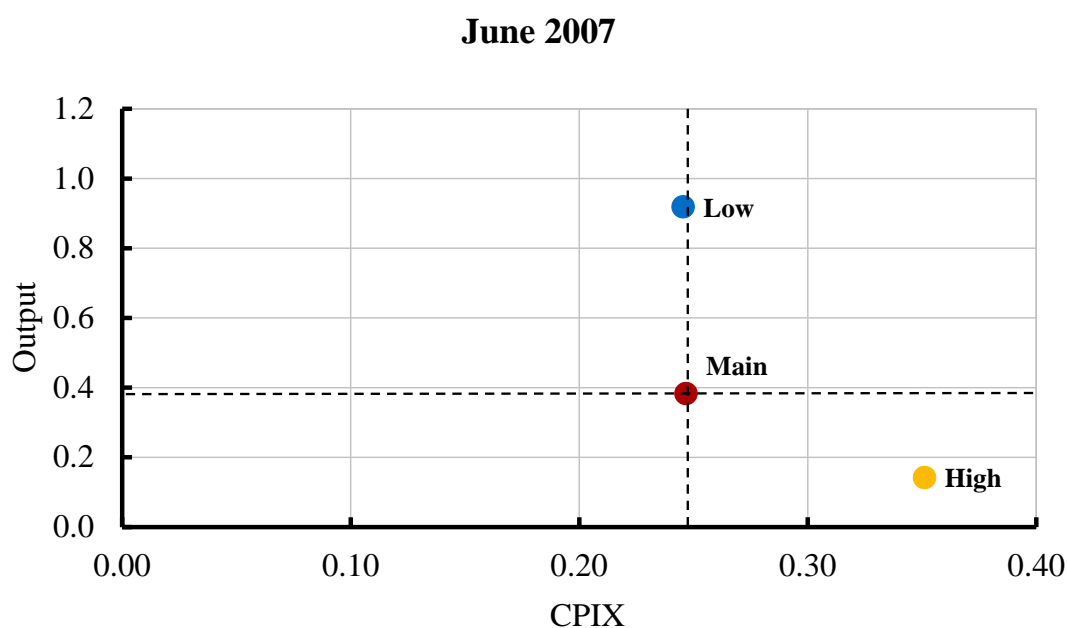
It is easier to delegate the monetary policy objective (than the financial stability aim) to an independent Central Bank, because:-

- 1) There is a primary, medium-term, focus, price stability (NB, the theorem that the Phillips curve becomes vertical in the medium-longer term remains unshaken).
- 2) This price stability target can be quantified, (subject to remaining issues about the appropriate indexation, responses to past misses, etc., and other technical issues).
- 3) There is one primary instrument, the official short term interest rate, that the authorities can wield for this purpose, thereby satisfying the Tinbergen rule, relating targets to instruments.

These conditions simplify the exercise of holding the delegated monetary authority accountable for its actions. Indeed, such a judgement can even be undertaken on the basis of a single, simple diagram, as developed by Lars Svensson (Riksbank, 2009) of the mean squared gap of the forecasts for output and for inflation arising from alternative projections for the policy path of the official short term rates, (see Goodhart and Rochet, 2011, Section 4.1); an example is given for Sweden from June 2007.

Figure 3

Mean squared gap for forecasts of the output gap and CPIX/CPIF inflation, June 2007- September 2008



Source: The Riksbank

No such similar quantification can be done for the objective of financial stability. There are various measures of the stability of parts of the financial system, e.g. derived from the scale/number of defaults, from the volatility of market returns/prices, from CDS rates, etc., but there is no generally agreed quantitative index of stability overall. At best there is a binary division of financial conditions into crisis/non-crisis (frequently now rephrased as war-time/peace-time), but even here both the dating, and the intensity, of crisis remains uncertain.

Moreover, unlike price stability, there are a variety of instruments that could be used to achieve financial stability, as discussed in Section II. How then can one hold the macro-prudential authority accountable for such operations as are delegated to its independent control? Despite this, we shall argue that operational independence is just as essential in this case, as in the process of setting interest rates for the monetary policy objective of achieving price stability.

The question, to whom should the macro-prudential authority be accountable, is quite easily answered; in a democratic society such an authority should be accountable to the legislature, (or a Committee of that legislature). But how can its performance be assessed? The legislature cannot observe the scale of shocks to financial stability; it cannot easily discern which of the various ameliorative measures could have been deployed to counter such shocks, or the likely transmission mechanisms and overall effects of such counter-measures; it can only broadly and uncertainly assess the current condition of financial stability, remembering especially that the system often becomes most over-extended just when everything looks most rosy.

The Treasury Committee of the House of Commons is wrestling with exactly this question of the design of accountability for the Financial Policy Committee. This is the subject of the final Section, Section IV of this note, and derives in part from evidence that was given earlier to that Committee.

II. The Powers of the Macro-Prudential Authority

(A) The Central Bank's Balance Sheet

In a crisis money is 'king'. In modern economies the Central Bank is the monopoly issuer of 'high-powered' money, notably to the financial system. A macro-prudential authority by itself has no money. So, it has to have access to the Central Bank's balance sheet. Willem Buiter has argued (2008, 2010a) that such an authority could be separate from the Central Bank, but yet have independent ability to draw on the Central Bank's balance sheet without getting prior permission from the CB. In my view that would diminish the independence and powers of the CB, so much so that the macro-prudential authority (M-PA) would become itself a second CB. This would be constitutionally and institutionally difficult, and could build conflict into the heart of the regulatory system. In my view this is the central argument why the M-PA has to be located within the CB.

But such location does not, of itself, resolve the potential conflict between the price stability and the financial stability objectives of policy. Both in some large part depend upon the manipulation and control of the CB's balance sheet. Yet there is a, quite neat, potential separation between the (balance sheet) requirements for the two objectives. The official short-term interest rate requires, i.e. is the 'dual' of, a certain quantum of (bank) high-powered money balances. Thus the overall size, quantum, of the CB's balance sheet must be controlled by the MPC. When such official rates hit the

zero bound, further quantitative easing (QE), is again a function of the MPC. Since World War II, the greater bulk of most CBs' assets have been held in government debt. In so far as the CB wants, and feels able, to affect the yield curve of interest rates on government debt by varying the maturity/duration of public sector debt that it holds, then that also should be within the province of the MPC.

While the achievement of a chosen official interest rate requires a given quantum of CB liabilities, the nature and form of the counterpart assets in the CB's portfolio is, as a generality, irrelevant to that end. Such CB assets can take the form of claims on the public sector, claims on the private sector and claims on the rest of the world (ROW). CB claims on the ROW, part of the official reserves of each country, are in most countries determined strategically by the government, with the CB acting as agent in the tactical management of such reserves. By the same token the Financial Policy Committee (FPC) should decide on the main outlines, and quantum, of CB lending to the private sector. Such lending could take several forms; LOLR (ELA) lending to individual, or sets of, financial intermediaries is the main traditional form of such lending; but credit easing (CE), as practiced recently by the Fed in the USA, in order to restore the proper activity of dysfunctional markets, is another example. Moreover, in previous centuries the main staple of CB balance sheets had been commercial bills of exchange, rather than government debt. The purchase of such 'real bills' was then thought to be less inherently inflationary and more conducive to financial stability than that of government debt. Prior to 1914 claims on the private sector, rather than claims on the public sector, formed the main part of CB balance sheets.

Currently, however, there is a strong contention, mostly emanating from the USA, e.g. M. Goodfriend (2009) but also see Buiter (2010a, 2011), that such purchases of claims on the private

sector should be minimised, or even avoided altogether. This assertion rests on a number of arguments. Some of these are better founded than others. Let me start with those that I regard as least well founded:-

i) Purchasing Private Sector Claims is 'Quasi-Fiscal'.

In one sense this is a ridiculous assertion. What could be more fiscal than a purchase of public sector assets, thereby changing the interest rate burden that the taxpayer has to meet. Assuming that the return is identical, the seignorage transferred to the Treasury is the same whether the CB holds public or private sector debt.

So what is presumably meant by this assertion is that the pattern of purchases of assets by the CB alters the distribution of relative yields/returns, and so benefits one sector of the private sector relative to another, in other words that the composition of the CB's balance sheet can have a distributional effect, and that such allocative/distributional effects are properly a function of the Treasury/legislature.

There are problems with this argument. In so far as the financial system is perfectly efficient, the yield/return on all such assets should be a function of fundamentals, e.g. prospective future cash flows. So shifting the balance sheet of one (relatively small) player in the financial market should have zero effect on relative prices (and Operation Twist should fail). So, in order for the composition of the CB's balance sheet, including LOLR or ELA loans, to matter there must be frictions, asymmetric information, inefficiencies in the financial systems, as of course there are. Indeed, it is exactly those frictions, inefficiencies, etc., that require the ministrations of an M-PA in the first place. It follows, therefore, that those who believe that macro-prudential policy is needed should also believe that this might properly be undertaken, at least in part, via CB operations in private sector assets.

ii) Purchasing Private Sector Assets is Too Risky

In view of the recent travails of the sovereign debt of peripheral euro-zone countries, it is not obvious that longer-duration public sector debt is less risky than shorter-dated private sector debt. But there is an additional consideration. The CB is within the public sector. Thus a loss (gain) to the CB from valuation changes on holding its own government's debt is, more or less, exactly counterbalanced by an offsetting change in the net present value of the Exchequer's debt.¹ The taxpayer is not affected directly, though the associated change in interest rates will of course have an impact.

In contrast, when a CB holds claims on the private sector, then changes in the value of such claims feed through directly into changes in the net debt of the public sector; though the net wealth of the country remains unchanged, it does shift the balance between taxpayers and others. Even so, the scale of CB claims on the private sector is usually minute, relative to overall public sector indebtedness. Moreover, so long as the financial system is efficient, with prices/yields dependent on fundamentals only, purchases/sales by the CB should have minimal impact on relative prices. It is only if/when financial frictions/inefficiencies occur, that CB market intervention could have a major effect on such relative prices. But it is in exactly such conditions that macro-prudential actions can be effective and would be desirable if done appropriately.

That said, CBs can be, and are, often blamed for interventions that subsequently lose money. The recent attacks on the Swiss National Bank for their intervention in the foreign exchange market provide an illustration. The desire by the CB to obtain some prior Treasury indemnity against losses on its purchases of assets, other than its own government debt, is more a function of institutional self-protection than of economic validity. Nevertheless

¹ When a CB, such as the ECB, holds the debt of subsidiary states, there will then of course be differential effects on the taxpayers of each relevant state.

concerns for self-protection are deeply felt, and ground rules for CB interventions in private sector markets might need to be spelt out in advance.

iii) Private Sector Markets are Relatively Efficient

In some senses this argument is the reverse of the previous two, to wit that private sector markets are so efficient that CB intervention will, on balance, drive prices/yields further away from, rather than closer to, their fundamental equilibrium. If so, the intervention of a relatively small investor should not have much effect. Once again, it is the existence of financial frictions, of asymmetric information, of externalities and systemic effects that justifies such intervention.

Thus the first macro-prudential instrument that should be used by CBs is the ability to intervene in order to purchase (or sell) claims on the private sector, including of course loans to banks or other SIFIs.

This division of the responsibilities for the MPC, on the quantum of the CB's balance sheet, and for the FPC, for the private sector component of that balance sheet, has the further connotation that policy conflicts between the two bodies (MPC and FPC) should not be a serious issue. Of course, actions by each affect the context in which the other works, though tightening by the FPC on ratio controls can either raise, or lower, interest rates, depending on whether the strengthened ratio falls on a lender or a borrower (e.g. LTV). Nevertheless coordination problems between the MPC and FPC need be no more severe, probably much less, than coordination between the fiscal and the monetary authorities. While this latter could become more problematical, as public sector debts and deficits rise, they have not, as yet, prevented the successful operation of an independent MPC. On this view the potentiality for conflict between the FPC and the MPC is a non-issue, especially given the overlap of Committee members.

(B) Constraints on the Process of Financial Intermediation

Constraints on the exercise of financial intermediation can take the form of applying various kinds of controls over the capital adequacy and liquid asset holdings of financial intermediaries. In a sense they can be viewed as margin requirements with respect to financial intermediation. They can, moreover, be accompanied by controls over the payment of dividends and certain forms of remuneration (e.g. bonuses), in some cases as sanctions should the intermediaries violate their margin (capital/liquidity) requirements, see for example the current proposals for the EC's Capital Requirements Directive, Fourth Version, (CRD4), as reported (e.g. *Financial Times*, *Times*, etc.), July 21st, 2011.

If such constraints are to bite, they presumably put those on whom the requirements fall in a less preferred position. In this sense direct constraints are somewhat similar to a tax, (as will be discussed later in Section II.C below). In a global financial system, without exchange controls, how far can any single M-PA impose penalties/taxes on its own financial intermediaries/markets without losing a large proportion of its financial business abroad? The 'level-playing-field' argument has always been the most potent argument against individual authorities' attempts to tighten regulation in its own jurisdiction, and this specifically does include the USA. Consequently almost all effective attempts to impose common ratio requirements, especially on capital, have been taken at the global, international level, e.g. by the Basel Committee on Banking Supervision (BCBS) and/or by the Financial Stability Board (FSB), previously the Financial Stability Forum (FSF).

In theory margin controls, e.g. in the form of capital adequacy ratios (CARs), ought to be tightened during periods of credit/asset price expansion, and lowered during recessions, in a counter-cyclical

manner (see Borio, 2009, and Drehmann, et al., 2010). But such financial cycles are not uniform across countries, as was exemplified during the build-up to the current crisis, with USA, UK, Spain, Ireland, Iceland having much stronger financial cycles than Germany, France, Italy and Japan. So, if there is to be some counter-cyclical element in the application of ratio requirements, this would seem to push responsibility for such actions back to national authorities and raise again the 'level-playing-field' issue.

In this latter respect there has been one, potentially major, step forward, offset by a partial step backwards. The advance was achieved in a recent BCBS agreement on Countercyclical Capital Buffers (2010, pp 3-9) that lending into a host country, whether by an intermediary located inside, or outside, that country, should bear the capital ratio applicable within that host country. So, should Canada, for example, raise the CAR on loans to commercial property in Canada by an additional X%, then a Japanese bank making such loans out of its Tokyo office would have to apply the same extra X% CAR on them. While this complicates somewhat the administrative calculation of CARs, this does provide much more scope for individual countries to apply counter-cyclical (time and state varying) ratios, freer from the 'level-playing-field' critique.

The partial step backwards is to be found in the current proposals by the European Commission (EC) that the regulatory requirements in the EU should involve a rule-book which not only provided minimum harmonisation, (no member state could apply lower ratios unilaterally), but also maximum harmonisation, (no country allowed to impose tougher requirements unilaterally), (see for example FT, July 20 and 21, 2011). This would prevent any member state introducing additional requirements independently. There is no necessary barrier that would prevent the option of more granular (member state/sectoral) counter-cyclical, time-varying, ratios being built into EU-wide

rules, to be put in place by agreement between the EU regulator and the member state M-PA, but such general enthusiasm for a single, common EU-wide application of rules will, on this view, lead to a strong bias towards 'one regulation fits all'. This is another illustration of the tension between differing national conditions, e.g. in fiscal, legal and institutional arrangements, leading to differing economic and financial conditions, and the desire for monetary and financial harmonisation within the EU.

It will be interesting to see how far the European Systemic Risk Board (ESRB) focuses on particular national dangers-spots, or confines itself, as does the ECB in its pursuit of price stability, to examining some EU average. If tiny Greece is at risk of financial explosion, but mighty Germany is robust, would the ESRB declare the average to be sound, with no worries? In view of the contagion, observed both with the ERM collapses in 1991/92 and with the current sovereign debt crisis, such a concentration on the EU average would be hard to justify. If the ESRB, then, is going to explore potential fragilities market by market, country by country, it must then endorse individual country M-PAs' and FSAs' ability to take independent countervailing action. So might the ESRB and the EC find themselves in some conflict over the ability of the member states to vary such required ratios?

Because of the 'level-playing-field' concern, the minimum level of CARs and liquidity ratios will need to be set internationally, at Basel. One perennial problem is that the BCBS/FSB has always shied away from proposing how such ratios might be enforced, regarding the application of sanctions as a national prerogative in a Westphalian system. While understandable, this stance has been most regrettable (Goodhart, 2011). The more that regulations are now tightened, to represent desirable conditions rather than irreducible minima, the more the question of designing ladders of sanctions, (slight initially, toughened steadily, and ultimately involving intervention by the State to take over

the weakening institution), needs to be urgently addressed. If the international bodies continue to refuse to do this, it will have to be tackled by the national macro and micro-prudential authorities. Penalties for violation of CARs have now apparently been built into the current proposals for CRD4; the details will need to be examined to consider how appropriate these may be.

Thus, on this front, the proposal is that national M-PAs should be given the power to impose additional ratio requirements, on capital and liquidity, within their own domain, above those agreed internationally. These should be capable of counter-cyclical time variation and also be as sectorally granular as the M-PA thinks appropriate. Beyond this, the M-PA should think carefully about sanctions for intermediaries falling below the desired ratios, the more so the less willing are the international bodies to grasp this nettle.

Ratios applied to banks (and to insurance companies) alone may penalise intermediation through this particular channel, and encourage disintermediation via other shadowy sub-systems. By the same token margins on derivative transactions, (that are to be encouraged to be undertaken via centralised counter-parties (CCPs) or even on more formalised exchanges), may induce substitution into over-the-counter (OTC) transactions. As Kashyap, Berner and Goodhart (2011) argue, there needs to be a degree of harmonisation of margin controls, between bank and non-bank, and between markets, whether formal exchanges or OTC. There is a 'level-playing-field' argument between institutional arrangements within countries, as well as between countries. The imposition of (asymmetric) penalties (taxes) on the most visible, largest and probably the most efficient intermediaries (i.e. the banks) may have an increasing effect in diverting such intermediation towards less visible, and possibly less efficient channels.

There is also a question whether margin controls should be imposed primarily on the lender, e.g. the bank, or on the borrower. Since money is fungible, imposing such controls on A rather than B just encourages a diversion whereby B borrows and then lends to A; and there are other ways of avoiding such controls. Nevertheless, if lending is much cheaper if it can be collateralised, as in the case of a mortgage, then restricting the extent of such securitisation via a loan to value, or a loan to income, ratio can be (partially) effective.

To date margin controls in the shape of CARs and liquidity ratios for banks (and insurance companies) have been at the centre of regulators' attention. Particularly if such ratio controls are now to be considerably tightened (as can well be justified), much more thought needs to be given to a ladder of sanctions for transgression, and to the possible application of somewhat similar ratios to other channels of intermediation and to some sets of borrowers (e.g. households borrowing on mortgages for house purchase).

(C) Taxation

In Section II.B above, the correspondence between direct regulatory controls, e.g. in the form of required ratios, and taxation applied to banks was noted. For any regulatory requirement, supported by some set of sanctions for violation, there is a tax regime (or regimes) applied to the same base that would achieve the same objective. Thus, if the authorities want banks, say, on average to hold 10% of core tier 1 equity capital, they can either impose a minimum requirement of, say, 8%, and sufficient penalties on violation that banks on average hold a 2% buffer margin, or they can impose a graduated tax on capital ratios below, say, 15%, such that banks choose to hold the 10% desired ratio. In that sense a requirement can be regarded as the dual of the tax.

Controlling banks, and their risk-taking, by taxation rather than by direct requirements has both advantages and disadvantages. Amongst the advantages is that it gives the individual institution (bank) more chance to optimise its position, subject to its own particular preferences/ conditions/constraints. Requirements tend to be one-size-fits-all; and when varied between institutions this is usually based on broad-brush, somewhat arbitrary characteristics (e.g. size). Another advantage, of course, is that this approach provides revenue to the relevant fiscal authorities, whereas direct requirements generally do not do so, (apart from pecuniary violation penalties, if any).

This latter is, however, also a disadvantage from the point of view of the macro-prudential authorities, whether national or international, since the imposition of taxes is clearly a fiscal exercise, and such M-PAs have no fiscal competence, whereas they have been accorded the ability to recommend, indeed now to require, the application of ratio (and other margin requirements). Another drawback of taxes, as a means of limiting risk-taking, is that, without considerable experience and experimentation, one does not know quite what average results one may get from a tax, whereas a minimum requirement, supported by appropriate sanctions, will deliver outcomes slightly above that minimum. Moreover those institutions keenest to take on risk, to gamble for resurrection, will choose to absorb most tax and hold the lowest ratios, whereas ideally one would want the greatest risk-lovers to be forced to hold the highest ratios. Against this it can be argued that at least those imposing most risk on the community at least pay more for doing so (and the tax need not be linear in application).

Whatever the balance of advantages and disadvantages, what is somewhat remarkable is how little attention was given to the possibility of using taxation on intermediaries, (or on housing

transactions) as a potential macro-prudential and counter-cyclical instrument, at least prior to the last couple of years. This was partly due to a mind-set whereby financial regulation was supposed to be done by direct imposition of (ratio) controls, whereas taxation was a separate fiscal exercise. The point that financial regulation was primarily justified by the existence of, socially adverse, externalities and that (Pigovian) taxes represented a feasible remedy for such externalities was simply not taken on board.

Once, however, President Obama raised the issue of potentially imposing taxes on banks, in early 2010 (New York Times, January 14) , the flood-gates opened, and bank taxation has since remained a common topic of policy discussion. From the macro-prudential viewpoint, however, a disadvantage of bank tax proposals is that there are many other motives for taxing banks besides influencing their risk-taking. Such taxes raise revenue for the public sector at a time of high public sector deficit/debt. Part of such deficit/debt was due to taxpayer support for a fragile banking system, so taxing the perpetrators of the need for such support seems 'appropriate'. Furthermore , banks are castigated not only for their behaviour but also for their excessive remuneration, so bank taxes can be seen as 'pay-back' time; bank taxation is politically popular. Some large part of bank activity is (loosely) described as a 'casino', 'speculative' or 'socially useless'. In so far as such activity can be separately identified, it would seem ripe for taxation.

In the midst of this emotional cauldron the fact that any such taxation is likely to change the behaviour of banks towards risk-taking, and alter the wider financial stability of the banking system as a whole can potentially get lost. An example was the (soon abandoned) proposal (July 21st, 2011) to tax euro-zone banks to provide some private sector support for Greek sovereign debt; since much of the problem of the euro-zone periphery comes from the interaction between bank and sovereign

debt, it is not immediately obvious why extra bank taxes, e.g. on Irish and Spanish banks, would be a sensible response.

In view of the many potential purposes of bank taxation, the fact that such taxation should be constitutionally introduced by the relevant legislature, and that any proposals for such taxation may get hijacked by special interest groups, what, if any, should be the role of M-PAs in relation to such taxation. In my view they should have a right and a duty in this respect. Their right should be to advocate to the executive and to the legislature proposals for the adoption of a bank tax that would in their view improve the country's financial stability. In view of the above considerations I would not expect such a right to be exercised often. Moreover, any citizen has a right to propose a tax change, so this right is not particularly valuable. However, in so far as a Financial Policy Committee, or an ESRB, gains credibility, its authority would mean that any specific proposal by them would be taken seriously.

The duty, suggested here, is likely to be far more important. This is that the FPC should have the obligation of assessing the implications for the stability of the financial system of any proposal to tax financial intermediaries or financial transactions undertaken within the country, and to present such assessment in the shape of a public document before the (relevant Committee of the) legislature. We should not allow any such legislation to be adopted without a careful, professional assessment of its effects on financial stability by the M-PA.

By the same token the FPC should have the right to propose legislation that would alter the structural features of the financial system, such as limits to the size or functions of banks, and the duty to comment on legislative proposals with these same effects emanating from other entities.

The Independent Commission on Banking (Vickers Commission) is just such an instance. The FPC should report to the House of Commons in the UK its own view on the implications of their recommendations for the financial stability of this country.

Such structural measures should also include those that would affect the relative rights of creditors and debtors in the event of the failure of a financial intermediary, such as (changes in) deposit insurance arrangements, government guarantees to be offered to various classes of creditors, netting procedures, revisions to bankruptcy laws applicable to financial intermediaries, etc., etc. once again an MP-A should have the right to make proposals, and the duty to comment, in public, on proposals put forward by others.

These latter measures concern legal and structural circumstances relating to crisis resolution, whereas all the prior discussion had been about the role of the M-PA in crisis prevention. This brings us neatly to the next general topic of what role, if any, an M-PA should have in crisis resolution.

(D) Crisis Resolution

Although some aspects of crisis prevention have fiscal aspects, notably taxes that influence bank behaviour, most do not. As we shall discuss later in Section IV, CB independence in this respect (crisis-prevention) is just as cogent and desirable as in the case of the MPC and price stability. But crisis resolution generally requires the allocation of losses, and these often fall on taxpayers. So, the control and governance of crisis resolution organisations should come under the direct control of the relevant Minister of Finance. The Chancellor of the Exchequer, George Osborne, was reported in the

Press as having emphasised the need to distinguish between the governance of crisis prevention and of crisis management. He is right to do so.

Moreover, the professional skills in instances of crisis resolution will be primarily legal and accounting, and related to micro-issues such as asset managing and running-off portfolios of impaired loans, rather than the economic and analytical expertise of an M-PA. In those countries with specialised resolution agencies, such as the FDIC in the USA or the Swedish National Debt Office, there is no suggestion, nor enthusiasm, for merging these into an M-PA or an expanded CB.

Nevertheless many countries have not previously had a Special Resolution Regime for banks, or SIFIs, and many of these will not have an organisation ready to hand to undertake the resultant requirements for handling such crisis situations. The options would seem to be three. First, to create a new stand-alone body; second, to imbed it in the existing micro-prudential FSA; and third, to place it in the CB/M-PA.

The first option is the least attractive; it would be wasteful of scarce resources, especially since crises should be rare events. A stand-alone organisation would have too little to do normally, but would be overwhelmed at times of crisis. On this view the second option, to imbed the resolution organisation in the FSA is preferable to the third option. The skill profiles required match more closely; and the need for the GB/M-PA to be (mostly) independent of government, whereas the resolution authority should work closely with the Ministry of Finance, are reasons for incorporating the resolution authority with the FSA, not with the CB/M-PA.

Yet the opposite was chosen in the UK. Under the Banking Act of 2009, establishing a Special Resolution Regime, the Bank of England was made responsible for carrying out resolutions of intermediaries subject to that Act. There was relatively little discussion whether this latter was appropriate. Now that the FSA has been disbanded, and the legacy Prudential Regulation Authority (PRA) brought under the aegis of the FPC and of the Bank of England, there is perhaps an opportunity for reconsideration, and reallocation of the organisation responsible for resolution back to the PRA, rather than having it in the BoE.

(E) Summary

In this Section we have established a rather neat taxonomy of macro-prudential powers and functions. These are:-

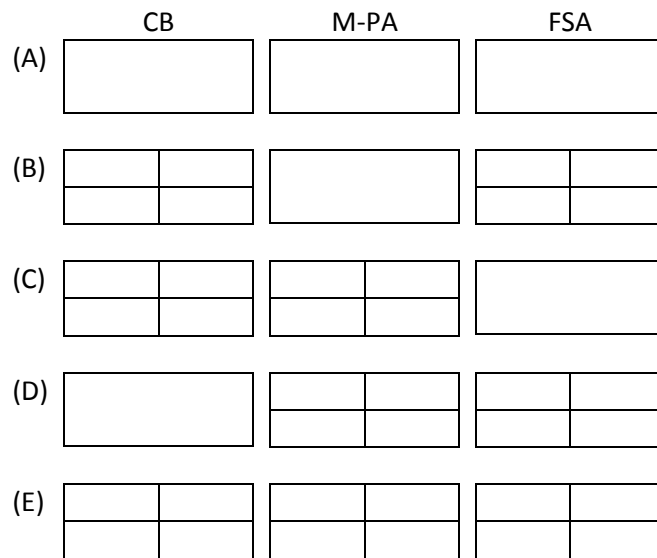
- a) The power to alter the composition of Central Bank assets, for liquidity and market interventions;
- b) The power to adjust margins (CARs, liquidity ratios, LTVs, etc.) to influence the conduct of financial intermediation;
- c) The power to propose fiscal and structural amendments affecting financial intermediation, and the duty to comment on such proposals emanating from other sources;
- d) The power to undertake financial resolution.



Partly because of the difference in the appropriate governance (and accountability) mechanisms, we have argued that potential power D should not be assigned to an M-PA, but should either go to a specialist entity, such as the FDIC, or be imbedded in the micro-prudential FSA.

So having set out what an M-PA should do, the next question is how this role should fit within the existing regulatory structure.

III. The Organisational Scope of an Macro-Prudential Authority

The proposed functions of a macro-prudential authority cover a somewhat new field, part way between the Central Bank on one side and the micro-prudential authority, the FSA, on the other. How should the relationships between these three institutions be organised? Logically there are five possibilities² shown diagrammatically below.



Where
 denotes a completely separate institution
 and
 denotes a combined, linked arrangement

We can start, easily enough, by ruling out option B. With an M-PA coming between the CB and the FSA, and being a new institution, with no track record nor history, there would be no point in

² Also see BIS (2011).

combining the CB and the FSA, and building up a completely new M-PA from scratch. By the same token, option A, with all three bodies independent, would be undesirable. It would require the establishment of a completely new body by itself, which would be wasteful of resources, and would lead to additional coordination problems, and provoke the question of ‘Who is in charge?’

There are also problems with Option D. As noted in Section II, a prominent, and essential, part of macro-prudential powers involves the management of the asset portfolio of the CB. It is difficult to see how this sensibly can be done if the M-PA and the CB are separately located. Again, the CB has concerns, and titular responsibility, for the smooth running of the payments and financial system that cannot just be delegated to a separate body. Moreover, the skill profiles of the CB and M-PA are similar, but different from those of the FSA.

For all these reasons, as argued in Goodhart and Rochet (2011), the only practical alternatives, once it has been decided to establish an M-PA, are options (and E, whereby the M-PA becomes part of the CB, with (option E) or without (option C), the FSA also becoming part of a unified, overall supervisory authority.

There are pros and cons to either choice. For further discussion of such issues, see Masciandaro, Quintyn and Taylor (2008), Masciandaro (2009), and Pellegrina, Masciandaro and Pansini (2010). Option E, (everything done by the CB), simplifies the exchange of information and the coordination of decisions. It should also be most efficient in the use of resources by eliminating overlaps. On the other hand it magnifies the concentration of power, especially in the hands of an unelected Governor of the CB. It also increases the chance of reputational risk, since no micro-prudential agency can prevent all frauds and other misconduct. Having the FSA/PRA under the direction of the

CB will mean that the Governor may get personally blamed for everything that goes wrong. In those cases, and committees, where the Governor, and/or a cohesive group of insiders, dominates, it could increase the danger of group-think, and focussing on a single (possibly erroneous) line of analysis and policy. In their proposals for Sweden, Goodhart and Rochet (2011) declined to give a preference between these two options. The choice should depend on the history, institutions, culture and preferences of each country.

Inevitably there remain some loose ends. For example, where should regulation of markets be placed? Market analysis and market operation are amongst the standard fare of economists, so, on the basis of professional skills, the regulation of financial market places might go to the M-PA. On the other hand, can one regulate markets independently of the individual institutions that interact in such markets. On such latter grounds their regulation should remain with the micro-prudential authority, the FSA.

Alternatively the American tradition has been to have separate financial market stand-alone regulators, the SEC and the CFTC. With some large financial intermediaries, i.e. the big US investment houses, Goldman Sachs, Morgan Stanley, et al., having being supervised, with the benefit of hindsight somewhat loosely, by the SEC, this led to decades of rivalry and conflict between the SEC and the banking supervisory bodies in the USA, and between the BCBS and IOSCO internationally (Goodhart, 2011). Now that all the remaining US investment houses have become banks that rivalry should reduce. Nevertheless there remains a question whether financial market regulation should be done within an M-PA or independently at the national level, and whether the BCBS and IOSCO should be merged or remain independent internationally.

Then there is the question of where to place the conduct of business, consumer protection, authority, either inside the FSA, or outside. Particularly in so far as the micro-prudential segment of the FSA comes under the overall direction of the FPC, there is a tendency towards establishing a separate body, as in the USA or the UK, for this purpose. Such an organisation should also have strong links with other anti-trust, pro-competitive, organisations. But what seems less logical is lumping financial market regulation alongside consumer protection, as now in the UK. Certainly consumers do use financial markets, but usually indirectly, e.g. via pension funds, and often with investment advisers. While consumers do have a direct concern about market access, the more important issues relate to the resilience, efficiency and inter-connectedness of markets, and these are, or should be, the province of the economists on the staff of the M-PA.

So one of the unresolved organisational issues is where to place financial market regulation. Most of the mechanisms so far adopted, both in the UK and the USA, seem unsatisfactory in some respects. This same issue has complicated arrangements for international cooperation in this field. Central Bank Governors, meeting together in their colloquium at Basel, got a head start in such international-regulation, setting up the BCBS in 1974. They have kept up the momentum in Europe, with the European Systemic Risk Board (ESRB) being totally dominated by CBs, and run by the ECB. Even so, insurance companies and market regulators have kept up their independent business societies, IAIS and IOSCO, and their European bodies ESMA and EIOPA. Indeed the sensitivities have been such that an umbrella body (GHOS, the Group of Governors and Heads of Supervision) had to be created to reconcile differences between them. In a tidier world all the macro concerns would go to an M-PA, dealing with all such macro/market interactions, and all the micro concerns would go to an FSA, whether the intermediary was primarily a bank, an insurance company, or a market broker. But we do not live in a tidy world. History and turf matter, and will continue to do so. Loose ends will remain.

IV. Accountability

The governance and accountability procedures for crisis resolution (war-time) should be very different from those of crisis prevention (peace-time). Crisis resolution implies burden sharing, often including (possibly temporary) imposts on taxpayers, and must come directly under the control of the Minister of Finance. In contrast, the instruments that should be wielded in the course of crisis prevention are akin to, but different from, adjustment of the official short term interest rate, and the same arguments as are advanced for the operational independence of the MPC can be put forward in support of the same independence for the FPC.

Just as increasing interest rates involves short-term political unpopularity (time inconsistency), so raising various required ratios to check an asset price bubble will be extremely unpopular. Indeed the resistance (push-back) to proposals to raise required down-payments for housing (lower LTVs) or lower loan to income ratios may well be particularly intense, since these impinge directly on a small section of the electorate, and a section that politicians are especially keen to support; indeed it was US politicians' aim to encourage the disadvantaged of America onto the housing ladder that was a major factor in sparking the sub-prime mortgage mess, (see Wallison, 2011, and Acharya, et al., 2011).

One concern, indeed, is that the general unpopularity of taking steps to check an asset price bubble will be so unpopular that just leaving this to the discretion of an, operationally independent, M-PA or FPC will mean that such counter-cyclical measures will be used too little, if at all. 'Taking away the

punch-bowl just when the party is getting going' is never going to make one beloved. Indeed there is a strong case for bolstering discretion with rules in this case, on which more later.

The need, therefore, is to separate the conduct, governance and accountability procedures of crisis resolution from those of crisis prevention. This should not be too difficult. Often crisis resolution is carried out by a different organization, e.g. FDIC in USA, Swedish NDO. We argued earlier that the crisis resolution agency should, if possible, not come under the direct control of the M-PA. Even where it does, as in the UK, occasions when the issue under consideration involves crisis resolution, rather than crisis prevention, are usually obvious, and then the make-up of the controlling Committee, e.g. its Chairman, Secretariat and membership, could be altered to fit with the issue at hand.

This proposal, of separating crisis prevention from crisis resolution, and putting the first in the hands of an, operationally independent, M-PA, while having crisis resolution come more directly under the control of the Minister and the legislature is quite different from that advocated by W. Buiter (2011), who wrote (p. 3) that,

“The Treasury should be at the centre of financial stability. This ought to be obvious from the experience of the years since the financial crisis started in August 2007. Instead, the proposed new arrangement places the Treasury on the sidelines. I propose that the Chancellor of the Exchequer be the chair of the FPC, that the FPC not have a majority of voting members from the Bank’s Executive, and that the FPC be constituted as an independent state body outside the Bank of England.”

In some part Buiter’s preference for putting the M-PA under the direct control of the Treasury, rather than of the CB, derives from his dislike of a CB undertaking any ‘quasi-fiscal’ activities, (see Section 7, pp 14-15), an issue already addressed here earlier, Section 11.A.

In so far as there is to be an, operationally independent, M-PA, or FPC, how can it be made accountable for its actions? Much ink has been spilt over the proposal to make the UK FPC a committee under the Court (Board) of the Bank of England. On this view this issue is a minor diversion from the main concerns. The Court maintains an administrative oversight over the staffing, compensation, hiring and promotion, organisational efficiency and disputes amongst senior personnel of the Bank as a whole, and can and should certainly extend that to the new, wider body of the FPC. Buitter (*ibid*) would go further and get rid of the Court altogether; Bingham (2011) is on the other hand supportive of a wider role for the Court than advocated here. The Court has played virtually no role either in policy-making or in subsequent assessments of the validity of such policies, since the Bank Rate Tribunal in 1958. Nor have appointments to the Court been based on the capacity of the candidate to assess policy. The Court may have, on a few rare occasions, been used as a go-between when there was a serious dispute between the Bank and the Treasury, but this would relate more to their characteristic as unbiased 'great and good' rather than as policy experts.

It is difficult, almost impossible, to believe that the involvement of the Court in the operation of the FPC was ever meant to put them in a position of opining on the validity of the FPC's policy decisions. The Treasury Committee suggested to witness that the Court might have initiated an independent enquiry, e.g. into the conduct of financial stability actions in 2007/8. With the benefit of time to reconsider this suggestion, it seems a bad idea. When, and if, the Court should call for such an enquiry, there is a, *prima facie*, implication that there is a case of wrong-doing to answer. If it has the powers to call for an enquiry, and does not use them, the implication then is that it supports the policy. This is a recipe for putting the Court either in conflict with the Bank/FPC, or having it given partial, passive, responsibility for policies in which it took no significant part. The Court has a useful,

though limited, role to play, which would even be jeopardised by giving it any policy-making or policy-assessing responsibility.

Instead, it is the Treasury Committee, and behind it the House of Commons to which the FPC should be accountable; and public enquiries into the decisions and functions of the FPC should be decided, and funded, by the Chancellor of the Exchequer, perhaps after taking advice from the Treasury Committee. In this respect the treatment of the UK FPC and MPC should be exactly similar.

The main problem is not about administrative procedures, that is to whom should the FPC be accountable, but of technical management, how can one hold the FPC accountable. In the case of the MPC there is a quantified objective for price stability, with bounds on both sides which, if transgressed, require a letter of explanation. There is also a generally accepted instrument, the official short term rate, with a well-studied transmission mechanism from instrument to objective. Finally there is an Inflation Report forecast, indicating at each quarterly date how the MPC expects inflation to unfold in future, which involves an (implicit) expected path for interest rates. Against this background, it is relatively easy to assess what if anything went wrong, and why.

In contrast there is no, generally agreed, quantification of financial stability; there is a plethora of potential instruments, ranging from direct market intervention, e.g. liquidity or credit expansion measures, through a whole range of margin (ratio) adjustments, through to recommendations for tax, or structural, changes, as set out earlier in Section II. The transmission mechanisms of such instruments are not well understood; as an example consider the disputes about the macro-economic effects of raising the required capital ratio of banks, which supposed consequences range from almost apocalyptic to almost insignificant. As to forecasts, there are virtually none. The

Financial Stability Review (FSRs) are long on generalised concerns about areas of fragility, but notably short on the likelihood, or probability, of crisis and collapse in any specific market. Like seismology or volcanology, the best that can be done is to assess growing tension before an eruption/quake, but not the timing or location of the crisis event. After a crisis, there will be several after-shocks, dignified in economics by the term 'auto-regressive conditional heteroscedasticity', or ARCH, before normality gradually returns.

So what can the Treasury Committee do in such circumstances? Given the uncertainty of measurement, and the unpopularity of counter-cyclical responses, the suggestion here is that there should be more recourse to rules of conduct for the FPC, or M-PA. There are certain presumptive indicators that have tended to accompany asset price bubbles that have involved the banking sector, and have therefore been particularly deleterious for financial stability. These include excessive leverage and credit expansion. A somewhat similar argument has been put forward by Enriques and Hertig (2010).³

³ Thus they state, p. 6, that

“we propose to improve supervisory market responsiveness by requiring prudential supervisors to “do something” upon material changes in market proxies of risk taking. More specifically, if the annualized return on equity (ROE) of a financial intermediary is an absolute 5% above its peer group average, or its annualized credit default swap (CDS) spread more than 30 basis points above its peer group average, financial supervisors would have an obligation to investigate whether this is due to excessive risk appetite and/or deficient risk management. Importantly, however, supervisors will keep the discretion to limit or even forgo corrective action provided they publicly disclose why (act or explain). This proposal is original in that it identifies a high RoE as a risk factor and puts the spotlight on normal times CDS spreads. By contrast, current reform debates focus on extreme events such as solvency benchmarks, which are overwhelmingly hard to read and generally give financial supervisors a choice between ‘crying wolf at the wrong time’ or reacting belatedly.”

and, on p. 28, that

“We propose to enlist capital markets to improve supervisory responsiveness by requiring prudential supervisors to “do something” upon material changes in openly observable market proxies of risk taking. More specifically, an annualized increase in any financial intermediary’s return on equity (ROE) or credit default swap (CDS) spreads above a predefined and publicly disclosed threshold would trigger an obligation for supervisors to investigate. Importantly, however, financial supervisors would maintain the discretion to limit or even forgo corrective action provided they disclose why (act or explain).”

Banking has become increasingly involved with the property market, both residential and commercial, both for loans and collateral. This is not necessarily inherent in banking as such. Prior to 1929-33 the US banking system was much more intertwined with the equity market, and with agriculture. But so long as the current focus on (residential) property remains, some measure(s) of overextension in such market(s) would also be advisable, whether housing prices, or some measure of personal debt to income ratio. The one-page proposal put forward to the Treasury Committee is reproduced in Appendix I.

Not only, however, is there much uncertainty about all these relationships, but also if any, or all, of them are translated into policy rules, then behaviour will change, the Lucas critique, or Goodhart's Law. Yes, indeed, but the proposal is not that they should be hard and fast rules, but that when two or three presumptive indicators are flashing danger, then the M-PA should either comply by taking countervailing measures, or explain in public, and to the Treasury Committee why not.

At present the easiest option for an M-PA is to discuss a generalised set of worries about financial fragility, but actually do nothing specific, and unpopular, about any of them. The purpose of comply, or explain, is to shift the default choice from inaction to action. If a CB Governor has to write a letter stating that there is no need to rein in leverage or a housing bubble because the situation is well in hand, and then there is an explosion, the extra accountability and incentive mechanism is palpable.

Of course, an FPC could fulfil a remit to respond to such presumptive indicators, and still avoid political unpopularity, by taking some minimal action, e.g. raising CARs from 10% to 10.05%.

Moreover given inexperience with counter-cyclical measures there will be an inevitable tendency to experiment in small steps. It would be good if M-PAs could do more analytic work on the effects of their instruments, e.g. changes in ratios, effects of intervention, etc., so that the appropriate calibration of policy response could be better ascertained, but in the immediate future it will be enough to try to make M-PAs active policy initiators rather than passive recorders of events.

One way of encouraging appropriate action where there may be conflicts of interest is to separate diagnosis from execution. While this is not easily possible within a country, though the Office of Financial Research (OFR) could act as a diagnostic agency in the USA, such a separation could happen in Europe. The ESRB will be a diagnostic body, whereas national M-PAs and FSAs will have to apply the remedial measures. The ESRB may not only point out fragilities, (and should not be fazed by the political unpopularity in a member state of doing so), but also require national financial stability authorities to select measures to remedy such fragilities. With the pressure of the ESRB's recommendations behind them, national authorities are, once again but through this different route, introduced into a comply, or explain, regimes, and hence accountability. In such a system, the ESRB could play a key role in reinforcing financial stability.

V. Conclusions

- A. Neither the achievement of price stability, via the MPC, nor the application of micro-prudential oversight, via the FSA, led to overall financial stability. There is a gap that needs to be filled by a macro-prudential authority (M-PA), FPC in the UK. The only macro-prudential instrument used heretofore has been the publication of Financial Stability Reviews (FSR). While worthy, these have been ineffective.
- B. The M-PA should have the following powers:
- 1) The power to alter the composition of Central Bank (CB) assets, by adding to (subtracting from) its holdings of claims on the private sector. The argument that such actions are 'quasi-fiscal', and should therefore not be undertaken, is not supported.
 - 2) The power to adjust margins (CARs, liquidity ratios, LTVs, etc.) to influence the conduct of financial intermediation. The argument that the use of such powers puts the FPC in a difficult conflict with the MPC is not supported.
 - 3) The power to propose (to the legislature) fiscal and structural amendments affecting financial intermediaries, and the duty to comment on such proposals emanating from other sources.
- The M-PA should not be involved in the resolution of financial intermediaries.
- C. Because the provision of liquidity is simultaneously a key Central Bank function and an integral component of crisis prevention, the M-PA has to come under the aegis of the CB. Whether the micro-prudential authority (FSA) is also brought under the overall

control of the CB + M-PA, or remains independent, will remain a matter of national preference and history, with arguments on either side. The more complicated question relates to where to place the regulation of financial markets. This should not be placed with the conduct of business regulator, as now proposed for the UK.

- D. Procedures for crisis prevention and crisis resolution should be separated. Crisis prevention should be undertaken by the CB + M-PA in an operationally independent manner, for exactly the same reasons as an MPC is independent. Crisis resolution involves the allocation of losses and should be the responsibility of the Treasury. The problem is how to make FPC accountable for its crisis prevention responsibilities. We advocate the adoption of a set of ‘presumptive indicators’, which, when triggered, require the FPC either to comply with remedial action, or to explain, in public, why there is no need to do so.

References

- Acharya, V.V., Richardson, M., Van Nieuwerburgh, S. and L.J. White, (2011), *Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance*, Princeton University Press, Princeton, New Jersey.
- Bank for International Settlements, (BIS), (2011), 'Central bank governance and financial stability', a report by a Study Group chaired by Stefan Ingves, Governor, Sveriges Riksbank, (May).
- Bank Rate Tribunal (Report), (1958), *Hansard*, HC Deb 03 February, Vol. 581, cc815-948.
- Basel Committee on Banking Supervision, (BCBS), (2010), 'Countercyclical capital buffer proposal', Bank for International Settlements Consultative Document, July.
- Bingham, T.R.G., (2011), 'Central Bank Accountability', written evidence submitted to the UK House of Commons Treasury Committee, (June 15).
- Borio, C., (2009), 'Implementing the Macroprudential Approach to Financial Regulation and Supervision', *Banque de France Financial Stability Review* no. 13, pp. 31-41.
- Buiter, W., (2008), 'Central banks and financial crises', paper presented at the Federal Reserve Bank of Kansas City's symposium on Maintaining Stability in a Changing Financial System, Jackson Hole, Wyoming, Wyoming, 21-23 August.
- Buiter, W., (2010a), 'Reversing unconventional monetary policy', lecture given at the 28th SUERF Colloquium in Utrecht, the Netherlands, 3 September 2009, in the conference volume *The Quest for Stability*.
- Buiter, W., (2010b), 'Games of 'Chicken' Between Monetary and Fiscal Authority: Who Will Control the Deep Pockets of the Central Bank?', *Global Economics View*, Citigroup Global Markets, 21 July.
- Buiter, W., (2011), 'Accountability of the Bank of England', *Global Economics View*, Citigroup Global Markets, 1 June.
- Brunnermeier, M.K., Crockett, A., Goodhart, C.A.E., Persaud, A., and H.S. Shin, (2009), *The Fundamental Principles of Financial Regulation*, Geneva Reports on the World Economy, 11, (Geneva: International Center for Monetary and Banking Studies, ICMB, and Centre for Economic Policy Research, CEPR).
- Cihak, M., (2006), 'How do Central Banks write on Financial Stability', IMF Working Paper, WP/06/163, (June).
- Drehmann, M., Borio, C., Gambacorta, L., Jiménez, G., and C. Trucharte, (2010), 'Countercyclical Capital Buffers: Exploring Options', BIS Working Papers No. 298, Monetary and Economic Department, Bank for International Settlements, Basel, Switzerland.
- Enriques, L., and G. Hertig, (2010), 'The Governance of Financial Supervisors: Improving Responsiveness to Market Developments', European Corporate Governance Institute Law Working Paper No. 171/2010, November.
- Goodhart, C.A.E., (2011), *The Basel Committee on Banking Supervision: A History of the Early Years, 1974-1997*, (Cambridge: Cambridge University Press), forthcoming.

Goodhart, C.A.E., and J.-C. Rochet, (2011), *Evaluation of the Riksbank's monetary policy and work with financial stability 2005-2010*, Reports from the Riksdag 2010/11:RFR5, The Committee on Finance, Sveriges Riksdag, 2011.

Goodfriend, M., (2009), 'Central Banking in the Credit Turmoil: An Assessment of Federal Reserve Practice', presented at the Conference on 'Monetary-Fiscal Policy Interactions, Expectations, and Dynamics in the Current Economic Crisis', May 22-3, Princeton University, Princeton, New Jersey.

Kashyap, A.K., Berner, R., and C.A.E. Goodhart, (2011), 'The Macroprudential Toolkit', *IMF Economic Review*, Vol. 59, No. 2, pp. 145-161.

Masciandaro, D., (2009), 'Politicians and financial supervision unification outside the central bank: Why do they do it?', *Journal of Financial Stability* 5, pp 124-146.

Masciandaro, D., Quintyn, M., and M.W. Taylor, (2008), 'Inside and outside the central bank: Independence and accountability in financial supervision - Trends and determinants', *European Journal of Political Economy* 24, pp 833-848.

New York Times, (J. Calmes), (2010), 'Taxing Banks for the Bailout', *New York Times*, January 14, <http://www.nytimes.com/2010/01/15/us/15tax.html>.

Minsky, H.P., (1977), 'A Theory of Systemic Fragility', in E.I. Altman and A.W. Sametz (Eds), *Financial Crises*, Wiley, New York.

Minsky, H.P., (1982), *Can "It" Happen Again? Essays on Instability and Finance*, (Armonk, NY: M.E. Sharpe, Inc.).

Minsky, H.P., (1986), *Stabilizing an Unstable Economy*, Yale University Press, New Haven.

Pellegrina, L.D., Masciandaro, D., and R.V. Pansini, (2010), 'Government, Central Bank and Banking Supervision Reforms: Does Independence Matter?', Paolo Baffi Centre Research Paper No. 2010-74.

Persaud, A., (2000), 'Sending the Herd off the Cliff Edge: The Disturbing Interaction between Herding and Market-Sensitive Risk Management Practices', *The Journal of Risk Finance*, 2(1), pp 59-65.

Svensson, L., (2009), 'Principles for the evaluation of different monetary policy alternatives', in 'Material for assessing monetary policy', Riksbank, pp. 27-29.

Wagner, W.B., (2010), 'Diversification at Financial Institutions and Systemic Crises', *Journal of Financial Intermediation*, 19(3), pp 373-386, July.

Wallison, P.J., (2011), *Dissent from the Majority Report of the Financial Crisis Inquiry Commission*, AEI Press, May 15.

Appendix

Financial Policy Committee: Accountability

By C.A.E. Goodhart

The accountability of the MPC is, of course, much enhanced by the quantified nature of the inflation target and the quantified bounds, beyond which the Governor has to write a letter of explanation. In the absence of any similar quantification in the field of financial stability, it is much harder to achieve similar clear accountability.

This is a problem that I have been struggling to resolve, and I believe that there may be a viable methodology for doing so. It runs as follows:-

- 1) Past experience suggests that there are a number of early warning indicators which tend to precede financial crises. These include the following:-
 - (a) A rate of growth of (bank) credit which is significantly faster than average, and above its normal trend relationship to nominal incomes.
 - (b) A rate of growth of housing (and property) prices which is significantly faster than normal and above its normal trend relationship with incomes.
 - (c) A rate of growth of leverage, among the various sectors of the economy which is significantly faster than usual and above its normal trend relationship with incomes.

I would not be dogmatic about the choice and formulation of such indicators, but I would like to suggest that the FPC is required to choose somewhere between two to four such presumptive indicators. The idea is that when at least two of these indicators are showing a danger signal, that the expectation would be that the FPC should take action to counter such developments or else be prepared to explain in public to the TSC why they have not done so.

- 2) I would then also suggest that you should ask the FPC to undertake (econometric) research on the basis of past historical data to work out what they would think the optimal response would have been in changing certain macro-prudential instruments, such as varying capital ratios, margin requirements, or loan-to-income ratios, etc., so that there can be a prior expectation of the extent that the FSC should vary instruments in response to these presumptive indicators.

The purpose of the exercise is to try and get the FPC to give a prior indication of how they might respond to circumstances which would seem, on past evidence, to suggest increasing financial fragility. The idea is not to constrain the FPC's behaviour, but to put them in a position where they either have to comply with action in such circumstances, or explain to you in public why this is not necessary.

After all, the Governor has already described an Inflation Target regime as one of constrained discretion. The purpose of my proposal is to make the operational regime of achieving financial stability similarly into a regime of constrained discretion.