Central Banking and the Credit Crunch (Slide 1)

You can generate a big audience these days for anything with credit crunch in the title. Indeed I have suggested to our conference people that they simply add it to the title of every lecture we run. So you can look forward to “the Future of the South Ossetian Enclave in the Credit Crunch”, and “New Perspectives on Peter the Great and the Credit Crunch”. I am expecting a particularly big house for “Foucault, Lacan and the Madness of Bankers in the credit crisis”.

But in a sense it is a bad time to try to assess the longer term implications of what has been going on. We are still quite clearly in mid crisis. It is very difficult to gain a proper sense of perspective on recent events. Particularly in relation to the central banks, we have to recognise that their practices are changing from week to week and from day to day. They have been doing things which, little more than a year ago, they said they would never do. Last week Mervyn King referred to “an extraordinary, almost unimaginable sequence of events” following the failure of Lehman Brothers on the 15th of September. As he also pointed out “the scale of central banking support has been unprecedented”. In a less noticed part of that speech, by the way, Mervyn noted that “the age of innocence – when banks lent to each other unsecured for three months or longer at only a small premium to expected policy rates – will not quickly if ever return” – raising the prospect of a permanently different relationship between banks and the rest of the financial system.

We should be careful then about jumping to conclusions in the midst of a crisis. Some of the issues which seemed crucial to an assessment of the role of central banks a year or so ago, when we were trying to push Northern Rock up a hill, have now faded into pre-history.

So this will not be an exercise in apportioning blame, fun though that would be. There will be many other attempts to do so, indeed they are already beginning. If this were a car crash, there would be a need to establish percentage responsibilities, and no doubt parliamentary and congressional inquiries will seek to do so. But having lived through a few episodes of financial turbulence myself as a central banker or regulator – although of course nothing on this scale – I have a well developed allergy to those who tour the battlefield while the fighting continues, bayoneting the wounded. Curiously, last week Alan Greenspan bayoneted himself. We might come that a little later.

So this is a peculiarly bad time to be writing a book about the future of central banking, which is what I have been trying to do. I worked sedulously over the summer, producing a hundred thousand words or so, almost all of which are now only waiting for me to press the delete button twice to put them out of their misery. I do not expect an outburst of sympathetic emotion at this point. My draft is not, perhaps, the most significant casualty of this crisis. But it is one I cannot help caring a little about.

One thing we can say without much fear of contradiction is that the theory and practice of central banking has received much greater exposure recently than it has for some time. When economic conditions are calm, when the famous misery index of inflation and unemployment is low, central bankers fade into the background. Mervyn King has regularly said that it is his ambition to be boring. Indeed he made a renewed plea for boredom last week –"I extend an invitation to the banking industry to join me in promoting the idea that a little boredom would be no bad thing". This plea is unlikely to be heard, and indeed Mervyn himself is rather bad at being boring, both in public and in private.

At times like this, there is no point in thinking that central bankers can be self-effacing. We realise that they are rather crucial parts of the landscape. Indeed we might share the view of that insightful commentator on economic policy Will Rogers (slide 2), who said "there have been three great inventions since the beginning of time: fire, the wheel and central banking".

The potential subject matter which fits under my title tonight is so vast that I must try first to set a manageable agenda for myself. One of the advantages of being the director here is that you can set your own exam paper. I aim to explore five issues, albeit the last of them rather briefly. I may disappoint those craving for certainty by leaving the answers to some of them open. But that is my state of mind at present. Willem of course, always knows his views – even on questions which have not yet been formulated. But I do not have his facility. My issues do not include the important current question of what the central banks' monetary policy response to the current sharp downturn should now be. There my view is the same as Willem's: they must cut rates, and cut vigorously. But tonight I aim to look more at structural than conjunctural issues.

The five questions I will address are;

- How far can we say that loose monetary policy in the last decade was one of the factors that led to the crisis. Technically, we might put this question in the form: "is it the Fed what done it?" (Slide 3)
- The second is a related question. If we think monetary policy was too loose we still need to deal with the fact that consumer price inflation remained low and generally within the target range, where a range was set, so how could central banks have justified adopting a tighter policy? The potential answer is that they should have taken more note of rising asset prices. So the question to address is - should monetary policy attempt to respond to emerging asset price bubbles? This is often known as the "leaning against the wind" argument. (Slide 4)
- The third, and again related question is that if central banks identify asset price bubbles, or price misalignments should we say, are there other ways in which they should seek to respond? Particularly, should capital requirements on banks be varied

to take account of the possible future risk of significant falls of asset prices and therefore of large losses. This is generally known as the “macro-prudential” argument. In other words might there sometimes be a case for “an across the board” adjustment of capital ratios, one which does not emerge from an assessment of the position of an individual bank? (Slide 5)

- The fourth question is again related to the third. If it is accepted that central banks have a role in financial stability, then does that necessarily mean that they should be directly engaged in banking supervision? This argument is once again live here, where the Conservative Party now appears to take the view that the shift of supervision to the FSA in 1997 was a mistake, and that the Bank of England has, as a result, moved too far away from its banking responsibilities. (Slide 6)
- The fifth, broader question which I will consider briefly here is whether the events of, and the responses to the crisis justify a major overhaul of what we might call the “social contract” between the authorities and the banking system. (Slide 7)

You will notice that I have not included the very central question of how liquidity is provided to the banking system at present. In part, that is because Willem knows more about that subject than I do. But also because there have been important changes, only last week, which is still too early to assess. I will refer to liquidity at a couple of points, however.

Is it the Fed what done it? (Slide 8)

The strong form of the critique of the Federal Reserve’s policy after 2001 can be found, for example, in the writings of Steve Roach, the former chief economist of Morgan Stanley and a long standing critic of Alan Greenspan. Roach does not mince his words. “Central banks”, he argues “were asleep at the switch. The lack of monetary discipline has become the hallmark of an unfettered globalisation. Central banks have failed to provide a stable underpinning to world financial markets and to an increasingly asset dependant global economy”. (Slide 9). Roach calls for a shift away from “one dimensional fixation on CPI based inflation”. That argument has been reinforced by those who believe that the CPI gave false readings as a result of the entry into the traded economy of huge new super-competitive nations - especially China. Competition from China held down prices of traded goods, and indeed the wages of manufacturing workers, while leading participants in financial markets grew incontinently rich, recycling the excess liquidity created by the central banks. That misled the Fed to a belief that inflation had been conquered and that a productivity revolution was underway.

The critics consider that this reading of inflation was fundamentally wrong. The CPI itself was really “Chinese price inflation”, as Gerard Lyons of Standard Chartered has dubbed it, held artificially low by the Chinese export boom. In fact, during the so-called great moderation a mass expansion of credit was underway, both inside and outside the banking sector, leading in turn to mis-pricing of risk and asset price bubbles, under the noses of central bankers myopically monitoring their narrowly defined inflation objectives.

One useful measure of risk mis-pricing was the high yield bond index, which by 2006 was trading at spreads above US treasuries around half the long run average. (slide 10).

I think it would be wrong to argue that loose monetary policy in the United States after 2001 was the sole cause of the boom and the bust we have seen. There are many other culprits whose actions must be taken into account. Alan Greenspan himself, in what was not quite a Mea Culpa last week, in fact defined his error as being to believe that “the self interest of organisations, specifically banks and others, was such that they were best capable of protecting their own shareholders”. Not quite, you will agree, an acknowledgment that there were monetary policy errors.

Nonetheless, I think that there is now quite a consensus that US interest rates, certainly, were kept too low for too long in the early years of this decade. While the Fed’s actions after the dotcom bust were justifiable and effective, they held interest rates at low levels for longer than was necessary, adding fuel to the flames of a boom that was already underway. This criticism is easy to make, with the benefit of hindsight. What is more difficult is to try to identify the ways in which a central bank might take account of asset price inflation in its monetary policy decisions. Yet if we wish to point to improvements in the future, we need to articulate an improved decision rule. That leads us to the second question, the “leaning against the wind” argument. Is it possible for central banks to do such a thing? Is it possible for central banks to identify asset price bubbles in a sufficiently reliable way to allow that identification to feed into interest rate decisions? (Slide 11) Or would that lead to dangerous ambiguity – the famous cross-eyed controller problem?

Leaning against the wind

This is perhaps the fiercest controversy in the world of central banking in the last few years, and has been going on since well before the bubble burst.

Bill White, the former chief economist of the BIS, was one of those who argued strenuously for a greater focus on credit expansion and asset prices, and did so well before the crisis hit. Surely, he argued, there was a point at which it was possible to identify mis-pricing and bubbles? Why could interest rate policy not take some account of the risk posed by escalating asset prices, just as it did with other risks to inflation and growth? Andrew Crockett, then general manager of the BIS, articulated the critique as early as 2003: “in a monetary regime in which the central bank’s operational objective is expressed exclusively in terms of short term inflation, there may be insufficient protection against the build up of financial imbalances that lies at the root of much of the financial instability we observe". This could be so if the focus on short term inflation control meant that the authorities did not tighten monetary policies sufficiently pre-emptively to lean against successive credit expansion and asset price increase. In the jargon, "if the monetary policy function does not incorporate the financial imbalances, the monetary anchor may fail to deliver financial stability".

This argument was not accepted by many in the central banking world at the time. Charlie Bean, now deputy governor of the bank of England, stigmatized Crockett's arguments as "the heterodox view". In Bean's view a forward looking inflation targeting central bank should bear in mind the longer run consequences of asset price bubbles in setting current rates, with no need of an additional monetary response to asset price movements. Greenspan, himself, was even more robust and challenged every link in the chain of Crockett's argument. In his view it was not possible to identify when a bubble was inflating, and even if it were possible to do so, a monetary response would be ineffective – "the notion that a well timed incremental tightening could have been calibrated to prevent the late 1990s bubble is almost certainly an illusion", he said. Furthermore it would almost certainly be undesirable to attempt to respond, in a way which might constrain markets and end the processes of innovation. Instead, the central bank should forget about preventive measures and "focus on policies to mitigate the fallout when it occurs and, hopefully, ease transition to the next expansion". In my view the misuse of the word "hopefully" is not the only thing wrong with this sentence.

These contrasting points of view seem to admit little possibility of accommodation. Yet there are more recent signs that central banks, faced with the massive value destruction now underway, are becoming more pensive about their record.

It may be useful to parse this dispute a little more. One proposition is that central banks should target asset prices. Here there is a large measure of agreement and even the "leaning against the wind" advocates do not think so. Stephen Cecchetti says "it is important to emphasise that… we are recommending that while central banks might react to asset price misalignments they must not target them". So the argument is not about adjusting the definition of inflation on an ad hoc basis as asset prices fluctuate, it is about how decision makers should systematically take account of asset price misalignments in setting interest rates and in determining the appropriate inflation target horizon.

The next question is whether the measure of inflation targeted should include some element of asset price, and particularly house price inflation. As Charles Goodhart argues, this is a crucial question, as if asset price changes are not incorporated in the measure of inflation which the authorities are enjoined to stabilize, they may express well founded anxieties about asset price inflation from time to time, but lack a framework to respond to them in an effective way. His argument, though, is that the case for incorporating a measure of house price inflation into the targeted rate is far stronger than it is in the case of equity prices. Alchian and Klein and others argue that a correct measure of inflation should include asset prices as they reflect the current money prices of claims on future as well as current consumption. Yet the current definition used in the UK and the EU excludes any element of housing costs. Mervyn King has expressed frustration at this. The question is in the hands of Eurostat, as it has been for some years. So there is some consensus emerging that a better approach to inflation definition would include some element of house prices.

But how high a weight should be given to house prices, and how far should monetary policy-makers respond? Cecchetti has calculated the impact on US inflation were an index of home sale prices to have been included, instead of a measure of imputed housing costs as at present. (Slide 12). Over the five years from 2000 computed inflation would have been three-quarters of a percent higher per year higher than recorded on the CPI used, which would have pointed to tighter policy. In the UK the effect would have been even greater. The re-computed RPI including house price inflation would have been between 2-4 percent higher over the last decade (Slide 13). I am not sure that a re-computation on that scale is what Mervyn King has in mind, and I think that might be over-egging the pudding.

But even if we agree that we should take some account of house price inflation in the target, we must nonetheless ask how we might know that asset prices are in unsustainable territory.

Here the divisions of view remain very marked. Ben Bernanke, before he joined the Fed, noted that "the advocates of bubbles would be forced to admit that it is difficult or impossible to identify any particular episode conclusively as a bubble, even after the fact". Jean-Claude Trichet is similarly doubtful. In 2005 he said "there is a fundamental difficulty in calling an observed asset price boom as a bubble: it must be proved that given the information available at the time of the boom, investors process this information irrationally". I am not sure I would accept that view, which seems based on a rather rigid interpretation of the efficient markets hypothesis. Perhaps one general lesson of the crisis is that central bankers might sometimes be more confident in asserting that markets may have got it wrong.

There were other indications that credit expansion was moving into dangerous territory. Here are two from Tuesday's Bank of England Financial Stability Review. Loan to income ratios in the UK mortgage market escalated dramatically from 2003 (Slide 14). And banks leverage ratios grew sharply at the same time (slide 15). There was, it seems to me, plenty of evidence of bubbles inflating during the years from 2003-2007, stimulated by a remarkable expansion in credit, both on and off banks balance sheets.

More recently, there are signs, that central bankers are becoming more open-minded on this issue. Some have advanced the proposition that while it is not possible for monetary policy to be adjusted to take account of asset price misalignments, regulatory policy can be. This seems curiously to amount to the argument that while central bankers, in their observation of macro-economic policy, cannot identify bubbles, regulators can do so. (I am always ready to believe that regulators are smarter than some people think, but I am not sure that they are as smart as all that).

In an important recent paper on this subject Sushil Wadhani points out that while identifying bubbles is undoubtedly difficult, and an inherently uncertain science, the uncertainties are no greater than in other areas where the monetary authorities have to take a view on the basis of highly uncertain assumptions. "It is not obvious to me that it is easier to measure the output gap than to identify bubbles", he says. Quite so.

So how should we come out on this question? I think central banks must pay more attention to asset price bubbles than they have in the recent past. The output costs of bubbles are large. The IMF estimates that equity market busts are typically associated with a four percent GDP loss, while sharp house price adjustments generate output losses twice as large. And I think we are in the middle of a new experience which may cause analysts to increase these estimates. I am not persuaded by the argument that bubbles cannot be identified ex ante. Of course assessing price misalignments is not an exact science. All interest rate judgements are based upon an assessment of risk and the consideration of possible outcomes. But there are indicators which can be used to identify potential misalignments, and many have been proposed by Charles Goodhart and others. I think it is not enough to say that an inflation target regime such as the one we have here can, without amendment, take full account of asset price moves by adjusting the inflation horizon. And I note that in the recent past both the Swedish and Australian central banks have justified rate changes by some kind of asset price overlay.

I am also not persuaded by the argument that very large increases in rates would have been necessary to have any impact on asset price movements. The impact on expectations of a more explicit attitude to asset prices in the formulation of policy may itself have an impact on price movements. The dangers of allowing bubbles to inflate for too long have been vividly demonstrated in the last two years. A policy which attempts to respond in some way to extreme asset price moves (in either direction) could enhance overall macro-economic stability.

But I would accept that there is no "one club" response to asset price bubbles, and that regulatory policy needs also to be taken into account. That takes us on to my third question. Is there an argument for using capital requirement on banks in a macro way? This would, I think, be bound to involve central banks in highlighting emerging imbalances and misalignments and inviting regulators, whether their own supervisors or those located in another agency, to respond to them by tightening capital requirements for cyclical purposes, not just in relation to the risk profile of an individual institution.

Is there an argument for a macro prudential overlay to capital requirements? (Slide 16)

Setting capital requirements is undoubtedly the most important thing that banking supervisors do. They put a lot of effort into it. The complexity of the calculations they use has been growing. The Basel capital accord in the late 1980s, designed primarily to cope with problems created by Japanese banks lending at low margins and with low capital reserves, was straightforward. You could have as much capital as you liked provided it was eight percent. The rules could be written on a postcard.

The second capital accord – Basel 2 – has taken rather longer. I recall attending a first meeting to discuss a new capital accord in 1998. It will implemented in the European Union this year and in the US next year. This is following a new, regulators version of the "just in time theory". In other words it will be just in time to be comprehensively rewritten.

Why do we require banks to provide a capital cushion? To provide a buffer when times are tough, as times are now. It is generally accepted that the reserves being held by many banks were not adequate even though they were based upon careful calculations founded on losses given default in past cycles. Perhaps they were not enough to cope with the problem identified by Dan Quayle, "Bank failures are caused by depositors who do not deposit enough money to cover the losses due to mismanagement". This is a very penetrating observation and I am sure that many in Wall Street and in the City would agree that it places the blame for our current problems precisely where it should rest.

Many criticisms have been levelled at Basel 2, including the excessive reliance on banks own models, and on credit ratings. Most importantly, it has been criticised for being procyclical. In the good times, capital requirements might be reduced as losses fall, and this can happen even when asset prices are rising rapidly, and the risk of a disorderly unwinding is rising. The argument, again most cogently put forward by BIS economists, is that banking regulators should adjust banking requirements to take account of potential asset mispricing. This argument is now gaining considerable traction. Even central bankers sceptical of the use of interest rates to deal with asset price bubbles think that there may be an argument for some kind of macro-prudential override on capital requirements when markets look unstable. One leading central banker has argued to me that the burden of proof needed to adjust capital requirements is perhaps less than that needed to adjust interest rates given the broader economic consequences which arise from an increase in borrowing rates.

But though there is an emerging view that greater account needs to be taken of asset prices, and macro-economic conditions more generally, in setting capital requirements, there remain considerable conceptual and practical problems to address. For competitive reasons it would be essential for a framework for these decisions to be made on an international basis. But there are considerable differences from country to country. In the decade up to the start of the credit crisis real house prices rose by over sixty percent in the US and by over one hundred percent in the UK, while they fell slightly in Germany. (Slide 18). So a common framework is required but it has to be one which can be adapted to the circumstances of individual banks. In the case of global banks operating in many different markets through branches there would be a need for a host supervisor adjustments to be agreed by the home supervisor, which would not be easy.

To offer, unfashionably, a modicum of support for Basel 2, it does provide a framework within which these judgements can be made. Pillar 2 is meant to be adjustable. It is conceivable that a macro-prudential adjustment of capital ratios could be incorporated into a pillar 2 calculation. But who should do it, and how?

One obvious answer is the Basel Committee itself, which does of course include central bankers and supervisors even when the central bank is not the national supervisor. But this would be a high profile task, with potentially serious implications for banks, and indeed for borrowing costs in the economy as a whole. If there were to be such a macro-prudential adjustment, it would need to be made at a much more senior level, and both Governors and the international financial institutions would probably need to be involved. How would they make the fraught calculations necessary? Charles Goodhart and Avinash Persaud have argued that an automatic mechanism should be introduced, whereby each bank would have a basic allowance of asset growth, based upon the country's inflation target and long run GDP growth rate. Asset growth above this rate would be given a higher weight in the calculation of capital requirements, providing an automatic dampener on the growth of a bank's balance sheet.

I am not attracted by the idea of an automatic calculation of this kind. Indeed I am suspicious of any approaches to banking supervision which seek to remove judgement from the process. There can be unsafe banks whose assets are declining relative to the market, perhaps because counterparties are suspicious of them. Unusual market share growth can be an indicator of poor credit decisions, but it can also be an indicator of superior management and better business focus. An automatic stabiliser can also freeze market shares and even offer protection to sleepy banks. There would be a risk of returning to the days of lending ceilings and credit guidance which were discredited some time ago. I would favour, instead, establishing a high level group which would be responsible for publishing six monthly assessments of the banking system which, if enough of the stress indicators were blinking amber, would justify a recommendation to the supervisors to impose a capital surcharge on banks exposure to those markets considered to be showing signs of overheating. The group could develop a suite of stress indicators, using probabilities of default and equity price movements as a market sign of potential stability, and therefore a justification for dynamic capital requirements. This would be a very important new task for central banks to perform with their financial stability hat on.

This, therefore, leads to my fourth question. We all generally accept that central banks should have a role in promoting financial stability. But does that mean that they should have a direct role in banking supervision. Has the Bank of England, in particular, moved too far away from its banking roots since the Financial Services Authority was established? Was that change a big mistake?

Should central banks be banking supervisors? (Slide 19)

As this issue is debated in the UK it is sometimes implied that our system, with the tripartite agreement between the Treasury, the Bank of England and the FSA, is an outlier internationally. That is not the case.

There is no settled view internationally on how best to organise financial regulation. It is as if a global controlled experiment is underway, from which no general conclusions are ever drawn.

The range of different models in use is extensive. Different taxonomies are possible. The Group of Thirty have just produced their own. My simplified approach identifies four main varieties (Slide 20);

1. The three pillar model whereby the central bank oversees banks, a kind of SEC handles the securities markets, and some other commission, or perhaps even government ministry, takes on insurers.
2. A variety of approaches whereby two of the three traditional financial sectors are brigaded together, sometimes in the central bank, sometimes not. Many Latin American countries are organised in this way.
3. The so called twin peaks model whereby there is one prudential regulator and one conduct of business regulator. In fact of the two main twin peak adherents, in one case (the Netherlands) the banking supervisor is in the central bank while in the other, Australia, there is a separate prudential regulator, well run by an LSE alumnus. Several other countries are considering this model themselves, notably the French at present. But the fact that the French are considering it does not in my mind necessarily imply that it is wrong.
4. Integrated regulation, on roughly the FSA model – though there are many different sub variants.

If we look at this biodiversity from the central bank perspective, it looks like this. (Slide 21). In fifty or so countries the central bank handles supervision and nothing else. In another fifty the central bank has no direct supervision responsibilities, while in the rest of the world they either do everything or some combination of regulatory functions.

If there is any trend noticeable internationally, it is towards integrated regulation. Almost forty countries are operating in that way, and there was something of a jump after the UK's introduction to the FSA in 1997. (Slide 22). So if we got it wrong here, we have been leading quite a lot of other countries up a dangerous garden path, and perhaps we should tell them to retreat.

But was the 1997 reform really a mistake, as the Conservative opposition now argue? They would like to put bank supervision back into the Bank of England, whether it wants it or not – and it clearly does not. An alternative critique, developed by Willem here, a couple of years ago, is that dividing the two functions of supervisors and LOLR risky, but that the right answer is that the FSA should also be the lender of last resort.

The arguments on this topic are complex, and I have written about them at greater length elsewhere, notably in the book that David Green and I published earlier this year on global financial regulation. (Slide 23). So I propose this evening a rather shorthand approach to the subject. Those who care more deeply on the subject can shell out £14.99 at The Economist bookshop.

I would make three preliminary points.

First, no one contests that the central bank should have a responsibility for promoting and/or maintaining financial stability. But there is a problem. No one quite knows what financial stability means. The term seems to have been invented in 1994 in the Bank of England to denote those objectives that were not to do with price stability or the efficient functioning of the financial system. But quite what one should do in the cause of financial stability is much less clear. (Slide 24). Indeed in 2005 the ECB noted that "financial stability assessment as currently practiced by central banks and international organisations probably compares with the way monetary policy assessment was practiced by central banks three or four decades ago – before there was a widely accepted, rigorous framework". This was a prescient observation in light of recent events. Perhaps it would be a good idea for more central banks to be given a statutory objective to promote financial stability, as the Bank of England will shortly be. Although the government have not yet made it at all clear what they expect the Bank of England to do differently as a result, having a statute will certainly focus minds in the bank and is already doing so. In the Financial Times on Tuesday of this week Steve Roach argued that the Fed should have a similar objective, on the grounds that "under a financial stability mandate, the Fed will need to replace its ideological convictions with common sense".

Second, the flowering of financial stability reviews in recent years, following the Bank of England's invention of the concept in 1996, has not obviously added a great deal of value to the global financial system. (Slide 25). Indeed the number of FSRs is certainly negatively correlated with financial stability. More than fifty central banks publish FSRs, as do some regulators and the international financial institutions. But most of them have been bland and uninformative. And a recent IMF analysis shows that the central banks which publish financial stability reviews frequently even avoid including the Fund's financial soundness indicators. Another IMF paper has devised an assessment framework for financial stability reviews looking at the clarity of the aims of the document, the coverage, in terms of different parts of the financial sector, and the consistency of the assessment approach over time; 26 indicators in total. He grades the FSRs 1-4 on each That assessment concludes that many of them are incomplete and inadequate. (Slide 26). Central banks have very rarely suggested in their FSRs that there were any serious problems emerging in their financial sectors even in those published in 2006-7. But, interestingly, those who are not directly responsible for supervision have tended to be somewhat more critical and more objective. The author of this IMF study, Martin Cihak, concludes that gradings are on average higher for central banks not directly involved in day to day supervision, partly reflecting that the overall assessments are more candid. (Slide 27).

Thirdly, it is important to record that even those central banks who are not operational supervisors have still been involved in the setting of capital requirements, which is after all the most important part of the job. The Bank of England has remained for the last decade a member of the Basel committee. So has the Bank of Canada, which has never in fact been the Canadian bank supervisor. But a problem is that the central banks tend to send shadow supervisors rather than macro-economic people to these meetings. And there is little evidence of a tight linkage between their macro-analysis and their views on capital requirements. That is one reason why, I think some new mechanism would be needed if we want to bring some macro-prudential dimension to this activity.

With those three preambular points in mind, how do the arguments then look on the case for central bank involvement in the grubby business of overseeing individual institutions, rather than in the design of capital frameworks, which they do already?

The US and the UK differ on this important question. In an early speech Ben Bernanke (Slide 28) argued that "the Fed's ability to deal with diverse and hard to predict threats to financial stability depends critically on the information, expertise, and powers that it holds by virtue of being a bank supervisor and a central bank." Mervyn King does not take that view. Nor, indeed, does Hank Paulson, whose blueprint for regulatory reform published in March of this year notes that the US system "is at odds with the increasing convergence of financial service providers and products". (Slide 29). The US Treasury have proposed three separate regulators, one focused on market stability across the entire financial sector, which would be the Federal Reserve shorn of its direct institutional responsibilities, a regulator focused on safety and soundness of those institutions supported by a federal guarantee, and a regulator focused on protecting consumers and investors. In future the Fed's role "would continue through traditional channels of implementing monetary policy and providing liquidity to the financial system". This role would "replace the Fed's more limited role of Bank Holding Company supervision".

It is curious that the Bush administration's conclusions on this point from the crisis so far has been that they should reform their system in the direction of the UK's – albeit not getting quite as far as a single US financial regulator. While, here, many commentators have concluded that we should move back in the opposite direction. Maybe this is simply proof of the old adage that the grass is always greener…

Does the performance of the different regimes, whether central bank based or FSA based, in the crisis the last 18 months, point clearly in one direction or another? It is not obvious to me that it does. It is hard to conclude other than that good and bad decisions have been made in both organisational structures. I do not think that the crisis has fundamentally altered the balance of the arguments on this issue, although it has altered the balance of argument on the scale of deposit protection, and on other important questions, like the design of a special resolution mechanism for failing banks. As far as the role of the central bank in supervision is concerned, however, my own conclusions are as follows:

- that no single model of supervision is clearly superior to all others
- a functionally based system has many drawbacks, and, in the light of the US Treasury's analysis, the defences of the US system by successive Fed chairman are surely no longer operational
- the process of integration of different sub sectors of the financial markets continues apace and looks to me to strengthen the arguments for integrated regulation. We can now see that institutions of different sorts, whether broker dealers or indeed insurance companies like AIG, can be systemic. We can also see that the process of risk transfer around the financial system requires regulators to have a clear view of the financial sector as a whole.
- But the crisis does point to the importance for a central bank of good links with regulators on one hand and market participants on the other. A central bank which behaves as a monetary policy institute risks finding itself dangerously behind the game when a crisis strikes, and central banks clearly need in senior management positions individuals with experience of and an instinct for and understanding of the dynamics of banking and securities markets, and of the use made of those markets by other intermediaries.

However, carrying out the grubby day to day tasks of prudential regulation of individual institutions is neither necessary nor sufficient to create the understanding of financial stability and the threats thereto that a central bank needs. And I continue to see other advantages in an integrated model of regulation and in the separation of regulation from the monetary authority .What is needed, though, is much more work on the technology of financial stability assessment, as the ECB have rightly argued.

My fifth and last question is more general. Is there now a need to renegotiate the social contract between the financial authorities, and notably the central bank, and the banking system?

Renegotiating the social contract (Slide 30)

I am indebted to Paul Tucker of the Bank of England for the use of this term. In some very interesting remarks to a Chatham House conference earlier this year, Tucker described the nature of the relationship between the banks and the state. Banks undertake the economically essential but inherently hazardous transformation of sight deposits into long term loans. We all know that this is in the nature of a confidence trick, and that if we all troop along to Coutts, or Hoares, which I imagine is where most of you have your accounts, to take our money out, it would not be readily available. So banks would not undertake this activity, and we would not continue to deposit with them, unless some underpinnings by the authorities are in place. (Slide 31).

The two essential underpinnings are the potential provision of liquidity by the central bank, at times when the banks need it and on the assumption that they are fundamentally solvent. The lender of last resort function, in other words. The second underpinning is the existence of a deposit guarantee scheme, whether backed by an actual fund, or by a statute-based levy scheme with a call on the assets of the banking system as a whole. Those two underpinnings are potentially risky for the state. The state therefore needs to know what that banks are doing, and to exert some control over their risk appetite, as otherwise it is heads they win tails we all lose; bankers may pay themselves extravagantly from the proceeds of risk-taking in the good times while the tax payers pick up the tab in the bad times. This is, of course, no longer an argument which appears only in the academic literature. Today it is very real indeed. That points to an overhaul of prudential regulation.

Tucker points out that all elements of this social contract have now been thrown into question. Central banks have come to realise that the provision of liquidity is potentially open-ended, and the terms on which they have had to provide it in this crisis are more generous and more risky for the central bank than they have been before. In spite of provision of support on a massive scale liquidity has remained under severe pressure. (Slide 32). And inter-bank rates have remained stubbornly above policy rates (Slide 33) obliging central banks to provide support on hitherto unimaginably liberal terms. It may even be that they still have more to do, if interbank rates do not come down further soon.

Deposit protection schemes have been put under much greater threat on both sides of the Atlantic. Undoubtedly serious losses will be incurred, even if we use anti-terrorist legislation to hold Icelanders hostage. So the third part of the contract, the regulatory bit, must also be adjusted. Indeed that is what we have been talking about this evening at some length. But the question also arises as to whether other elements of this contract need to be revised. There are many voices calling for other types of control on the banking sector. Some argue for a version of directed lending – with support for the banks conditional on some volume of advances to particular sectors of the economy. Others argue for controls on executive pay, on the grounds, I suppose – though the argument is not put quite this way – that the banks have essentially become quasi-utilities, especially where they have direct government shareholding.

This is really difficult territory. We must hope that the situation we are now in is only temporary. I am sure that the government and the Bank of England, and the Federal Reserve, hope so too. We would not benefit economically in the long run from continued direct intervention in the banking system, whether through quantative controls on lending or through administered pricing. The authorities should try to get out as soon as possible, and I was encouraged to see last week that the Treasury is already thinking of an exit strategy. In the meantime, the government and the central banks should as far as possible use normal mechanisms to exert their influence. So, for example, I think the fraught question of bankers pay, in banks which the government have had to bail out, should be dealt with by appointing directors to the board who can influence discussions in the remuneration committee.

But it is idle to pretend that there will not be some long term consequences as a result of this debacle. In future the authorities will need closer relationships with the banks, and that will involve central banks as well as regulators. Indeed it will involve the macro-economic and monetary parts of central banks who are also regulators. Leverage will be reduced in the banking system for some time, if not permanently. Off balance sheet vehicles will be of closer interest to the authorities in the future. There will be much more dialogue on funding mechanisms than there has been in the past. It is evident that banks were engaging in activities which implicated the authorities, while the authorities were either unaware of them or insouciant. It would be useful, I think, to situate this debate within the kind of social contract language which Paul Tucker has suggested.

Conclusion

Let me offer, finally, a few very brief concluding observations.

The crisis has reminded us that central banks are, indeed, banks, and that their role at the centre of the financial system is crucial in times of trouble. A central bank cannot retreat in to an ivory tower and redefine itself as a monetary policy institute, however tempting that may be. But the type of central bank needed in the very different financial system we have today is open to question. Amid all the uncertainties, once again the definition of central banking is in flux. It is highly likely that there will be significant changes in the definition, and in the functions of the central bank in the next few years. The Bank of England's relationship with the markets has already changed considerably and the new liquidity arrangements outlined ten days or so ago will alter things again. Fortunately, the historical record tends to suggest the central banks have a strong capacity for adaptation. As Charles Goodhart has pointed out (Slide 34) "if the fundamental evolutionary criterion of success is that an organisation should be produced and multiplied over the world, and successfully mutate to meet the emerging challenges of time, then central banks have been conspicuously successful". They will need to rediscover that evolutionary skill to remain relevant in the very different economic and financial world of the 21st century. (Slide 35).