



Remarks given by

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The dreadful crisis affecting the international economy and financial system will rightly prompt a thorough re-examination of principles and structures: the 'rules of the game' for global finance. There will be many reports. As after the 1987 stock market crash and after the 1990s' EME crises, they will be rich in analysis, proposals and plans. The Turner Report is an early distinguished intervention, taking its place alongside, for example, the reports from Paul Volker's G30 Committee and Jacques Larosière's European group.

We would be foolhardy not to start thinking about the shape of the system we want, and we should take the quick wins. But it might well be a mistake to reach early conclusions on the truly big issues. Before this crisis is over, we could well learn quite a lot more about which business models and risk management practices worked best; and about how effectively the current efforts to stabilise banking systems and stimulate nominal demand work to revive our economies. We will then be in a better position to make judgments about just how much we need to constrain financial activity in the future in the interests of stability.

My own working definition of 'financial stability' has long been as follows. It is to do with money. It starts with monetary policy being directed, of course, to ensuring that the value of central bank money in terms of goods and services is stable. But most money in economies everywhere is private money: deposits with commercial banks. In significant degree, financial stability is about safeguarding the stability of private money (deposits with the banking system) relative to central bank money. Prosaically, depositors with banks have to be confident that they can exchange their deposits at face value for our money – our notes; or that they can switch to another bank where they can be confident of that. At the level of the system, we need an "exchange rate" of unity for private money and central bank money. And we need wholesale funders of banks to be confident of that too. When that is secured, demand for our money is low, and society reaps the efficiency benefits of the private sector banking system. Absent that confidence, the payments system simply would not work. And the supply of credit would be imperilled, as we have rediscovered to the global economy's great cost. These objectives – price stability, and banking system stability – are the two key facets of stability in a monetary economy. As recent events show, they can be affected profoundly by conditions in capital

markets and in overseas financial systems. Focusing ultimately on the stability of our monetary system therefore clearly requires a broad view of financial markets more generally.

Stability in the elemental sense I have described was profoundly threatened last autumn – when the universal crisis of confidence triggered by Lehmans' failure tore the fabric of international commerce. That stability has been sustained owes everything to governments stepping in, effectively being prepared to borrow from the future in order to prop up the banking system now. In that sense, we are, of course, 'beyond Financial Stability',¹ insofar as, ordinarily, we would regard instability as a state of affairs that requires such support.

The Turner Report rehearses the analysis of how we got to that point. It rightly places weight on the baleful effects of persistent and cumulative global current and capital account imbalances. I dearly wish that the international authorities had taken on board the lessons from the 1990s EME crises about the vital importance of monitoring, and where necessary managing, national balance sheets – for large countries as well as EMEs.² It is striking, however, that other analysts, including recently from the IMF, are starting to play down the part played by the international monetary system.³ I do not go along with that. There can surely be no disputing that macroeconomic imbalances have mattered greatly to the crisis, as they contributed to the build up of debt and, through the compression of risk-free rates and risk premia, the appreciation of asset prices. But in acknowledging that, we do not have to claim that of themselves such imbalances lead inevitably to financial instability. A necessary condition, in my view, is for faultlines to exist within the financial system itself – and the deeper they run, the greater will be the threat to stability. The identification and mitigation of such faultlines requires engagement with the details of the system. Those who argue that it is all down to global imbalances and that we did not need to know about leverage via CDOs and the shadow banking system and so on are equally wrong. But the scale of the macroeconomic imbalances that were allowed to accumulate surely raised the bar for resilience of the financial system, and probably beyond what was reasonable. We need to quit pointing the finger, alternatively, at global macroeconomic and financial system causes, and accept that it was both. The Turner Report does that.

A few points on micro regulation

The Report and accompanying FSA Discussion Paper's principal focus is, of course, micro regulation. I have just three points to add or emphasise on that this morning. Effective prudential supervision of individual firms relies on the line supervisors being prepared to substitute their views for those of management when they have good reason to believe that the viability or stability of a bank otherwise may be in peril. They need the confidence, when necessary, to face down management, and even boards; and also to be prepared to take the risk of being overruled on appeal. A respected, self-confident but restrained line supervisor, with the forensic skills to get to the heart of things, can do a very great deal for stability. It is terrific that Adair and Hector are renewing the emphasis on line supervision. (But, by the way, when supervisors do their job, their achievements are invisible and they get no thanks.)

Second, it is important to remember that most bank failures have their roots in large or concentrated exposures. This crisis is in some respects no exception. It is, therefore, good news for the future that, ahead of this crisis, the EU was already planning to extend the bar on large credit exposures to interbank deposits. Line supervisors must additionally look for concentrated exposures to sectors or instruments; to give just one of many possible examples, large holdings of super-senior CDO tranches just might have been a pointer to the vulnerabilities at some large internationally active banks. And the possibility of fateful concentrations in bank funding structures should be given similar weight. If all that requires more reporting by banks, it would be worth it.

Third, effective prudential supervision is seriously impeded by complex group structures. That was a headline lesson from the failure of BCCI nearly two decades ago; and EU Directives were amended to make unsupervisable structures a ground for withholding or withdrawing authorisation, and so for exercising regulatory powers. But complexity is not just a convenient shield for wickedness. It can also make it hard for management and supervisors to figure out what is going on in a perfectly honest business. The explosion of what I referred to a couple of years ago as Vehicular Finance,⁴ with committed credit lines and reputational risk constituting umbilical cords back to parent or sponsoring banks, was precisely a manifestation of that variety of obfuscatory complexity. Supervisors should get serious about working together on the oversight and regulation of international groups. The long-standing challenges of consolidated supervision are unfinished business, more than thirty years after the first Basel Concordat.⁵

Micro-to-macroprudential

Those issues, and even more those of capital and liquidity, shade into the debate about macroprudential oversight and regulation.

One explanation of the parlous state of the industrialised world banking system is that too many banks had made too many rotten individual-loan underwriting decisions. Quite plainly there was some of that: for example, manifestly in the US subprime market, in commercial property, and probably in some Leveraged Buy Outs. It would be the job of the authorities' bank examiners, as they are termed elsewhere, to detect significant erosion in the quality of individual portfolios or underwriting standards, and get it fixed before it overwhelmed the system.

Another, not mutually exclusive, explanation is that by virtue of holding large 'trading' books that were marked to market, banks found themselves having to make very large portfolio write downs in the face of sharp rises in liquidity premia in asset markets. As highly-levered institutions – as banks are unavoidably: deposits are debt – those mark-downs depleted their net worth to the point of imperilling solvency. That caused a retrenchment in the availability of credit, helping to plunge the world economy into recession, and so impairing traditional loan books, in a vicious spiral. The point of this account is that it emphasises the role of banks' leverage. Combined with maturity transformation, this unavoidably makes banks brittle. And that underlines just why our predecessors placed such great weight on the safety and soundness of banks.⁶ Indeed, the original reason for regulating capital was that an assurance of capital adequacy, for all but the most extreme circumstances, would make runs less likely.⁷ But that was hardly meant to lead to the neglect of liquidity highlighted a few years ago by one of my predecessors, Andrew Large, and others.⁸

Liquidity

We therefore welcome the Turner Report's exploration of 'core funding'. And we very much support, and have encouraged, the FSA's plan that all banks should in future hold a minimum level of high-quality government bonds, on the grounds that only they carry a reasonable assurance of market liquidity in stressed conditions. I hope the same approach can be adopted internationally.⁹ Further, supervisors should be vigilant in ensuring that banks' so-called 'treasury' or 'liquidity' portfolios are not concentrated in funding instruments, such as FRNs, issued by other banks. That turns out to have been all too prevalent. And they were not liquid when the music stopped. Years ago, regulators

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decided to deduct banks' holdings of each other's <u>capital</u>-instruments, to avoid the system as a whole generating illusory capital. The same principle could perhaps apply in liquidity regulation.

The authorities also need to be clear about what level of stress, and/or what proportion of short-term liabilities, the stock liquidity buffer must cover. That must be a judgment for the authorities; and it must, as the Turner Report makes clear, be more demanding than in the past. But just as important, we must not imagine that the kind of modelling that can be applied to, say, credit risk and, perhaps, to some types of market risk can sensibly be carried across to liquidity risk. Liquidity goes wrong when there is, in the jargon, strategic interaction: I run (or sell) because I think you will etc. Liquidity buffers need to sustain confidence; if successful, the buffer is never needed. A time series of data showing low use of a liquidity buffer is not compelling evidence that a requirement was too high. Our successors must remember that in 10-20 years time.

Of course, no liquidity buffer can be proof against all circumstances. Which is why central banks are in the business of providing liquidity insurance to the system.¹⁰ That insurance needs to be provided on terms that do not incite imprudent liquidity risks, and that are time consistent, in the sense that we avoid needing to recast our regime when really difficult times hit. The Bank set out its approach in the paper we issued last autumn on the launch of our Discount Window Facility, through which we stand ready to lend against a wide range of collateral at pre-determined fees to banks that are not facing fundamental problems of solvency or viability.¹¹

Capital, and capital-of-last-resort

I have talked about liquidity partly because, as our community returns to thinking about bank supervision in terms of stability as well as consumer protection, it needs to be centre stage again; but also because we can think about capital regulation under the same broad headings. What should count as capital; what risks should it protect against; and what happens when the system turns out not to have enough capital?

On the definition of capital, I agree with the Turner Report that what matters to stability is common equity (and possibly, subject to further analysis, also instruments that can unambiguously be converted into common equity at the option of the bank or regulator). That is because confidence in a bank as a going concern is crucial to the stability of its deposit and wholesale funding base. Subordinated debt may well help to protect depositors in the event of liquidation, but it cannot absorb losses on a

going-concern basis and so does little to avoid the incentive to run or, therefore, the slide into resolution. Nor does subordinated debt alter the position of retail depositors, who can look to the deposit-protection scheme, especially now that it provides 100% cover up to £50,000. Subordinated debt can enhance recoveries made by the Financial Services Compensation Scheme. But it is not directly stability-enhancing. The composition of regulatory capital was allowed to become too complicated. Including debt instruments is effectively to allow double leverage. The Basel Committee is itself returning to this question.

As with liquidity, I do not want to say much today about how to measure the risks that capital should cover. I applaud the Turner Report's analysis of 'trading book' risks; as discussed in the Bank's Financial Stability Review a few years ago,¹² making Value at Risk the bedrock of market risk requirements allows capital to fall, or leverage to rise, during periods of unusually low volatility. The Basel Committee are addressing this. More generally, the degree of stress that capital should enable banks to withstand, whether against default risk or market risk, should be decided by the authorities not by individual banks, precisely because of the systemic significance of banks to the payments and credit system. Even when individual banks look adequately capitalised taken in isolation, the aggregate position may be more vulnerable taking into account common exposures to credit, market or liquidity risk, and cross-system exposures. Capital requirements for individual firms may, therefore, need to depend on how liquidity mismatched and how leveraged the <u>system</u> as a whole is.

Even so, just as with liquidity, there will be rare episodes, which we must strive to make <u>very</u> rare, where there is a capital deficiency in individually significant banks, or even in the system as a whole. And, again analogously, we therefore need ex ante policies for catering with that.

There are two elements to such policies.

First, we need regimes for resolving distressed banks in an <u>orderly</u> way, outside of the insolvency regime applying to ordinary companies. The UK has taken a useful step forward in introducing a Special Resolution Regime for banks. We will need to keep its provisions under active review.

Large and Complex Financial Institutions present a special challenge. Nearly a decade ago, a joint G10/Financial Stability Group, on which I served, articulated the imponderable scale of the challenge of winding up such a group. The conclusion was that it lay beyond the current capability of the authorities internationally; but that, nevertheless, we should work together – providing factbooks on

firms and exchanging information – to put ourselves in the best possible position. None of that was done, and the FSF and G20 are, thankfully, now again underlining how vitally important it is. We need in particular to ensure that financial groups maintain information on the assets and liabilities of their legal entities; it is legal entities that go into resolution not business divisions. Lehmans shouts that out loud and clear. We need to ensure that banks, however grand they are, keep information that would facilitate rapid payout from deposit-protection schemes. We need banks to have contingency funding plans that are shared with regulators and central banks. We need, more ambitiously, to address Too Big To Fail. And we need to do just massively better at working together internationally.

However much we do, I fear that the inescapable conclusion will be that we cannot rule out that <u>very</u> rarely the banking system will end up needing to be supported by some ultimate source of capital. If that is right, then society needs principles and policies for what might be called 'Capital of Last Resort', to sit alongside the Lender of Last Resort (LOLR) principles developed by and for central banks since the 19th century.¹³ Parts of the academic community have started to think about and advocate capital-insurance from the private sector,¹⁴ but over the long term we need to decide whether or not to have a policy for public sector capital insurance. At a high level, this faces exactly the challenges of central bank liquidity insurance. Its terms must not incentivise imprudent behaviour; and they must be time consistent. These were exactly the challenges faced by the Bank in articulating the terms of its Discount Window Facility. But the challenges are even greater in this area because the exit strategy from capital injections is so much more difficult; by potentially delivering control, capital-insurance is much more closely intertwined with issues of management; and because there would have to be clarity about treatment of all parts of the capital structure.

I think that articulating and sticking to policies in this area will be one of the great challenges over the coming years and decades.

Macroprudential: taming the credit cycle

It would all be a lot easier if we could tame the credit cycle. This is the debate about the missing 'macroprudential instrument'.¹⁵ What would be the objective; is there in principle an instrument; would it work in practice in a world of free capital flows? Those debates are prior to questions of institutional responsibility. And they have a bearing on the parallel debate about the regulatory boundary, which is where I will begin.

I start from the position that excessive leverage and maturity transformation in parts of the non-bank financial sector – funds, conduits, securities dealers, and so on – was predicated on the availability of plentiful credit on too-easy terms from the commercial banking system. Up to a point, the same goes for liquidity in asset markets. Of course, persistently strong demand for financial assets – crudely, rising prices – created an illusion of liquidity but, beyond that, the willingness and terms on which 'market-makers' underpinned liquidity depended on their access to credit to finance inventory. And the ultimate private sector providers of such credit are commercial banks.¹⁶

One big question, therefore, is how far we could get in dampening the credit cycle by focusing on the provision of liquidity, and so leverage, by banks to other financial firms. That goes to whether hedge funds and other vehicles need to be brought within the net. Frankly, it is hard to know whether, internationally, the regulatory community tried and failed to control the leverage available to the non-bank financial sector; or whether it was not really attempted taking into account system-wide conditions. Either way, more information from non-banks would probably be needed to make such a policy workable.

But a second question, perhaps the biggest, is whether 'dampening the credit cycle' should be the goal at all; or, alternatively, whether it is a realistic goal. A very slightly more modest – but, in truth, still demanding – objective might be to concentrate on making banks themselves more resilient to economic or market shocks, so that it is less likely that they expose banking system fragility that amplifies an economic downturn.

A third big question is about instruments. Lots of candidates are canvassed. Dynamic provisioning under which banks would, in the manner of previous generations, set aside general provisions as loan books grew. Capital requirements that increased with the rate of growth of balance sheets, or some measure of incipient stress. Variable margin requirements on the terms of credit provided to financial, or even real-economy, borrowers.

A fourth big question is whether the chosen instrument(s), whatever it is, could be operated by rules or would require an element of top-down judgment. On that, I am inclined to the view that our community is unlikely to be able to write down a suitably robust rule. I have two reasons for that. One draws a parallel with monetary policy. The history of monetary policy, not least in this country, is littered with failed attempts to design an optimal rule, giving way to efforts to constrain the discretion of policymakers making judgments. I cannot see why we would be any better at developing rules for financial stability. As the structure of the financial system evolved, we would need to adapt the rule and would probably fail to spot the need to do so. But there is also something about the nature of financial stability problems that makes 'rules' implausible to me. In the upswing of the credit cycle, there is often a collective-action problem. Even though individual banks may perceive risk as underpriced, not knowing for sure whether or when the party will end they hesitate to step off the rollercoaster for fear of damaging their business franchise. This is precisely why it is the job of the authorities to 'take away the punchbowl as the party gets going'. I just cannot see how we could calibrate ex ante rules for the increase in capital requirements or whatever that would be needed to do that, but we would of course need somehow to find a way of sensibly constraining the discretion at the core of the alternative approach.

Even if we could resolve all those issues, a fifth big issue is how far individual national authorities would be able to operate in this field on their own, given free flows of capital internationally and cross-border banking.

These big questions are, of course, inter-related. Most obviously, how far we could get in designing an instrument(s) and a process for its deployment will affect whether the objective should be to ameliorate the effects of economic shocks on the banks or also the effects of the credit-creation process on the economy. And the objective will have a bearing on whether it is host or home authorities who need to constrain a bank's lending growth. That is a formidable agenda, and it underlines just how much there is to do.

Macroprudential: markets and infrastructure as part of the transmission mechanism

But if we are to deliver and maintain stability, a macroprudential agenda cannot focus only on countercyclical capital (or margin) requirements. We need to focus on how large shocks might be transmitted through the financial system.

Again, there is an analogy with monetary policy. Effective monetary policy relies upon a rich and subtle understanding of the structure of the economy and how our policy decisions are transmitted to our final goals (the so-called 'monetary transmission mechanism'). Equivalently, effective delivery of a financial stability mandate requires a rich and subtle understanding of the structure of the domestic and international financial system, and how developments in one part are transmitted to others. That

means our range must continue to extend beyond banks to the capital markets and the financial infrastructure.

The analogy does not stop there. In the monetary sphere, policymakers in the 1980s and 1990s urged reforms to make the <u>real</u> economy, especially labour markets, more flexible, as that would reduce the burden on monetary policy in smoothing cyclical fluctuations.¹⁷ The analogue in the financial stability sphere is that the authorities need to help to identify <u>and</u>, crucially, remedy faultlines in the financial system. Whereas for monetary policy we want real-economy flexibility, for financial stability we want financial system resilience. And just as the monetary policy transmission mechanism evolves, so the structure of the financial system changes. The explosion of Vehicular Finance and the development of credit trading are just two recent examples that affected the current crisis. We therefore need a very high-quality, continuous assessment of emerging vulnerabilities in the system as a whole, and how it would behave under stress.

Internationally the official community has not distinguished itself on that front over recent years. Just three examples; there are more, I fear.

First, there were too many large financial businesses for which an AAA rating was, fatally, more than a description of their credit standing; it <u>constituted</u> their business model.¹⁸ Examples include Fannie and Freddie; the Landesbanks; the US monoline insurers; the SIVs; and, if they can be thought to have a business model, the ABCPs. These institutions distorted the supply of credit across the global economy. (In the case of the monoline insurers, for structured finance they were effectively in the business of providing "end-of-the-world insurance with a settlement period of T+1".)

An even wider group of private-sector AAA institutions were not required to collateralise derivatives-related counterparty-credit exposures. The effect for the system as a whole was to introduce an extraordinary vulnerability to a ratings downgrade of any of these institutions or structures. There was, in effect, a potentially systemic cliff.¹⁹

A second serious faultline in global capital markets – arguably the greatest – was the firm expectation of 'no break the buck' in the massive global Money Market Mutual Fund industry; c. \$3trn in the US, more or less the same size as commercial bank deposits.²⁰ The failure to pay par at a major US money fund when Lehman collapsed helped trigger the unravelling of confidence across global markets. Constant net-asset value MMMFs have perhaps been, globally, the most important non-bank banks

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lying outside the scope of what I like to call the banking Social Contract:²¹ no prudential supervision, no 'deposit' insurance, no access to the discount window, and yet nevertheless allowed to conduct maturity transformation and offer payments services. Although smaller in Europe than in the US, this industry does exist over here; the ECB even include money funds in their definition of monetary institutions and so in measures of broad money. But there is the added twist that during the boom a large part of their assets comprised bank CDs and conduit ABCP. In other words, they have essentially been an intermediary between the banks and corporate treasurers, insurance companies etc, who fund banks at one remove.²² As Paul Volker's G30 report concludes, we need to review whether or not to continue to allow Constant NAV MMMFs; the alternative would be that they convert either into variable NAV funds (ie like any other mutual fund) or into regulated deposit-takers.

A third faultline may have been the extension of mark-to-market accounting to (more or less) everyone or everything without attention to how the dynamics of the system as a whole would be affected. If liquidity premia can fluctuate materially, the effects on portfolio values can be material, increasing or reducing leverage and affecting risk-seeking or shedding behaviour.²³ Accounting measures then become actors rather than purely passive measures. This is a world away from only a small handful of dealers marking to market. My point here is not that marking to market is necessarily flawed, but rather that the 'rules of the game' for global finance matter. It is really no good anyone arguing against that: the debate needs to move on and, thanks to the Financial Stability Forum, probably is.

The moral of this story is that the <u>details</u> of the structure of our capital markets matter to stability. They may matter only in the event of very low probability shocks to the system. But policymakers <u>must</u> focus on containing the impact of such tail events. <u>Systemic resilience</u> is as much a part of a macroprudential approach as countercyclical capital requirements.

This is not just a matter of picking out those features of the system we should dislike. It should occasionally, but with restraint, be as much about what we <u>do</u> want. The current topical issue is whether CDS contracts, or vanilla OTC contracts, should be centrally cleared and exchange-traded. Ideally yes, which will underline the importance of the integrity of central counterparty risk management, and systemic oversight by the authorities. But the broader issue is that the authorities should be ready to nudge intermediaries, asset managers and infrastructure providers into those market-development initiatives that are clearly desirable in the interests of stability but need not harm efficiency.

Put another way, the 'plumbing' matters. We have positive reasons, as well as negative ones, for believing that. Two examples. Fifteen to twenty years ago, central banks moved wholesale payment systems on to a Real-Time Gross Settlement basis. Cutting through the details, this meant that <u>settlement</u> banks are no longer exposed to each other during the day for the payments they send each other; and, in the UK and most other countries, the central bank delivers this without taking unsecured intra-day credit exposures itself.²⁴ Without those unheralded reforms, I have little doubt that last autumn's crisis would have been calamitous on a scale massively exceeding the dreadful near-seizure we did experience in the money markets. That example was a public sector initiative; the banks were more or less herded into it. But there is an equally important private sector initiative. Without the collateralisation of OTC-derivative counterparty credit exposures, the credit spillovers from firm and fund failures around the world would surely have been much greater.

What those two examples demonstrate is that the authorities and practitioners can get things right – when we focus on what will matter in <u>bad</u> states of the world.

Summary

The Turner Report makes a big contribution to developing the agenda for reforming the global financial system, including on macroprudential oversight. If anything, I may have added to that agenda this morning.

We need to undertake serious research and analysis on whether we can develop a macro instrument for taming the credit cycle.

But, in making the system more resilient, we cannot rely solely on bank capital or loan market requirements. That endeavour – heading-off incipient stress, and keeping the 'rules of the game' up to date and fit for purpose – requires high-quality surveillance of the system as a whole, bringing together analysis, experience and intelligence on markets, the macro environment, the infrastructure, firms. We have to identify and address faultlines. The system's strengths and weak points 'morph' over time. One era's solution may be today's or tomorrow's faultline: Fannie Mae is an example of that. And, for when those efforts fail, we need to be clearer about how the authorities will intervene to preserve stability, and whether we can construct a 'capital of last resort' policy that does not create perverse incentives during 'peacetime'.

Surveillance, building system resilience, crisis management. A macroprudential approach to stability has to do rather more than bring together a central bank's macroeconomists and a micro regulator's line supervisors. What lies in between matters hugely: markets, payment systems, the plumbing. I should like to think that, amongst others, central banks can bring something to this, drawing on our conjunctural expertise, but also on our operational presence in money and bond markets and at the heart of the payments and settlements system. Certainly the Bank will engage actively with the FSA, HMT, overseas central banks, and the industry in designing new 'rules of the game' for the global financial system.

ENDNOTES

¹ Bill White and colleagues have urged a debate on needing to think 'beyond monetary stability'; White, W (2006), "Is price stability enough?", BIS Working Papers, no 205.

⁴ Tucker P M W (2007), "A Perspective on Recent Monetary and Financial System Developments", Speech to Merrill Lynch Conference.

After all the excitement over the Capital Accords, the Concordats are perhaps strangely neglected. They remain the corner stone of international co-operations in the supervision of internationally active banks, which is where the Basel Committee began. The first Concordat was released in September 1975, "Basel Committee: Report on the supervision of banks' foreign establishments". A revised Concordat was released in 1983 after Banco Amrosiano. Both are available at www.bis.org

⁶ Bank supervision has its origins not in consumer protection but in preserving stability (and protecting the central bank against risks incurred through its open market operations and discount window lending). This was evident in the remarks, just over twenty years ago, of George Blunden, the Bank's then Deputy Governor and, a decade earlier, the founding Chairman of the Basel Committee: "Supervisory standards are set not only with an eye to what is required to protect depositors with individual institutions, looked at in the narrow context of their own operations, but also with an eye to protecting them from problems which could be created by wider, systemic, developments. A bank may consider a course of action it wishes to take to be acceptable – as it may well be in a limited context. But the same course might, if widely copied by other banks, have unfortunate effects on the banking system as a whole. It is part of the supervisors' job to take that wider, systemic view and sometimes to curb practices which even prudent banks might, if left to themselves, regard as safe." See, Blunden G, "Supervision and Central Banking", Bank of England Quarterly Bulletin, August 1987.

⁷ This traditional view has in recent years been expressed more formally in the analytical work of Hyun Shin and others. For example see, Cifuentes R, Ferruci G and Shin H S (2005), "Liquidity Risk and Contagion", Journal of the European Economic Association, 3, 556-566; a paper that was first published in the Bank of England Working Paper series.

For example, see Large A (2005), "Financial Stability: Managing Liquidity Risk in a Global System", Speech at the Fourteenth City of London Central Banking and Regulatory Conference, National Liberal Club, London; and Chaplin G, Emblow A and Michael I (2000), "Banking System Liquidity: Developments and Issues", Financial Stability Review, Issue 9, December 2000.

⁹ For example, see Bank for International Settlements (2008), "Principles for Sound Liquidity Risk Management and Supervision", Basel Committee on Banking Supervision; and Rule D (2008) "Ten Rules for Bank Liquidity Regulation", Financial World.

¹⁰ Goodhart C (1988), "The Evolution of Central Banks", MIT Press.

¹¹ See Section II of Bank of England (2008), "The Development of the Bank of England's Market Operations: A consultative paper by the Bank of England, October 2008.

¹² See pp. 54-55 of the Bank of England's June 2004 *Financial Stability Report*.

¹³ For example see, "The pursuit of financial stability", LSE lecture by Governor George, Bank of England Quarterly Bulletin.

¹⁴ Kashayp A K, Raghuram G R and Stein J C (2008), "Rethinking Capital Regulation", Jackson Hole Symposium, Federal Reserve Bank of Kansas City. ¹⁵ Governor King spoke to this on 24 March 2009 in evidence to the House of Lords Select Committee

on Economic Affairs and in a recent speech, King M A (2009), "Finance: A Return from Risk" to the Worshipful Company of International Bankers, at the Mansion House.

¹⁶ For example, see Brunnermeier M K and Pedersen L H (2008), "Market Liquidity and Funding Liquidity", The Society for Financial Studies, *Oxford University Press*. ¹⁷ Lord George (2008), "The Approach to Macroeconomic Management: How it Has Evolved", Per

Jacobsson Foundation Lecture, Bank for International Settlements.

¹⁸ I owe this argument to exchanges some years ago with my former colleague David Rule.

¹⁹ Gai P and Haldane A (2007), "Public Policy in and Era of Super-systemic Risk", Bank of England, mimeo.

²⁰ This faultline was stressed in the mid-1990s by, for example, Franklin Edwards (1996) "The New Finance: Regulation and Financial Stability", American Enterprise Institute.

²¹ For example, see Tucker P M W (2008), "Remarks by Paul Tucker" at Chatham House Conference on "The New Financial Frontiers" or Davies H (2008), "Banking and the State: changing the social contract".

² Financial Stability Forum (2000), "Report of the Working Group on Capital Flows".

³ IMF (2009), "Initial Lessons of the Crisis". (Washington: International Monetary Fund).

²² One argument advanced for them by practitioners is that corporate treasurers etc do not have the capacity to monitor and discriminate between banks and so it is more efficient to concentrate that activity amongst dedicated money fund managers. Although I have not seen it in the academic literature, this is analogous to Douglas Diamond's analysis of banks existing because they can act as 'delegated monitors' of the companies to which they on-lend savers' funds. For more detail see, Diamond D W (1984), "Financial Intermediation and Delegated Monitoring", *The Review of Economic Studies*, Vol. 51, No. 3. (Jul., 1984), pp. 393-414.
²³ Plantin G, Sapra H and H S Shin (2008), "Marking-to-Market: Panacea or Pandora's Box?", *Journal*

 ²³ Plantin G, Sapra H and H S Shin (2008), "Marking-to-Market: Panacea or Pandora's Box?", *Journal of Accounting Research*, 46, pp. 435-460.
 ²⁴ Leigh-Pemberton R (1989), "Developments in Wholesale Payment Systems", speech given at 12th

²⁴ Leigh-Pemberton R (1989), "Developments in Wholesale Payment Systems", speech given at 12th Payment Systems International Conference, 6 October, printed in *Bank of England Quarterly Bulletin*, November.