## David Clementi: Banks and systemic risk – theory and evidence

Speech by Mr David Clementi, Deputy Governor of the Bank of England, at a Bank of England Conference held in London, 23 May 2001.

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### Introduction

I would like to begin by extending a very warm welcome to you all to the Bank of England and to this conference. It is a great pleasure indeed to be welcoming so many distinguished participants, both as speakers and audience members; I am confident that we have the right mix of academics, officials, and industry representatives to take forward our chosen subject.

'Banks and systemic risk' is our title, and I would like to introduce the conference by saying a few words about the choice of material: why is it important to discuss these issues? And why is it topical to discuss them now? Having dealt with the importance of financial stability and the challenges presented by the current environment, I would then like to turn to some policy responses and to focus in particular on disclosure, the procyclicality of capital requirements and the impact of the new Basel Accord on overall capital. I would like to finish by saying something about the importance of consistency in the capital requirements for banks and insurance companies. One theme which I will return to throughout is the importance of achieving an acceptable balance between financial stability and financial efficiency. And a second theme is the need to bear in mind the distinction between the stability of individual institutions and the stability of the system.

### Bank of England's role in financial stability

But if I may, I'd like to precede all this with a brief explanation of why we are discussing this topic here – that is, why we at the Bank of England have a keen interest in promoting debate in this area.

As many of you may know, in 1997 the UK Government took the decision to separate banking supervision from the central bank and unify it with the rest of financial supervision under the new Financial Services Authority. At the same time, the maintenance of stability in the overall financial system was clarified as one of the three core tasks of the Bank of England, along with responsibility for monetary stability and promotion of efficiency and effectiveness in the financial system. So we continue to take a strong interest in the issue of overall systemic stability, including how to monitor it, how to promote it, and how best to deal with any stresses that might arise.

Obviously co-ordinating our efforts with the FSA's supervision of individual institutions and the Treasury's legislative responsibilities is key. We work hard at fostering a close relationship, helped by the fact that I am a member of the FSA Board and Howard Davies, who is giving the key-note address tomorrow, is a non-executive director of the Bank. Our respective roles and responsibilities, including in a crisis, are set out in a formal Memorandum of Understanding published in the Autumn of 1997 between the Treasury, Bank of England, and FSA. The MOU also established a Tripartite Standing Committee that meets monthly to exchange information and discuss current threats to financial stability.

I like to think that, with the departure of responsibility for day-to-day supervision of individual institutions, the Bank has addressed the issue of systemic stability with a new-found clarity of purpose. That said, we know that there is a huge amount of work still to be done on understanding systemic risk. I see a clear contrast here with the monetary policy field. In monetary policy, we are closer to a general consensus about the policy framework and the objectives of monetary policy, even if at any moment of time uncertainty still surrounds our forecast for inflation and the appropriate policy response. Certainly the UK target for monetary stability (the 2.5% symmetrical inflation target) is clear and transparent. In the field of systemic stability and financial crisis, however, our understanding is at a very preliminary stage. We face an array of fundamental questions: how to define systemic stability; how to measure and predict it; what policy weapons we should employ to achieve it; what the costs are if we fail; and how best to resolve instability if it occurs. We have only partial answers to these questions. Defining the objective is possible only in the broadest sense, measuring how close we are

to it is even more difficult; there is certainly no agreed single indicator or set of indicators which tell us when we have achieved financial stability or when we risk failing to achieve it.

#### Importance of financial stability

In part this is because we still lack evidence. This comment may strike some of you, perhaps those from Scandinavia or Japan, as ironic; you may feel that the body of evidence we have is already disagreeably large. However, whilst banking crises are not exactly rare, they are episodic rather than regular and they tend to exhibit a number of idiosyncratic characteristics. This is in some sense reassuring – at least banks and the authorities do not keep making exactly the same mistakes – but at the same time it makes predicting crises very difficult. The causality is complex and difficult to grasp. In some cases, fragility at individual banks can turn into system-wide fragility and in turn into system-wide crisis. In others, a macro-prudential shock or policy error can impact on individual institutions, revealing underlying systemic weakness and triggering a crisis. However, the papers to be presented at this conference each address, in various ways, one or more of these issue s – about definitions, objectives, and policy mechanisms – and I am confident that at the end we will have achieved our aim of a real advance in our understanding.

I said just now that I wanted to address two questions, the first of which was why the subject is so important. Well, in this murky and difficult area, there is perhaps one aspect which commands a fair consensus, which is that financial crises, specifically banking crises, produce real economic costs. There are the immediate direct costs to the public sector if crisis-hit banks require lender of last resort support or have to be bailed out, and longer term costs to growth. There is a lively debate on how to measure the latter, which I hope we can take further during this conference, as one of the papers is addressing this very subject, but I would describe the range of estimates in some countries as starting at large and ending at very large indeed. Interestingly, on some measures, the longer term output costs seem to end up higher in developed countries than in emerging market countries, in the main we think because crises in developed countries have typically dragged on for long er. On top of evidence about the impact of financial instability, there is also evidence that the incidence of banking crises has become more frequent over the past 20 years. In fact four out of the G-10 countries have suffered a banking crisis of one sort or another in the last ten years. It is thus clear that financial instability remains a hugely relevant topic to both developed and emerging market economies.

#### Threats to financial stability in the current environment

Having described the potential costs of financial crisis and why financial stability matters, I want to turn to my second question, why it matters now. By this I do not mean that we have detected any unusually marked amount of stress or weakness in the financial system. Indeed, I cannot resist at this point expressing some thankfulness that we are managing to hold this discussion in relatively calm times (although this is the sort of comment that might be better saved for the closing address at a conference rather than the opening one). The last international conference the Bank sponsored on a financial stability topic, back in September 1998, followed closely on considerable turbulence in global bond markets and in fact managed to coincide with the incipient collapse of LTCM. As we found out shortly afterwards, we were lucky to have any American colleagues at all at that event! Rather, I mean that the financial system, and in particular the banking system, is undergoing substantial change, both in its external environment and in the way it manages its risks and is regulated. Globalisation, consolidation, conglomeration within and across sectors, technological change: these are not new developments, but they are continuing and intensifying. These developments present new opportunities to banks, as financial markets open up and mature. But they also present challenges. New markets, new customers, new products, new technology: the risks of something going wrong are high if the industry's risk assessment procedures and control mechanisms do not keep pace.

The impetus behind all these changes is intensified competition. This is good news for financial efficiency, and given that this is also one of the Bank of England's core interests, we welcome it. But there are undoubtedly some implications for financial stability, at least in transition. An increase in competitiveness may for a period increase the financial system's vulnerability to shocks; academic research suggests that the process of financial liberalisation can increase significantly the probability of a banking crisis. So how do we make this trade-off acceptable, given that we certainly do not want to exchange the overt costs of financial crisis for the hidden costs of financial protectionism?

## Policy response to the changing environment

Well, a large part of the answer must be to strive for improvements in the financial and regulatory infrastructure – to 'risk proof' the system as it were. There are a number of very significant initiatives that are worth mentioning in this context. The proposed new Accord from the Basel Committee is deservedly the focus of a number of the papers to be presented at this conference. A large slice of our time here is also going to be devoted to evidence on the effectiveness of market discipline on banks. Market discipline through enhanced disclosure does of course form one of the pillars of the new Basel Accord but there are also broader international initiatives underway on this front. What I would like to do is spend a little time here discussing how increased public disclosure, and certain other aspects of the new Basel Accord, could affect financial efficiency and financial stability. Is it possible to achieve advances in both?

## Enhanced disclosure

Clearly the architects of these initiatives believe so. Increased disclosure should help the market distinguish between well-managed and adequately capitalised banks and their poorly managed and unsound counterparts. The latter will as a result come under pressure to improve their performance. This should produce clear financial stability benefits, and also financial efficiency ones, since the weaker banks are likely to be those who in some sense misdirect, or rather mis-price, credit to borrowers.

Greater disclosure should also help to address the propensity in financial markets for self-fulfilling crisis. By this I mean, the tendency as conditions deteriorate and confidence is dispelled for market participants to act in a way that precipitates crisis for firms that would otherwise be solvent. The greater the uncertainty the more participants will be liable to trigger a crisis in this way. Increased disclosure has a part to play in reducing this risk. But it also explains the importance that we attach to liquidity management and the need to ensure that, given the current focus on the new Basel Accord, the regulation of liquidity is not overlooked.

There are of course a number of conditions that have to hold before we can be confident that increased disclosure will deliver real benefits for financial stability and efficiency. As far as market discipline is concerned, increased disclosure by itself is not enough to achieve this: the market has to have an incentive to monitor the disclosed information, the ability to monitor it, and the means to influence the banks once it is disclosed. There is no point, for example, in introducing extra disclosures if the burden of producing and absorbing it proves too high. This will not achieve our aim of improving stability and will probably negatively affect efficiency through the imposition of pointless costs. I think that the proposals in the new Basel Accord do incorporate these considerations, even though there has been some concern from the industry about the proposed volume of disclosure. First, the disclosure requirements are intended to use information that is already produced for other purposes, whether regulatory or internal. This helps to keep producer costs down. And secondly, there are recommendations for standard formats and templates for disclosures, which will help keep the user costs of absorbing the information low.

Equally there is no point in enhancing disclosures if the market has no incentive to apply the information because creditors believe that banks will not be allowed to fail. So our goal of improving and harnessing market discipline has to go hand in hand with continued rolling back of state guarantees, whether formal or implicit. Finally, we have to do our best to ensure that market discipline is exercised in a relatively benign and gradual way – graded differentiation of spreads on debt for example, rather than sudden refusal by the market to rollover debt at any price. This means we need to think hard about the frequency as well as detail of disclosures, and specifically the trade-off between the two. Too frequent disclosure might not only be too onerous but also add to the volatility of company ratings. Too long and the potential for large step changes in an institution's risk profile will increase market uncertainty and volatility. Of course, there may be times when this cannot be avoided – the sudden emergence of fraud for example – which is where crisis management by the bank concerned and by the authorities comes into play. But we should not overemphasise the relevance of these new disclosure initiatives in this particular sort of situation: publicly owned banks are after all already required to disclose any information which could significantly affect their share price.

## Impact of the New Basel Accord

Turning to the Basel proposals on minimum capital, their aim is to align regulatory capital much more closely with risk. This should have financial efficiency benefits, as I explained just now. To the extent that seriously undercapitalised risk taking by banks will in the future be more difficult, there are also clear financial stability benefits. But for system wide financial stability, we also need to think about the effects not just on individual banks, but collectively on the financial system. In this context I would like to touch briefly on four issues: procyclicality; overall capital; financial consolidation; and consistency of the capital framework for other financial intermediaries.

### *(a) Procyclicality*

On the first I will be very brief indeed; the implications of risk sensitive capital requirements over the financial cycle is a subject which I and other commentators have raised on a number of occasions. But it is extremely relevant to a debate on systemic risk. It is a clear example of how rational and indeed prudent behaviour by individual banks – raising capital, including cutting back on credit granted if no other route is possible, in the light of perceived heightened risk – could collectively be damaging to the system. Some academics are indeed criticising the risk-sensitive capital requirements that we already have for market risk, on similar grounds. In the Asian crisis, for example, VaR measures of market risk, and their associated capital requirements, increased extremely sharply, leading banks to enforce loss limits which in turn exacerbated price falls. But I am not aware that anyone is suggesting that risk insensitive capital measures are the answer – they are associated with much more obvious and damaging pitfalls. Rather we need to ensure that, in so far as we can, we avoid sudden perceptions of changed risk. To achieve this, risk sensitive capital requirements need to be both sufficiently backward looking and sufficiently forward looking: backward-looking in the sense that they should be based on long runs of data that incorporate experience of both peaks and troughs; and forward-looking in the sense that risk measures hold good through the business cycle, taking account of possible future downturns even as banks are extending credit in benign conditions.

### *(b) Overall capital*

The issue of how the new Basel framework will affect the overall amount of capital in the international banking system is also a hot potato at the moment. Again, this is a question which is crucial to the right balance between financial stability and financial efficiency. Erring on the low side in the minimum capital standard could result in unacceptable risk, while erring on the high side with too much capital is likely to result once again in wasteful and costly regulatory arbitrage. The importance of the question is, however, mirrored by its difficulty. Deciding the relative riskiness of different types of banking business is technically challenging enough, but the issue of where absolutely our tolerance of banking fragility lies is not only a problematic technical question but is also of course a normative one. And like all normative questions, different people will have different answers.

Turning to the technical aspects of this issue, I would note that even if we can agree on, and then measure, the minimum solvency standard which we should be targeting for our international banks, perhaps the really hard step is making a robust connection between individual banks' solvency and the solvency of the system. The latter is the primary focus of central banks though the former is obviously a necessary condition. I am encouraged to see that a number of the papers to be presented here have a go at making this connection. This is an issue which merits substantially more attention and research. It is far from just a statistical exercise: whilst we might just possibly be able to calculate statistically the joint probability of failure for a group of banks from their existing individual probabilities of failure, this does not of course reflect realities. Those realities are that the risk of collective bank failures depends on hard-to-measure and fluctuating factors such as correlations in risk profiles, and the mood and behaviour of the market once fragility at one institution becomes apparent.

### *(c) Consolidation*

The changing financial landscape complicates the task, and this brings me to the third point I wanted to highlight, namely consolidation. Consolidation of financial institutions is a trend that is relevant to several different facets of systemic risk. First, does consolidation make banks more or less likely to fail? Diversification is a solid protection against failure, but not all mergers and acquisitions are motivated by diversification – they may by contrast be designed to gain greater market share in an existing business and thereby do nothing to increase diversification. Moreover, there is again the

distinction between individual banks and the system – the system can be diversified by having lots of different specialised banks. This would not in all circumstances be a less robust system than one where individual banks have reasonably diversified portfolios which are all as a result vulnerable to common shocks, or one where a smaller number of large banks are all directly interconnected with each other. And finally, even if we were to conclude that consolidation makes banks safer in the long run, the short run effects could be very different as management tries to resolve inconsistencies in systems or clashes in cultures.

Secondly, there is the issue that consolidation is perhaps likely to make bank failure more damaging in its impact, although again this can only be judged case by case. And thirdly, since larger banks tend to be organisationally more complex, there is the question that resolving large bank failures can turn out to be an infinitely more complex task. I would stress that all this does not mean we think consolidation extends 'too big to fail' status; but it does mean that central banks and other authorities have to ensure that they are monitoring how consolidation is affecting risk and financial interlinkages. They should also think ahead and examine matters such as their own operational expertise, information flows with other bodies, legal processes and other procedures, in the event of a complex wind-down.

### *(d) Consistency*

The final point I want to highlight is the question of consistency of regulation between different types of financial intermediary. It makes no sense to introduce a Rolls Royce system of capital adequacy regulation for banks if we have not considered the ramifications for the financial system as a whole, in the light in particular of the very different capital frameworks which apply to insurance companies. We may find that our new rules are simply arbitraged away, for example using credit risk transfers to insurance subsidiaries, or asset securitisation sales to third party insurers, or credit insurance and derivatives sold by insurers. In the long run, both our financial stability and financial efficiency objectives could be undermined by this: financial stability if we find that these credit risk transfers are not robust, or that they result in potentially systemic strains in the insurance sector; and financial efficiency through the extra costs of arbitrage processes.

I emphasise that this is not a call for harmonisation of regulation or a blind assertion of the need for a completely level playing field, but simply a call to re-examine the rationale for differences in regulation. We may find that some differences are justified. For example, if we conclude that failures of insurance companies impose fewer systemic costs than bank failures, we might certainly choose to set our minimum insolvency tolerance at a different level. Much of the detail of risk measurement and regulation must necessarily differ, for example because of the very different time horizons involved in life insurance compared with either banking or securities business or non-life insurance. But there is a body of common risks faced by banks and insurers on both their assets and liabilities – namely credit, market, and operational risks – as well as a body of distinct risks (such as mortality risk for life insurance companies and on the banking side liquidity risk); and to my mind this means that any very fundamental divergences in the basic frameworks do need careful consideration: for example, whether the trend toward risk based measures in banking needs to be mirrored in the non-life insurance regulation in Europe. This is clearly not a small task but I would welcome it being scheduled for the future on the international agenda. The establishment in recent years of regulators like the FSA with responsibility in a single body for bank and insurance supervision will help to achieve progress in this area; indeed the convergence of risks being taken by financial institutions of different origins is a central plank underlying the need, certainly in the UK, for an organisation like the FSA.

## Conclusion

I feel aware that throughout this address I seem to have repeatedly stressed the importance of advancing our analysis of systemic risk and at the same time the huge complexities involved in this task. Having highlighted the difficulties, it is now conveniently time to hand over the podium to those who may have some of the answers! I'd like to end by referring back to my statement of our objective for this conference, namely to achieve an advance in our understanding of systemic risk. This is of course not our only objective: we also hope that you manage to enjoy the opportunity of meeting with so many colleagues from around the world, enjoy the Bank's hospitality, and for those of you from overseas to enjoy your visit to London. Thank-you.