



# Some New Directions for Financial Stability?

*C.A.E. Goodhart, CBE*

University of Zurich  
Zurich, Switzerland

Sunday, June 27, 2004

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**Bank for International Settlements  
Per Jacobsson Foundation**

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# Foreword

The first 2004 Per Jacobsson lecture, “Some New Directions for Financial Stability?” was delivered by Professor Charles Goodhart, Deputy Director of the Financial Markets Group at the London School of Economics, on Sunday, June 27. Professor Goodhart’s presentation was made in the Aula of the University of Zurich, Switzerland, in conjunction with the Annual General Meeting of the Bank for International Settlements (BIS) in Basel. Mr. Jacques de Larosière, Chairman of the Per Jacobsson Foundation, and Mr. Malcolm D. Knight, General Manager of the BIS, presided over the event, the proceedings of which are presented in this publication.

The Per Jacobsson Foundation was established in 1964 to commemorate the work of Per Jacobsson (1894–1963) as a statesman in international monetary affairs. Per Jacobsson was the third Managing Director of the IMF (1956–63) and had earlier served as the Economic Adviser of the BIS (1931–56).

On the occasion of the fortieth anniversary of the Foundation, the second 2004 lecture will be delivered in Washington, D.C., on Sunday, October 3, 2004, in conjunction with the Annual Meetings of the Boards of Governors of the International Monetary Fund and the World Bank. The speaker will be the Honorable Lawrence Summers, President of Harvard University and former Secretary of the U.S. Treasury. The event will be held in the Hall of the Americas at the Headquarters Main Building of the Organization of American States at 17th Street and Constitution Avenue, NW, Washington, D.C. 20006.



# Opening Remarks

**MALCOLM KNIGHT**

Before I hand over to the Chairman of the Per Jacobsson Foundation, I would just like to say that it is a great privilege to be here at Zurich University in this splendid auditorium. This room has been the venue for many renowned speakers in the past. There is a plaque here which explains that on the 19th of September, 1946, Sir Winston Churchill spoke in this room. In March, in Fulton, Missouri, he had given his famous Iron Curtain speech. Here, in September, he spoke on the theme “Let Europe Arise.” Much has happened since then, although that sort of theme has maybe come back a little bit in terms of relevance to the current economic conjuncture.

Let me also very quickly draw your attention to the painting that is behind me. It was begun at the beginning of the last century by Ferdinand Hodler and finished by Paul Bodmer, two very famous Swiss artists. As you can see, the painting depicts a circle of women joined in obvious harmony while the men are around the periphery. I think that this picture might remind us, particularly in our community of economists, of the strength and importance of what are sometimes seen as the feminine qualities of intuitive awareness and understanding. If I can apply that analogy to our world of central banking, I think we should always recall that our successful collaboration depends not only on careful analysis and logical thinking but also on effective intuitive communication and informal contact. These are very important elements that our informal meetings at the BIS attempt to foster and of which our Annual General Meeting is an important part. So, without further ado, then, let me hand over the chairmanship of this session to Jacques de Larosière.



## JACQUES DE LAROSIÈRE

Thank you very much, Malcolm. First of all, I would like to express the deep gratitude of the Per Jacobsson Foundation to you and the BIS because once more you have been willing to host this lecture, and this is a great pleasure and a great honor for the Foundation. Actually, without the BIS, there would not be this session today. And when I see the audience, where I recognize many—I wouldn't say old friends, but young friends of some time—I am particularly happy, and I know I am speaking on behalf of Leo Van Houtven, our president, to tell you how happy we are.

Now it is a very easy task for me this time to introduce our speaker. It is an easy task because I would say that Charles Goodhart is the ideal speaker. I know I shouldn't say that before the speech because it puts the speaker under some pressure, but when you think of his work, of his career, you have to wonder why we didn't think of Mr. Goodhart before to deliver a Per Jacobsson Foundation lecture.

He has, indeed, two characteristics that together are rather unique in the field of financial matters. On the one side, he is an academic, and he is an academic of high prestige. He has taught at the University of Cambridge, where he was a fellow of Trinity College, and he has taught at the London School of Economics. We know what Cambridge and the LSE represent in terms of academic excellence, and not only has he taught at these institutions but, perhaps as importantly, he has reflected and written, and his publications, including his books, are well known. I will not go through the list, but I will just say that *Money, Information, and Uncertainty* captures in a way the essence of what we are all together trying to do in our daily lives, in our institutions, and you also know *Monetary Theory and Practice: The UK Experience* and *The Central Bank and the Financial System*—all these are on themes that we are familiar with.

So that's the academic part. But what is more *original*, as we would say in French, is that Professor Goodhart has combined this academic life and career with practical experience in monetary policy making. Indeed, he has worked at the Bank of England for some 17 years, I think, in total, as monetary adviser, Chief Adviser actually in 1980, and in 1997 he was appointed—and this says a lot, in terms of the openness, intelligence, and farsightedness of the Governor of the Bank of England, whom I salute this morning—as

an outside, independent member of the newly formed Bank of England Monetary Policy Committee until 2000.

So you have got this rare combination of policymaking and academic thinking, and after having read Mr. Goodhart's speech, which I was immensely and intensely interested in, I think we are going to have one of our great Per Jacobsson sessions today, and thank you again, all of you, for coming to listen to this exposition.

Professor Goodhart, now you have the floor.

### **CHARLES GOODHART**

Thank you so much, Jacques. One thing that my CV, however, does not say is that I am also a distant relative of the erstwhile U.S. Secretary of the Treasury, Henry Morgenthau, Jr., who, among other things, as you probably know, advocated closing down the BIS at the end of World War II.

Now, the suggestion that today I am intending to fulfill that long-standing obligation by boring you all to death is, I trust, a canard. More seriously, though, Per Jacobsson had the responsibility of guiding the BIS through some very difficult times then, and *pace* my relative, I am very glad that he succeeded so that I can have the opportunity of addressing you this morning.



# Some New Directions for Financial Stability?

C.A.E. GOODHART, CBE

When the incoming Labour government in the United Kingdom transferred responsibility for the supervision of banks to the newly formed Financial Services Authority (FSA) in May 1997, at the same time it reaffirmed (for example, in the Chancellor's Statement on the Bank of England of May 20, 1997, reprinted in the *Bank of England Quarterly*, 1997, p. 246) that the Bank of England retained responsibility for overall financial stability. But what exactly are the functional responsibilities of a central bank which is required to maintain systemic financial stability without having supervisory oversight of individual financial institutions? Particularly, since a number of other major countries have been following this same route—for example, in Scandinavia, Japan, Germany, Austria, and, now, China—it is worth starting with this question.

Several aspects of this role are clear and relatively uncontroversial. Whereas the FSA has responsibility for supervising individual financial *institutions*,<sup>1</sup> the central bank retains responsibility for the smooth running of the domestic payments system and, by extension, oversight of the structure and soundness of the clearing and

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*Note:* I am grateful to Howard Davies, Graham Hache, Rafael Repullo, Dirk Schoenmaker, Hyun Shin, Martin Summer, Philip Turner, Leo Van Houtven, William White, and Geoffrey Wood for helpful suggestions. Responsibility for all remaining errors of fact and interpretation lies, however, with me.

<sup>1</sup>Whereas it is clear that the FSA has sole responsibility for supervising individual financial institutions, the division of responsibility for systemic financial developments is more nuanced. Thus, the Financial Services and Markets Act in the United Kingdom also gives the FSA a parallel responsibility for “maintaining confidence in the UK's financial markets.”

settlement systems of the main financial markets, money and bond markets, the foreign exchange market, and (perhaps to a somewhat lesser extent) the equity market. Similarly, the central bank will be the body most concerned with the interlinkages between domestic financial markets and payment systems and international markets and systems, in the European case with the Target system.

A second, associated function, thrown into prominence by 9/11, is to undertake contingency planning against a major physical disruption of markets, whether by terrorism or natural causes.

A third role, perhaps the best-known component in this portfolio of operational tasks, is to provide injections of liquidity, either to the financial system as a whole via open market operations or via lender-of-last-resort (LOLR) actions to individual institutions. A problem with such latter LOLR operations is that they might put taxpayers' money at risk. In many cases of bank rescues, for example, in Scandinavia and Japan, the scale of the losses were such that only the fiscal authority could take up the burden. Even when this is not so, as in the case of the Johnson Matthey bank rescue in 1984 in the United Kingdom, lending by the central bank may involve some subsequent loss, and the taxpayer is the residual owner of the central bank. Such losses from LOLR are the more likely, the greater the incentive for a commercial bank in trouble to defer approaching the authorities until it has used up every other possible avenue of raising funds. Is there an analogy here at the international level with the IMF and national governments?

Moreover, the official body which such a troubled bank must first approach in the United Kingdom is the FSA, not the Bank. Consequently, a decision on how to deal with an impending financial crisis has to depend on a troika, or a combination of three authorities: FSA, Bank, and Treasury (or Ministry of Finance), and hence the political authorities.

While this troika has been nicely formalized, in the United Kingdom at least, by a Memorandum of Understanding (MOU) and the establishment of a Tripartite Standing Committee, the implications of all this for the *international* handling of crises have not been, in my view, so clearly prepared, at least in the European context, and I shall later turn to this specifically. One immediate conclusion, however, is that the central bank in a country where the banks (or

a significant proportion of the major banks, as in the United States) are subject to supervision by a separate supervisory authority, can hardly any longer be the sole financial representative at national, or international, discussions of regulatory changes.

The period from 1974 until the end of the 1990s—when the Basel Committee on Banking Supervision was a private informal enclave of central bankers, establishing soft law for the international financial architecture—was constitutionally extraordinary, though generally beneficent. It deserves a full, detailed historical treatment. Be that as it may, the separation of supervision from central banks and the enhanced involvement of Ministries of Finance (together with the greater role of the IMF and World Bank in this field) are now making the procedures for reforming the international financial architecture, both globally and in the European Union, more messy and complicated, but somewhat more “democratic,” than perhaps they used to be.

So there are lots of valuable and useful bits and pieces that come under the wing of the financial stability function, but it is, perhaps, arguable whether they amount to a coherent whole. Moreover, until a crisis comes along, this branch has no regular unilateral decision that it can take, unlike a Monetary Policy Committee (MPC) setting interest rates. In most cases, decisions, for example, on regulatory changes, are taken after much discussion between FSA, Treasury, and the Bank, or even more tortuously in international committees. There is no clear-cut instrument, nor a clear-cut objective, except the negative one of avoiding financial instability.

Indeed there is currently no good way to define, nor certainly to give a quantitative measurement of, financial stability. When Phil Davis, who has established a professional chat group of experts on this subject on the Internet, asked the group to define financial stability, the most persuasive responses were that it was just the absence of financial instability.

Let me put the problem another way. When a central bank issues an Inflation Report, it describes what has been happening to a whole series of economic variables, and (usually) sets out some account of its forecasts for the main macro objective variables, for example, inflation and output. While this is commonly done descriptively in words, lying behind it all are (a suite of) quantitative economic models (based on some combination of theory, practical relevance, and empirical fit). In comparison, the financial stability

reviews put out by many of the same central banks, and indeed initiated once again by the Bank of England, have roughly similar descriptions of financial developments, and very useful and interesting these are, but there is no overall, coherent model lying behind it all, as in the case of the Inflation Report. With imitation being the sincerest form of flattery, the Bank of England has been recognized as leading the way so far for those central banks without responsibility for supervision of individual banks.

Yet there is a long way to travel. In this talk I shall outline some new directions that we need to consider in this field. First, I shall develop the theme already noted, which is that we need to construct models of *systemic* stability, not just of individual bank probability of default; second, that we need to pay more heed to the links between fiscal and monetary policies on the financial stability side; third, that, exhausted as you all may be by the marathon effort of agreeing Basel II, we do need to go on to integrate concern with interest margins and liquidity alongside the reforms to risk-related capital adequacy requirements (CARs); and, finally, that the combination of risk-related CARs and the ongoing trend to market, or fair value, accounting behooves us all to give further, serious consideration to ways of mitigating procyclicality.

### **A RESEARCH AGENDA**

So I have become increasingly of the view that what needs to be done is to construct an underlying model that can act as an intellectual backstop to the systemic financial stability function, analogously to the way that macro forecasting models provide the intellectual backbone to the MPC's interest rate decision. A major problem in this respect is that almost all the quantitative techniques for risk measurement that have been devised apply to the individual (banking) institution, *not* to the banking system as a whole. This is true, for example, of Value-at-Risk (VaR) techniques, Merton models,<sup>2</sup> stress and scenario testing, at least as usually applied, etcetera, etcetera.

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<sup>2</sup>Martin Summer, in ongoing work with Alfred Lehars, is, however, extending work on Merton models to a portfolio of banks.

Almost by definition such exercises relating to individual banks cannot cope with interactions, or contagious effects, between banks. And there are many potential channels for such contagion, not just via the interbank market, which is now being studied (see, for example, Cocco, Gomes, and Martins, 2003; Elsinger, Lehar, and Summer, 2002; Furfine, 1999; Upper and Worms, 2001; and Wells, 2002), but also through reputational channels, and via the effects of one bank's actions on the market prices and conditions facing other banks (see Cifuentes, Ferrucci, and Shin, 2004).

It is certainly likely that a financial (or banking) system with weak (strong) individual component institutions is likely to be systemically fragile (robust). Nevertheless, it is simple to think of numerous conditions under which the interlinkages are such that systems containing individually fragile banks are nevertheless systemically robust, and vice versa. For example, at the end of the 1980s, the Japanese banks appeared individually strong and powerful, yet they were systemically fragile in the face of sharp asset price declines.

Given the context of the exercise, aimed at constructing a model suitable for analyzing and quantifying *systemic* financial stability issues, a number of special characteristics for such a model become essential. First, there must be incomplete financial markets; otherwise all contingencies can be hedged, and the need, and role, of financial intermediaries such as banks become moot. So there is a need to think carefully about the form of such incompleteness. Second, banks must behave in different ways; they must be heterogeneous. It is impossible to consider contagion, or even to have an interbank market, in a representative bank model or, what comes to much the same thing, in a world of  $n$  identical banks.<sup>3</sup>

Third, and most important and most difficult, it is necessary to model default. Most macromodels effectively assume that there is *never* any default, with a transversality condition which implies that all debts are repaid by the final horizon. Such an assumption is totally out of place in any model of systemic risk. Properly modelling the default process is extremely hard to do, particularly since

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<sup>3</sup>Of course a shock could hit a particular bank(s), making that bank want to borrow from other banks, but then the banks would have become, ex post, heterogeneous.



it involves such patent nonlinearities. In my view, the best approach to this, out of relatively few attempts made by the profession, has been by Martin Shubik, and his colleagues and followers. Martin has modeled default as part of a choice process by agents who choose a path of behavior giving rise to some endogenous frequency of default, with that frequency depending, *inter alia*, on the stochastic state of nature and on the severity of the penalty agents incur in a case of default. Endogenous default may be either strategic or due to ill fortune, and is perfectly consistent with equilibrium and the overall well-functioning of markets.

Anyhow, I have been fortunate to work with one of Shubik's best followers and students, Dimitri Tsomocos. With the help of another colleague, Ton Sunirand, we have tried to construct a theoretical model involving these three features: incomplete financial markets, heterogeneous banks, and heterogeneous bank customers, and an essential role for both liquidity and default. As you can probably imagine, these features add to the complexity of the model; but we have tried to make versions of the basic framework simple enough so that it can be calibrated from the data of any banking system.

Two of the papers have been submitted for publications (in *Economic Theory* and the *Journal of Financial Stability*) and are available already as LSE Financial Markets Group Discussion Papers.<sup>4</sup> The ultimate aim of this exercise is to try to lead the way toward a quantitative measure and model of *systemic*, aggregate financial stability, which can complement the continuing risk measurements of individual institutions. If this can be done, it could start to provide an intellectual backstop to the more descriptive commentaries in Financial Stability Reviews; and possibly to allow for a more coherent unification of the various roles of a central bank in its Financial Stability remit. Moreover, it could usefully focus discussion on questions of what data are necessary to examine *systemic* financial stability issues empirically. Nevertheless there are lots of problems to overcome in such an ambitious program, and our own models mentioned above no doubt suffer from manifold deficiencies. But I remain confident that this is the right direction for research and analysis in this field to proceed.

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<sup>4</sup>See also Catarineu-Rabell, Jackson, and Tsomocos (2003); and Tsomocos (2003a and 2003b).

**BURDEN SHARING IN  
FINANCIAL CRISES  
WITH INTERNATIONAL OVERLAPS**

So the first of my proposed new directions relates to an ambitious, but difficult, agenda for research. The second concerns a more organizational and administrative set of issues. This relates to the crucial linkages between fiscal and monetary policies. One of the advantages of belonging to the Chartalist school of monetary history, as I do, is that recognition of the importance of such linkages becomes almost second nature.

Fortunately for my audience, this is not a prelude to launching into yet another discussion of the late-lamented Stability and Growth Pact. In any case, this is now sub judice, and we await with interest what the European Court of Justice will pronounce on the subject. Instead, my point is that the linkages between fiscal and monetary policies are just as important and as problematical on the financial stability side as on the macro monetary policy side of central bank operations.

As I indicated earlier, in my introduction, the scale of losses involved in major financial crises and banking reorganizations has been massive in many countries, as well-documented by Bordo and others (2001); Caprio and Klingebiel (1996 and 1999); Frydl (1999); Hoggarth, Reis, and Saporta (2001); and Lindgren, Garcia, and Saal (1996). Such events continue, for example, in Argentina and Turkey. Moreover, even smaller losses, such as might feasibly be met out of central bank capital, ultimately fall on the taxpayer, now that central banks are public sector bodies. An exception occurs when the loss is met by a deposit insurance fund which is financed by the private sector, but such funds tend to become exhausted quite quickly on occasions of serious systemic risk.

This actually raises an interesting historical question, which is, Why did most economists and commentators think, as they mostly did until recently, that central banks could resolve banking crises unilaterally, without recourse to the deeper pockets of the public purse, i.e., the Treasury? One reason is that small, perhaps even medium-sized crises could be met, as in the case of the first Barings crisis in 1890, by the central bank pressurizing private sector banks to absorb a major proportion of any residual loss through joint guarantees and lending. Indeed, this continued in the United Kingdom

as the main form of burden sharing through the Fringe Bank crisis of 1973–74, and up to the Johnson Matthey bank failure in 1984. But this latter case demonstrated that this approach was reaching the end of its useful life, though it resurfaced once again in the United States in a somewhat new guise in the LTCM crisis.

The problem that the Bank of England faced in the Johnson Matthey instance was that so many of the major banks in London were foreign owned. Not only were such banks less under the thrall of the Bank, and less subject to arm twisting, but they could also claim, in this more litigious age, that their own shareholders at home might sue them for inappropriate use of equity funds in helping to prop up a competitive, and furthermore foreign, bank. It is my understanding that, from that time onwards, the Bank of England has taken it as axiomatic that no significant bank rescue exercise can proceed without the positive involvement of the Treasury and, by extension, of the Chancellor. The situation is somewhat different in the United States, where the Federal Deposit Insurance Corporation Improvement Act of 1991, or FDICIA, legislates how bank insolvencies are to be treated; but in most other countries the position is much the same as in the United Kingdom.

Thus banking crises will often require significant fiscal input, for example, for recapitalization, and the handling of such crises will need to be agreed with the relevant fiscal, and political, authorities. There is no particular administrative problem with that within a national context, though it may add to coordination and operational difficulties when crises come to be handled by a committee, rather than having a single locus for decisions.

The problems arise when the crisis has international dimensions, perhaps especially so within the euro zone, where the geographical domain of monetary policy, under the aegis of the European Central Bank (ECB), differs from that of financial stability policies, which are still under national control. Let me, however, defer discussing the particular problems of the EU for the moment, though I will return to them.

Let us assume two countries, A and B, where a bank headquartered in A has a subsidiary in B. Something happens that makes A's regulators want to shut down that bank, but B's officials want their own subsidiary to continue. The likelihood is that reputational effects would make the survival of the subsidiary on its own improbable (as was the case for the perfectly well-functioning BCCI

subsidiary in Hong Kong). How would B's officials negotiate with A's regulators, given the time pressures and likely market responses to any news leaks?

The problem is worsened if measures have been taken which will place much, or most, of the burden on the depositors and/or fiscal authorities in B, whether or not the losses have arisen in B. Assume that the B subsidiary is profitable, but that the headquarters in A, perhaps at the behest of the authorities there, transfer much of the subsidiaries' profits and assets to prop up the main bank. Moreover, the bankruptcy laws in A might ring-fence assets in A so that A depositors were paid off before B depositors got a look-in. Whether on purpose, or not, in a globalized financial system, losses occurring in a bank in one country could be effectively passed through to the depositors or to the fiscal authorities in another country. There is no mechanism in place to devise a generally acceptable sharing of burdens from international (banking) crises;<sup>5</sup> perhaps the position of the foreign banks in Argentina could be taken as a case in point. Can we rely on voluntary cooperation and coordination between the countries involved under such crisis circumstances? Frankly, I am doubtful.

These problems are perhaps most acute in three groups of countries. The first group consists of those countries, such as the transition countries in Eastern Europe, whose banks are mostly foreign owned. They stand at risk from supervisory decisions taken by headquarter home countries to which they are not party. The second is the United Kingdom because so many foreign banks have a presence in London, and because, as the main international financial center, any cross-border crisis is likely to cause some reverberations there. The final group consists of those countries whose domestic banking systems are already largely interpenetrated, such as in Scandinavia and Benelux. Since all three groups are European, this is primarily a problem for the EU to handle, even aside from the concerns expressed by many about the differing domains of macro monetary and financial stability policies within the euro zone.

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<sup>5</sup>If there were no transactions costs, no time pressures, and no political constraints, such issues could be resolved by Coaseian bargaining between the parties. It was, however, Coase's main point that such an idealized world does not exist.

Given that an aim of the Lisbon process is to establish one single, common European financial system, a logical step might seem to be to shift *both* the fiscal competence to deal with banking crises *and* the banking supervisory function to the federal EU level. It is, however, in my view, not possible to move one of these—the fiscal or supervisory functions—without the other. Moving the fiscal function to the federal level, while leaving the supervisory function at the national level, would cause too much moral hazard, since each national supervisor would know that other taxpayers would pay much, or perhaps most, of the bill for lax supervision and forbearance. Moving the supervisory function, while leaving the fiscal function at the national level, would be inconsistent with the postulate that if the national Treasury has to pay, it is going to want to control what is being paid for. He who pays the piper calls the tune. That was the fundamental premise behind the Brown-Eichel Oviedo letter, and remains valid.

I doubt whether it will prove possible in the foreseeable future to move the fiscal function for crisis resolution to the EU level. The costs of handling such a crisis are not quantifiable in advance, and are open ended. Even though there would only be a need to fund, through borrowing and taxation, such fiscal costs on an *ex post* basis, without a prior agreement on how such taxes and borrowing were to be carried out, a fiscal resolution at the EU level would not be *ex ante* credible.

Absent such a shift of the fiscal competence for crisis resolution to the EU level, calls for transfers of supervisory functions to a central, European body are, in my view, nugatory and little more than whistling in the wind. That, alas, brings us back to the question of how to share out the burden of rescues when the relevant public authorities are national but the financial system is international.

In this context, and given these suppositions, perhaps the best strategy for the ECB might be to develop a role as an independent, unbiased, and expert arbiter on handling such financial crises as have important international facets, both within the EU, and between the EU and other non-EU countries. Its judgments and pronouncements in this role would not (and probably also should not) have any legal effect. But its position, expertise, and the possibility of publication of (parts of) its judgments on whether an overall rescue would be advisable, and perhaps even some tentative comments on the appropriate division of burden sharing between the

relevant national regulatory authorities,<sup>6</sup> should exert some considerable moral suasion, and allow compromise solutions, especially intra-EU, to be reached. This route, in my view, would be more likely to be fruitful than any continuing push toward centralization of banking supervision, given the probable inability to achieve a federal fiscal competence for crisis management.

Even then there is a serious question about whether the national finance ministries, who will ultimately have to provide the taxpayer-based support to finance any such rescue, would be willing to give much locus to *any* independent body, such as the ECB, to determine the weights of individual member states in a support package. They might prefer to keep the discussions in forums in which the relevant individual nation states are directly represented, such as the EFC or the Committee of European Banking Supervisors. But then who could help relieve any deadlock if national representatives could not agree directly among themselves, as seems all too likely?

Because of the need for any such arbiter to have full access to confidential commercial data, and of the potential sensitivities inherent in the exercise, it would be difficult, if not impossible, to delegate this role to an independent, academic body, *pace* my friends on the European Shadow Financial Stability Committee who have advocated an independent Financial Regulatory Forum. Even if they were to sign an official document about observing confidentiality, they would need to be so publicly accountable as to become, in effect, another public sector body themselves. Also, for natural reasons of expertise, familiarity with monetary and banking issues, and coordination with other macro monetary policy issues, the ECB would be a better home for the arbiter role than the European Commission.

So my second proposed new direction for financial stability would be to encourage the ECB to be in a position to be able to adopt a role of arbiter on handling financial crises when these have intercountry

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<sup>6</sup>There might be a concern that the ECB would be entering the political domain by commenting on the sharing of fiscal burdens between nation states. This consideration just reinforces the point that centralization of regulatory functions in the EU will be impossible unless, and until, the associated fiscal competence is also centralized.

European overlaps, in those cases of disagreement and deadlock between the national bodies.

### **CONCERN WITH OTHER ASPECTS OF RISK**

I have always told my students, to whom I teach monetary economics, on no account become a bank supervisor. The pay is not commensurate with the likelihood of losing your reputation. The best a supervisor can expect is not to be noticed; everything else that goes wrong on your watch will be blamed on the supervisor, whether or not that is equitable; the pun is intentional.

I could have added that the task of devising good and effective financial regulation is truly like the labors of Sisyphus. And at least Sisyphus could reminisce about the reasons he got condemned to roll the stone uphill, which was that he had seduced scores of inappropriate ladies, whereas I surmise that most of those on the Basel Committee just found themselves in the wrong place at the wrong time.

Actually Sisyphus's myth does have another real lesson for bank supervisors. You know how banks can make risk apparently disappear off balance sheet by securitization and credit risk derivatives. Sisyphus had a neighbor, Autolycus, who could make objects temporarily disappear from sight and was stealing Sisyphus's cattle. Sisyphus dealt with this by marking the bottom of their hooves, and was able to track their passage through the muddy ground. So the moral of this story is that if the final resting place of risk is hard to observe, at least try to track its passage through the markets.

But the reason why trying to devise good financial regulation is like the labors of Sisyphus is not just that financial innovation and interactions between the supervised and the supervisors will continuously require any such regulation to be revised and updated, though this too will happen, and Basel II will be succeeded in due course by Basel III, but also that there are so many aspects of risk, and no one set of negotiations can, or will, fully take on board all of them.

The focus of Basel II was, of course, on the application of capital to credit risk, and to other operational risks. While such concerns are entirely valid, I want on this occasion to note that there are numerous *other* facets of risk management which also need our

attention. I shall pick out three such considerations briefly now: these are, first, the need for liquidity; second, the need for an appropriate pricing of risk via interest rate margins; and, third, the need for devising an appropriate structure of incentives to encourage bankers (and for that matter also supervisors) to abide by the various standards and requirements that may have been promulgated.

One remarkable feature of the last 40 years is the degree to which the attention of regulators has swung from concerns about liquidity, with requirements for various cash and liquidity ratios, to a focused concentration on capital requirements. In my view, this pendulum has swung far too far.

For example, when capital requirements bite in cyclical downturns, it will usually not be a good time to raise new capital. Banks will be forced to shrink their books. As Cifuentes, Ferrucci, and Shin (2004) note, asset sales which drive down market prices will adversely impact the assessed capital values of all other banks also holding such assets, thereby potentially inducing dynamic instability. Something very like this affected the life insurance companies in the United Kingdom in 2002. Such a cause of instability will become more serious, the more accounting shifts to a market, or fair, value basis, which is the subject of my final section.

The point which I want to make now, however, is that the maintenance of sufficient liquid assets by the banks protects the system as a whole from damaging fluctuations in asset prices when adverse conditions force banks to shrink their books. There is also a concomitant obligation on the authorities to maintain the liquidity of such markets to enable such adjustments to proceed smoothly. Since much of the benefit of any bank holding more liquid assets accrues to other banks (because its attempts to shrink its books would then have less effect on their own asset values and hence capital), while the negative effect on profitability is almost entirely internalized, there will be an incentive for banks to hold less than the socially optimal amount of liquid assets. It is arguable that the case for externally imposed liquid asset ratios is actually much stronger than the case for externally imposed risk-related CARs. As noted earlier, the pendulum has swung much too far recently.

Banks' holdings of liquid assets not only protect other commercial banks, they also protect the monetary authorities and help them to maintain systemic stability. The more liquid assets a bank has, the longer it can sustain adverse clearings. That provides a breathing



space, and in cases of financial crises, time is of the essence. Time is necessary to gather and transmit information, and to agree on the best course of procedure. It is liquid assets, *not* capital, that provides time in crises. Indeed, one measure, and not necessarily a bad one, of appropriate liquidity is that banks should have enough to continue business to the nearest weekend even in the face of widespread public doubts about their solvency.

Let me turn now from liquidity to margins. It is common to talk about the need to price risk correctly. It is frequently said that this is key to good risk management. Yet we do not mean by this the application of sufficient capital; rather, we mean the need for sufficient margins to provide a return on loans that will offset expected losses on those loans that do not perform, NPLs. Now the discussion on whether capital should be applied to expected losses, EL, as well as unexpected losses, UL, did properly surface in Basel II, especially in the context of credit card business. But I do wonder whether the integration of interest rate margins, alongside capital requirements, has yet been taken far enough.

It is, for example, a stylized fact, explored for instance in the work of Barth, Caprio, and Levine (2000) of the World Bank, that banking systems with a larger proportion of public sector banks (and perhaps other non-profit-maximizing banking entities) are more fragile. Might this be, at least in part, because the public sector banks can, and do, for a variety of reasons, so reduce interest rate margins that the private sector banks cannot obtain a viable risk/return profile? One thinks of the post office banks in Japan and indeed Germany, as well as the Landesbanken there.

One measure of risk appetite is the scale and extent of risk margins. We often think that the shrinkage of such margins during periods of boom and confidence is a sign that the financial system may be taking on too much risk, and vice versa during depressions. Perhaps one approach to countering procyclicality in the financial system would be to have the various regulatory requirements, for example, capital and liquidity requirements, vary inversely with margins, so that when risk margins fall during booms, relative to the historical norm, aggregate required ratios would rise, and vice versa.

Let me end this penultimate section of my talk by noting an apparently irresistible temptation among regulators to focus solely on what banks *should* desirably do, and to issue regulations and suggested standards and codes of conduct, as in the ROSC list of the

IMF, that exemplify such good behavior. While this has considerable merit and use, rather like giving a booklet on good etiquette to a potentially naughty child so he knows what is desirably expected, what is, in fact, both more difficult and more important is to have worked out what sanctions to apply, for example, if the naughty child throws his food onto the floor. That example shows just how difficult putting sanctions in place can be; it was done in FDICIA, but has yet really to be tackled at Basel, perhaps because this is just too constitutionally and administratively difficult to do at the international level. Yet establishing an agreed procedure for handling a breach of regulations is as, or more, important than trying to fine-tune the optimality of the inevitably somewhat arbitrary details of the regulations themselves. The importance of devising a set of sanctions to give bite and backup to standards, codes, and other regulatory requirements was a theme that Peter Kenen emphasized in his contribution to the Per Jacobsson panel discussion in June 2000, and I would echo all that he said then.

### **HOW TO SMOOTH OUT VOLATILITY**

For my final topic I want to consider an (accounting) issue that tends to split Europeans and Americans. This is whether banking data should in all cases be presented on a market, or fair, value basis, or whether in some cases it is desirable to present such data on a historic cost basis, or to apply some other form of smoothing device. The Europeans argue that markets can be extremely volatile, so that using so-called fair value data will enhance financial instability. For example, in a financial panic, all asset values will shrink dramatically. Using current market valuations, the capital ratios of banks will contract sharply. This would lead them to cut back lending just at a time when continuing, indeed additional, loans are desirable, perhaps even essential from a macro viewpoint. Think of the equity crash of October 1987 or the bond market crisis in October 1998. Is it sensible to impose an accounting methodology that would have the effect of exacerbating such near-panics?

Moreover, one of the main purposes of financial intermediation is to allow the private sector to smooth out consumption over time, and, in particular, to obtain funding for consumption and investment from banks during bad times, periods of recession. As Freixas

and Tsomocos (2003) show in their model, a shift from historic cost accounting to market value accounting lessens the ability of banks to undertake this smoothing function.

In the 1960s, discussion of this issue in the United Kingdom revolved around the question of whether commercial banks should be allowed to maintain “hidden reserves,” and the same valid arguments were put forward in support, including, as I recall, from the Bank of England. But in the event, the maintenance of hidden reserves was terminated, and for essentially the same reason as why all devices for smoothing the data are attacked. Such devices are usually not transparent, are capable of manipulation, lessen the availability of information, including early warnings of impending problems in financial institutions, and are likely to lead to a misallocation of investable funds. For a time the line of defense for historic cost accounting could be held on the grounds that for bank loans to the private sector there was no proper market, and hence no market value on which to base accounts. But the advent of securitization and credit default derivatives are eroding the basis of that argument, at least in developed countries.

Market values are indeed volatile, and often seem tenuously related to fundamentals. But anyone who can systematically foresee when the market has overshot, and is due for a correction, should be rich enough not to care about accounting issues. For the rest of us poor mortals, the market’s valuations may seem erratic, but at least they are (in most cases) objective and not subject to manipulation and abuse. It is an unreliable measuring rod, but the best we have.

So there has been a progressive trend towards fair (market) value accounting. Given this trend, it is perhaps surprising that ratings agencies purport to set ratings on the basis of some cyclical average, “looking through the cycle.” Moreover, commercial banks using the Internal Ratings Basis (or IRB) approach are being encouraged to follow the same procedure. But this is just a standard smoothing device and subject to much the same criticisms as the others.

I had, until recently, long defended the use of such smoothing devices for banks, but market innovations and the trend of thought on this subject mean, I believe, that their day is done. Fair market values reign, OK? Well, not entirely OK, because that still leaves us with the problem of enhanced volatility and worsened fragility. As Gordy (2003) and Gordy and Howells (2004) have noted, if the ac-

counts, ratings, and valuations are all to be based on current market values, then, if volatility in the system is to be restrained, we should do so by applying offsetting adjustments in the parameters that are used in the various regulatory ratios, solvency ratios, CARs, etc. This idea has much in common with the Spanish dynamic pre-provisioning approach.

How does one work this trick? This is, in essence, what several economists at the BIS have been proposing, notably Borio and White (2003); Borio, Furfine, and Lowe (2001); Borio and Lowe (2002); and Gordy and Howells (2004). They have proposed several alternatives. The procedure that I like best is to relate the required ratio to the rate of change of the key systemic factor over some recent period; admittedly the formula would be somewhat arbitrary, and would require considerable empirical study before adoption. Thus the CARs relating to commercial loans might depend on the rate of growth of GDP, on property loans to the rate of growth of property prices, on housing loans to housing price inflation, on equity holdings to equity price changes, etc.

But does that not mean that regulatory ratios would be reduced in bad times, during recessions, just when individual banks, or insurance companies, were at their most fragile, horror of horrors? Yes, it does, but that is looking at the glass half-empty. The basic idea would be to set the initial (minimum) ratio(s) at a level suitable for bad, recessionary times. Then the above procedure can be envisaged as imposing add-ons to (capital) requirements during better times, with such requirements increasing sharply during periods of (unsustainable) booms in the relevant systemic factor. The glass is at least half-full, if not better than that.

If, for example, such a procedure had been applied to life insurance companies, or to the treatment of housing loans, in the United Kingdom, this would have helped to lessen the asset price booms and busts. Again, I hope to do some empirical work on this issue in the future.

## CONCLUSIONS

So, let me conclude. Over the course of the last 15 or so years—dating perhaps from the adoption of operational independence and inflation targeting in the Reserve Bank of New Zealand Act, where

I was privileged to act as an external adviser to the RBNZ—the macro monetary policy side of central banking activities has made enormous progress in achieving operational success, in practical procedures and in theoretical understanding.

I do not really see an equivalent success on the financial stability side yet, despite the prodigious efforts of all those working at Basel. I hope that it will come in the next 15 years. For that to occur, however, I believe that those working on this side need to take some new directions. First, we need a better systemic model of financial fragility, notably a model which incorporates default as a central, essential element. I have tried, with colleagues, to give a lead here. Second, the close relationship between fiscal policies and financial crisis management needs to be better appreciated, and the roles of certain international institutions, notably the ECB, reinterpreted in the light of such assessment. Third, we have to extend our gaze beyond risk-related capital requirements to integrate risk margins, liquidity requirements, and an appropriate set of incentives and sanctions into a holistic approach to financial regulation. Finally, the time has now come for a general adoption of fair value accounting, with no more smoothing devices. Instead, the systemic smoothing should come by adjusting the regulatory ratios in response to fluctuations in rates of growth of the main relevant systemic factor in each case.

I recommend these new directions to you, without, I fear, much confidence that they will be followed.

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## Questions and Answers

**JACQUES DE LAROSIÈRE:** Charles, thank you very much, indeed, for this extremely thought-provoking speech. I think Professor Goodhart is happy to answer a few questions. I would ask you to be very concise in their formulation because we have very little time, but the floor is open now.

**QUESTION:** *Charles, I would like to challenge your proposition that we need a model, a single model, of systemic risk in order to account for what lies ahead. I think when you are dealing with risks, you may have an idea of the probability distribution of events lying ahead. One of the characteristics of financial market developments is exactly that we do not have this probability distribution. We have no idea, so I think that basically if you want to have a radar screen of what lies ahead, you do not need a single model. To the contrary, you need a host of models that take account of the various characteristics of financial institutions, their different strategies, the different directions in which they are going and possibly their interplay, so it would actually be dangerous to focus research on such a single model. I think you need a host of things to be running parallel to take account of this underlying uncertainty which will not go away.*

**CHARLES GOODHART:** I entirely agree with that. I probably put my point incorrectly. The problem actually is not that we are trying to focus on a single model, it is that we just really don't have any models of systemic interlinkages between banks in which default plays a major part. I am certainly not trying to advocate that the particular exercise that I am undertaking should be the focus; far from it. We need a whole series of models, as indeed you correctly said, just as there are a whole series of macromodels. The point is not that we are focusing on a single model and that is dan-



gerous, it is rather that there are just no models out there which incorporate default, financial incompleteness, and heterogeneity of bank and customer behavior. The more models there are that incorporate these conditions, the better, and I would be very keen for a plethora of models, and I am glad to say that such models are being developed. The Austrian National Bank is developing models along these lines, and there are quite a lot of central banks which are thinking of this, and I hope that they will all proceed. The more models the better. As I say, it is not that we are focusing on one, it is just that we don't have any at the moment.

**QUESTION:** *I just wanted to raise the point you made about the distinction between liquidity risk and capital risk. Surely the point is that when crises come along, when banks get into trouble, it is always a question of whether it is a liquidity problem or a capital problem, and the real issue here is how the regulators come down on the decision making. Lately, of course, they have been much more biased toward capital, but isn't this really an empirical question that you have to address when a crisis occurs?*

**CHARLES GOODHART:** Yes, but if a bank does not have liquidity, the speed of the crisis will be considerably greater, and the pressures put on the authorities to act will be much more acute. Once a crisis has started, what banks actually need is liquidity rather than capital. The two, I think, are complementary. It is absolutely right to think of capital requirements, but to ignore, or to put entirely on one side, liquidity requirements is not right.

When I started working in this area at the beginning of the 1960s, what regulators thought about all the time was liquidity ratios and cash ratios, and capital really wasn't considered, and that was wrong. Now it seems to me that all the focus is on capital and there is not sufficient consideration of the liquidity requirements that are needed to support it. So I am asking, in a sense, for more balance.

**QUESTION:** *May I ask you how you will reconcile your defense of fair value accounting with the following example? Suppose that you have a company which would be downgraded by a rating agency, then with full fair value accounting, the value of the debt of this company would be reduced, therefore leading to an increase in the capital base. So it means that what the market would tell you is that the*

*strength, the financial strength of the company increased, whereas the judgment, the supposed intelligent judgment of the rating agency is that the financial strength of the company actually decreased.*

**CHARLES GOODHART:** I am not sure that I follow, because if the fair value accounting has been impaired, then the capital value has also fallen. I do not follow how you will get an increase in the capital ratios under these conditions because the value of the capital is impaired when the assets fall relative to the liabilities.

**FOLLOW-UP QUESTION:** *But in that case the assets have not changed. It's the value of the liability which has decreased the value of the debt, because the change in the rating means that the actual value of the debt decreases because the implicit interest rate increases.*

**CHARLES GOODHART:** Can I pass on that for the time being?

**JACQUES DE LAROSIÈRE:** Yes, I think you can pass. It is one of the questions that I had in mind too, and I would add a comment so that you do not need to pass a second time, and that is that I still feel very uncomfortable that variations in the value of derivatives that are basically the hedging instruments of banks have a direct impact on the equity of those banks under some conditions, but this is only a comment and not an invitation to discuss these matters.

Well, thank you very much, indeed. This was a most interesting and thought-provoking talk, and I am sure that we will have in mind your three basic lessons, which I have well understood. The first is that we do need some form of systemic models of default because this is a matter that has to be more rationalized. We have done it in the macrosector. We haven't really done it so well in the microrisk sector.

The second basic idea is that more consistency—if not coordination, but I don't like that word—in the fiscal treatment of crisis and lender-of-last-resort lending as a method of dealing with crises has to be established, which is difficult in an integrated world where the forces of the market are worldwide, integrated, global. Those who regulate are basically national, and that's a very difficult task, and you were right to put the emphasis on that.

Your third point, which I think is most intriguing and interesting for this assembly, is, has the pendulum not gone a little bit too far toward capital adequacy and perhaps we should have more in mind liquidity ratios, which, as you like to say, help at least to get to the next weekend.

Well, thank you so much and applause for Charles.



### **C.A.E. Goodhart, CBE**

C.A.E. Goodhart, CBE, is Deputy Director of the Financial Markets Group at the London School of Economics (LSE). He served as Norman Sosnow Professor of Banking and Finance at the LSE from 1985 to 2002. Previously, Dr. Goodhart worked at the Bank of England for 17 years as a monetary adviser, becoming Chief Adviser in 1980. In 1997, he was appointed as an outside independent member of the newly formed Bank of England Monetary Policy Committee until May 2000. He was elected Fellow of the British Academy in 1990 and awarded the Commander of the Order of the British Empire (CBE) in the New Year's Honours List for 1997 for services to monetary economics.

Dr. Goodhart has taught at the University of Cambridge, where he was a Fellow of Trinity College, and at the LSE. He has published extensively over the years in the areas of monetary history, contemporary monetary issues, and financial regulation. These publications include, besides numerous articles, a monetary textbook, *Money, Information, and Uncertainty* (second edition, 1989); two collections of papers on monetary policy, *Monetary Theory and Practice: The UK Experience* (1984) and *The Central Bank and the Financial System* (1995); and a monograph on the foreign exchange market, *The Foreign Exchange Market: Empirical Studies with High-Frequency Data* (2000).

Dr. Goodhart earned his bachelor's degree from the University of Cambridge and a Ph.D. from Harvard University. In his spare time, he is a sheep farmer.

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