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# **Revising Basel 2: The Impact of the Financial Crisis and Implications for Developing Countries**

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## PREFACE

The *G-24 Discussion Paper Series* is a collection of research papers prepared under the UNCTAD Project of Technical Support to the Intergovernmental Group of Twenty-Four on International Monetary Affairs and Development (G-24). The G-24 was established in 1971 with a view to increasing the analytical capacity and the negotiating strength of the developing countries in discussions and negotiations in the international financial institutions. The G-24 is the only formal developing-country grouping within the IMF and the World Bank. Its meetings are open to all developing countries.

The G-24 Project, which is administered by UNCTAD's Division on Globalization and Development Strategies, aims at enhancing the understanding of policy makers in developing countries of the complex issues in the international monetary and financial system, and at raising awareness outside developing countries of the need to introduce a development dimension into the discussion of international financial and institutional reform.

The research papers are discussed among experts and policy makers at the meetings of the G-24 Technical Group, and provide inputs to the meetings of the G-24 Ministers and Deputies in their preparations for negotiations and discussions in the framework of the IMF's International Monetary and Financial Committee (formerly Interim Committee) and the Joint IMF/IBRD Development Committee, as well as in other forums.

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**REVISING BASEL 2:  
THE IMPACT OF THE FINANCIAL CRISIS AND  
IMPLICATIONS FOR DEVELOPING COUNTRIES**

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## **Abstract**

*Since the start of the drafting process of Basel 2 ten years ago the agreement has assumed a central position in the reform of international rules on financial regulation. The finalization of Basel 2 has proved much more difficult than anticipated by the initiators of the negotiation process owing to the complexity of its subject-matter, its global scope and the moving target of what regulatory rules are expected to achieve in rapidly changing conditions. These features of Basel 2 are mutually related: its complexity reflects the challenge of designing global rules suitable for institutions of different levels of sophistication in countries at different levels of development as well as of responding to continuing financial innovation and, most recently, to a cross-border financial crisis triggered by inadequate control of risks, malpractice and regulatory failures in countries with the most sophisticated financial systems.*

*This paper reviews various aspects of the debate concerning the effects of Basel 2 and of the regulation of banking risks. Inevitably it thus takes up issues raised during both the earlier stages of the drafting process and more recently after the decision was taken to revise Basel 2 as part of the agenda of financial reform in response to the financial crisis which began in 2007. The debate concerning Basel 2 has been primarily concerned with banking regulation in general, and the problems which have received most attention have been those posed by the experience of developed countries. By contrast the debate has devoted only limited attention to the likely impact of Basel 2 in emerging-market and other developing countries. This paper attempts to redress the balance with respect to the latter. It reviews evidence on the global introduction of Basel 2, and examines in greater detail features of the introduction of Basel 2 in a small sample of Asian developing countries. It also emphasizes the way in which increased attention to the macroprudential dimension of regulation in the agenda for financial reform could serve to highlight important connections between regulation and development policy.*

*Much of the discussion of revision of Basel 2 as part of the agenda of financial reform has an inevitably provisional character since work on the agenda is still ongoing. However, it is already possible to identify major problems under headings such as liquidity risk, improved infrastructure for OTC derivatives, the compensation of bank staff, the credit rating agencies, accounting standards, and the procyclicality of bank lending, all of which headings have intersections with Basel 2. The paper summarizes ways in which these problems are being addressed in the reform agenda and some of the implications for developing countries. In this context, it draws attention to approaches to these problems in the Asian developing countries mentioned above, approaches which in the case of India were to a significant extent pre-emptive.*



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# REVISING BASEL 2: THE IMPACT OF THE FINANCIAL CRISIS AND IMPLICATIONS FOR DEVELOPING COUNTRIES

Andrew Cornford\*

## I. Introduction

In the words of two former senior British financial regulators “the objective of the new arrangements [Basel 2] is to strengthen the soundness and stability of the international banking system while maintaining sufficient consistency so that capital regulation will not be a significant source of competitive inequality among internationally active banks” (Davies and Green, 2008: 43). Basel 2 sets levels of minimum regulatory capital for three categories of banking risk – credit, market and operational – according to rules which include a multiplicity of different approaches (see box 1). This multiplicity reflects the objective of the Basel Committee on Banking Supervision (BCBS) to accommodate within these rules banks of very different levels of sophistication as well as points raised by critics during the long process of drafting Basel 2.

The effects of the rules of Basel 2 on different dimensions of banking risk have been extensively debated during the long drafting process and during the current financial crisis. However, this debate was primarily concerned with regulation and risk management in general and devoted only limited attention to the likely impact of the introduction of Basel 2 in emerging-market and other developing economies. After reviewing information concerning global plans for the introduction of Basel 2, this paper discusses the rationale of the agreement and recent proposals for its revision in the light of developments which led to the current crisis. The discussion attempts to place these proposals in the context of the broader agenda for financial reform now being developed. Moreover, it attempts to redress the balance with respect to emerging-market and other developing countries through consideration of issues related to introduction of Basel 2 in their jurisdictions as well as a review of approaches to its introduction actually adopted in selected countries.

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**Box 1****OVERVIEW OF THE BASEL CAPITAL ACCORDS**

Basel 2 is designed to replace the 1988 Basel Capital Accord (Basel 1).<sup>a</sup> Both agreements were drawn up by the Basel Committee on Banking Supervision (BCBS), a body of banking regulators established in 1974 which originally consisted of the countries of the G10 and has subsequently been expanded to include all countries of the Group of 20 and selected other countries with important financial sectors. The BCBS is linked geographically and organizationally to the Basel-based Bank for International Settlements.

Basel 1 and Basel 2 are agreements on frameworks for assessing the capital adequacy of banks. The framework sets rules for the allocation of capital to banks' exposures to risks through its lending and other operations. The agreements have two objectives. One is prudential, namely to help to ensure the strength and soundness of banking systems. The other is to help to equalize cross-border competition between banks (provide "a level playing field") by eliminating competitive advantages due to differences among countries in their regimes for capital adequacy (a special concern of United States and European banks vis-à-vis competitors from Japan in the 1980s).

As a measure of the difference between the value of a bank's assets and liabilities capital serves as a buffer against future, unidentified losses. The capital of banks consists of equity and other financial instruments which have the properties of being available to support an institution in times of crisis.

Financial instruments classified as capital are usually associated with higher rates of return, and are thus a more costly way of financing banks' assets than other liabilities such as deposits. The rate of return on capital is a determinant of banks' pricing of loans and of other transactions involving exposure to risk and as such is a factor in their competitiveness vis-à-vis other banks.

Capital under the initial version of Basel 1 agreed in 1988 was to serve as a buffer against credit risk, i.e. that of the failure of borrowers or parties to the other banking transactions to meet their obligations. Under the accord capital was to constitute 8 per cent of banks' risk-weighted assets.

Measurement of these risk-weighted assets was based on the attribution of weights reflecting the credit risk of different classes of counterparty (sovereign, OECD or non-OECD, other public sector, corporate, etc.). Off-balance-sheet exposures (such as guarantees, various contingent liabilities, and interest-rate and exchange-rate derivatives) were converted to their on-balance-sheet equivalents by multiplying them by credit conversion factors (CCFs). The resulting figures were then weighted according to the class of counterparty as for on-balance-sheet exposures. For example, collateralized documentary credits received a CCF of 20 per cent and the resulting on-balance-sheet equivalent would be multiplied by the risk weight of the counterparty to which the documentary credit was made available.

The attribution of credit risk weights (0, 10, 20, 50 and 100 per cent) followed a scheme which favoured governments and certain other entities from OECD countries over those from non-OECD countries, and banks over other commercial borrowers. Thus, a weight of 0 per cent was attributed to claims on OECD governments and central banks, and one of 20 per cent (corresponding to a contribution to minimum capital requirements of 1.6 per cent of the nominal value of the exposure) to claims on banks incorporated in OECD countries and to banks incorporated in non-OECD countries with a residual maturity of up to one year. A weight of 100 per cent was attributed to claims on private sector entities not otherwise specified such as non-financial corporations and non-OECD governments.

Through an amendment in 1996 Basel 1 was extended to cover market risks in banks' trading books, i.e. those due to the impact on a bank's portfolio of tradable assets of adverse changes in interest and exchange rates and in the prices of stocks and other financial instruments. The amendment accommodated two alternative ways of setting minimum capital levels for market risk. One involved the use by banks of their own internal risk-management models, and the other a standardized methodology under which capital requirements are estimated separately for different categories of market risk and then summed to give an overall capital charge (as for credit risks).

Basel 1 was originally designed for internationally active banks. However, by the second half of the 1990s it had become a global standard and had been incorporated into the prudential regimes of more than

100 countries. But Basel 1 was also the subject of increasingly widespread dissatisfaction so that a decision was taken to initiate what proved to be the lengthy process of drafting a successor agreement. What was intended to be the definitive version of the new accord, Basel 2, became available in mid-2006. However, further revisions of Basel 2 are now being drafted to incorporate the lessons learnt as a result of the stresses on banks' solvency during the financial crisis. The package containing the revised version of Basel 2 will also include standards for the management of banks' liquidity risk, whose close connections to solvency, the target of Basel 2, were underlined by the crisis.

Basel 2 consists of three Pillars. Under Pillar 1, minimum regulatory capital requirements for credit risk are calculated according to two alternative approaches, the Standardized and the Internal Ratings-Based. Under the simpler of the two, the Standardized Approach, the measurement of credit risk is based on ratings provided by external credit assessment institutions. According to the text of the agreement export credit agencies as well as credit rating agencies are indicated for this purpose. However, the expectation of both the BCBS and of national authorities is clearly that the role will most frequently be assumed by credit rating agencies. Owing to perceived shortcomings in the performance of the major credit rating agencies this choice has proved controversial.

Under the Standardized Approach of Basel 2, entities from OECD countries are no longer favoured over those from non-OECD countries. Both banks and non-financial corporations are now differentiated according to their credit ratings (of which the BCBS uses those of Standard & Poor's for illustrative purposes). Thus non-financial corporate borrowers rated between AAA and AA- are attributed a weight of 20 per cent, those rated between A+ and A- one of 50 per cent, those rated between BBB+ and BB- one of 100 per cent, and those rated below BB- one of 150 per cent. Unrated non-financial corporate borrowers are attributed a weight of 100 per cent.

Under the Internal Ratings-Based approach, exposures are classified as corporate, sovereign, bank, retail, equity, purchased receivables, and specialized lending. For corporate, sovereign, bank and retail exposures, subject to the satisfaction of certain conditions with respect to their internal controls and the availability of relevant data, banks use their own rating systems to measure some or all of the determinants of credit risk, namely the probability of unexpected default, loss given default, exposure at default, and the remaining effective maturity of the exposure. Under the Foundation version of the Internal Ratings-Based Approach, banks estimate the determinants of default probability but rely on their supervisors for measures of the other determinants of credit risk. Under the Advanced version of the Internal Ratings-Based Approach, banks also estimate the loss given default, the exposure at default, and the remaining maturity (subject to a floor of one year and a ceiling of five years).

For exposures consisting of equity or purchased receivables banks calculate credit risk weights on the basis of frameworks which also incorporate to varying degrees banks' own estimates of the determinants but not in accordance with the same formula as corporate, sovereign, bank and retail exposures. Specialized lending covers categories of corporate exposure with special characteristics such as project finance, commodities finance, and certain kinds of real-estate financing. Under the rules for specialized lending banks that meet the supervisory requirements for the estimation of the determination of default probability may use the formula prescribed for the Internal Ratings-Based Approach for corporate exposures. Banks not meeting these requirements are to use a special set of supervisory categories and risk weights for unexpected losses.

Pillar 1 also contains rules for regulatory capital requirements for market risk which follow the same framework as Basel 1 but which are now to be strengthened to cover default risks on trading positions not adequately covered by the framework of the 1996 amendment.

Unlike Basel 1, Basel 2 contains regulatory capital requirements for operational risk which covers losses due to events such as human errors or fraudulent behaviour, computer failures or disruptions from external events such as earthquakes. Under the Basic Indicator Approach, the simplest of the three options in Basel 2, the capital charge for operational risk is a percentage of banks' gross income. Under the Standardized Approach to operational risk the capital charge is the sum of specified percentages of banks' gross income or loans for eight business lines. Under the Advanced Measurement Approach to operational risk, the most sophisticated option of Basel 2, subject to the satisfaction of more stringent supervisory criteria, banks estimate the required capital with their own internal measurement systems.

Also unlike Basel 1, Basel 2 contains detailed rules concerning securitisation exposures, i.e. the exposures for a bank after the transfer of the risks of assets on its balance sheet to outside investors, a category of risk which was omitted from Basel 1. The rules of Basel 2 are intended to establish stringent conditions for the recognition of the transfer of risk from banks' balance sheets and to set regulatory capital charges for the risks remaining with banks. These rules are currently being strengthened in response to banks' risk experience due to their securitisation exposures during the financial crisis.

Under Basel 2, the minimum regulatory capital ratio remains at the 8-per-cent figure of Basel 1. The denominator of this ratio consists of estimated exposures for credit, market and operational risk. The numerator consists of capital as in Basel 1 but after adjustment in certain ways. Conceptually the most important of these adjustments is the exclusion of risks corresponding to several categories of expected losses from the denominator of the ratio and of banks' corresponding loss provisions from capital in the numerator. This exclusion brings Basel 2 more into line with traditional banking practice according to which expected losses are covered by loss provisions, while capital is intended to cover unexpected losses.

Pillars 2 and 3 of Basel 2 are concerned with supervisory review of capital adequacy and the achievement of discipline in banks' risk management through disclosure to investors. Under the guidelines of Pillar 2, supervisors are to prescribe additional regulatory capital not only for the credit, market and operational risks of Pillar 1 if they judge this to be necessary for supervisory reasons but also for risks not covered under these three headings, such as liquidity risk (which covers banks' ability to obtain required funding and the prices at which it can sell assets in financial markets) and interest-rate risks due to changes in the margins between the rates at which banks lend and borrow.

Pillar 3 specifies rules for the disclosure of information concerning banks' capital and risk management. These rules are intended to enable financial market participants as well as supervisors to subject these to scrutiny which will reinforce the effectiveness of Pillars 1 and 2.

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a For the full 2006 text of Basel 2, see BCBS (2006). As explained below, this text is now being revised in the light of lessons learnt during the current financial crisis.

## II. Global implementation of Basel 2 and the difficulties confronting developing countries

Much of the information on implementation concerns the number of countries planning to introduce Basel 2. Beyond the raw statistics, however, people are usually also interested in having some kind of assessment of the realism of the plans for introduction and, especially for developing countries, of the pressures on national supervisors which the introduction of Basel 2 can be expected to generate.

Two surveys of the Basel-based Financial Stability Institute in 2004 and 2006 covered the plans of regulators in non-Basel-Committee countries for the introduction of Basel 2 (Financial Stability Institute, 2004 and 2006). If a country announces its intention to introduce the approaches, options and other rules of

Basel 2, this means that its regulators will make them available to financial firms in their jurisdictions.

Major findings of the 2006 survey were that 82 of the 98 responding countries planned to introduce Basel 2. This figure rises to 95 when the 13 member countries of the BCBS (as it was then constituted) are added. In comparison with the 2004 survey, the planned schedule for introduction in the 2006 survey was less ambitious in many countries. For most of the regions there were marked increases in the 2006 survey in comparison with the 2004 survey in the proportions of respondents planning to meet the obligations of Pillar 2 (supervisory review) and Pillar 3 (transparency) by 2009. Indeed, the data on meeting the obligations of Pillars 2 and 3 suggest a widespread and understandable tendency among responding countries to give first priority in plans for the introduction of Basel 2 to strengthening



supervisory capacity – Pillar 2 – and disclosure standards – Pillar 3.

During the drafting process for Basel 2, there was widespread concern over the difficulties likely to be posed to introduction by limitations on the technical capacity of banks and supervisors. So it is natural to ask the question whether the plans in the replies to the Financial Stability Institute's survey are realistic. Available information does not permit a definite answer to this question but a number of pertinent points can be raised.

The technical capacity of banks and supervisors in many developing countries in comparison with their counterparts in industrialised countries should not be underestimated. Indeed, events during the last decade – and more especially during financial crisis – have drawn attention to the sometimes egregious shortcomings of both banks and supervisors in industrial countries. In comparing the risk management capabilities of the large international banks of industrial countries and of banks of developing countries it is important to remember that the activities of the latter are generally more focused on traditional commercial banking and less on the new products and services which are proving more difficult to manage, control and supervise.

Nevertheless, the strains on national supervisory capacity of introducing Basel 2 in developing countries should not be underestimated. Information bearing on the scale of these strains can be illustrated from the Financial Stability Institute's 2004 survey which found that non-BCBS countries expected training on Basel 2-related topics would be necessary for about 9,400 supervisors or almost 25 per cent of the countries' supervisory staff.

The tasks in developing countries entailed by the introduction of the Standardized Approach for credit risk in Basel 2 are considerable but should be manageable. The requirements for introducing the Foundation and Advanced versions of the Internal Ratings-Based Approach as well as the more advanced approaches for operational risk, are a potential source of greater difficulties.

These more advanced approaches of Basel 2 require data covering substantial periods and the meeting of standards for validation by banks themselves and their supervisors. In the absence of internal sources for the data and models required, banks can

have recourse to external providers or vendors subject to carefully defined conditions.

In developing countries where key inputs to the Foundation version of the Internal Ratings-Based Approach for credit risk (loss given default and exposure at default) are to be provided not by banks but by supervisors, lack of required data and models may mean that supervisors as well as banks need to have recourse to outside vendors. The danger here is that pressures associated with implementation of the more advanced options of Basel 2 according to a timetable determined by political rather than supervisory considerations may lead to failures to meet proper validation standards for external data and models.

### **III. Capital standards in relation to investment and growth in developing countries**

The 1988 Basel Capital Accord (Basel 1) was not designed with economic development in mind. Its objectives, which Basel 2 has left unchanged, concerned the stability of the international banking system and competitive equality between banks engaged in international lending.

Although the institutions originally targeted by Basel 1 were the internationally active banks of the BCBS's member countries, by 1999 Basel 1 had become a global standard in the prudential regimes for strictly domestic as well as international banks in more than 100 countries. Basel 2 likewise will be a global standard, and the plans for the introduction of Basel 2 in a large number of developing countries raise the question of whether Basel 2 will have a developmental impact.

One question raised in this connection is whether the rules of Basel 2 concerning banks' capital requirements and internal controls will not have the effect of throttling categories of developmental financing which require a long-term perspective and willingness to incur considerable risks. Data bearing on this question include historical statistics for banks' capital in different countries. These statistics refer to simple leverage, i.e. the ratio of equity to a bank's on-balance-sheet assets (or its inverse) and not to the ratio of capital as defined by Basel 1 and Basel 2

**Box 2****LEVERAGE RATIOS FOR SELECTED ASIAN ECONOMIES, 1994**

The data below for 1994 from Thomson BankWatch on the relation of banks' capital to their assets for selected Asian economies refer to simple leverage calculated as the ratio of a bank's on-balance-sheet assets to equity, and not to the ratio of capital (including non-equity instruments designated as capital under Basel rules) to risk-adjusted assets and off-balance-sheet exposures, i.e. the ratio which is the target of Basel 1 and Basel 2 (Delhaise, 1998: appendix 4). The 8-per-cent minimum capital ratio of Basel 1 corresponds to a leverage (assets/capital) ratio of approximately 12 only if the banks' loans and other exposures are attributed risk weightings of 100 per cent. In the numerators of the leverage ratios for the Asian economies, no allowance is made for the less than 100-per-cent credit weighting attributed under the rules of Basel 1 to low-risk exposures on banks' balance sheets. Nor generally are off-balance-sheet exposures included in the ratio. Moreover the denominator generally excludes non-equity capital.<sup>a</sup> These differences should be borne in mind in comparing historical figures for banks' leverage with a Basel-based benchmark. 1994 figures for the leverage ratios of banks in selected Asian economies are as follows:

- Taiwan Province of China 5.32 (new banks) and 18.93 (established banks);
- Philippines 6.87;
- Singapore 7.74;
- Hong Kong, China (excluding HSBC), 8.71;
- Republic of Korea 11.01 (old merchant banks), 14.2 (country banks), 22.245 (nationwide banks) and 23.78 (specialized banks);
- Pakistan 11.16 (new banks) and 31.46 (established banks);
- Indonesia 11.26 (private banks) and 16.17 (state banks),
- Thailand 11.69;
- Viet Nam 12.41;
- Macao, China, 12.59;
- India 16.82 (commercial banks) and 28.44 (state banks):
- Malaysia 15.08;
- China 17.29 (banks incorporated in Hong Kong, China)
- China 25.33;
- Bangladesh 31.11.

Thus at least half of the groupings of banks specified in the Thomson BankWatch data for 1994 probably had leverage ratios no higher than would have been compatible with the rules of Basel 1 (which many of the economies had adopted or were about to adopt, though implementation of this measure probably would have been at most at a highly preliminary stage).

a Rules of thumb sometimes applied here are that leverage of 12 corresponds to a Basel 1 capital-to-assets ratio of 11 per cent rather than 8 per cent, and leverage of 20 to a Basel 1 capital-to-assets ratio of 6.5 per cent.

rules to risk-adjusted assets and off-balance-sheet exposures.

For example, in the United States, the average equity-to-total-assets ratio was about 50 per cent in 1840; about 12 per cent in the late 1920s; and (for the 25 largest banks) 5 per cent in 1989. Richard Dale, a scholar of financial regulation, comments as follows: "These high ratios – as they now seem to us – were the consequence not of any regulatory action but of

market forces. That is to say, visibly high equity ratios were necessary to maintain depositors' confidence" (Dale, 1992: 170). It should also be noted here that under practices common before the United States Civil War state banks' capital was often of highly doubtful quality, including as it might stock subscriptions which the organizers had borrowed from the very bank being established (Symons and White, 1991: 25). Data for Asian banks for the first half of the 1990s discussed in more detail in box 2 shows

that half of the national bank groupings probably had leverage levels no higher than would have been compatible with the rules of Basel 1.

Thus, partial as they are, the information concerning the United States and Asian countries do not point to a strong connection between banks' capital-to-assets ratios and the pace of economic development. Assessment of banks' contribution to development should indeed include the structure and evolution of their balance sheets. But assessment should not place too much emphasis on leverage or capital ratios at the expense of other indicators such as the scale and sectoral distribution of lending, loans-to-deposits ratios, liquidity and net interest margins.

Explicit references to development financing in the text of Basel 2 are difficult to find. None the less important techniques of development finance can be accommodated under the rules of Basel 2 for credit risk mitigation, a term which covers loan collateralization, guarantees and credit derivatives. Guarantees are a standard technique by means of which a public entity can substitute exposure to its credit risk for that of another borrower. The lower credit risk of lending backed by state guarantees is recognized in Basel 2.

Other provisions of Basel 2, which may be useful in the context of lending for development are its preferential credit weightings for lending to small and medium-sized enterprises (SMEs). Some of the relevant rules for such weightings are to be found under those for retail exposures.

Nevertheless, there are legitimate concerns as to the developmental implications of Basel 2's underlying premises about the nature of a good banking model. Pushed too far, these could prove harmful.

The premises of Basel 2 about the relationship between a bank and its counterparties are part of the now generally accepted business model for banking in the member countries of the Basel Committee and the rest of developed world. But they diverge to varying degrees from the premises of banking models in several emerging-market countries.

In Basel 2 the assumed relationship is arms-length. This implies that decisions about lending, investment and the provision of other banking services are based on reasoned analysis of the

counterparty's capacity to meet interest obligations as well as of other dimensions of creditworthiness as measured by objective rating or scoring systems.

A different model of borrower-lender relations has often prevailed in emerging-market countries. This model involves practices which go by names such as policy or directed lending, relationship or name lending and collateral-based lending. As part of such practices loans are made on the basis of criteria different from those of the underlying premises of Basel 2. The assumptions about risk sharing between a bank and its borrowers involve a relationship that is less arms-length and in some cases more like an equity investment.

It is often pointed out by commentators in developed countries that relationship lending can degenerate into "crony capitalism". This is true but the alternative banking models now prevalent in many developed countries also have their downside. Relationship lending's opposite, arms-length banking, with its reliance on quantitative criteria derived from supposedly scientific approaches to finance and with its de-emphasis on long-term relations between banks and their customers, pushed to its extreme, led to the financial turbulence engulfing major developed countries since mid-2007.

Where borrower-lender relations different from those assumed by Basel 2 are deeply rooted in national practices, the risks to economic activity and development from too an abrupt transition to Basel 2 could be substantial. Especially in Asia but also to varying degrees in many other developing countries a major source of economic growth has been firms, often family-owned or -controlled, which would not necessarily achieve high credit ratings – and thus low weightings for credit risk under Basel 2 – according to objective, quantitative criteria.

Two PricewaterhouseCoopers authorities on the capital regulation and risk management of banks have posed the following important question concerning Basel 2 and such firms: "Might the introduction of Basel II lead to a credit crunch, with banks less willing to lend to these companies? As they provide the backbone of the emerging economies, and would find it difficult to turn to the capital markets for alternative sources of funds, what impact might this have on the economic development of these countries? These are issues which supervisors need to consider very carefully before implementing Basel II in many

countries across the region [Asia-Pacific]” (Matten and Trout, 2006: 268–269).

As to the question of whether there are discernible implications of Basel 2 for investment and growth in developing countries these are still early days. But there is some anecdotal evidence that in some countries banks are treating Basel 2 as a justification for tightening lending standards in the way warned against above. Changes in banks’ lending practices in response to the introduction of Basel 2 are a subject which authorities in developing countries need to keep under close scrutiny, using policy space available to them to forestall banks’ adoption of potentially damaging lending practices.

#### **IV. Basel 2, securitization and financial turmoil**

Several commentators have raised the question whether Basel 2 has contributed to the outbreak of the financial crisis. The collapse in the value of certain financial assets, particularly securitized categories, and the associated seizing-up of major parts of the financial markets originated in the United States, subsequently spreading outwards to other countries and markets, mainly in Europe. However, in the United States only in July 2007 did the four banking regulators (the Federal Reserve, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and the Federal Deposit Insurance Corporation) announce agreement on the implementation of Basel 2. Thus the introduction of Basel 2 came too late to have influenced the crisis. However, the lack of adequate rules on securitization in Basel 1 did help to facilitate practices whose adverse consequences only became fully evident during the crisis.

Large-scale securitization of mortgage loans in the United States antedated Basel 1. Only in the 1990s did securitization spread to higher-risk assets such as subprime mortgages. The involvement of European banks in securitization also began to increase rapidly in the second half of the 1990s. There is evidence that as part of regulatory capital arbitrage banks securitized loans requiring relatively high capital charges for given levels of risk in order to economize on regulatory capital. This evidence is discussed by a working group of the Basel Committee itself in a 1999 report on the effects of Basel 1 which attributed a major part of the expansion of the securitization

of non-mortgage debt to regulatory capital arbitrage (BCBS, 1999: 3–4).

The lack of internationally agreed rules concerning securitization exposures was regarded by banking regulators as a major weakness of Basel 1 and its remedy was a major objective of Basel 2. However, the drawn-out character of the negotiations on Basel 2 meant that the Basel Committee’s concerns were not reflected early in the new millennium in new rules constraining the increasingly unsound structures associated with the “originate-to-distribute” model of securitization.<sup>1</sup>

While the omission of rules for securitization exposures from Basel 1 thus contributed to recent financial turbulence, the role should not be exaggerated. The expansion of “originate-to-distribute” took place in a period when opinion favoured non-interference in financial markets. As the Governor of the Reserve Bank of India put it in a recent speech, “the balance [between markets and regulation] is right or wrong only ex-post ... when there is all round prosperity, everyone wants everything to be left to the markets; when things go wrong and there is pain, monetary and regulatory policies are invoked to save the situation” (Reddy, 2008a).

The expansion of “originate-to-distribute” was also an integral feature of the movement towards conglomeration in the financial sector in the United States which followed the Gramm-Leach-Bliley Act in 1999. In normal times the involvement of the financial holding companies after this reform in a broad range of different financial services might have served the purpose of risk diversification and lower volatility of earnings. But in conditions such as those witnessed since 2007 the involvement has simply multiplied financial enterprises’ exposures to different, often correlated sources of financial turbulence.

#### **V. Basel 2 and the agenda for regulatory reform**

##### *1. Overview*

Responsibility for surveillance of the financial reform agenda has been assigned to the Financial Stability Board (FSB). This body was established in April 2009 as the successor of the Financial Stability Forum (FSF), an organization set up in 1999



to promote information exchange and cooperation between the regulators of a group of countries with important financial markets and multilateral financial institutions. The FSB includes as members countries of the Group of 20 which had not been members of the FSF as well as Spain and the European Commission. (In the sequel references will be to the FSB or the FSF according to their respective roles in the enunciation of the principles in question. Where the responsibility is a historically shared one, the term “FSB/FSF” is used.)

The FSB agenda is driven principally by the weaknesses in the framework of financial regulation and cross-border cooperation in developed countries indicated by the financial crisis. This is evident in the coverage of subjects in the FSB’s own overviews (for example, FSB, 2009a):

1. strengthening the prudential framework for financial institutions with recommendations on capital requirements, liquidity management, and a framework and tools for macroprudential regulation and supervision;
2. strengthening risk management;
3. implementation of principles for executive compensation in banks;
4. extension of the scope of financial regulation to institutions, markets and products currently not properly covered (such as many customized or OTC derivatives and hedge funds);
5. revising accounting standards;
6. reforming the use of credit ratings and the operations of the credit rating agencies;
7. improving cross-border cooperation between supervisors, especially in the areas of crisis management and cross-border insolvencies of financial firms;
8. establishing arrangements for enhancing adherence to internationally agreed regulatory standards.

Although the Financial Stability Board and its predecessor, the Financial Stability Forum have expressed strong support for implementation of Basel 2, they have also acknowledged that the rules need to be revisited in the light of weaknesses revealed by the crisis. The BCBS has developed an agenda for

strengthening the rules of Basel 2 in the following areas: (1) better coverage of banks’ risk exposures by minimum regulatory capital, particularly important under this heading being those of securitizations and of market risks in the trading book; (2) improvement in the quality of the regulatory capital corresponding to banks’ risks; (3) countercyclical capital buffers and provisions; and (4) introduction of a non-risk-based measure of regulatory capital designed to help to contain the degree of leverage in the banking system (Bank for International Settlements, 2009; and Wellink, 2009).

However, it should also be noted that most of the subjects in the overall financial reform agenda mentioned above bear in one way or another on Basel 2, as is evident from the following points contained in this agenda:

- Increased emphasis is now being given to connections between liquidity, on the one hand, and capital or solvency, on the other. These connections were dramatized by the cases of Bear Stearns and Lehman Brothers, the solvency of which was shown by events in 2008 to depend on continuing access to short-term financing.
- There is now more explicit acknowledgement that the risks associated with banks’ exposures to derivatives are generally greater in the case of non-standardized OTC products lacking a central counterparty.
- The quality of banks’ risk management depends on the way in which banks’ staff is remunerated.
- Credit ratings enter at a number of points into the setting of Basel 2’s weights for credit risk, for example, the weights under the Standardized Approach and for securitization exposures.
- International accounting rules determine the way in which the value of banks’ positions are measured and their reported profits estimated. The rules thus have an important bearing on banks’ risk management via the remuneration of their staff and their incentive structures, and on the contents of financial reporting under Pillar 3 of Basel 2.
- Perhaps most importantly, running through much of the agenda for changes in Basel 2 as well as the overall agenda for financial reform is the theme of the crucial relations between

the microprudential regulation of individual financial institutions, which was originally the central concern of Basel 2 (as of Basel 1), and macroprudential regulation, which is intended to counter systemic risks. These relations are central to the proposed inclusion of countercyclical buffers and provisions in the revised version of Basel 2.

Better coverage in Basel 2 of banks' risk exposures is addressed in documents already issued by the BCBS concerning securitization exposures and the framework for market risk (BCBS, 2009a, 2009b and 2009c). Under the heading of securitization exposures banks are to conduct their own due diligence concerning the assets securitized, thus reducing failures on this front observed in connection with the originate-to-distribute process during the credit crisis. For the purpose of estimating capital charges, the calibration of securitization exposures has been made more rigorous to take better account of the risks. Under the heading of market risk, the BCBS has increased the capital charge to take account of default risks to positions in banks' trading books highlighted by recent experience.<sup>2</sup> Work on the other items of Basel Committee's agenda for Basel 2 – improvement in the quality of the regulatory capital, countercyclical capital buffers and provisions; and an overall leverage ratio is ongoing (and is discussed further below).

## 2. *Liquidity risk*

In September 2008, the BCBS published principles for the management and supervision of liquidity risk (BCBS, 2008). These principles focus on the practices of individual banks – their need for adequate liquidity cushions and for internal management which includes appropriate stress testing, plans for contingency funding and management of off-balance-sheet as well as on-balance-sheet commitments. However, the oversight body of the Basel Committee, the Group of Central Bank Governors and Heads of Supervision, have also decided that microprudential principles for liquidity risk need to be supplemented by guidelines addressing the relation between the liquidity risk of institutions and systemic financial risk. These will include a framework for the assessment of system-wide liquidity risk which could serve as a basis for internalizing within individual banks the externalities which their activities create.

## 3. *Central counterparties and OTC derivatives*

The prevailing view among regulators is that existing arrangements for the clearance and settlement of OTC derivatives are not conducive to transparency and stability. During the crisis regulators did not always know where risks associated with holdings of derivatives were concentrated. Moreover, provision of financial support by governments and central banks to individual financial firms was motivated in some cases by fear of the domino effects throughout the financial sector that the failure of a large holder of OTC derivatives might have on other firms through the network of their bilateral derivatives contracts (Scott, 2008: chapter 10). A major concern of both national regulators and the Financial Stability Board here is the currently opaque market for credit default swaps.<sup>3</sup> Proposals for improving the transparency and security of such swaps as well other OTC derivatives have focused on the institutional and contractual infrastructure, special emphasis being given to extending the use of central counterparties (CCPs) for clearing and settlement.

Clearing and settlement refer to the arrangements for the completion of securities transactions. Clearing covers confirmation of the identity and quantity of the financial instrument or contract being bought or sold, the price and date, and the identity of buyer and seller. Clearing may also cover the netting of trades, i.e. the offsetting of the buy and sell orders of a single party. Settlement refers to payment to the seller and delivery or transfer of ownership of the financial instrument to the buyer.

Derivative transactions can be strictly bilateral and subject to no external surveillance or control, as has been the case for several categories of OTC derivatives.<sup>4</sup> In such cases, risk management (through collateralization, etc.) is also bilateral and transparency is at best limited. Greater transparency can be achieved if transactions are submitted to a central repository of information for OTC transactions. However, such a repository does not itself provide protection from the risk that a counterparty will not perform.

CCPs not only serve the function of information repository but also reduce credit risk by interposing themselves between the counterparties to transactions, becoming the buyer to every seller and the seller to every buyer and thus eliminating the risk

of domino defaults due the failure of one party to chain of bilateral derivatives contracts. If they are to serve this purpose, the CCPs' procedures must be well designed and they must have capital and other access to financing which will enable them to meet the demand on their resources resulting from defaults. CCPs can be used in connection with OTC contracts or can take the form of clearinghouses for exchange-traded contracts. In both cases, the contracts served by the CCP arrangements are subject to a measure of standardization, and in both cases participants in the arrangements must meet margin requirements. One difference between the CCP arrangements for OTC contracts, on the one hand, and exchange-traded contracts, on the other, concerns the parties covered – in the case of the former financial institutions and in the case of the latter, a more heterogeneous set of market participants reflecting the long history of exchange traded derivatives and the wider range of their coverage which includes commodities as well as exchange-rate, stock and government-bond futures. Another difference concerns transparency, information on prices being more widely available for exchange-traded contracts.<sup>5</sup>

The differing risks of alternative arrangements for clearing and settlement will be reflected in various features of regulatory reforms. Basel 2 is currently being revised so that minimum regulatory capital requirements reflect more accurately the risk associated with the alternatives. The capital requirements can be expected to be lower for derivatives with markets served by CCPs.

#### 4. Compensation

Unsurprisingly, in view of the high political profile of the issue, a reasonably comprehensive set of principles for compensation of executives by financial firms has already been issued by the FSB (FSB, 2009b). Key concepts underlying these principles are that total variable compensation (i.e. bonuses) should never compromise maintenance by the firm of a capital base which is consistent with the risks faced by the firm, and that decisions as to the size and allocation of variable compensation should take full account of these risks. Specific guidelines include the following:

- Poor financial performance should lead to a contraction of variable compensation. This

should include reductions in amounts previously earned, including malus or clawback arrangements.

- In the case of senior executives and other employees whose actions have a material impact on the firm's risk exposure, a substantial proportion of total compensation should be variable and performance-related. Moreover, a substantial proportion of variable compensation (40 to 60 per cent) should be payable under arrangements which defer payment over a period of not less than three years.
- A substantial proportion of variable compensation (a figure of at least 50 per cent being mentioned) should be awarded in shares or share-like instruments which align incentives with long-term value creation and risk.
- The remainder of deferred compensation can be paid as cash which vests gradually and is subject to the clawback arrangements already mentioned.
- In the event of government intervention to stabilize or rescue the firm supervisors should have the power to restructure compensation, and the compensation of the most highly paid employees should be subject to independent review and approval.
- Guaranteed bonuses should not be part of prospective compensation plans. Existing contractual payments related to termination of employment should be maintained only if it is determined that they are aligned with long-term value creation and prudent risk-taking.

The FSB principles also include obligations as to disclosure and the scope of supervisors' responsibilities for oversight.

Implementation initiatives are under way. The Basel Committee has integrated the FSB principles into Pillar 2 of Basel 2. It has also conducted a survey of progress in implementation of the FSB principles, and has created a task force to promote consistent and effective implementation. Unsurprisingly, there is variation in the pace of implementation among countries. Such variation is leading to pressures from within the banking industry to dilute the principles because of concerns over their impact on the international competitiveness of different jurisdictions (an argument commonly encountered in connection

with various items on the financial reform agenda) (FSB, 2009a: 14). Uniformity of implementation may also be complicated by differences in countries' tax regimes for compensation in the form of deferred receipts of stock.

## 5. Credit rating agencies

Even before the crisis the standing of the agencies was under pressure. Criticism focused on the sector's concentration and the dominant role played by a small number of global institutions. The agencies' seal of approval is a key factor in the saleability of debt instruments, some categories of institutional investor actually being limited to instruments with a rating of investment grade, i.e. BBB or better. Yet in a number of cases involving firms such as Enron and Asian countries prior to 1997–1998, the agencies were considered to have been slow to identify the problems leading to insolvency or financial crises.

The criticisms of the credit rating agencies have intensified since the outbreak of the current crisis in 2007. The agencies played a key role in the "originate to distribute" process by their rating of securitized investment products, especially of the more complex structured products. High ratings were often accorded to such products on the basis of technically flawed analysis. The quality of the analysis was also often adversely affected by the conflicts of interest involved in a process which generated high fees for the agencies but where banks could – and did – shop around for favourable ratings.

These weaknesses have led the FSF and the FSB to call for improvements in the technical quality of the rating process and improved management of conflicts of interest, especially those in ratings of structured products. They have also called for reduced reliance on credit ratings and for enhanced due diligence and credit analysis by banks and investors. Regulators are to check that their rules are consistent with reduced reliance on the agencies ratings throughout the financial sector.

Under a new regulatory regime for credit rating agencies in the EU, all agencies will have to apply for registration and will have to comply with rules requiring: (1) avoidance of conflicts of interest due to their roles as advisers to banks on ratings as well as actual raters; (2) vigilance concerning the quality

of rating methodology; (3) and acting in a transparent manner. Ratings for the structured financial products which were at the heart of the crisis are to be differentiated from other ratings by the use of an additional symbol.

Regulatory reform in the United States is to include tighter regulation of credit rating agencies' policies and procedures regarding subjects similar to those of the new EU regime. Another idea under consideration is that there should be increased civil liability for credit rating agencies, a move long resisted by the agencies which maintain that it would conflict with their right to freedom of speech. Japan has also introduced reforms designed to achieve objectives similar to those of the EU and United States.

The Basel Committee is reviewing Basel 2's use of credit ratings in its procedures for setting minimum regulatory charges for credit risk. In the context of Basel 2 as a global standard reliance on such ratings is most important under heading of the simplest Standardized Approach to setting minimum regulatory capital charges (see box 1), though ratings are also incorporated in other rules of the agreement such for the charges for securitization exposures. At present, the BCBS appears likely to stand by its decision to base some of its rules on the agencies' ratings owing to inability to come up with an alternative – and presumably in the hope that ongoing reforms of the agencies will enhance ratings' reliability.

It is not clear how important reform of the credit rating agencies will be to the application of Basel 2 rules in most developing countries. The Standardized Approach includes a risk weight of 100 per cent – and thus a capital charge of 8 per cent – for loans to unrated borrowers, a category likely to include a large number of borrowers in such countries. For these borrowers, introduction of the Standardized Approach will not involve changes in banks' minimum regulatory capital from the rules of Basel 1. From a longer-term point of view, the current motivating force of concern over the role of credit ratings in Basel 2, namely discredited practices of the major agencies in industrialized countries, may prove to be parochial since it fails to take into account the impact on the application of Basel 2 rules of the possible establishment of indigenous rating agencies in developing countries themselves. Indeed, it is reasonable to raise the question why countries which are increasingly becoming formidable international competitors in several other sectors should not also be capable of



establishing agencies capable of meeting the Basel Committee's standards for external credit assessment institutions under the Standardized Approach.

## 6. Accounting consolidation and valuation

In its report of April 2008, setting out the agenda for financial reform, the Financial Stability Forum (FSF, 2008, chapter III), as part of its recommendations on enhancing transparency and valuation, drew attention to the need to strengthen accounting and disclosure standards for off-balance-sheet entities and to the problems associated with the accounting valuation of financial instruments, especially of complex instruments and illiquid markets.

The work of the International Accounting Standards Board (IASB) and the United States Financial Accounting Standards Board (FASB) on off-balance-sheet entities has been motivated by concerns similar to that of the BCBS on securitization in Basel 2. The rules of the accounting bodies include standards for what does or does not constitute consolidation for accounting purposes, while Basel 2 specifies the conditions which must be met if the securitized assets are to be removed from the exposures which must be included in its minimum regulatory capital requirements. Assuring consistency between accounting and supervisory rules on off-balance-sheet entities should involve no insuperable difficulties, although the rules of the IASB and FASB themselves are not completely consistent (Butler, 2009: 195–196). However, the application to a subject, consolidation, where firms have historically been creative in devising means of getting round rules and regulations, may still prove problematic.

Setting appropriate standards for the valuation of financial instruments requires solutions to more conceptually intractable problems. As a recent treatise on accounting for financial instruments puts it, “Not only must the accountant know how to value financial instruments. He must also be able to understand and disclose the ways in which they change the risk profile of an organization and report in a manner which complies with the most difficult and controversial accounting standards ever written” (Butler, 2009: 7). According to the traditional accounting model, some assets and liabilities are currently shown on the balance sheet at cost and others at market

value or some approximation thereof. However, as the financial instruments and techniques used by financial (and large non-financial) firms have multiplied owing to innovation and the conglomeration of different activities in single financial enterprises, the rules governing the choice of accounting options have grown increasingly complex (see box 3).

The approach to reform advocated by the many commentators who view accounting standards as solely or mainly a tool to enable decision making by investors is to reinforce rules requiring fair valuation of assets and liabilities (fair value being defined in the IASB's International Financial Reporting Standards as “the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction”). But this approach, though superficially plausible, entails several problems.

The approach glosses over the multiple roles of accounting, for example, in firms' corporate governance and internal controls whose requirements may differ from those of the provision of information for investors. It implicitly assumes that reasonably straightforward methods of estimating fair values are always available – if not on the base of market prices, then through the use of firms' own models. However, in illiquid markets such methods may be fraught with uncertainty, and for some items, especially complex financial instruments, the firm's models can themselves serve as the basis for creative accounting and thus misleading estimates of profit and loss.

Moreover, the application of fair valuation can aggravate financial instability and the procyclical behaviour of banks.<sup>6</sup> In a report on procyclicality in the financial system, the FSF drew attention to the way in which fair-value accounting “encouraged market practices that contributed to excessive risk-taking or risk-shedding activity in response to observed changes in asset prices ... When the markets for many credit risk exposures became illiquid over 2007–08, credit spreads widened substantially as liquidity premia grew ... Wider spreads drove down mark-to-market valuations on a range of assets ... The extensive use of fair value accounting meant that, across the financial system, these declines translated into lower earnings or accumulated unrealized losses ... Mark-to-market losses eroded banks' core capital, causing balance sheet leverage to rise. Banks sold assets in an attempt to offset this rise in balance sheet leverage and to address liquidity issues, but such sales only

**Box 3****ACCOUNTING VALUATION FOR FINANCIAL INSTRUMENTS**

For accounting purposes, financial instruments are classified as belonging to one of three categories: (1) loans and receivables and other assets held to maturity; (2) items held for trading and items to which the fair value option applies; and (3) assets available for sale.

Items under (1) are shown on the balance sheet at amortized cost. Trading items under (2) are usually held on a short-term basis for speculation or as part of broker-dealer activities. These items are shown on the balance sheet at fair value (see main text) and changes in this value go through profit and loss. The fair value option allows firms also to show selected other instruments at fair value, changes in which go through profit and loss. This option is available for items which, owing to measurement or recognition inconsistencies, might otherwise be a source of artificial volatility of earnings if carried on the balance sheet at amortized cost. Available-for-sale is a residual category for items (not including derivatives) to which the other two accounting categories do not apply. For balance-sheet purposes, these are valued at their fair value but changes do not go through profit and loss until the items are sold.

Fair value hedges enable the use of derivatives to control the fair value of balance-sheet items. If a derivative qualifies as a fair-value hedge, changes in the value of the item hedged are adjusted to take account of changes in the value of the derivative. The objective of such hedges is to reduce earnings volatility since only the change in value reflecting the ineffective part of the hedge goes through profit and loss. Cash flow hedges enable the hedging of future cash flows. If a derivative qualifies as a cash-flow hedge, changes in its value do not go through profit and loss until the period when the forecasted hedged transaction is also recorded in earnings. In both cases, the derivatives used for hedging must meet stringent criteria. Qualifying hedges of foreign exchange gains and losses on net investment in foreign entities and operations may also be subject to special accounting treatment.

Many firms have proved reluctant to use hedge accounting to reduce earnings volatility owing to complexity of the rules and the extensive documentation required under international and United States accounting. Moreover, in the illiquid markets of the credit crisis the value of many hedging instruments themselves experienced increased volatility, thus reducing their usefulness for hedging (Committee on the Global Financial System, 2009: 13).

pushed credit spreads wider, causing more mark-to-market losses” (FSF, 2009b: 26; Committee on the Global Financial System, 2009: 14).

The recommendations of the FSF to standard setters and prudential supervisors concerning rules for accounting cover: (1) the difficulty of estimating fair values when the market data and the modeling required are inadequate for this purpose; and (2) changes in accounting rules which would mitigate the contribution of fair value accounting to “adverse price dynamics” (i.e. procyclicality). The recommendations cover the following subjects:

- the use of valuation reserves or adjustments for financial instruments as protection against the consequences of highly uncertain fair values;

- changes in the underlying accounting model to reduce the complexity of existing rules for financial instruments;
- a review of rules covering transfers between the accounting categories for financial assets to avoid procyclical effects of fair-value accounting during periods of severe illiquidity;
- simplification of the requirements for the recognition of hedge accounting. The complexity of existing requirements is thought to deter more widespread use of hedge accounting to smooth fluctuations in profit and loss due to the application of fair valuation.

For its part, the Basel Committee in a statement on guiding principles for the replacement of the

International Accounting Standard for the recognition and measurement of financial instruments (IAS 39) has also supported exceptions to the application of fair value (BCBS, 2009d). It advocates the following: linking bank accounting to the bank's business model and risk-management strategy and practices and to the economic substance of its transactions; reducing the complexity of relevant rules; and delinking fair values from income and profit recognition when there is considerable valuation uncertainty.

Revisions of international accounting standards recently proposed by the IASB have not so far taken on board the recommendations of the FSF and FSB (IASB, 2009b). Under new proposals, the IASB has reaffirmed the principle that financial assets should be measured at fair value or amortized cost, with the objective of simplifying application of the principle rather than making it more flexible. Classification of assets would be based on the firm's business model for measuring financial instruments and the instruments' contractual cash flows. To qualify for measurement at amortized costs, the instruments should have the basic features of a loan. Otherwise, they should be measured in accordance with fair valuation. Reclassification between the categories of amortized cost and fair value would be permitted only in response to changes in the firm's business model. The proposals would appear to not to offer the flexibility as to reclassification proposed in the recommendations of the FSB. Moreover, there is no mention of the use of valuation reserves or adjustments when markets are illiquid and usual estimation methods provide a weak basis for valuation. The proposals of the IASB thus suggest that agreement may be difficult on the flexibility regarding valuation for which financial regulators are pushing via the FSB.

Fair value is important in Basel 2 since it is the basis for valuing exposures in both banking and trading books (para.718 (xcx)) of the version of Basel 2 which incorporates post-2006 revisions as reproduced in BCBS, 2009c: 26–29). However, the application of fair value in Basel 2 is subject to ad hoc adjustments. In particular, banks are to adjust fair values to allow for differences in the degree of positions' liquidity. This would appear to be consistent with the recommendations of the FSB concerning the need for valuation reserves or adjustments to take account of increased uncertainty as to fair value in illiquid markets. However, such adjustments or reserves do not currently figure in the new proposals of the IASB.

Developing countries will be affected by the changes in accounting rules which are part of the agenda for financial reform. In several of these countries, the strengthening of accounting standards for banks has been closely linked to the introduction of Basel 2 and this connection can be expected to continue. Revisions of the accounting for the valuation of financial assets will thus require adjustments to the supervisory rules and guidelines accompanying introduction of Basel 2 and complicate the tasks of authorities in developing countries accordingly.

## 7. *Countercyclical buffers in a macroprudential framework*

The focus of a macroprudential framework is damage from adverse developments to the economy as a whole – real as well as financial activity – as opposed to the concern of traditional microprudential orientation with individual financial institutions. As the Governor of the Bank of Canada put it in a recent speech, [under the microprudential approach to reform] “protect the banks from the economic cycle; in other words, make each bank, individually, more resilient” and [under the macroprudential approach] “protect the cycle from the banks; that is make the system as a whole more resilient” (Carney, 2009). An issue central to strengthening the macroprudential framework is the procyclicality embedded in regulatory rules. The macroprudential perspective also includes subjects which are related to development policy (see below).

Procyclicality denotes the dynamic interactions between financial and real activity whereby business-cycle fluctuations are amplified and financial instability in turn is exacerbated (FSF, 2009a: 8). The danger that Basel 2 might aggravate procyclicality arises because the rules of Basel 2 are intended to align regulatory capital requirements more closely with economic capital, i.e. the amount of capital considered to be appropriate as a buffer against unidentified future losses in abstraction from regulatory rules, and thus with banks' actual practices with respect to the control and pricing of credit risk – practices which are notoriously procyclical.

That procyclicality might be increased by the rules of Basel 2 has been recognized during the drafting process. Through-the-cycle estimates of the key statistical determinants of credit risk would, it was

hoped, mitigate this danger. Moreover, adjustments were made to the formula for credit risk to reduce its sensitivity to changes in the probability of default (Cornford, 2005: 27–28). More recently, in response to the recent turmoil, the macroprudential dimension of regulatory and supervisory frameworks has attracted much increased greater attention leading to additional efforts to root out or dampen the procyclicality embedded in regulatory rules.

Under the heading of prudential regulations directed at reducing procyclicality in the financial system capital requirements and loss provisioning are closely related. In the design of Basel 2, subject to certain restrictions, loss provisions can be included in regulatory capital up to specified limited limits. Like capital, loss provisioning is capable of contributing to procyclicality. Evidence for the United States indicates that loss provisions fall as a percentage of loan volume during periods of rapid economic growth and rise during downturns (FSF, 2009a). The increases in provisions during downturns are capable of lowering retained earnings, capital and lending, while the decreases during expansions are capable of having converse effects.

Recommendations of the FSF concerning countercyclical buffers are directed at capital, provisioning and leverage (FSF, 2009b). Countercyclical capital buffers and an overall leverage ratio as part of Basel 2, have already been mentioned under the current agenda of the Basel Committee (in section V.1). Other closely related recommendations of the FSF for mitigating procyclicality concern revision of the framework for market risk of Basel 2 to reduce reliance on cyclical Value-at-Risk (VaR)-based estimates of regulatory capital, stress testing and monitoring of Basel 2's rules to ensure that they dampen rather than amplify procyclicality.

The rules on countercyclical capital buffers are to cover the mechanisms for triggering increases and decreases in capital, the capital instruments involved, and the question of whether regulation should target overall levels of capital or that allocated to particular categories of exposure.

On trigger mechanisms a major question is whether greater weight should be given to regulatory rules, on the one hand, or to regulatory discretion, on the other.

The proposal of a group assembled by the Geneva International Centre for Monetary and Banking

Studies and the London Centre for Economic Policy Research, whose proposals for countercyclical revisions to Basel 2 are part of a larger agenda for financial reform, is for a laddered response of regulatory levels to the credit cycle, an approach which would prioritize rules over discretion (Brunnermeier et al., 2009: chapter 4). The laddered response would be to divergences between actual and target macroprudential levels of regulatory capital (greater than those of Basel 2), which would be estimated on the basis of indicators whose fluctuations have potential implications for systemic risk, such as leverage, maturity mismatches between assets and liabilities, and the expansion (or contraction) of lending and asset prices.

Dynamic provisioning, another approach often raised in the context of countercyclical regulation of capital although it targets loss provisions rather than capital as such, also deploys regulatory rules in preference to discretion. Such provisioning is designed to reflect credit risks and credit losses that accumulate in loan portfolios in boom periods before they become apparent in downturns. The resulting general loss provisions (i.e. provisions reflecting expected future losses on a loan portfolio as a whole and not the performance of individual loans) diminish during the downturns as they become associated with specific loans, adding to specific loss provisions but preserving capital at levels above regulatory minima and thus, it is intended, mitigating declines in bank lending. The much cited version of dynamic provisioning pioneered by the Spanish authorities puts its principal emphasis on the indicator of actual as opposed to long-run average credit growth for the purpose of estimating target loss provisions (Committee on the Global Financial System, 2009: 15; Brunnermeier et al., 2009: 34).

Within the regulatory community there is support for judgement, and thus also for discretion, in applying rules on countercyclical capital buffers. The judgement would be reached by regulators on the basis of a comprehensive set of macroprudential indicators which would include those in the two rules-based approaches described above (Tucker, 2009: 9–10).

Concerning the categories of capital which would be included in the countercyclical buffers there is a consensus that it should be mainly Tier 1 equity capital, and that it should not include other items such as the subordinated debt also qualifying as capital in Basel 1 and Basel 2. Most recently, however,



widespread interest has been expressed in the idea of including in the countercyclical capital buffers debt instruments, so-called contingent convertible (CoCo) bonds, whose trigger for conversion into equity would be a preassigned level of a regulatory indicator such as the bank's capital ratio. A practical example of such an instrument is the recent issue of enhanced capital notes (ECNs) amounting to GBP 16 billion by Lloyds Bank in exchange for other debt instruments. However, if such bonds are to be included in countercyclical capital buffers, regulators will need to be confident that their costs will be low enough for them to be an attractive option, and will have to decide what form or forms the regulatory triggers should take. In the debate on such bonds misgivings have also been expressed that simultaneous triggering for conversion of the bonds at several banks in volatile financial markets could also actually trigger financial panic (Sakoul, 2009; Tett, 2009).

Commentary on countercyclical capital buffers has tended to focus on managing changes in aggregate capital. However, within the regulatory community there is apparently scepticism concerning reliance on this approach. Suppose, for example, that minimum aggregate capital requirements were raised during a credit boom which, as is frequently the case, involved primarily particular sectors or financial instruments. The reaction of the banks might simply be to reduce lending to less exuberant sectors or instruments, while continuing to lend on relaxed terms to the more exuberant ones i.e. those driving the boom. Ways of dealing with this problem currently under consideration include limiting countercyclical variations in minimum capital ratios to the problematic classes of exposure as well as variations in the permitted haircuts (discounts with respect to nominal values) for collateral used in secured lending under the problematic headings – collateral which would typically be experiencing values inflated by the exuberance of a credit boom (Tucker, 2009).

The FSF's recommendations earlier this year concerning loss provisioning were directed partly at the framework underlying existing rules: the IASB and the United States FASB were to issue a statement reiterating the need for the use of judgement to determine losses for provisioning purposes; and the two bodies were to reconsider the existing model for incurred losses with a view to incorporating a broader range of available information (FSF, 2009b: 19–21). Motivating these recommendations is the FSF's view that earlier recognition of losses than that required

under the current provisioning model could have reduced procyclicality in the current crisis. Other recommendations of the FSF regarding provisioning were that the Basel Committee should undertake reviews of Basel 2 to reduce or eliminate disincentives for establishing appropriate provisions for loan losses and to assess the adequacy of disclosure concerning loan-loss provisioning under Pillar 3 of Basel 2.

As part of its revision of standards on financial instruments, the IASB has recently published proposals on loss provisioning (IASB, 2009a). Under these proposals, there would be a move away from the existing method which focuses on current incurred loss impairment toward one based on expected losses. This method would recognize expected losses when the asset in question is acquired and throughout the life of the asset with reassessment at each accounting period.

These proposals are a move in the direction of the recommendations of the FSF. By prescribing earlier recognition of losses, the proposals would reduce the negative and procyclical impact on the profit and loss account under current accounting practice of sharp rises in incurred losses at the beginning of cyclical downturns. Loss provisioning under the IASB's proposals would not be part of countercyclical capital buffers as such but would none the less contribute to the same objective of reducing procyclicality. Similarly the IASB's proposals should remove accounting objections to the build-up of provisions for loan losses during cyclical upturns which is required for dynamic provisioning. It should be recalled that the IASB's proposals are still at the stage of an exposure draft. The period for comments and finalization of rules here means that a new standard will not be issued before 2010 and will not be mandatory before about three years later.

## VI. The experience of selected developing countries

Most of the problems of introducing Basel 2 are common to all countries but some can be more severe in developing countries owing to less adequate supervisory capacity, less developed internal controls within banks themselves, and the shortage of infrastructure such as data on credit risks and credit rating agencies. Features of experience in introducing

Basel 2 in some developing countries (India, Pakistan and Sri Lanka) are described below. Of particular interest, here are ways in which attempts have already been made in these countries to address issues on the agenda of financial reform such as the procyclicality of Basel 2, which are discussed above in section V.

## 1. India

Basel 2, like its predecessor, Basel 1, has been introduced in a context of continuous upgrading of India's system of financial regulation. Some of the measures in this upgrading are directed at reducing the cyclicity of bank lending (Leeladhar, 2007a and 2007b; and Reddy, 2008b).

- In 2002, banks were advised to build up within five years an Investment Fluctuation Reserve amounting to a specified proportion of their financial assets as a countercyclical prudential requirement which would facilitate their capacity to absorb the effects of increases in interest rates. The target for this reserve was 5 per cent of assets in the categories of Held for Trading and Available for Sale (see box 3). This countercyclical regulatory requirement is considered as having assisted banks during the rises in interest rates beginning in late 2004.
- Banks are required to use mark-to-market in estimating changes in the value of assets Held for Trading and Available for Sale. Provision is to be made for net losses but net gains are not to be included in profits.
- Credit risk weights for minimum regulatory capital requirements have been varied (mostly in an upward direction) for lending to sectors such as real estate, mortgage-backed securities, and consumer credit which are particularly sensitive to the business cycle. In the case of real estate, the increases in credit risk weights were accompanied by tightening of rules on exposure limits and collateral. At the same time, risk weights for housing loans below a certain ceiling were reduced.
- Prudential norms for loan loss provisioning for exposures to real estate, personal loans, credit receivables and loans resulting in exposures to capital markets have been tightened in response to credit growth.

Other noteworthy features of recent Indian upgrading of regulations related to capital standards and risk management are the following: (1) the minimum regulatory capital requirement is 9 per cent of risk-weighted assets – i.e. higher than the Basel 2 minimum of 8 per cent – and banks are expected to operate at levels well above this; (2) conservative guidelines have been issued for minimum regulatory capital requirements for securitization exposures; (3) comprehensive guidelines have been issued for the Internal Capital Adequacy Process (ICAAP) under Pillar 2 (supervisory review) of Basel 2 which is designed to capture all material risks to banks, including those not covered or not fully covered by the weights for credit, market and operational risks under Pillar 1.

To control banks exposure to liquidity risk, guidelines have been issued to limit banks' vulnerability to changes in conditions in interbank lending and in the money markets. These take the form of ceilings on banks' interbank liabilities as a proportion of their net worth as well as on banks' access to the market for call money as both lenders and borrowers. Interesting in the context of the credit crisis in major developed countries are guidelines regarding banks' exposure to non-government securities. The coverage of these guidelines includes listing and rating requirements, prudential limits, internal controls, the role of boards, disclosure, and trading and settlement procedures. In the case of non-government securities, banks are advised not to be guided solely by the ratings of credit rating agencies but to carry out their own appraisals as in the case of direct lending.

In the context of introducing Basel 2, India must also confront problems due to the small number (four) of credit rating agencies and to the limitation of the agencies' ratings to financial instruments as opposed to issuing entities. The authorities are aware of the danger that unrated entities may be handicapped under the rules of Basel 2 in their attempts to obtain bank credit so that special measures to maintain the credit flow to such borrowers may be necessary.

## 2. Pakistan

As in many other developing countries, the introduction of Basel 2 should be viewed in the context of broader reforms of the financial sector. In addresses concerning these reforms, a Governor of the State Bank of Pakistan has spoken at length about the

upgrading of corporate governance of banks. Some of the subjects under this heading such as limits on banks' exposures to single borrowers and to groups of related borrowers are an integral component of the prudential regime for banks of which Basel 2 is also a part (Akhtar, 2006a, 2006b and 2008).

Recurring subjects of the addresses of the Governor are the small number of credit rating agencies (two) in Pakistan and the consequent problem of accessing the information required by Basel 2, the danger that Basel 2 will contribute to procyclicality in banks' lending, and the possibility that Basel 2 will further restrict the access to finance of sectors, firms and individuals already underserved.

On procyclicality, the emphasis of the Governor is on the use of supervisors' discretionary powers under Pillar 2 (supervisory review) to demand that banks accumulate additional capital during economic expansions which will be available to cushion the effects on lending of decreases during downturns. Restrictions on access to financing in contradiction with the thrust of the country's development policy are to be countered by reviews of credit scoring mechanisms as they apply to small businesses and the poor – mechanisms which the Governor clearly believes are currently unsatisfactory.

### 3. Sri Lanka

Here too the introduction of Basel 2 should be viewed as part of a programme of upgrading the corporate governance and risk management of banks, a programme which the Deputy Governor of the Central Bank denotes with the acronym GRC – Governance, Risk Management and Compliance (Jayamaha, 2008).

The setting of minimum capital requirements for banks in Sri Lanka has been accompanied by measures designed to reinforce their effects.

- The minimum regulatory capital requirement of 10 per cent of risk-weighted assets under the Sri Lankan version of Basel 1 (as opposed to the 8 per cent prescribed in Basel 1 itself) is to be retained under Basel 2. Waivers are to be granted only in accordance with strict criteria.
- The rules of Basel 2 regarding the granting of preferentially low risk weights to loans

qualifying for the retail portfolio have been adjusted to meet local conditions for retail and SME loans.

- To counter procyclicality of bank lending, the authorities favour encouraging banks to build up capital buffers in good times to help stabilize lending during economic downturns.
- To avoid the danger that Basel 2 will lead to restrictions on lending to firms with low credit ratings under the Standardized Approach to credit risk, the authorities are permitting flexibility regarding the application of such ratings. In the absence of such flexibility, they acknowledge that there will be an incentive to firms not to submit to credit rating, a practice which they wish to promote (Jayamaha, 2006).

## VII. The new macroprudential focus and development

Basel 2 was not intended to be developmental. Indeed, it is questionable whether an international agreement on prudential rules for banks should or could explicitly target developmental objectives. Such targeting would presuppose an international consensus – which is lacking – on the relationship between banking models, on the one hand, and development, on the other. Nevertheless, an agreement intersecting with as many aspects of banking practice as Basel 2 inevitably has implications for both development and development policy. Such implications are evident in the observations in section III concerning the dangers for development of an inflexible introduction of Basel 2, and they are part of measures to accompany the introduction of Basel 2 adopted in a number of developing countries (such as India discussed in section VI).

The emphasis in the current financial reform agenda on macroprudential as opposed to principally microprudential regulation opens the way to incorporation in the agenda of developmental dimensions. According to the characterisation in a recent paper of the Bank for International Settlements, the macroprudential orientation of regulatory and supervisory frameworks “would focus policy on the damage to the system as a *whole* ... with a particular eye to the impact on the real economy. Here, common exposures across financial institutions to macroeconomic factors play a key role. And it would explicitly take

into account the *impact of the collective behaviour of economic agents on aggregate risk*" (Bank for International Settlements, 2008: 3–4).

The proximate objective of macroprudential policies is specified in the paper of the Bank for International Settlements as limiting system-wide distress, and the ultimate objective as avoiding output costs linked to financial instability. These objectives were no doubt drafted primarily with the relations between traditional features of macroeconomic stability and prudential supervision in mind. However, in emerging-market and other developing countries output costs as a feature of the macroeconomy cannot be abstracted from development policy any more than development policy can be abstracted from policies belonging to the macroprudential framework.

In any immediate perspective, the practical implication of this broadening of the prudential perspective should concern the way in which Basel 2 is introduced in different countries. Basel 2 is not a binding international agreement and its rules (which, as explained above, are still being revised in the light of recent experience) accommodate considerable flexibility as to the way in which they are implemented. This leaves it up to countries to ensure that their choices as to the way in which Basel 2 is introduced are consistent with their development priorities.

In a longer term perspective, one can envisage eventual inclusion in the supervisory review of Pillar 2 of guidelines covering features of Basel 2's interactions with policies with a developmental dimension. Possible subjects for such guidelines would be dimensions of macroprudential (and microprudential) risks more commonly encountered in developing than developed countries and appropriate ways of measuring and controlling them.

## VIII. The representativeness of the Basel Committee and the role of developing countries in agreements on capital standards

Since the second half of the 1990s, increasingly insistent questions have been raised concerning the representativeness of the BCBS now that its work, especially that on *Core Principles for Effective Banking supervision* (BCBS, 1997) and on Basel 2, have clearly established its status as a global standard

setter and not just standard setter for banks in G10 countries. Some critics have even questioned the legitimacy of the BCBS's role as global standard setter owing to the narrowness of its membership.

The case for the longstanding limitation of the BCBS's membership to a group of mainly European developed countries rested principally on two arguments: (1) the need to avoid expansion of the Committee to a size which would be unwieldy and compromise the Committee's efficiency; and (2) the need to maintain the Committee's credibility with the financial sector. The case for extension of the Committee's membership to the larger emerging-market countries and to other countries which might represent important constituencies such as major offshore centres and Islamic banking was that such an extension would align the Committee's membership more closely with the newly emergent structure of world banking and financial markets. Such an extension, it was argued, would enhance rather than diminish the Committee's credibility. Moreover, within an enlarged Committee agreement should be possible on ways of avoiding unwieldy methods of working.

Acknowledgement of the need for a new framework of global cooperation on financial regulation as part of the response to the financial crisis has now led to an extension of the BCBS's membership in two stages in 2009. In March, Australia, Brazil, China, India, the Republic of Korea, Mexico and the Russian Federation became members, and in June remaining non-member economies of the G20, namely Argentina, Indonesia, Saudi Arabia, South Africa and Turkey, were also invited to join together with Hong Kong (China) and Singapore.

The extension of the Committee's membership to all G20 countries seems likely to reflect to a significant extent the role now attributed to the G20 as the principal forum for the global coordination of economic policy, while the invitations to Hong Kong (China) and Singapore are due to their importance as international financial centres. Overall, relations between the BCBS and countries not represented will continue to be maintained via regional supervisory groups and international conferences. More specifically regarding rules on capital, the principal vehicle for cooperation and consultation will be the Committee's International Liaison Group which also includes Chile, Czech Republic, Poland, the West African Monetary Union, the European Commission, the IMF, the World Bank, the Financial



Stability Institute, the Association of Supervisors of Banks of the Americas and the Islamic Financial Services Board.

It is difficult to assess in advance how effective the new structure for cooperation on banking standards will be in assuring that proper account is taken of the views of countries which are not members of the BCBS. The new structure is unlikely completely to silence critics of the Committee's unrepresentativeness. However, in view of its reflection of the global distribution of political and financial power, the new membership seems unlikely to be changed any time soon.

## **IX. Other features of the changed regulatory landscape**

As indicated in section II, the global introduction of Basel 2 will be accompanied by divergences at the country level due to choices regarding the multiple options under Pillar 1 for minimum regulatory capital requirements for credit, market and operational risk as well as to variation in different countries' timetables for adoption and in other rules for introduction. Thus, global regulation of banks' capital after the introduction of Basel 2 will remain something of a patchwork. Such an outcome compromises the second of Basel 2's major objectives, namely the achievement of a reasonable measure of cross-border competitive equality among banks – the so-called “level playing field” – by contributing to cross-border consistency in the regulation of banks' capital. However, such a patchwork is not necessarily an unfavourable outcome for developing countries since it entails recognition of countries' need for space in which to adopt policies regarding banks'

capital and risk management adapted to national needs.

A complete assessment of the likely eventual impact of Basel 2 would need to take account not only of the ongoing revisions of the agreement which were discussed in section V but also of other subjects which likely to be part of national or the international reform agendas but have less direct links to capital standards. Under this heading, one might single out the following areas for consideration: (1) limitations on the size of financial firms; (2) restrictions on their activities; (3) expansion of the perimeter of supervision to institutions currently either unsupervised or subject to exceptionally light supervision; and (4) a resolution mechanism for failing financial firms which are systemically important and thus in today's world almost by definition cross-border.<sup>7</sup>

Reforms under the first two headings, owing to differences in countries' banking histories and in the activities traditionally carried out by different categories of financial firm, are likely to be the outcome of national initiatives rather than of agreed international rules. Nevertheless, such reforms are likely to have close connections to the rules of Basel 2. For example, the vehicle chosen for limitations on firm size may well be a rule that regulatory capital should increase with size. Restrictions on banks' activities, which may take the form of separating commercial banking from at least some of the activities traditionally associated with investment banking, would be associated with limitations on the types of exposure and thus risks which the bank could assume. The connections between Basel 2 and reforms under the third and fourth headings are likely to be less direct. Nevertheless, such reforms will affect banks' credit and market risks but in ways which are difficult to forecast.

## Notes

- 1 In the “originate-to-distribute” model debts generated or originated by one institution are pooled and transferred to a special purpose vehicle. The assets in this vehicle serve as the backing for securities sold to investors, often in tranches carrying returns that vary according to their different degrees of risk. For a more detailed discussion of the role of this model in the financial crisis, see Cornford, 2009b: section 8C.
- 2 For a commentary on these 2009 documents of the Basel Committee, see Cornford (2009a).
- 3 A credit default swap is a derivative directed at the risk that a specified entity (single-name) or specified entities (multi-name) will “default”. Following a default event covered by the contract of the credit default swap the protection buyer receives a payment from the protection seller to compensate for credit losses, and in return pays a premium to the seller until maturity or the default event. After issuance credit default swaps are traded on secondary markets.
- 4 The account which follows of alternative arrangements for the clearing and settlement of derivative transaction makes extensive use of Cecchetti, Gyntelberg and Hollanders (2009).
- 5 Multiplication of the number of CCPs justified in the name of competition or providing different regions or countries with their own CCPs may actually render them less effective for the achievement of their major purposes. Exchange among the CCPs of information concerning trading and positions would be required for the purpose of consolidation, thus raising the costs of transparency. Contract standardization and the multilateral netting of positions would require coordination across CCPs. Lack of regulatory consistency between CCPs could act as an incentive for regulatory arbitrage. The cost to members (margin payments, contributions to the equity capital of the CCPs, etc.) could well rise with the number of CCPs.
- 6 For a fuller discussion of the concept of procyclicality, see below.
- 7 This classification of subject areas for consideration follows closely that of Truman (2009).

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