Yale SCHOOL OF MANAGEMENT
Program on Financial Stability

EliScholar – A Digital Platform for Scholarly Publishing at Yale

YPFS Resource Library

1999

A New Capital Adequacy Framework

Bank for International Settlements (BIS)

https://elischolar.library.yale.edu/ypfs-documents/54

This resource is brought to you for free and open access by the Yale Program on Financial Stability and EliScholar, a digital platform for scholarly publishing provided by Yale University Library.
For more information, please contact ypfs@yale.edu.

A NEW CAPITAL ADEQUACY FRAMEWORK

Consultative paper issued by the

Basel Committee on Banking Supervision

Issued for comment by 31 March 2000

Basel

June 1999

Table of Contents

EXECUTIVE SUMMARY

1. The Basel Committee on Banking Supervision (the Committee)[1] has decided to introduce a new capital adequacy framework to replace the 1988 Accord.[2] The Committee seeks views on its proposed approaches and on its plans for future work.

2. This new capital framework consists of three pillars: minimum capital requirements, a supervisory review process, and effective use of market discipline. With regard to minimum capital requirements, the Committee recognises that a modified version of the existing Accord should remain the "standardised" approach, but that for some sophisticated banks use of internal credit ratings and, at a later stage, portfolio models could contribute to a more accurate assessment of a bank's capital requirement in relation to its particular risk profile. It is also proposed that the Accord's scope of application be extended, so that it fully captures the risks in a banking group.

3. The world financial system has witnessed considerable economic turbulence over the last two years and, while these conditions have generally not been focused on G-10 countries directly, the risks that internationally active banks from G-10 countries have had to deal with have become more complex and challenging. This review of the Accord is designed to improve the way regulatory capital requirements reflect underlying risks. It is also designed to better address the financial innovation that has occurred in recent years, as shown, for example, by asset securitisation structures. As a result of this innovation, the current Accord has been less effective in ensuring that capital requirements match a bank's true risk profile. The review is also aimed at recognising the improvements in risk measurement and control that have occurred.

4. The Committee is committed to ensuring that any review of the Accord should meet the following supervisory objectives:

---

[1] The Basel Committee on Banking Supervision is a committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States. It usually meets at the Bank for International Settlements in Basel, where its permanent Secretariat is located.

[2] *International Convergence of Capital Measurement and Capital Standards*, Basel Committee on Banking Supervision (July 1988). All Basel Committee papers referred to in this document can be obtained from the BIS website at http://www.bis.org.

- the Accord should continue to promote safety and soundness in the financial system and, as such, the new framework should at least maintain the current overall level of capital in the system;
- the Accord should continue to enhance competitive equality;
- the Accord should constitute a more comprehensive approach to addressing risks; and
- the Accord should focus on internationally active banks, although its underlying principles should be suitable for application to banks of varying levels of complexity and sophistication.

5. In constructing a revised capital framework, the importance of **minimum regulatory capital requirements** continues to be recognised. This is the first pillar of the framework. The Committee is now stressing the importance of the **supervisory review** of an institution's capital adequacy and internal assessment process as the second pillar. The third pillar, which the Committee has underlined in recent years, is the need for greater **market discipline**. The Committee believes that, taken together, these three elements are the essential pillars of an effective capital framework.

6. With regard to **minimum regulatory capital requirements**, the Committee is building on the foundation of the current Accord, which will serve as a "standardised" approach for capital requirements at the majority of banks. In so doing, the Committee proposes to clarify and broaden the scope of application of the current Accord. With regard to risk weights to be applied to exposures to sovereigns, the Committee proposes replacing the existing approach by a system that would use external credit assessments for determining risk weights. It is intended that such an approach will also apply, either directly or indirectly and to varying degrees, to the risk weighting of exposures to banks, securities firms and corporates. The result will be to reduce risk weights for high quality corporate credits, and to introduce a higher-than-100% risk weight for certain low quality exposures. A new risk weighting scheme to address asset securitisation, and the application of a 20% credit conversion factor for certain types of short-term commitments are also proposed.

7. For some sophisticated banks, the Committee believes that an internal ratings-based approach could form the basis for setting capital charges, subject to supervisory approval and adherence to quantitative and qualitative guidelines. The Committee will (in consultation with the industry) be examining these issues, and will seek to develop an alternative approach based on internal ratings within the same timeframe as its review of the "standardised"

approach. The Committee believes that this will be an important step in the effort to align more closely capital charges with underlying risk. Looking further ahead, the Committee will closely monitor developments in portfolio credit risk modelling for its possible use in regulatory capital calculations.

8. The Committee is also examining the capital treatment of a number of important credit risk mitigation techniques. To assist in this process, the Committee is seeking comment on approaches for devising a sound and consistent approach for credit derivatives, collateral, guarantees, and on-balance-sheet netting.

9. The existing Accord specifies explicit capital charges only for credit and market risks (in the trading book). Other risks, including interest rate risk in the banking book and operational risk, are also an important feature of banking. The Committee therefore proposes to develop a capital charge for interest rate risk in the banking book for banks where interest rate risk is significantly above average, and is proposing to develop capital charges for other risks, principally operational risk.

10. The second pillar of the capital adequacy framework, the **supervisory review of capital adequacy**, will seek to ensure that a bank's capital position is consistent with its overall risk profile and strategy and, as such, will encourage early supervisory intervention. Supervisors should have the ability to require banks to hold capital in excess of minimum regulatory capital ratios[3] – a point underscored in the course of the Committee's discussions with supervisors from non-G-10 countries. Furthermore, the new framework stresses the importance of bank management developing an internal capital assessment process and setting targets for capital that are commensurate with the bank's particular risk profile and control environment. This internal process would then be subject to supervisory review and intervention, where appropriate.

11. The third pillar, **market discipline**, will encourage high disclosure standards and enhance the role of market participants in encouraging banks to hold adequate capital. The Committee proposes to issue later this year guidance on public disclosure that will strengthen the capital framework.

---

[3] The Committee acknowledges the differences in legal systems in various countries and the resulting difficulties that implementation of this second pillar may entail.

12. Looking to the future, the Committee believes that the Accord must be responsive to financial innovation and developments in risk management practices. The Committee's longer-term aim is to develop a flexible framework that reflects more accurately the risks to which banks are exposed. The Committee therefore will examine further ways of making the capital adequacy framework more risk sensitive and welcomes comments on how best to do this.

13. The Committee seeks comments from all interested parties by 31 March 2000, and plans to set forth more definitive proposals later in the year 2000.

CONSULTATIVE PAPER ON A NEW CAPITAL ADEQUACY FRAMEWORK

1. This paper sets out the Committee's proposals for a new capital adequacy framework. The merits and weaknesses of the existing Accord are briefly discussed, along with the Committee's objectives for a new Accord.

2. Today's rapidly changing world requires a broad-based and flexible capital adequacy framework. The Committee believes this objective is best accomplished through three pillars: minimum capital requirements; a supervisory review of capital adequacy; and market discipline. Each of these three complementary pillars is needed for supervising both the overall financial health of the banking industry and that of individual institutions, though none can substitute for effective bank management.

3. The Committee believes that, by focusing on risk and risk management, the new framework has the potential to meet the challenges of innovations in increasingly complex financial markets. Additional details on the Committee's proposals and anticipated work plans are set forth in Annexes 1 – 4 to this paper.

A. Merits and weaknesses of the current Accord

4. The 1988 Accord established minimum levels of capital for internationally active banks, incorporating off-balance-sheet exposures and a risk weighting system aimed in part at ensuring that banks were not deterred from holding low risk assets. While the original Accord focused mainly on credit risk, it has since been amended to address market risk. Interest rate risk in the banking book and other risks, such as operational, liquidity, legal and reputational risks, are not explicitly addressed. Implicitly, however, the present Accord takes account of such risks by setting a minimum ratio that has an acknowledged buffer to cover unquantified risks.

5. The Committee believes the 1988 Accord and subsequent additions and amendments have helped to strengthen the soundness and stability of the international banking system and have enhanced competitive equality among internationally active banks. The Accord was followed by substantial increases, primarily during the transitional period between 1988-1992, in the capital ratios of nearly all internationally active banks. This trend generally has

continued, particularly since pressure from the market on banks to maintain strong capital ratios has increased. The widespread adoption of the Accord in many countries has contributed to achievement of the objective of competitive equality.

6. However, the financial world has developed and evolved significantly during the past ten years, to the point where a bank's capital ratio, calculated using the current Accord, may not always be a good indicator of its financial condition. The current risk weighting of assets results, at best, in a crude measure of economic risk, primarily because degrees of credit risk exposure are not sufficiently calibrated as to adequately differentiate between borrowers' differing default risks.

7. Another related and increasing problem with the existing Accord is the ability of banks to arbitrage their regulatory capital requirement and exploit divergences between true economic risk and risk measured under the Accord. Regulatory capital arbitrage can occur in several ways, for example, through some forms of securitisation, and can lead to a shift in banks' portfolio concentrations to lower quality assets.

8. Finally, for some types of transactions, the Accord does not provide the proper incentives for risk mitigation techniques. For example, there is only minimal capital relief for collateral, and in some cases, the Accord's structure discourages the use of credit risk mitigation techniques.

B. Objectives of the new framework

9. It is clear that the Accord must evolve along with the changes in the market. The Committee is therefore working towards a new and comprehensive capital adequacy framework which focuses on the following supervisory objectives:

- the Accord should continue to promote safety and soundness in the financial system;
- the Accord should continue to enhance competitive equality;
- the Accord should constitute a more comprehensive approach to addressing risks; and
- the Accord should focus on internationally active banks, although its underlying principles should be suitable for application to banks of varying levels of complexity and sophistication.

10. The Accord is a cornerstone of the current international financial architecture. Its overriding goal is to promote safety and soundness in the international financial system. The

existence of an adequate capital cushion is central to this goal, and the Committee believes that the new framework should at least maintain the overall level of capital currently in the banking system.

11. The Committee believes that in order to achieve its safety and soundness objectives, the new capital adequacy framework must encompass the three pillars defined in paragraph 2 above. The 1988 Accord sets out minimum capital requirements, which remain a key pillar of the new capital adequacy framework. More recently, the Committee has emphasised the value of market discipline. The Committee is now making an additional advance in the framework by making explicit the supervisory review pillar, which has already been in place explicitly or implicitly in several countries.

12. In respect to the first pillar, the Committee notes that the methods used to determine the capital charges for credit risk in the current Accord are not overly sophisticated, and the rapid rate of financial innovation in markets and the growing complexity of financial transactions have reduced their relevance. As such, the Committee is now setting forward various approaches for making the Accord more sensitive to credit risk. This effort includes proposing a modified and developed set of rules to serve as the standardised approach. Within the same timeframe, the Committee is also seeking to develop an alternative approach for establishing minimum capital requirements at some sophisticated banks, based on the banks' internal credit ratings.

13. When the Accord was first established, it was primarily concerned with minimum capital standards to cover credit risk. Insofar as these capital charges covered other types of risk, these were effectively assumed to be proportional to credit risk. The Committee now proposes to develop an explicit capital charge for other risks (such as operational risk), and interest rate risk in the banking book for banks where interest rate risks are significantly above average ("outliers"). Such a framework would formally take account of a wider range of actual and potential exposures.

14. The Committee fully recognises the benefits of competition in the financial sector and remains committed to the concept of a level playing field for banks operating in international markets. It is aware, however, that differences in national accounting, tax, legal and banking structures will inevitably create differences between national markets and that the use of banking supervisory rules cannot address all these differences. As such, the Committee

believes that the second and third pillars will serve as a complement to the minimum capital requirements set forth in the first pillar.

15. With regard to the supervisory review pillar, the Committee notes that supervisors should focus bank management's attention on developing an internal capital assessment process and on setting targets for capital that are commensurate with the bank's particular risk profile and control environment. This internal process would then be subject to supervisory review and intervention where appropriate.

16. The Committee also believes that supervisors have a strong interest in facilitating effective market discipline as a lever to strengthen the safety and soundness of the banking system. Effective market discipline requires reliable and timely information that enables market participants to make well-founded risk assessments. The Committee plans to issue more detailed guidance on the disclosure of capital levels, risk exposures, and capital adequacy later this year.

17. The Committee recognises the critical importance of sound accounting and valuation practices as a basis for setting capital requirements, and strongly encourages supervisors to use all possible means at their disposal to promote sound practices. While a number of supervisors have the power to implement accounting and disclosure requirements directly through binding regulations, others may use more indirect approaches, including issuing sound practice recommendations and interacting with the competent authorities. Thus, as part of this effort, the Committee is also developing sound practice guidance on loan valuation, loan loss provisioning and credit risk disclosure.[4]

C. Scope of application

18. The Accord should capture the risks in the whole banking group. At the same time, it should address the safety and soundness of individual banks within the group. To these ends, it is proposed that the Accord be extended to include, on a fully consolidated basis, holding companies that are parents of banking groups. Banking groups are groups that engage predominantly in banking activities and, in some countries, a banking group may be registered as a bank. In addition, the Committee is clarifying the Accord's application on a

---

[4] *Sound Practices for Loan Accounting, Credit Risk Disclosure and Related Matters,* Basel Committee on Banking Supervision (issued for comment in October 1998).

fully consolidated basis to all internationally active banks at every tier within a banking group. Further, supervisors should ensure that each of the banks within a group is adequately capitalised individually.

19. Banks have increasingly expanded into other areas of financial activity, especially the securities and insurance industries. The Committee is therefore clarifying capital treatments for banks' investments in those areas. The Committee is also clarifying the capital treatment for significant minority-owned entities and is seeking industry views on the appropriate capital treatment for majority-owned investments in commercial entities. With regard to diversified financial groups, the Committee recognises the need to continue working with insurance and securities supervisors to align capital adequacy standards, and supports the application of techniques such as those developed by the Joint Forum on Financial Conglomerates.[5]

D. The three pillars

1) Minimum capital requirements

20. Minimum capital requirements will continue to consist of a definition of regulatory capital, measures of risk exposure, and rules specifying the level of capital in relation to those risks. With respect to the definition of regulatory capital, the Committee will maintain at this stage the existing rules as set out in the 1988 Accord (and clarified in the press release of October 1998 on the definition of Tier 1 capital). With respect to both regulatory capital and measures of risk exposure, the Committee stresses the importance of sound accounting and valuation principles that produce realistic and prudent measures of assets and liabilities and related profits and losses in the determination of capital reserves. Weak or inadequate accounting policies undermine the usefulness of capital requirements by causing overstated or unreliable capital ratios.

21. With respect to measures of risk exposure, risks run by banks fall into three broad categories: credit risk (particularly from loans in the banking book); market risk; and other risks (including interest rate risk in the banking book and operational, liquidity, legal and

[5] *Capital Adequacy Principles*, Joint Forum on Financial Conglomerates (February 1999).

reputational risks). The Committee believes that the new framework should be enlarged so as to cover more explicitly each of these three major categories of risk.

22. For **credit risk**, the Committee believes that the objective of a more comprehensive treatment of risk, with capital charges that are more sensitive to risk, can be met in varying ways depending on the timeframe under consideration and on the technical abilities of banks and supervisors. The Committee has considered the following approaches for setting minimum capital requirements: a modified version of the existing approach, the use of banks' internal ratings, and the use of portfolio credit risk models.

23. In this consultative document, the Committee is proposing revisions to the existing approach to credit risk, which would serve as the standardised approach for calculating capital charges at the majority of banks. Within this approach, the use of external credit assessments could provide a means of distinguishing some credit risks. The Committee proposes to permit the use of such assessments in determining the risk weighting category for various banking book assets, e.g. claims on sovereigns, banks, certain corporates, and certain asset securitisations as set out in Annex 2. For claims on banks, two options are under consideration, one based on the assessment of the sovereign of the bank's country of incorporation and one based on the rating of the bank itself. Furthermore, the Committee intends to introduce a greater than 100% risk weight for certain assets that exhibit higher risk characteristics.

24. The Committee recognises that various considerations must be taken into account before allowing the evaluation of external credit assessment institutions to serve as the basis for regulatory capital requirements. As such, national supervisors would have to be satisfied that such an institution meets minimum standards, including transparency, objectivity, independence, credibility and the possession of a track record.

25. For some sophisticated banks, the Committee believes that an internal ratings-based approach could form the basis for setting capital charges. The Committee will, in consultation with the industry, be examining the key issues related to such an approach, and will seek to develop it within the same timeframe as its review of the standardised approach. The Committee will present a more detailed analysis of its proposals in this respect in a forthcoming consultative document.

26. At some of the more sophisticated banks that make use of internal ratings, credit risk models based on these ratings (and other factors) have also developed. Such models are

designed to capture the risk from the portfolio as a whole - an important element not found in approaches based solely on external credit assessments or internal ratings. The Committee welcomes the use already made of these models in some banks' risk management systems, and recognises their use by some supervisors in their appraisals. However, it is clear that, because of a number of difficulties, including data availability and model validation, credit risk models are not yet at the stage where they can play an explicit part in setting regulatory capital requirements. The Committee will verify how this could become possible after further development and testing, and intends to monitor closely progress on these issues.[6]

27. The recent development of credit risk mitigation techniques such as credit derivatives has also enabled banks to substantially improve their risk management. The Accord may have, in some instances, not favoured the development of specific forms of credit risk mitigation by placing restrictions on both the type of hedges acceptable for achieving capital reduction and the amount of capital relief. It has also left open the treatment of imperfect credit risk protection (maturity mismatches, asset mismatches, potential future exposure on hedges), resulting in the development of different national policies. The Committee proposes a more consistent and economic approach to credit risk mitigation techniques, covering credit derivatives, collateral, guarantees, and on-balance-sheet netting, as discussed in Annex 2.

28. The Committee recognises that maturity of a claim is a factor in determining the overall credit risk it presents to the bank. The Committee at present is not proposing to take maturity of claims into account for capital adequacy purposes, except in a very limited case. Nonetheless, as the Committee proceeds with its work to seek ways to distinguish more precisely among the credit quality of exposures, it also will consider ways to factor maturity more explicitly into the assessment of credit risk.

29. The Committee will also be considering what changes may be needed to the **market risk** component of the Accord to enhance consistency of treatment between the banking and the trading books and to ensure adequate capital coverage for trading book items. The Committee will also consider ways to follow up on recommendations contained in its two

---

[6] See *Credit Risk Modelling: Current Practices and Applications,* Basel Committee on Banking Supervision (April 1999).

recent papers on highly leveraged institutions[7] in the context of both trading and banking book practices.

30. The Committee's paper on operational risk[8] included the results of an informal survey that highlights the growing realisation of the significance of **risks other than credit and market risks, such as operational risk**, which have been at the heart of some important banking problems in recent years. The Committee is proposing to develop capital charges for such other risks; among the proposals under consideration are: basing a capital charge on a measure of business activities such as revenues, costs, total assets, or, at a later stage, internal measurement systems, or creating differentiated charges for businesses with high operational risk based on measures commonly used to value those business lines. Particular regard will need to be paid to the capital arbitrage potential, to any disincentives to better risk control that might thereby be created and to the capital impact for particular types of banks. Qualitative factors such as the integrity of the controls process and internal measures of operational risk should be considered. The Committee anticipates a dialogue with the industry on possible specifications.

31. Further, the Committee has long recognised the significance of **interest rate risk within some banking books**, depending on a bank's risk profile and market conditions. Accordingly, the Committee proposes to develop a capital charge for interest rate risk in the banking book for banks where interest rate risks are significantly above average ("outliers"). The Committee recognises that some national discretion would be necessary regarding the definition of outliers and the methodology of calculating interest rate risk in the banking book. At the same time, the Committee intends to examine developments in methodologies as set out in the Committee's 1993 paper on the "Measurement of Banks' Exposure to Interest Rate Risk"[9] to identify those banks which are outliers. The Committee will consider alternative methodology (including how to allow for national discretion) for capital charges, including basing such charges on internal measurement systems that are subject to supervisory review, and will seek comments from the industry.

---

[7] *Banks' Interactions with Highly Leveraged Institutions,* and *Sound Practices for Banks' Interactions with Highly Leveraged Institutions,* Basel Committee on Banking Supervision (January 1999).
[8] *Operational Risk Management,* Basel Committee on Banking Supervision (September 1998).
[9] *Measurement of Banks' Exposure to Interest Rate Risk,* Consultative proposal by the Basel Committee on Banking Supervision (April 1993).

2) *Supervisory review of capital adequacy*

32. The Committee is explicitly recognising supervisory review as an integral and critical part of the capital framework for internationally active banks, and as a complement to both the minimum regulatory capital requirement and the market discipline pillars. The goal of supervisors in reviewing a bank's capital position is to ensure that the position is consistent with its overall risk profile and strategy and to enable early supervisory intervention if the capital does not provide a sufficient buffer against risk. This process rests on the following four basic and complementary principles:

- supervisors expect banks to operate above the minimum regulatory capital ratios, and should have the ability to require banks to hold capital in excess of the minimum;
- a bank should have a process for assessing its overall capital adequacy in relation to its risk profile, as well as a strategy for maintaining its capital levels;
- supervisors should review and evaluate a bank's internal capital adequacy assessment and strategy, as well as its compliance with regulatory capital ratios; and
- supervisors should seek to intervene at an early stage to prevent capital from falling below prudent levels.

33. The Committee expects all internationally active banks to have effective internal processes for evaluating their own capital adequacy. Banks may utilise various techniques in this effort, including subjective measures of risk, rigorous capital allocation methodologies, and internal models. The Committee also recognises that banks' decisions on the actual level and structure of capital will continue to reflect largely judgmental considerations, including implicit or explicit regulatory expectations, peer group analysis, market expectations and other qualitative factors. Regardless of their preferred methodology, banks must be able to demonstrate that the chosen internal capital targets are well founded, and should have a robust stress-testing process in place to support their assumptions.

34. Supervisors already review and evaluate a bank's capital adequacy through on-site examinations, off-site surveillance, and review of the work of internal and external auditors. The Committee also expects supervisors to review the internal capital adequacy assessments of banks and to discuss the internal capital targets set by each. In evaluating a bank's overall capital adequacy, supervisors will have to consider various factors, including the bank's risk appetite and its track record in managing risk; the nature of the markets in which the bank

operates; the quality, reliability and volatility of its earnings; its adherence to sound valuation and accounting standards; the diversification of its activities; and its relative importance for the national and international financial markets.

35. All supervisors should also have an approach for identifying and intervening in banks where falling capital levels raise questions about the ability of the bank to withstand business shocks. The need for early intervention arises because of the short-term nature of many bank deposit liabilities coupled with the relatively longer-term, illiquid nature of most bank assets, as well as the limited options banks have for raising capital quickly.

36. Of course, such a supervisory programme has serious resource implications for most bank supervisors and consideration may need to be given to the number and skill level of supervisory staff required to carry out this work. Further, this requires bank supervisors to work in close co-operation to evaluate the risk profile of internationally active banks and to ensure consistency of standards across national borders.

37. The Committee welcomes progress from both banks and supervisors in meeting these goals. In so doing, the Committee sees the potential for future work in the following areas:

- identifying in more detail specific factors that should be considered in assessing a bank's overall risk profile, the adequacy of its capital, and the extent to which it should hold capital above the minimum;
- considering approaches for more directly relating a bank's capital requirement to its risk profile, drawing on existing approaches, further internal work and feedback received via the consultative processes;
- describing various approaches supervisors can use to encourage banks to hold capital above their minimum level and to intervene when capital levels are falling; and
- considering, as an optional tool for supervisors, the use of a supplemental, simple capital ratio, such as a ratio of Tier 1 capital to assets adjusted for off-balance-sheet positions, or other simple measures.

3) Market discipline

38. Market discipline has the potential to reinforce capital regulation and other supervisory efforts to promote safety and soundness in banks and financial systems. Market discipline imposes strong incentives on banks to conduct their business in a safe, sound and efficient manner. It can also provide a bank with an incentive to maintain a strong capital base as a

cushion against potential future losses arising from its risk exposures. The Committee believes that supervisors have a strong interest in facilitating effective market discipline as a lever to strengthen the safety and soundness of the banking system.

39. The Committee's paper, "Enhancing Bank Transparency"[10], discusses how a bank that is perceived as safe and well-managed in the marketplace is likely to obtain more favourable terms and conditions in its relations with investors, creditors, depositors and other counterparties than a bank that is perceived as more risky. Bank counterparties will require higher risk premiums, additional collateral and other safety measures in transactions and contractual relations with a bank that presents more risk. These market pressures will encourage a bank to allocate its funds efficiently and will help contain system-wide risks.

40. The Committee recognises that differences in banks' reliance on financial markets and in their capital structure mean that the potential for market discipline varies both within and across countries. While an effective supervisory framework and adequate public disclosure are essential, it is not within the authority of bank supervisors to ensure that all incentives for market discipline are in place. For example, a bank may not be subject to market discipline from a fully insured depositor who has nothing at risk, and therefore has no motive to impose discipline. No internationally active bank could, however, expect to insulate itself entirely from the judgements of markets and the general public.

41. Effective market discipline requires reliable and timely information that enables counterparties to make well-founded risk assessments. Banks should publicly, and in a timely fashion, disclose all key features of the capital held as a cushion against losses, and the risk exposures that may give rise to such losses. This will enable market participants to assess the bank's ability to remain solvent. This information should, at a minimum, be provided in annual financial reports and should include quantitative and qualitative details on the bank's financial condition and performance, business activities, risk profile, and risk management activities.

42. The Committee notes that there are differences in the legal authority of bank supervisors to set disclosure standards across countries. While a number of supervisors have the power to implement disclosure requirements directly through binding regulations, others may use more indirect approaches, including issuing sound practice recommendations.

---

[10] *Enhancing Bank Transparency*, Basel Committee on Banking Supervision (September 1998).

43. Currently, the Committee is conducting interviews with market participants and is reviewing actual disclosure practices of large, internationally active banks. The Committee, in conjunction with other bodies examining these issues, proposes to develop more comprehensive guidance on public disclosure designed to strengthen this third pillar of the capital framework.

E. Coverage of the Accord

44. The 1988 Accord was designed for internationally active banks in the G-10 countries. The Accord has been widely adopted and applied throughout the world, not only to internationally active banks but also, in many countries, to strictly domestic banks. Over 100 countries have adopted the Accord, making for more consistent prudential regulations worldwide.

45. While the focus of the new Accord will again be on internationally active banks, the guiding principles, as embodied in the three pillars, are generally suitable for any bank in any jurisdiction. Full account must be taken of individual circumstances; for example, many non-G-10 countries show greater volatility at the macro-economic level. Moreover, supervisors will need to consider carefully whether the essential pre-conditions laid down in the Accord are met - for example, whether there are sound accounting principles and practices - and to take appropriate action where needed. Circumstances of individual banks (such as scale, diversification, risk management systems, and riskiness), and of supervisors (including resources available for review), are all relevant to how and when individual countries can apply the Accord.

46. Supervisors in countries that are subject to sizeable volatility in their economic conditions should consider imposing higher capital requirements. Some supervisors already do impose higher capital standards on their banks to take account of such circumstances.

47. The Committee believes that the safety of banks around the globe will best be achieved by supervisors fully implementing the three pillars of the Accord and adopting the Core Principles for Effective Banking Supervision[11]. In turn, this will enhance countries' prospects of successfully integrating into the world economy and gaining the benefits of international

[11] *Core Principles for Effective Banking Supervision*, Basel Committee on Banking Supervision, (September 1997).

capital flows. In the course of its preparation of this consultative paper, the Committee acknowledges the help of supervisors in many non-G-10 countries, especially on the lessons for capital adequacy stemming from recent financial crises.

48. The Committee wishes to develop a new Accord that will be as helpful as possible to all those concerned in promoting the safety and soundness of banking systems in the face of rapidly evolving financial markets and institutions. The Committee will therefore continue to work closely with banking and other supervisors around the world, including the International Organisation of Securities Commissions (IOSCO), the International Association of Insurance Supervisors, the Financial Stability Forum, the Joint Forum on Financial Conglomerates and other bodies.

F. Next steps

49. This paper is being released for consultation. Comments should be submitted not later than 31 March 2000 to relevant national supervisory authorities and central banks and may also be sent to the Basel Committee on Banking Supervision (Address: The Basel Committee on Banking Supervision, Bank for International Settlements, CH-4002 Basel, Switzerland; Fax: +41 61 280 9100; e-mail: BCBS.Capital@bis.org).

50. The Committee has recently issued a paper on credit risk modelling as a complement to this consultative paper. The Committee also expects to issue further consultative papers, for example on internal ratings. The Committee will take into account comments on all these papers and the further work outlined in this document before issuing, in the course of 2000, a more definitive paper covering the complete framework.

ANNEXES TO THE CONSULTATIVE PAPER ON A NEW CAPITAL ADEQUACY FRAMEWORK

ANNEX 1 THE SCOPE OF APPLICATION OF THE ACCORD

1. The 1988 Accord was intended to apply to internationally active banks on a "consolidated basis, including subsidiaries undertaking banking and financial business." The primary objective of applying the Accord on a consolidated basis was to preserve the integrity of capital in a bank with subsidiaries by eliminating double gearing, which occurs when another entity in the same group holds capital issued by the bank. The Committee reconfirms its view that applying the Accord on a consolidated basis is the best means of preserving the integrity of the capital base in the banking system. The Committee was also concerned that "ownership structures should not be such as to weaken the capital position of a bank or expose it to risks stemming from other parts of the group" and noted it would keep developments in this regard under review.

2. Over the years, with the growth of complex ownership structures, different national practices have developed when determining the scope of application of the Accord, notably in deciding the consolidated level at which it should apply. In addition, banks have increasingly expanded into other areas of financial activity, specifically the securities and insurance industries. In jurisdictions where investments in these non-bank entities are not consolidated, their capital treatment often varies.

A. Level of consolidation

3. To address these concerns, the Committee is proposing to capture risks within the whole banking group by expanding the scope of application of the Accord. To this end, it is proposed that the Accord be extended to include, on a fully consolidated basis, holding companies that are parents of banking groups. Banking groups are groups that engage predominantly in banking activities and, in some countries, a banking group may be

registered as a bank.[12] At the same time, the Committee is clarifying the application of the Accord to all internationally active banks at every tier within a banking group, also on a fully consolidated basis (see illustrative chart at the end of this section).

4. The application of capital requirements to the full banking group reduces the opportunity for excess leveraging of capital and ensures that there is sufficient capital for the whole banking group. The Committee believes, however, that an application at the highest level only is not sufficient to ensure that capital is immediately available to absorb losses and, thus, protect depositors at each bank within a banking group. Having appropriate levels of capital located where risks are present in a group limits the scope for financial contagion. Applying the Accord on a sub-consolidated basis to all internationally active banks at every tier below the top banking group level is essential to ensure that sufficient capital is present where it is required. Further, supervisors should ensure that each bank within a group is adequately capitalised individually.

5. As an alternative to full consolidation, the application of the Accord to the stand-alone bank (i.e. on a basis that does not consolidate assets and liabilities of subsidiaries) would achieve the same objective, providing the full book value of any investments in subsidiaries and significant minority-owned stakes is deducted from the bank's capital. A three-year transitional period for applying full sub-consolidation or the alternative stand-alone basis with full deduction is proposed for those countries where this is not currently a requirement.

B. Subsidiaries and other financial activities

6. Generally, all banking activities, which in some countries may be defined to include securities and other financial activities (e.g. leasing), conducted within a bank or banking group should be included in the consolidation of the internationally active bank or banking group for capital purposes. Majority-owned or controlled banking entities and securities entities (where securities activities are deemed banking activities) should generally be included in the scope of consolidation[13] (see illustrative chart at the end of this Annex). If any majority-owned banking and securities-related subsidiaries are not consolidated for capital

[12] A holding company that is a parent of a banking group may itself have a parent holding company. In some structures, this parent holding company may not be subject to the Basel Accord because it is not considered a parent of a banking group.

[13] Control of an entity can exist in circumstances where there is less than a 50% ownership interest.

purposes, the capital investments in those entities attributable to the group should be deducted, and the assets and third-party capital investments in the subsidiary removed (i.e. deconsolidated).[14] Fully deducting the book value of the group's investment eliminates the risk of double counting capital when assessing the group's capital adequacy.

7. Where a banking group also contains majority-owned or controlled insurance subsidiaries, these should generally be excluded from the scope of the consolidation through deduction, since the Accord's requirements are not aimed specifically at addressing insurance risks. Rather than deducting investments in insurance and securities entities, banking supervisors may apply alternative techniques which provide for the elimination of double counting of capital, in line with the principles and methodologies developed by banking, securities and insurance supervisors in the Joint Forum on Financial Conglomerates.[15]

8. Significant minority-owned equity investments in regulated financial entities, where control does not exist, should be consolidated on a pro rata basis, under certain conditions, or excluded from capital by deduction of the equity investment. The Committee is considering the capital treatment for such investments in unregulated financial institutions. The threshold above which minority-owned investments should be deemed significant and be thus either consolidated on a pro-rata basis or deducted is to be determined by national accounting and/or regulatory practices. The Committee reaffirms the view set out in the 1988 Accord that reciprocal cross-holdings of bank capital artificially designed to inflate the capital position of banks should not be permitted for capital adequacy purposes.

9. In some countries, banking groups contain majority-owned or controlled commercial subsidiaries, whereas in others, investments by banks in non-financial subsidiaries are not an issue. The Committee is considering how banks' risks relative to significant commercial investments should prudently be treated for capital purposes.

10. The Committee recognises that the Accord is aimed at banking risks and that the development of diversified financial groups which undertake a range of activities means that there is a need to continue efforts aimed at aligning capital standards of banking, securities, and insurance supervisors in order to assist in the assessment of conglomerate-wide capital

---

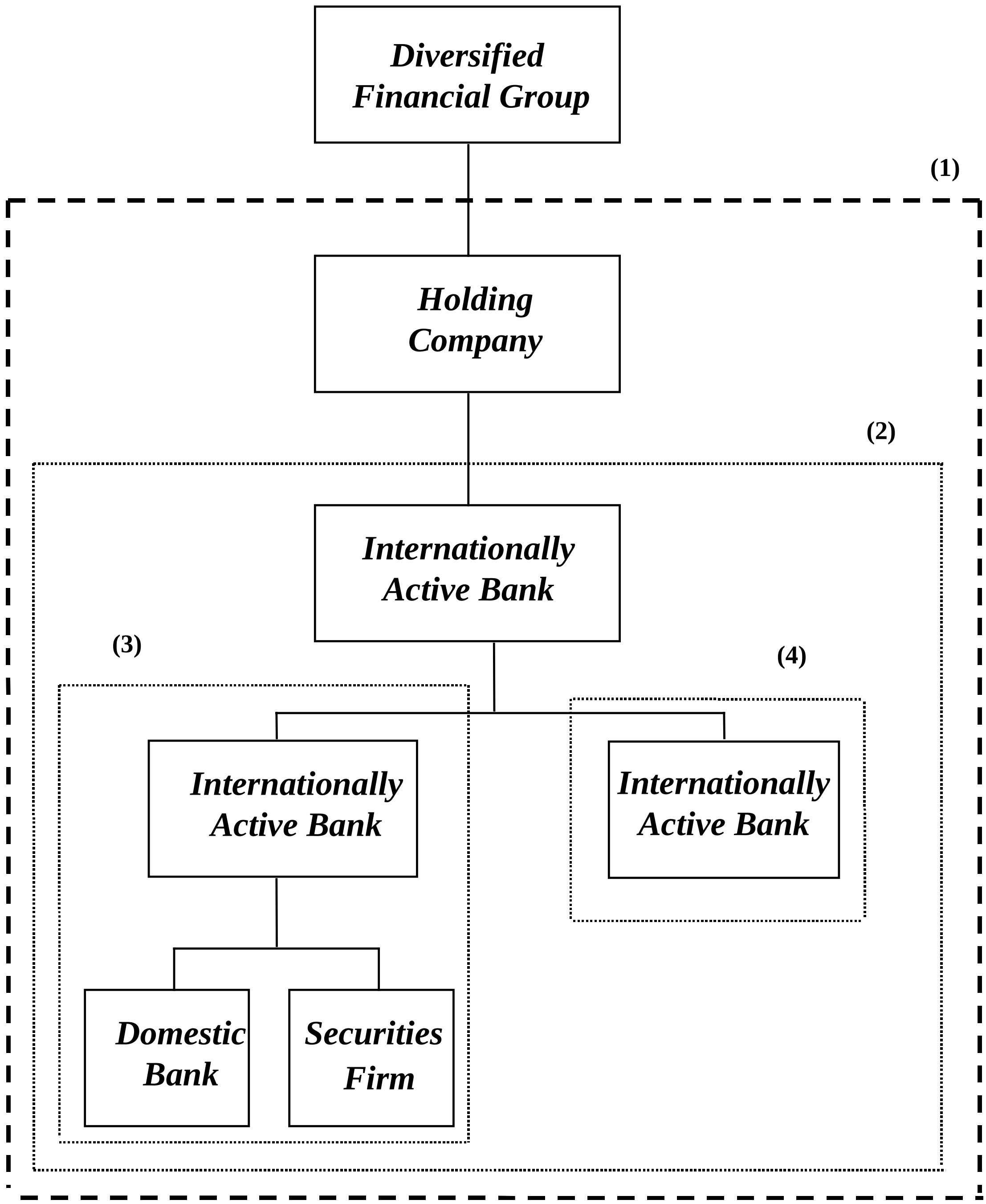
[14] Where the group's capital ratio is at 8%, risk weighting the capital investment at 1250% is equivalent to a full deduction.

[15] See footnote 5 above.

adequacy. At the diversified financial group level, supervisors are encouraged to apply the principles and techniques developed by the Joint Forum on Financial Conglomerates.

11. In cases where banking activities are undertaken in a mixed activity or mainly non-banking financial group, supervisors should seek to ensure that the Basel requirements are not being circumvented, for instance, through the leveraging of capital issued at levels above the bank (or bank holding company). Supervisors should also ensure that in such situations banking activities are properly subject to the Accord, through its application at a sub-consolidated level. The Committee emphasises the need for cooperation among banking, securities and insurance supervisors in order to ensure that the overall level of capital and its distribution are adequate to meet the risks within such mixed groups, and that risks arising elsewhere in the group are adequately taken into account.

ILLUSTRATION OF NEW SCOPE OF APPLICATION OF THE ACCORD



(1) Boundary of predominantly banking group. The Accord is to be applied at this level on a consolidated basis, i.e. up to holding company level (cf. page 21, paragraph 3).

(2), (3) and **(4)**: the Accord is also to be applied at lower levels to all internationally active banks on a consolidated basis. As an alternative to full consolidation, applying the Accord to all three internationally active banks on a stand alone basis, but with full deduction of capital downstreamed to their subsidiaries, would achieve the same result.

ANNEX 2 THE FIRST PILLAR - MINIMUM CAPITAL REQUIREMENTS

A. The constituents of capital

1. The Committee’s definition of the elements of capital is set out in the 1988 Accord (and clarified in the press release of 27 October 1998 on "Instruments eligible for inclusion in Tier 1 capital"). The Committee does not propose at this stage to make further amendments to the definition of capital.

B. The banking book treatment – Standardised approach

2. The Committee proposes a new standardised approach for the risk weighting of banking book assets which would place greater reliance on external credit assessments than in the current Accord, where the use made of such assessments is strictly confined to certain trading book items. The Committee recognises that there are certain difficulties in placing reliance on such assessments. There also are concerns about the incentive and consequential effects of a more extensive use of external assessments in the Accord on the agencies themselves. For these reasons, the Committee is proposing that national supervisors should not allow banks to place assets in preferential risk weighting categories based on external assessments in a mechanical fashion. Rather, banks should do so only where they themselves and their supervisors are satisfied with the quality of the assessment source and methodology. Banks must adopt a consistent approach in using a particular assessment mechanism and should not “cherry pick” among assessments.

1) Claims on sovereigns

3. The current Accord applies different risk weights to claims on sovereigns and central bank obligations depending on whether the claim is on a member of the OECD. Similarly, claims on banks are risk weighted differently depending on whether the issuer is incorporated in a country that is a member of the OECD. The OECD group comprises, for the purpose of the current Accord, all members of the OECD or countries that have concluded special lending arrangements with the International Monetary Fund associated with the Fund's General Arrangements to Borrow, and which have not rescheduled their external sovereign debt within the previous five years. When this approach was adopted, the Committee

recognised the obvious shortcoming that some countries that might not merit inclusion on grounds strictly related to default risk would be included in the preferential group, while potentially high credit quality countries outside the OECD would be excluded. When adopted, however, the OECD/non-OECD approach was determined to be the most workable proxy for identifying countries that should be eligible for preferential risk weighting treatment.

4. The Committee has discussed on several occasions ways to address the shortcomings of this approach. It now proposes, for claims on sovereigns and central banks, to replace the current approach with a system that would permit the risk weights applied to such claims to be benchmarked to the assessment results of eligible external credit assessment institutions. Under this approach, for example, claims on sovereigns (and their central banks) determined to be of the very highest quality could be eligible for a zero risk weight. The assessments used should generally be in respect of the sovereign's long-term foreign currency obligations.

5. As mentioned above, the Committee has some reservations about relying on credit assessment institutions. For sovereigns in particular, rating agencies currently have only a limited and mixed track record with regard to rating less than ultra-prime borrowers. Furthermore, it is not clear that such ratings have always taken adequate account of the strength of the financial infrastructure in particular countries (including the contingent liabilities of a weak banking system or the adequacy of bank supervision). For these reasons, the Committee is proposing also to make use of other bodies performing similar assessment functions; for example, the export insurance agencies in the G-10 countries. In using different assessments, the Committee plans to develop a prudent approach.

6. The Committee recognises that different external credit assessment institutions use different credit analysis methodologies and ratings terminology, and will continue to assess how they can be used consistently within the regulatory capital framework. At this stage, the Committee proposes the following approach: the zero-weighted category would be limited to sovereigns with the highest credit quality; those, for example, with a minimum rating of AA- under the methodology used by one institution, Standard & Poor's Corporation[16]. Claims on countries rated A+ to A- would be eligible for a 20% risk weight. Claims on countries rated

---

[16] The paper in large part uses Standard & Poor's credit ratings as an example only; it could equally use Moody's or Fitch IBCA's rating structure, or that of some other agency. The ratings used throughout this document, therefore, do not express any preferences or determinations on external assessment institutions by the Committee. Any external credit assessment institution will need to meet the strict eligibility criteria as set out in paragraph 29 of this Annex.

BBB+ to BBB- would be eligible for a 50% risk weight. Claims on countries rated BB+ to B- would be risk weighted at 100%, as would those on countries without a rating. Claims on countries rated below B- would be weighted at 150%. Paragraph 30 below sets out how different assessments of credit quality might be used in this approach.

7. A modified treatment would be available for banks' exposures to their own sovereign (or central bank) denominated in domestic currency and funded in that currency. National supervisors of such banks could decide to provide a lower risk weight for such exposures where they judged this appropriate. Where this discretion is exercised, other supervisory authorities may allow their banks to apply a similar risk weighting as domestic banks.

8. The Committee is also considering that claims on sovereigns would include claims on the central bank of a sovereign government and that the Bank for International Settlements would be assigned the lowest risk weight applicable to sovereigns under any assessment approach adopted.

9. The Committee does not believe that banks should rely on an external assessment of a sovereign borrower where the sovereign does not provide sufficient information about its financial and economic status. Accordingly, the Committee is of the view that, to be eligible for a risk weighting below 100%, the sovereign would have to subscribe to the IMF's Special Data Dissemination Standards (SDDS), which provide standards for participating countries in disseminating economic and financial statistics, including to international financial markets. The Committee will also consider supplemental disclosure requirements.

2) Claims on banks

10. The current Accord provides that all claims on banks incorporated in OECD countries and short-term claims (i.e. up to one year) on banks incorporated in non-OECD countries may be risk weighted at 20%. Long-term claims on banks incorporated in non-OECD countries are risk weighted at 100%. If the current approach for sovereigns is replaced with an approach based on external credit assessments, as outlined above, then the existing approach for claims on banks would no longer be appropriate. To address this issue, the Committee has discussed two main options. Views are invited on whether one should be used rather than the other, or whether both could be used, at national discretion.

11. The first option is to revise the Accord so that claims on banks would be given risk weights based on the weighting applied to claims on the sovereign in which the bank is incorporated. The weight applied to the bank would be one category less favourable than that

applied to the country.[17] For example, if a claim on the bank's sovereign was weighted at 20%, a claim on that bank would be weighted at 50%. There would be a cap of a 100% weight, except for claims on banks of the lowest-rated countries (for example, below B- in Standard & Poor's methodology), where the risk weight on the bank would be capped at 150%. The weightings to be used for these purposes would not include the modified treatment potentially available for domestic currency lending to banks' own government or central bank.

12. The second option would be to use ratings assigned directly to banks by an external credit assessment institution. Most claims on banks, including unrated banks, would receive a 50% weighting. However, claims of very high quality (for example, AAA to AA- in Standard & Poor's methodology) would receive a 20% weight, claims on banks with a rating of BB+ to B- would receive a 100% weighting, and claims on banks with a rating below B- would receive a 150% risk weighting. Claims on banks of a short original maturity, for example less than six months (other than the lowest-rated), would receive a weighting that is one category more favourable than the usual risk weight on the bank's claims. For example, if a claim on a bank would be weighted at 50%, a short-dated claim on that bank would be weighted at 20%. The floor for all claims on banks would be 20%, and no claim on a bank could receive a risk weight less than that applied to claims on its sovereign.

13. In either of these options, claims on a bank would only receive a risk weighting of less than 100% if the banking supervisor in that country has implemented, or has endorsed and is in the process of implementing, the 25 Core Principles for Effective Banking Supervision.

14. Claims on multilateral development banks, as defined in the current Accord, would continue to be weighted at 20%.

3) Claims on non-central government public sector entities

15. The Committee proposes that claims on public sector entities (PSEs) should generally be treated as claims on banks of that country. National supervisory authorities may, however,

---

[17] As interpreted by the European Court of Justice, Article 6 of the Treaty of Rome prohibits discrimination against individuals and enterprises based directly or indirectly on their nationality. Therefore, to ensure consistency with the requirements of the Treaty of Rome, the member states of the European Union (EU) may put into place a regulation to ensure that any claim on a bank which is incorporated in a current (at the time of publication of this consultative document) member state of the EU is treated on an equivalent basis regardless of the member state in which it is incorporated.

treat claims on domestic PSEs in the same way as claims on their sovereign. Where this discretion is exercised, other supervisory authorities may allow claims by their banks on such PSEs also to receive this weighting.

4) Claims on securities firms

16. The Committee proposes that claims on securities firms subject to supervisory and regulatory arrangements comparable to those under the Accord for banks (including in particular risk-based capital requirements) should generally be weighted in the same way as claims on banks.

17. Claims on a securities firm may only receive a risk weighting of less than 100% if that firm's supervisor has endorsed and is in the process of implementing the 30 Objectives and Principles of Securities Regulation set out by IOSCO.[18]

5) Claims on corporates

18. The Committee recognises that a shortcoming of the current Accord has been that inadequate recognition is given to the differing credit quality of claims on corporates. The Committee now proposes that the standard weighting of claims on corporates remains at 100%, but that a weighting of 20% be given to claims on corporates of a very high quality (for example, a minimum rating of AA- in Standard & Poor's methodology) and that a weighting of 150% be given to claims on corporates which are of very low quality (rating below B-). No claim on a corporate could be given a risk weight preferential to the risk weighting assigned to a claim on the sovereign of the corporate's country of incorporation.

19. The Committee is proposing a preferential risk weight only for the very highest quality credits because the coverage of firms receiving external assessments among the G-10 countries is at present very uneven. Thus, extending preferential risk weights to less than the very highest quality borrowers could result in competitive inequities among banks across countries. Nonetheless, the Committee envisages further work in this area and welcomes industry views on ways to differentiate more finely among corporate credits, which could be broadly implemented.

---

[18] *Objectives and Principles of Securities Regulation,* International Organisation of Securities Commissions (September 1998).

20. In broad summary (using once again Standard & Poor's methodology as an example), the weightings proposed for claims on sovereigns, banks and corporates are thus as follows:

Table 1

Claim		**Assessment**					
		AAA to AA-	**A+ to A-**	**BBB+ to BBB-**	**BB+ to B-**	**Below B-**	**Unrated**
Sovereigns		0%	20%	50%	100%	150%	100%
Banks	**Option 1** [1]	20%	50%	100%	100%	150%	100%
	Option 2 [2]	20%	50% [3]	50% [3]	100% [3]	150%	50%[3]
Corporates		20%	100%	100%	100%	150%	100%

[1] Risk weighting based on risk weighting of sovereign in which the bank is incorporated.

[2] Risk weighting based on the assessment of the individual bank.

[3] Claims on banks of a short original maturity, for example less than six months, would receive a weighting that is one category more favourable than the usual risk weight on the bank's claims.

6) Loans secured by property

21. The Committee proposes that lending fully secured by mortgages on residential property that is or will be occupied by the borrower or that is rented should continue to be weighted at 50%.

22. In view of the experience in numerous countries that commercial property lending has been a recurring cause of troubled assets in the banking industry over the past few decades, the Committee holds to the view that mortgages on commercial real estate do not, in principle, justify other than a 100% weighting of the loans secured.

7) Higher risk categories

23. The Committee is committed to making the capital framework more sensitive to credit risk. In this regard, as already noted, the Committee is proposing to reduce the risk weights of

certain high quality assets based upon relatively favourable default history and price volatility. In addition, the Committee intends to risk weight certain types of assets at greater than 100% based upon relatively adverse default history and high price volatility. Specifically, the Committee proposes to establish a 150% risk weighting category to include instruments (sovereigns, banks, and corporates) rated below B- and securitisation tranches that are rated between BB+ and BB-. The Committee is also considering introducing additional higher risk weighting categories for even riskier assets. The Committee is seeking comment on this proposed change, and on how it might define this 150% category - and potential other higher risk categories - to include a broader set of exposures where the volatility of losses arising from credit risk is on average significantly higher than that of claims in lower-weighted categories. The Committee plans to evaluate these comments in conjunction with its research on banks' methodologies for assigning internal credit ratings, and will seek to establish consistent treatment between the standardised approach and the internal ratings-based approach.

8) Other claims

24. The 100% weighting would remain the standard risk weighting for all other assets.

9) Off-balance-sheet items

25. The Committee is not proposing to change the existing conversion factors for off-balance-sheet items with the exception of commitments. Under the current Accord, commitments with original maturity of up to one year, or those which can be unconditionally cancelled at any time, do not have capital requirements. For commitments with original maturity over one year, a credit conversion factor of 50% is applied to determine the capital charge. This treatment was designed to reflect the fact that the longer the maturity of the commitment, the greater the probability of a drawdown and/or a deterioration in the credit quality of the borrower.

26. This approach has been circumvented largely by banks that structure commitments with a term of 365 days or less, and roll such commitments over. Given that even short-term commitments entail some risk, the Committee is proposing a credit conversion factor of 20%, which would principally apply to business commitments. An exception would be applied to commitments that are unconditionally cancellable, or that effectively provide for automatic

cancellation, due to deterioration in a borrower's creditworthiness, at any time by the bank without prior notice.[19]

27. In view of the proposed lower risk weighting for highly rated institutions, there is no longer a need to limit the risk weighting for exposures to counterparties in OTC derivatives transactions. Therefore, the Committee proposes to abolish the 50% cap that had been included in the current Accord for the specific benefit of those OTC transactions on the presumption that the counterparties involved tend to be first-class names. This proposal follows the recommendations made in the Committee's paper "Banks' Interactions with Highly Leveraged Institutions"[20].

10) Maturity

28. The Committee notes that the maturity of a claim is a factor in determining the overall credit risk it presents to the bank. Where the credit quality of two borrowers is equivalent, the exposure to the borrower with the longer-term claim would generally be riskier than that to the borrower with the shorter-term claim. However, given the broadbrush approach currently taken with regard to the credit quality of borrowers, the Committee realises the difficulties of pursuing greater precision in differentiating among the maturities of claims through capital charges. For example, it is recognised that a long-term claim on a high quality borrower is often less risky than a short-term claim on a poor quality borrower. Thus, the Committee at present is not proposing to take maturity of claims into account for capital purposes, with the possible exception of certain claims on banks. Nonetheless, as the Committee proceeds with its work to find ways to distinguish more precisely among the credit quality of exposures, it also will consider ways to factor maturity more explicitly into the assessment of credit risk.

11) Criteria for eligible external credit assessment institutions

29. The revised risk weighting scheme outlined above would, as noted, place increased reliance by supervisors on external credit assessment institutions. For prudential reasons, it is therefore important that criteria for recognising these institutions be set at an appropriately high standard. The minimum criteria that the Committee sees as essential for recognition are as follows:

---

[19] In certain countries, retail commitments are considered unconditionally cancellable if the terms permit the bank to cancel them to the full extent allowable under consumer protection and related legislation.
[20] See footnote 7 above.

i. Objectivity: The methodology for assigning credit assessments must be rigorous, systematic, continuous and subject to some form of validation based on historical experience. Moreover, assessments must be subject to ongoing review and responsive to changes in financial condition. Before being recognised by supervisors, the Committee proposes that an assessment methodology for each market segment, including rigorous backtesting, must have been established for at least one year, while recognising that a three-year period would be preferable.

ii. Independence: The methodology should be as free as possible from any external political influence or constraints, or economic pressure from assessed entities.

iii. Transparency: For validation purposes, the individual assessments should be publicly available.

iv. Credibility: To some extent, credibility will be derived from the criteria above. This criterion should not be used as a barrier to the entry of new institutions, but at the same time, any new institution that emerges following this change in the supervisory framework would need to be carefully evaluated. The credibility of an institution would also be underpinned by the existence of internal procedures to prevent the misuse of confidential information.

v. International access: The institution is not required to assess firms in more than one country, but its results should be available to non-domestic parties with a legitimate interest on the same basis as to equivalent domestic parties.

vi. Resources: The institution should have sufficient resources to allow substantial ongoing contact with senior and operational levels of assessed entities.

vii. Recognition: National supervisory authorities will be responsible for recognition of institutions based on the above criteria. It is proposed that the Secretariat to the Committee will serve as a clearing house of information on the institutions recognised by national supervisory authorities.

The Committee is soliciting comment on whether and how the criteria could be strengthened to ensure that they are sufficiently rigorous.

30. The Committee will undertake empirical work on the approaches of the various major external credit assessment institutions to determine more fully how an assessment methodology should be applied to the different liabilities of a firm. For example, the

Committee will need to determine when and how short-term/long-term assessments should be used and whether assessments can be applied to the non-rated debt of other companies within a group or to non-rated debts in foreign currencies. For illustration, ratings of claims considered to be of very high quality (i.e. having a very low degree of credit risk) and of very low quality are summarised in the table below.

31. The Committee proposes to use the general approach adopted for trading book purposes to determine the number of assessments required before their use is permitted as the basis for capital charges. Thus, either two assessments by eligible external credit assessment institutions would be required or one assessment where no eligible institution has given a lower assessment. However, in contrast to the allowable treatment for trading book positions, and pending development of an internal ratings-based approach to capital requirements, it would not be sufficient for a bank to include banking book claims that are unrated but deemed to be of comparable quality by the reporting bank.

32. As an aid to market discipline, it is proposed that banks be required to disclose the credit assessment institutions that they use for the risk weighting of their assets, including the percentage of their assets' risk weightings based on assessments by each such institution.

Table 2

Credit Assessment Institution	**Very High Quality Assessment**	**Very Low Quality Assessment**
Fitch IBCA	AA- and above	Below B-
Moody's	Aa3 and above	Below B3
Standard & Poor's	AA- and above	Below B-
Export insurance agencies	1[21]	7

[21] This category will generally include "High Income OECD Countries" (as defined by the World Bank).

12) Asset securitisation

33. The Committee recognises that asset securitisation can serve as an efficient way to redistribute credit risks of a bank to other banks or non-bank investors. In this respect, securitisation is providing better risk diversification and is enhancing financial stability. Nevertheless, the Committee has become increasingly concerned with some banks' use of structured financing or asset securitisation to avoid maintaining capital commensurate with their risk exposures. Furthermore, the current Accord lacks consistency in that the same economic risk may result in substantially different capital requirements depending on the type of transaction that a bank employs. Thus, through such techniques, a bank may be able to achieve an overall risk-based capital ratio that is nominally high but which may obfuscate capital weakness in relation to the actual economic risks inherent in the bank's portfolio.

34. To address these concerns, the Committee is now proposing a revision to the Accord that makes use of ratings by eligible external credit assessment institutions for setting capital charges for asset securitisations. In this regard, the proposal is primarily addressing transactions that result in a special purpose vehicle (SPV) issuing paper secured on a pool of assets. The Committee notes that the securitisation market is a global market, in which a significant number of internationally active banks participate. Furthermore, asset-backed securities issued in the international market typically have a credit rating. Thus, using external credit assessments for assessing capital against risks arising from securitisation transactions would further promote the Accord's objective of ensuring competitive equality.

35. The Committee is proposing that securitisation tranches

- rated AAA or AA- (using, for example Standard & Poor's methodology) would be risk weighted at 20%;
- rated A+ to A- would be risk weighted at 50%;
- rated BBB+ to BBB- would be risk weighted at 100%;
- rated BB+ to BB- would be risk weighted at 150%; and
- rated B+ or below or unrated would be deducted from capital.

36. In addition, in the case of revolving facilities, when, in the opinion of the supervisor, uncontrolled early amortisation or master trust agreements may pose special problems to the originating bank, off-balance-sheet securitised receivables (i.e. managed assets) could be

converted, at the discretion of the national supervisor, to a credit equivalent amount at 20% and risk weighted based on the obligor's weighting.

C. The banking book treatment – Internal ratings-based approach

37. The Committee's goal is to develop an approach to regulatory capital that increasingly ensures that, for an individual bank, regulatory capital requirements reflect that bank's particular risk profile. To this end, the Committee proposes certain revisions to the standardised approach to credit risk, which will remain applicable to the majority of banks.

38. The Committee recognises, however, the inherent attractiveness of an approach that is based on a bank's own quantitative and qualitative assessment of its credit risk. The Committee therefore believes that an internal ratings-based (IRB) approach could form the basis for setting capital charges for some sophisticated banks. The Committee will, in consultation with the industry, be examining the key issues related to such an approach, and will seek to develop it within the same timeframe as its review of the standardised approach. The Committee will present a more detailed analysis of its proposals in this respect in a forthcoming consultative document.

39. As part of this effort, the Committee will be:

- analysing banks' internal rating systems;
- evaluating quantitative and qualitative standards for use by supervisors in recognising, validating, and monitoring banks' internal rating systems; and
- evaluating methodologies for linking capital requirements to internal ratings. For example, banks could map their internal rating categories to the standardised risk weights, to an expanded system of risk weights, or the Committee could design a capital charge which explicitly reflects internal ratings. In this respect, the Committee expects that the first-stage option in the IRB approach will be one that provides an acceptable trade-off between operational feasibility and conceptual soundness at the time of implementation – for example, an approach that maps internal ratings to an expanded number of standardised risk weights.

40. The Committee will also pay careful consideration to ensuring that the regulatory capital charge under this approach is developed in a manner that ensures accuracy and consistency with the standardised approach. The second and third pillars of the capital framework will also command a key role in an IRB framework. The supervisory review

process will play an important role in determining the reasonableness, accuracy, and comparability of internal rating systems across banking institutions. The Committee is also giving consideration to enhancing market discipline in a much broader sense and measures for achieving this objective (e.g. making compliance with SDDS for risk weighting of sovereigns one condition for receiving lower risk weights) will be incorporated into the IRB approach.

41. The discussion below highlights some of the issues that the Committee will be developing in greater detail in its forthcoming consultative document on the IRB approach, and considers what this approach might look like in practice.

1) Advantages and drawbacks of the use of internal ratings for capital adequacy purposes

42. Internal credit risk ratings are utilised by many sophisticated banks to summarise the risk of individual credit exposures, and are increasingly incorporated into various banking functions, including operational applications (such as determining loan approval requirements) and risk management and analysis (including analysis of pricing and profitability as well as internal capital allocation).

43. The Committee recognises that internal ratings may incorporate supplementary customer information which is usually out of the reach of an external credit assessment institution, such as detailed monitoring of the customers' accounts and greater knowledge of any guarantees or collateral. Internal ratings may also cover a much broader range of borrowers, providing assessments of the credit quality of individuals and small-to-medium-sized companies through credit scoring, and assessment of larger non-rated borrowers through detailed analysis. Thus, in offering a parallel alternative to the standardised approach based on internal ratings, the Committee hopes that banks will be encouraged to further develop and enhance internal credit risk management and measurement techniques, rather than place an unduly broad reliance on credit assessments conducted by external credit assessment institutions.

44. Furthermore, an internal ratings-based approach also shares certain similarities with credit risk models in terms of its reliance on banks' internal credit assessments, and in its conceptual measures of risk; as such, it could also provide incentives for banks to further refine credit risk management techniques, paving the way for a transition towards full credit risk models in the future.

45. Notwithstanding the above mentioned benefits of internal ratings, their use for setting minimum capital requirements would represent a major step forward for supervisors from the proposed standardised approach. The trade-off between the current straightforward but simplistic approach and the potentially greater accuracy and coverage that could result from the use of internal ratings systems has to be carefully evaluated, as it would have far reaching implications both for banks and their supervisors. The lack of homogeneity among the rating systems at different banks, together with the central role of subjective risk factors and business judgements in assigning internal grades, means that comparability across institutions and countries presents an important hurdle. Moreover, given the multiple roles of internal ratings in overall risk management, issues might arise from the use of such ratings for minimum capital requirements. Thus, the Committee will be carefully evaluating these issues, and evaluating methodology for relating capital requirements to internal gradings. Certain considerations are highlighted below.

2) Practical implications for supervisors

46. Since prior supervisory approval would be necessary before banks could be allowed to use their internal ratings systems for setting minimum capital requirements, a critical issue in considering such an approach is how supervisors should assess the overall adequacy of bank rating systems. In order to address this and other key considerations, the Committee will first need to review the factors that influence banks' internal systems and evaluate methodologies which can be used by banks to translate internal ratings into a common benchmark. Then, it would be possible to elaborate qualitative and quantitative criteria which can be used by supervisors in assessing and validating these internal ratings systems.

47. In considering the design of a bank's rating system for use in setting regulatory capital requirements, supervisors would need to determine whether the number of gradations is appropriate to distinguish meaningfully among the range of risks in the institution's exposures. Additionally, supervisors would need to consider whether the rating scale in use for management purposes is adequately linked to a measurable loss concept. For example, there would be very different results between systems that measure only the probability of the borrower defaulting and those systems that also consider recovery rates if the default occurs.

48. Supervisors would also need to consider whether all appropriate risk factors are incorporated into the criteria for assigning exposures to rating categories, and whether the criteria are sufficiently clear and explicit. The clarity and detail of the rating process would

not only facilitate consistent and accurate ratings, but also allow for ex-post evaluation of whether losses on transactions with the specified characteristics behave as institutions expected. This could signal that either the rating criteria or the loss characteristics attributed to a risk grade need to be adjusted. In addition, supervisors would need to be convinced that an institution's processes and controls assure that ratings are assigned and/or reviewed by experienced individuals who are independent of the credit approval or pricing decision.

49. Finally, in evaluating the loss characteristics attributed to each grade, supervisors would need to be confident that an institution can support its estimates with meaningful historical data from its own experience, or alternatively from third-party historical loss experience on instruments that are comparable to the assets being rated. In general, this would also require that all loans rated in the same grade have the same ex-ante loss characteristics, and that the rating criteria and process take proper account of the loan type, collateral, guarantees and other characteristics in order to provide this comparability.

3) Interaction with other parts of the capital adequacy framework

50. The Committee will also evaluate how the use of internal ratings would link to risk weights and the rest of the capital adequacy framework, and thus to capital ratios. One possibility would be to map the bank's internal ratings into the standard risk weights or an expanded set of risk weights proposed for the Accord. This could allow for clearer comparison of the capital requirements for different assets or exposures, irrespective of the source of the credit assessment, and could be connected with the enhancement of the risk weighting scheme. In this respect, the Committee expects that the first-stage option for relating capital requirements to internal ratings will be one that provides an acceptable trade-off between operational feasibility and conceptual soundness at the time of implementation, for example, mapping internal ratings to an expanded set of risk weights. Another possibility, perhaps longer-term, would be to allow a bank's own estimates of loss, such as default probability, together with some other considerations, to translate directly into a capital requirement for that exposure, once the supervisor has recognised the bank's methodology as being suitable for this purpose. However, this would require that a number of challenges are addressed. These include estimation of a loss probability, through, for example, measures of EDF (Expected Default Frequency) and its associated PDF (Probability Density Function), evaluation of the conceptual methodologies used in estimating a PDF (such as the holding period and definition of credit event), validation, and data limitations.

51. Given the variety of factors that the bank may have taken into account in determining its capital requirement, the interaction with the rest of the capital adequacy framework could differ significantly among banks. Some of these differences would include the extent to which the standardised approach to credit risk mitigation techniques continues to apply for an institution and the extent, if any, to which the capital requirement for other risks requires modification. The Committee intends to carry out further work on these interactions and anticipates a meaningful dialogue with the industry on these issues.

D. The banking book treatment - Credit risk models

52. The Committee has also considered the possible use of portfolio credit risk models in setting regulatory capital requirements.[22] The Committee commends the use and continued development of such models. The Committee indeed recognises that credit risk modelling may prove to result in better internal risk management, and may have the potential to be used in the supervision of banks. However, before a portfolio modelling approach can be used in the formal process of setting regulatory capital requirements for credit risk, supervisors would have to be confident not only that models are being used to actively manage risk, but also that they are conceptually sound, empirically validated, and produce capital requirements that are comparable across institutions. At this time, significant hurdles, principally concerning data availability and model validation, still need to be cleared before these objectives can be met.

53. The Committee will verify how, after further development and testing, credit risk models could play an explicit part in setting regulatory capital requirements. To this end, it intends to monitor developments in this area closely, and hopes to engage the industry in a constructive dialogue going forward.

E. Credit risk mitigation techniques

54. The 1988 Accord gave recognition, for capital purposes, to certain techniques banks use to reduce credit risk on a loan or other exposure, namely taking collateral or obtaining a third party guarantee. The question of whether the scope of recognition of these forms of risk mitigation techniques should be expanded is dealt with in the later section on collateral,

---

[22] See footnote 6 above.

guarantees and on-balance-sheet netting. The paragraphs immediately below consider other aspects of credit risk mitigation.

55. In this connection, the 1988 Accord noted the possibility of giving capital recognition to the practice of entering into an offsetting transaction with the same counterparty under a legally enforceable netting agreement. The Accord was subsequently amended to recognise such netting. Further, in April 1998, the Committee proposed to give capital recognition in a very limited way to on-balance-sheet netting arrangements. Although the Committee has consulted on some aspects of these issues in the past, it now believes there are benefits in consulting on the full range of issues as part of the current review of the Accord.

56. The Accord's current approach to recognising credit risk mitigation techniques reflects largely the state of the art in credit risk management when the Accord was endorsed. It also reflected the Committee's views about where to strike the balance between rules that would be simple to apply and verify and those that would provide banks with more flexibility, but require substantially more supervisory oversight and validation. At the time, such techniques were largely limited to taking collateral and obtaining guarantees from banks, in the form of standby letters of credit, or from governments. In the decade since then, there has been a significant increase in the use and range of techniques and instruments for mitigating or hedging credit risk, as well as in the ability to manage the associated risks. The increased usage in part has been promoted by the development of new techniques specifically designed to allow banks to better unbundle and control their risks. In particular, bank guarantees in the form of credit derivatives have gained widespread usage. These developments have had important effects on the credit risk profile of many banks.

57. The Committee acknowledges the benefits that can accrue from the use of credit risk mitigation techniques and the key role they can play in prudent risk management. Accordingly, the Committee believes it is important that the capital framework should provide for a better recognition of mitigation techniques.

58. The increasingly widespread usage of credit risk hedging has raised the question of how best to recognise for capital purposes reductions in credit risk arising from the use of credit risk mitigation techniques. The issues can be viewed in two ways. On the one side, how best to deal, for capital purposes, with residual risks that remain when a credit risk hedge is imperfect (one example of such imperfect hedging is when the maturity of the credit risk hedge is shorter than the credit exposure). On the other side, the extent to which recognition

for capital purposes should be given to reductions in credit risk that result from the use of such techniques, i.e. whether, and if so, how, greater capital relief beyond the current substitution approach - which substitutes the risk weight of the collateral or guarantor for that of the underlying exposure - could be introduced.

59. The Committee has been considering ways to deal with these issues. In identifying approaches, it is essential to weigh the trade-off between pursuing accuracy in the measurement of credit risk mitigation effects for capital purposes and retaining a relatively simple framework for regulatory capital. Pursuing accuracy should be more consistent with reinforcing incentives for prudent risk management; on the other hand, more accuracy would be at the cost of more complexity. There is also a need to achieve a balance between an appropriate capital charge for imperfect hedging and a capital relief which gives sufficient recognition to sound risk mitigation techniques. In order for recognition to be given to credit risk mitigation techniques, banks will need to ensure that they have a well founded legal basis for the technique they are applying, and effective control processes over the risks involved. For example, in relation to on-balance-sheet netting, the Committee has noted that it is essential that a bank monitors and controls in a sound manner the relevant exposures on a net basis. In commenting on the following sections, it is important that banks demonstrate how these requirements are met.

1) Residual risks

60. As indicated above, residual risks arise where the hedge is imperfect. Imperfect hedges can reduce credit risk and, therefore, may be desirable, but at the same time, it is necessary to deal appropriately with the residual risks. These residual risks take a number of forms. Residual forward credit risk occurs in the case of a maturity mismatch, where the hedging instrument expires before the underlying asset. Basis risk arises where the exposure and the hedging instrument are subject to potential changes in market price that could create a shortfall in value of the hedge. A third type of residual risk relates to asset mismatches and arises when an asset is hedged by a credit derivative referenced to an asset with different risk characteristics. These residual risks and the Committee’s views on possible approaches for capital treatment are discussed below.

(i) Maturity mismatches

61. The current Accord does not specifically require that the maturity of a credit risk hedging instrument match the maturity of the underlying asset. As a result, national practices have tended to vary in their treatment. Some supervisors do not recognise any hedge for capital purposes unless its maturity matches that of the underlying asset. Other supervisors generally grant capital relief where the maturity of the hedge is less than that of the underlying asset and risk management practices are in place for dealing with the residual, but certain, forward credit risk. Others disallow mismatched hedges where the hedge claim (such as an asset netted against an offsetting liability) would attract a 0% risk weight, but permit them where the hedged claim (such as an asset guaranteed by a credit derivative provided by/written by a bank) would attract a higher risk weight, which provides some capital cushion to cover the forward credit risk.

62. The Committee believes that more consistency should be brought to the regulatory capital treatment of hedges with maturity mismatches.

63. The simplest way to deal with residual forward credit risk would be to disallow capital recognition of the risk reduction effects of hedges where there is a maturity mismatch. This approach, however, would not build in an incentive for hedging and prudent risk management.

64. An alternative would be to recognise hedges even where there was a maturity mismatch, but subject to an additional capital requirement in the form of a simple add-on against the uncovered risk. There are two issues that would need to be resolved in this respect. The first would be to decide on appropriate add-ons. The second would be whether this approach would be prudent where the hedge only provided short-term protection. On this latter issue, the Committee is considering specifying a minimum remaining maturity for the hedge, for example one year, below which the hedge would not be recognised. The add-on could be waived if the remaining maturity of the hedge is longer than a specified period, for example, two or three years. The waiver would reflect the view that the residual credit risk is of less concern where it arises at a future date since the bank has more time to prepare for potential future problems. Views on these issues are sought, as well as comments on how best to balance capital charges and maturity requirements with risk management processes and market practices.

(ii) Changes in market prices

65. Exposures and hedging instruments can be subject to future changes in market prices that can create a shortfall in credit protection (unless there is adequate over-collateralisation and frequent marking-to-market). A fully secured position today may not turn out to be fully hedged if the market value of the hedging instrument falls below that of the underlying obligation. Such basis risk occurs most often where an exposure is secured by non-cash collateral, but also can arise in the context of netting, for example, where the asset is denominated in a different currency from the offsetting liability.

66. The current Accord recognises the potential future exposure of off-balance-sheet derivative contracts by requiring additional capital through the use of add-ons. It does not otherwise address basis risk except to the extent that it does not permit netting of cross-currency on-balance-sheet positions.

67. The Committee has considered using the same add-on approach as in the off-balance-sheet area or using a haircut approach where the value of the hedging instrument is discounted by a certain percentage. Either of these measures would address the issue of potential unsecured exposures arising from adverse market conditions, as discussed in the Committee's paper "Banks' Interactions with Highly Leveraged Institutions"[23]. While the add-on approach has the merit of consistency with the treatment of off-balance-sheet derivative contracts, it does not provide banks with suitable incentives because the position would always attract an add-on capital charge regardless of the degree of over-collateralisation. Moreover, the add-ons developed for derivative contracts may not be appropriate for on-balance-sheet positions. The haircut approach, on the other hand, would not impose an additional capital charge on a position that was sufficiently over-collateralised. Determining the size of appropriate add-ons or haircuts, however, would require substantial empirical work, in which assumptions on both effective holding periods and price volatilities would be critical. The Committee invites comments on the best approach to take.

(iii) Asset mismatches

68. Where the reference asset and the underlying asset of a credit derivative are not identical - an asset mismatch - the effectiveness of protection might be eroded. The

[23] See footnote 7 above.

Committee considered whether it would be sufficient to require cross-default clauses and a high degree of correlation between the two instruments. It has concluded that a satisfactory methodology currently does not exist for ensuring (and demonstrating) that high correlations provide a hedge against asset mismatch risk. Accordingly, the Committee believes that, for the credit derivative to have a capital reducing effect on the underlying obligation, the reference and underlying assets must be issued by the same obligor, the reference asset must rank pari passu or more junior than the underlying assets, and cross-default clauses must apply.

2) The extent of risk reduction

69. The Committee is aware that the Accord does not fully capture the extent of the risk-reduction that can be achieved by credit risk mitigation techniques. Under the Accord's current substitution approach, the risk weight of the collateral or guarantor is simply substituted for that of the original underlying obligor. For example, a 100% risk weighted loan guaranteed by a bank attracts the same 20% risk weight as the bank guarantor. However, in the above example, a bank would only suffer losses if both the loan and its guarantor default.

70. On this basis, the size of the capital requirement might more appropriately depend on the correlation between the default probabilities of the original obligor and the guarantor bank. If the default of the guarantor were certain to be accompanied by the default of the borrower, then the current substitution approach would be appropriate. But, if the probabilities of default are essentially unrelated, then a smaller capital charge than currently exists would be justified. In this context, the Committee has considered whether it would be possible to acknowledge the double default effect by applying a simple haircut to the capital charge that currently results from substituting the risk weight of the hedging instrument for that of the underlying obligor. Such a haircut would need to be set at a prudently low level.

71. The Committee appreciates the logic of recognising the benefits of what is essentially a reinsurance effect and would like to reinforce proper incentives to manage risks. Nonetheless, it has identified several concerns. First, the double default effect described is not symmetric - the failure of the guarantor bank would re-expose the bank to the original obligor and, so, to the risk of a future default. In this regard, it should be noted that banks often use credit risk mitigation techniques to manage their poorer quality exposures, which may well have an

economic capital requirement greater than the standard 8% capital charge. Second, pursuing recognition for the double default effect could increase the scope of regulatory capital arbitrage and may not be balanced in view of the broad-brush approach the standardised Accord continues to take to differentiating the inherent credit risk of underlying obligors. Third, historical experience has shown that because some guarantors can have significant concentration in a particular form of risk, in practice default correlations are higher in cyclical or industry downturns. Fourth, it may not be practical to calibrate appropriate measurements of risk reduction owing to the double default effect without going into the field of credit risk modelling.

72. The above paragraphs deal with risk mitigation techniques in a generalised way. The balance that is sought is to give due allowance for effective risk reduction whilst ensuring that appropriate capital is required against residual risks. There are a wide range of risk reduction techniques available, including credit derivatives, collateral and on-balance-sheet netting. Although each can mitigate credit risk, they are not identical in the way each allows a bank to control residual risks, such as the roll-off risk involved when there is a maturity mismatch. This implies that the degree of recognition of risk mitigation and the treatment of residual risk may need to differ across the different products. The Committee is interested in responses which identify such differences.

3) Collateral, guarantees and on-balance-sheet netting

73. As explained in the previous section, the 1988 Accord gave some recognition to the reduction of credit risk which results from the taking of collateral and the obtaining of third party guarantees. Where an exposure is collateralised by cash or securities issued by an OECD central government, OECD public sector entity, or multilateral development bank, it attracts the risk weight given to the collateral (i.e. zero or a low weight). This somewhat limited scope of recognition of collateral was deemed appropriate in the light of the varying practices among banks in different countries for taking collateral and different experiences of the stability of physical and financial collateral values. Likewise, the types of guarantees currently recognised in the Accord are limited to third party guarantees issued by: OECD central governments or public sector entities; OECD incorporated banks and securities firms; non-OECD banks where the underlying transaction has a residual maturity of up to one year; or multilateral development banks. Exposures covered by guarantees of such entities attract the risk weight assigned to a direct claim on the guarantor (i.e. zero or a low weight). In the

case of exposures only partially covered by collateral or guarantee, only that part of the exposure covered attracts the reduced risk weight.

74. In the course of this review of the Accord, the Committee has considered whether and, if so, how the scope for guarantees and eligible collateral could be expanded. The Committee is proposing to expand eligible guarantors to those that attract lower risk weights than the underlying exposure.

75. The Committee wishes to provide banks with incentives for using collateral to reduce credit risk where appropriate. It is therefore considering further expanding the scope for eligible collateral to all financial assets – not just marketable securities – that attract a risk weight lower than the underlying exposure, provided that the collateral is supported by a robust legal opinion and has a readily determinable value at which it can be realised by the bank. Instruments eligible for inclusion in the trading book could generally meet this latter condition. Eligible collateral could potentially include, for example, accounts receivable from AAA/AA companies, or cash flows from derivative contracts. The Committee notes that the effect of such expansion could be significant. The Committee is seeking comment with regard to the expansion of the scope of eligible collateral beyond cash and marketable securities and particularly seeks views on how a greater recognition of risk reduction could be balanced to ensure that prudential concerns could best be allayed.

76. The Committee has also decided that, subject to certain conditions, the scope of on-balance-sheet netting should be expanded to all assets and liabilities in the banking book. Before implementing this, however, the Committee wishes to carry out further work on the implications of this approach, and to consider the way forward in the light of other risk mitigation techniques discussed above.

77. The Committee is seeking comment on this, again with the principal focus being how to balance recognition with adequate prudential standards.

F. Treatment of other risks

1) Interest rate risk in the banking book

78. The Committee recognises the significance of interest rate risk in some banking books. Accordingly, the Committee proposes to develop a capital charge for interest rate risk in the

banking book for banks where interest rate risks are significantly above average ("outliers"). As part of this effort, the Committee intends to examine developments in methodologies as referred to in the consultative proposal set out in the April 1993 paper on the measurement of banks' exposure to interest rate risk[24] to identify those banks which are outliers. The Committee seeks industry comment on how approaches could be developed in the light of current practice.

79. The approach the Committee is considering in identifying outliers also includes evaluation of qualitative factors, including the adequacy of the bank's internal risk management process, and as such would be closely linked to the supervisory review pillar of the capital framework. In addition, the Committee believes that consideration should be given to a bank's compliance with sound interest rate risk management practices such as those set out by the Committee in 1997[25]. In this respect, the Committee recognises that many large banks rely on well developed measurement techniques for interest rate risk as an integral part of their risk management process. Some of these banks are using their internal VAR and other models to capture interest rate risk for both the trading and banking book. Although these are well established techniques for measuring interest rate risk, the Committee notes that there are still controversial issues related to the measurement process, such as the quantification of the duration for core deposits. Consequently, the Committee recognises that some national discretion will be necessary regarding the definition of outliers and the methodology of calculating interest rate risk in the banking book.

80. There are also other important differences between interest rate risk in the banking and trading books which would need to be fully addressed. In principle, either of the two approaches contained in the Market Risk Amendment to the current Accord (i.e. the standardised approach or the internal models approach) might also be extended to the treatment of interest rate risk in the banking book.

81. The Committee is undertaking further work to consider the incentives for banks of explicit interest rate risk charges in the banking book under any proposed regime, and also the impact any change would have on anomalies between the banking and trading books. The

---

[24] *Measurement of Banks' Exposure to Interest Rate Risk,* Consultative proposal by the Basel Committee on Banking Supervision (April 1993).

[25] *Principles for the Management of Interest Rate Risk,* Basel Committee on Banking Supervision (September 1997).

Committee seeks specific comment from banks on how best to apply and calibrate a capital charge for interest rate risk for banks where interest risk is significantly above average ("outliers"), including comment on the definition of outliers**.**

2) Other risks

82. The Committee acknowledges the importance of risks other than credit and market risk for banks, and believes that a rigorous control environment is essential to prudent management of, and limiting of exposure to, such risks; however, additional steps are necessary to ensure the sound management of banking institutions. Analytical approaches for managing this broad category of risks are currently in the early stages of development. For example, most banks have only recently begun to develop a framework for explicitly measuring and monitoring operational risk. Other elements of this broad category, such as reputational and legal risks, also pose challenges to banks’ risk management processes as they, too, are difficult to quantify.

83. Notwithstanding these challenges, however, the Committee believes that such risks are sufficiently important for banks to devote the necessary resources to quantify the level of such risks and to incorporate them into their assessment of their overall capital adequacy. From a regulatory perspective, the growing importance of this risk category has also led the Committee to conclude that such risks are too important not to be treated separately within the capital framework. The Committee proposes to develop an explicit capital charge for other risks and is exploring ways in which this could be done in practice. However, in the absence of industry standard practice, operational risk will be difficult to incorporate into the risk-based capital framework in a truly risk-sensitive manner. The Committee is soliciting comment on various approaches to achieve this objective.

84. Among the possible approaches for assessing capital against operational risks, the Committee has identified several options, which range from a simple benchmark to various modelling techniques. A simple benchmark could be based on an aggregate measure of business activity such as gross revenue, fee income, operating costs, managed assets or total assets adjusted for off-balance-sheet exposures, or a combination of these. This could be balanced by including an anchoring reference to the balance sheet. Particular regard will need to be paid to the capital arbitrage potential, to any disincentives to better operational risk control that might thereby be created and to the capital impact for particular types of banks. The Committee invites views on the preferred benchmark measure.

85. The Committee is also aware that there are other possible methods of allocating regulatory capital for operational risk. One would be to permit banking organisations to use models. For this option, particular regard would need to be paid to the robustness of the model, the quality of the data, stress-testing, the extent to which it responds to changes in exogenous variables, and the areas of operational risk not covered by the model. (Depending on the quality of the model, supervisors could still apply a multiplier or other adjustment factor to the model output). The Committee perceives that, at the moment, very few, if any, banks have a model that meets these criteria, and that, therefore, such models could only be used at a later stage. However, the Committee invites submissions from banks that perceive their models to be functioning well.

86. There are also a variety of other methods used by banks for allocating capital for operational risk, which seem difficult to use for assessing a regulatory capital charge at present. Examples would be measurements based on earnings-at-risk, cost volatility, commonly used business line valuation techniques, brand values, the risk in one type of business compared to another, non-quantitative self-assessment, or loss events dependent on business volumes and cross-referenced to loss benchmarks. The Committee invites comments from banks that use such methods.

87. In exploring various approaches for assessing a capital charge for other risks, the Committee believes that supervisors should also apply a qualitative judgement based on their assessment of the adequacy of the control environment in each institution. As part of this judgement, supervisors will pay regard to the extent to which institutions assess, measure and control operational risk.[26]

G. The trading book

88. There are various challenges to the present Accord that stem from differences between the trading and banking books: minimum capital requirements for credit risk are set in different contexts in the two books as a result of several factors, including different accounting/valuation frameworks, assumed holding period horizons, and risk weightings.

---

[26] In this regard, supervisors should also consider imposing additional capital requirements, for example, for banks that are exposed to large foreign exchange settlement risk. The Committee will soon be issuing a consultative paper on *Supervisory Guidance for Managing Settlement Risk in Foreign Exchange Transactions.*

Given these differences, capital requirements for credit risk are potentially lower in various ways in the trading book, providing a potential incentive for banks to undertake regulatory capital arbitrage between the two books. Therefore, in light of the proposals to amend capital requirements in the banking book, the Committee will review the treatment of trading book positions to ensure consistency, and to reduce the incentive for regulatory capital arbitrage. Separately, the Committee recognises that the diversity of positions within the trading book also presents a challenge, as the Accord does not address the differences in the liquidity of various instruments. Therefore, the Committee will also be considering the need for differing treatment (internal, supervisory, or regulatory) for trading book positions with only moderate liquidity.

89. As noted in the Committee's reports on highly leveraged institutions[27], given large and increasing market volumes, the regulatory treatment of (reverse) repo transactions in the trading book is also an issue of special concern. In order to address the potential counterparty risk of repo transactions, the Committee proposes to specify adequate capital requirements to reflect price volatility of underlying securities and the frequency with which positions are marked to market. These requirements need to be consistent with the collateral valuation rules as discussed in Annex II, section E of this document. In addition to this proposal, the Committee will be considering further means of following up on the other recommendations of the reports on highly leveraged institutions.

[27] See footnote 7 above.

ANNEX 3 THE SECOND PILLAR - SUPERVISORY REVIEW OF CAPITAL ADEQUACY

1. This section recognises supervisory review explicitly as an integral part of the capital framework. The supervisory review process should not be viewed as a discretionary pillar but, rather, as a critical complement to both the minimum regulatory capital requirement and market discipline. The goal of supervisors in reviewing a bank's capital position and strategy is to ensure that the bank's capital is consistent with its overall risk profile and to enable early supervisory intervention if the capital strategy does not sufficiently buffer risk. In addition, supervisors assess whether a bank is complying with regulatory capital minima.

2. The discussion of the supervisory review of a bank's capital adequacy rests on four basic and complementary principles, described in more detail below. The principles are:

- supervisors expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum;
- a bank should have a process for assessing its overall capital adequacy in relation to its risk profile, as well as a strategy for maintaining its capital levels;
- supervisors should review and evaluate a bank's internal capital adequacy assessment and strategy, as well as its compliance with regulatory capital ratios; and
- supervisors should seek to intervene at an early stage to prevent capital from falling below prudent levels.

A. Capital above regulatory minima

3. Supervisors treat the regulatory capital requirements set out in the Accord as minima and expect banks to hold capital in excess of these regulatory minima, as appropriate for their levels of risk exposure. With regard to establishing these appropriate levels, a bank and its supervisor need to consider a variety of factors, including:

- the experience and quality of its management and key personnel
- its risk appetite and its track record in managing risk;
- the nature of the markets in which it operates;

- the quality, reliability and volatility of its earnings;
- the quality of its capital and its access to new capital;
- the diversification of its activities and concentration of exposures;
- its liability and liquidity profile;
- the complexity of its legal and organisational structure;
- the adequacy of risk management systems and controls;
- the support and control provided by shareholders; and
- the degree of supervision by other supervisors.

These considerations imply that the appropriate margin above the minimum regulatory capital requirements will differ across banks.

4. In assessing capital adequacy, and, in turn, how far above the regulatory minima a bank should be operating, banks and supervisors need to consider business cycle effects and the overall macroeconomic environment. As part of this process, a bank should perform rigorous forward-looking stress testing that identifies possible events or changes in market conditions that could impact it adversely, and assess its ability to withstand them. Stress testing should also consider the impact of likely "worst case" scenarios.

5. As part of this process, banks must be able to demonstrate that chosen internal capital targets are well-founded and bank supervisors should review, evaluate, and determine whether these targets are consistent with a bank's overall risk profile and the current operating environment. In addition, in evaluating an institution's overall capital adequacy, supervisors will have to take into account its relative importance to the national and international financial markets and its potential to trigger systemic instability. Supervisors should have the ability to require banks to hold capital in excess of minimum regulatory capital ratios.

B. Banks' internal assessment of capital adequacy

6. The Committee recognises that capital adequacy in relation to economic risk is a necessary condition for the long-run soundness of financial institutions. Thus, in addition to complying with the established minimum regulatory capital requirements, as noted above, it is essential that each financial institution critically assesses its internal capital adequacy and future capital needs in light of its risk profile and business plan.

7. Most well managed banks have developed internal processes and techniques to assess and evaluate their own capital needs. While there may not be industry consensus on the best methodology to use for conducting such assessments, the trend of sound practice seems clear. Increasingly, large banks are developing approaches to assess capital adequacy in a systematic, disciplined manner, taking into account both qualitative and quantitative risk factors. Some consider capital allocation methodologies frequently used for pricing and performance measurement across business and product lines as an element of their analysis; these methodologies frequently incorporate different kinds of volatility-based measures that incorporate a view of unexpected loss, along with more subjective measures of risk. Furthermore, while some banks may consider formal models as an element in evaluating their present and future capital needs and capital structure, decisions on the actual level and structure of capital continue to reflect largely judgmental considerations, including implicit or explicit regulatory expectations, peer group analysis, market expectations and other qualitative factors.

8. As noted above, sound practice standards are still evolving; at a minimum, banks should have a credible and clearly defined internal capital allocation methodology. For the most sophisticated banks, this is likely to take the form of an internal economic capital allocation model, defining an institution to be adequately capitalised based on a reasonable soundness definition, such as targeted insolvency probability. Any methodology used should re-adjust, as necessary, the bank's internal capital requirements to take into account all significant transactions, including securitisations, as well as changes in the economic environment. This will help ensure that institutions with relatively higher overall risk profiles will maintain commensurate amounts of capital. This process should be overseen by senior management that is responsible for setting target capital ratios and determining capital strategy. These points are expanded below.

9. As part of the process for evaluating capital adequacy, a bank should be able to identify and evaluate its risks across all its activities to determine whether its capital levels are appropriate. This process should a) adequately differentiate risk exposure among various risk categories; b) provide a complete overview of an institution's banking book risk profile and identify any concentrations of credit risk; c) identify trends in the portfolio, for example, whether a bank's lower-quality loans, as a percentage of its portfolio, have grown significantly over time; d) include controls to ensure the objectivity and consistency of the

internal risk assessment process; and e) provide analysis or evidence supporting the accuracy or appropriateness of the risk measurement process.

10. As part of this process, the bank should also be able to incorporate changes in its risk profile, whether due to new products, increased volumes, changes in concentrations and/or changes in the overall business/macroeconomic environment. Further, a bank should perform comprehensive and rigorous stress tests to identify possible events or changes in markets that could have adverse future effects on the bank, and to assess its ability to withstand them. The bank should also be able to demonstrate that its approach to assessing its capital adequacy is conceptually sound, that any input used in its assessment are of good quality and that outputs and results are reasonable. A bank could, for instance, use sensitivity analysis of key inputs and peer analysis in assessing its approach.

C. The supervisory review process

11. Supervisors already currently review and evaluate a bank's capital adequacy through one or more of several techniques. Bank supervisors in all Basel Committee member countries monitor compliance with minimum regulatory capital ratios and hold periodic meetings with bank management to discuss financial and other developments, as well as capital strategy, capital structure and related targets. Supervisors review capital adequacy, either through on-site examinations or off-site surveillance, taking into account a number of qualitative risk factors, and review the work of internal and external auditors. Many hold meetings with internal and external auditors and review reports issued by them. Some supervisors also consider supplemental capital requirements, such as minimum leverage ratios or bank-specific trigger ratios.

12. As banks turn to new analytical approaches to assess their capital adequacy and set internal capital targets, supervisors could incorporate these into their overall supervisory programs. In order to use effectively a bank's analytical processes, supervisors should have a method for reviewing the internal capital adequacy assessments of individual banks and discussing internal capital targets set by the bank. Supervisors should review a bank's assessment of its own risk profile, inquire about the bank's estimate of its capital needs for new activities or markets, and trace the capital impact of activities such as commercial credit securitisation. In conducting their reviews, supervisors should rely on periodic meetings with bank management, bank prepared reports that detail the results of its capital adequacy assessment and/or internal and external audit reports. Additionally, supervisors should review

whether a bank's approach treats similar risks across products and/or business lines in a consistent manner, and whether changes in the bank's risk profile are readily incorporated. Supervisors should also evaluate the reasonableness of the bank's approach by reviewing technical documentation provided by the bank and the results of sensitivity analyses and stress tests conducted by the bank and how these relate to capital plans. Further, supervisors should evaluate whether the sophistication of methodologies and stress tests used in the bank's approach are commensurate with the kinds of activities in which the bank is engaged. Finally, supervisors should consider other relevant factors in assessing the bank's approach, for instance, its adherence to sound accounting and valuation principles, the quality of management information reporting and systems for aggregating business risks and activities, and the proactiveness of the bank in responding to emerging or changing risks.

13. Of course, such a supervisory program has serious resource implications for most supervisors and consideration may need to be given to the number and skill level of supervisory staff. Further, this requires supervisors to work in close co-operation to evaluate the risk profile of internationally active banks and to ensure broad consistency of standards across national borders.

D. Supervisory intervention

14. One important motivation for a supervisory review of a bank's regulatory capital measures and its internal capital adequacy process is to identify as early as possible the potential for serious erosion of the bank's capital position. In every Committee member country, bank supervisors seek to intervene at the appropriate time in situations where a bank's capital is falling relative to its risks. The need for early intervention reflects the relatively illiquid nature of most bank assets and the limited options banks have in raising capital quickly. However, supervisors strive to let market forces work appropriately and not in a manner that is overly reactive to supervisory intervention. Furthermore, the Committee recognises that bank management and ownership has the primary responsibility for managing risks in a prudent manner and to take action to address problems as they arise, and as such, that supervision is not a substitute for effective management.

15. The kinds of intervening actions that supervisors take to address bank problems are determined by law, national policies, case-by-case analysis, or a mix of all of these. Some supervisory regimes place their primary emphasis on informal monitoring of regulatory capital ratios. Others rely on both regulatory capital measures and other supervisory risk

assessments to identify potential problem institutions. Most supervisors rely to a large extent on moral suasion to encourage banks to improve their capital positions and to correct underlying internal control and risk management weaknesses. In a few regimes, capital ratios represent triggers for supervisory action, up to and including the closure of a bank. These trigger ratios may be set above established minimum regulatory ratios, but this is not typical.

16. All supervisors should have an approach for identifying and intervening in banks where capital levels are falling to levels that raise questions about the ability of the bank to withstand normal business shocks. Supervisors generally agree that there should be positive incentives for banks to hold higher capital levels; but that higher capital levels are not a substitute for strong risk management and internal controls.

E. Future work on the supervisory review process

17. The Committee will continue its efforts to enhance the supervisory review process. For example, the Committee will discuss how best to address resource issues and consider developing supervisory work programs and standards. Future work also could include further discussion of the range of surveillance techniques currently used by supervisors, and efforts to enhance old techniques and develop new ones.

18. As a starting point for further work, the Committee is currently conducting a survey of its members on regulatory and supervisory approaches to assessing capital adequacy, as well as on techniques used by banks to assess their own capital adequacy. Based on the results of the surveys and the consultation process with the industry and other supervisors, the Committee envisages developing more detailed guidance on the principles addressed in this section. The Committee particularly sees the potential for future work in the following areas:

- Identifying in more detail specific factors that should be considered in assessing a bank's overall risk profile and the adequacy of its capital. These factors could include the bank's credit, market, operational and other risks (e.g. concentration risk), and the associated risk management processes. The factors also could include characteristics of individual banks which supervisors have historically associated with higher than usual potential for strains on capital, such as very rapid growth or expansion into unfamiliar geographic or highly innovative markets. In addition, consideration could be given to country risk factors including the reliability of information under a country's accounting rules, the quality of supervision and macroeconomic conditions.

- Considering approaches for more directly relating a bank's risk profile to its capital, drawing on the results of the Committee survey and consultative processes, as well as existing supervisory approaches. In this respect, the Committee notes that some banks have begun to develop internal methods for describing their risk profile and assessing their capital needs. These methods are relevant to supervisors both for the review of the bank's approach to choosing its capital level and, conceivably, for enhancing existing supervisory approaches.

- Describing various approaches supervisors can use to encourage banks to hold capital above the minimum levels and to intervene when capital levels are falling. This work would be based on a fuller study of the techniques used by supervisors, drawn from the surveys of regulatory and supervisory approaches.

- Considering, as an optional tool for supervisors, the use of a supplemental, simple capital ratio, such as a ratio of Tier 1 capital to assets adjusted for off-balance-sheet positions or, alternatively, to operating revenues. The use of such a simply-determinable measure of minimum capital cushion may be useful in view of the unavoidable imprecision involved in accounting measures of bank insolvency and, more generally, of portfolio risk. This imprecision is further exacerbated by regulatory capital arbitrage, which may exist with any regulatory formula that inevitably lags evolving market practices.

19. An important goal of the Committee's future work is to enunciate clear principles for the supervisory review process and to provide a range of approaches from which supervisors can choose. The Committee believes it is appropriate to offer such a range of approaches in order to account for differences among banks and their activities, within and across countries. Similarly, the Committee notes that the supervisory review of capital adequacy should be an integral part of the overall approach to supervision in a country and should make use of and complement the methods and techniques prevalent in that country.

ANNEX 4 THE THIRD PILLAR - MARKET DISCIPLINE

1. In order for market participants to assess a bank's capital adequacy, they need to have information about the bank's capital structure as well as its risk profile. Therefore, the Committee considers disclosures about capital levels, risk exposures and capital adequacy to be important in achieving a meaningful level of market discipline. These disclosures should be made at least annually, and more frequently if appropriate.

A. Capital structure

2. A bank should disclose summary information about its capital structure, including the components of capital and terms and main features of capital instruments, especially in the case of innovative, complex and hybrid capital instruments. A bank should also disclose information about its reserves for credit losses and other potential losses. Information disclosed should provide a clear picture of the institution's loss-absorbing capacity and include any conditions that may merit special attention in an analysis of the strength of a bank's capital including: maturity, level of seniority, step-up provisions, interest or dividend deferrals, use of Special Purpose Vehicles (SPVs), and terms of derivatives embedded in hybrid capital instruments.

3. A bank should disclose the components of its capital based on the Accord, including the amounts of Tier 1 capital, Tier 2 capital, and (if applicable) Tier 3 capital.

4. A bank should disclose information on its accounting policies, including policies for valuation of assets and liabilities, provisioning, and income recognition. This information is crucial to enable financial statement users to assess and compare the quality of an institution's capital.

B. Risk exposures

5. Given the dynamic financial markets in which banks operate, and the influences of increased global competition and technological innovation, a bank's risk profile can change very quickly. Therefore, users of financial information need measures of risk exposures that remain meaningful over time and which accurately reflect sensitivities to changes in underlying market conditions.

6. A bank should publicly disclose qualitative and quantitative information about its risk exposures. Together with the disclosure of a bank's capital position, information about its risk exposures helps illustrate whether a bank will be able to remain solvent in times of stress. Transparency regarding the bank's risk profile, i.e. the risks inherent in its on- and off-balance-sheet activities at a point in time and its appetite for taking risk, provides information about the stability of an institution's financial position and the sensitivity of its earnings to changes in market conditions.

7. In discussing each risk area, an institution should present sufficient qualitative (e.g. management strategies) and quantitative (e.g. position data) information to help users understand the nature and magnitude of its risk exposures. Further, comparative information of previous years' data should be provided to give the financial statement user a perspective on trends in the underlying exposures.

8. More detailed guidance on the quantitative and qualitative disclosures that should be made within various risk areas can be found in the Committee's report "Enhancing Bank Transparency" [28].

C. Capital adequacy

9. A bank should disclose its risk-based capital ratios calculated in accordance with the methodology prescribed in the Accord and any other supervisory or regulatory capital standards that it is required to meet. Such disclosure should include enough information to enable the user to assess whether available capital is sufficient to meet credit risk and market risk and other risk requirements.

10. A bank should make qualitative disclosures about the internal processes it uses for evaluating its own capital adequacy. Such disclosures will assist market participants in judging how a bank's management of its capital adequacy relates to its other risk management processes, and how well it will be able to withstand future volatility.

---

[28] See footnote 10 above.

D. Future work

11. Most of the disclosures outlined in this annex consist of recommendations that have already been made by the Committee in various issuances.[29] The Committee has several projects underway that will enable it to provide more detailed guidance on capital adequacy disclosure in the future. This work includes recently issued proposals on loan accounting and disclosure, and trading and derivatives disclosure.[30] In addition, the Committee is conducting interviews with market participants and is reviewing the actual disclosure practices of large, internationally active banks.

12. Based on this work, including the comments received on this and the various other proposals, the Committee plans to issue more detailed guidance later this year. The guidance will address what disclosures should be made in order to advance the role of market discipline in promoting bank capital adequacy. Comment is invited regarding the areas in which enhanced disclosure would be the most beneficial to banks and other market participants.

---

[29] See in particular the report *Enhancing Bank Transparency*, Basel Committee on Banking Supervision (September 1998).

[30] *Sound Practices for Loan Accounting, Credit Risk Disclosure and Related Matters*, Basel Committee on Banking Supervision (October 1998); *Recommendations for Public Disclosure of Trading and Derivatives Activities of Banks and Securities Firms*, Basel Committee on Banking Supervision and International Organisation of Securities Commissions (February 1999).