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INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS (July 1988, UPDATED TO April 1998)¹

Introduction

1. This report presents the outcome of the Committee's work over several years to secure international convergence of supervisory regulations governing the capital adequacy of international banks. Following the publication of the Committee's proposals in December 1987, a consultative process was set in train in all G-10 countries and the proposals were also circulated to supervisory authorities worldwide. As a result of those consultations some changes were made to the original proposals. The present paper is now a statement of the Committee agreed by all its members. It sets out the details of the agreed framework for measuring capital adequacy and the minimum standard to be achieved which the national supervisory authorities represented on the Committee intend to implement in their respective countries. The framework and this standard have been endorsed by the Group of Ten central-bank Governors.

2. The document is being circulated to supervisory authorities worldwide with a view to encouraging the adoption of this framework in countries outside the G-10 in respect of banks conducting significant international business.

3. Two fundamental objectives lie at the heart of the Committee's work on regulatory convergence. These are, firstly, that the new framework should serve to strengthen the soundness and stability of the international banking system; and, secondly, that the framework should be fair and have a high degree of consistency in its application to banks in different countries with a view to diminishing an existing source of competitive inequality among international banks. The Committee notes that, in responding to the invitation to comment on

¹ This document contains the July 1988 text of the Basle Capital Accord amended to reflect five textual changes:

- the November 1991 amendment (concerning general provisions) to paragraphs 18-21 of the main text and Annex I, paragraph D;
- the July 1994 amendment (concerning the qualification for the OECD risk weighting) to paragraph 35 and to footnote 2 of Annex 2;
- the April 1995 amendment to Annex 3 (concerning certain off-balance-sheet items) and claims collateralised by securities issued by OECD non-central government public-sector entities;
- the April 1998 amendment to Annex 2 (concerning the list of assets eligible for a 20% risk weighting);
- the removal of references to transitional and implementation arrangements.

The text has not been changed to reflect the market risk amendment introduced in January 1996. That amendment appears as issued in Volume II of the Compendium.

its original proposals, banks have welcomed the general shape and rationale of the framework and have expressed support for the view that it should be applied as uniformly as possible at the national level.

4. Throughout the recent consultations, close contact has been maintained between the Committee in Basle and the authorities of the European Community in Brussels who are pursuing a parallel initiative to develop a common solvency ratio to be applied to credit institutions in the Community. The aim has been to ensure the maximum degree of consistency between the framework agreed in Basle and the framework to be applied in the Community. It is the Committee's hope and expectation that this consistency can be achieved, although it should be noted that regulations in the European Community are designed to apply to credit institutions generally, whereas the Committee's framework is directed more specifically at banks undertaking international business.

5. In developing the framework described in this document the Committee has sought to arrive at a set of principles which are conceptually sound and at the same time pay due regard to particular features of the present supervisory and accounting systems in individual member countries. It believes that this objective has been achieved.

6. In certain very limited respects (notably as regards some of the risk weightings) the framework allows for a degree of national discretion in the way in which it is applied. The impact of such discrepancies on the overall ratios is likely to be negligible and it is not considered that they will compromise the basic objectives. Nevertheless, the Committee intends to monitor and review the application of the framework in the period ahead with a view to achieving even greater consistency.

7. It should be stressed that the agreed framework is designed to establish *minimum* levels of capital for internationally active banks. National authorities will be free to adopt arrangements that set higher levels.

8. It should also be emphasised that capital adequacy as measured by the present framework, though important, is one of a number of factors to be taken into account when assessing the strength of banks. The framework in this document is mainly directed towards assessing capital in relation to credit risk (the risk of counterparty failure) but other risks, notably interest rate risk and the investment risk on securities, need to be taken into account by supervisors in assessing overall capital adequacy. The Committee is examining possible approaches in relation to these risks. Furthermore, and more generally, capital ratios, judged in isolation, may provide a misleading guide to relative strength. Much also depends on the quality of a bank's assets and, importantly, the level of provisions a bank may be holding outside its capital against assets of doubtful value. Recognising the close relationship between capital and provisions, the Committee will continue to monitor provisioning policies by banks in member countries and will seek to promote convergence of policies in this field as in other regulatory matters. In assessing progress by banks in member countries towards meeting the

agreed capital standards, the Committee will therefore take careful account of any differences in existing policies and procedures for setting the level of provisions among countries' banks and in the form in which such provisions are constituted.

9. The Committee is aware that differences between countries in the fiscal treatment and accounting presentation for tax purposes of certain classes of provisions for losses and of capital reserves derived from retained earnings may to some extent distort the comparability of the real or apparent capital positions of international banks. Convergence in tax regimes, though desirable, lies outside the competence of the Committee and tax considerations are not addressed in this paper. However, the Committee wishes to keep these tax and accounting matters under review to the extent that they affect the comparability of the capital adequacy of different countries' banking systems.

10. This agreement is intended to be applied to banks on a consolidated basis, including subsidiaries undertaking banking and financial business. At the same time, the Committee recognises that ownership structures and the position of banks within financial conglomerate groups are undergoing significant changes. The Committee will be concerned to ensure that ownership structures should not be such as to weaken the capital position of the bank or expose it to risks stemming from other parts of the group. The Committee will continue to keep these developments under review in the light of the particular regulations in member countries, in order to ensure that the integrity of the capital of banks is maintained. In the case of several of the subjects for further work mentioned above, notably investment risk and the consolidated supervision of financial groups, the European Community has undertaken or is undertaking work with similar objectives and close liaison will be maintained.

11. This document is divided into three sections. The first two describe the framework: Section I the constituents of capital and Section II the risk weighting system. Section III deals with the target standard ratio.

I. The constituents of capital

(a) Core capital (basic equity)

12. The Committee considers that the key element of capital on which the main emphasis should be placed is equity capital² and disclosed reserves. This key element of capital is the only element common to all countries' banking systems; it is wholly visible in the published accounts and is the basis on which most market judgements of capital adequacy are made; and it has a crucial bearing on profit margins and a bank's ability to compete. This

² Issued and fully paid ordinary shares/common stock and non-cumulative perpetual preferred stock (but excluding cumulative preferred stock).

emphasis on equity capital and disclosed reserves reflects the importance the Committee attaches to securing a progressive enhancement in the quality, as well as the level, of the total capital resources maintained by major banks.

13. Notwithstanding this emphasis, the member countries of the Committee also consider that there are a number of other important and legitimate constituents of a bank's capital base which may be included within the system of measurement (subject to certain conditions set out in sub-section (b) below).

14. The Committee has therefore concluded that capital, for supervisory purposes, should be defined in two tiers in a way which will have the effect of requiring at least 50% of a bank's capital base to consist of a core element comprised of equity capital and published reserves from post-tax retained earnings (tier 1). The other elements of capital (supplementary capital) will be admitted into tier 2 up to an amount equal to that of the core capital. These supplementary capital elements and the particular conditions attaching to their inclusion in the capital base are set out below and in more detail in Annex 1. Each of these elements may be included or not included by national authorities at their discretion in the light of their national accounting and supervisory regulations.³

(b) Supplementary capital

(i) Undisclosed reserves

15. Unpublished or hidden reserves may be constituted in various ways according to differing legal and accounting regimes in member countries. Under this heading are included only reserves which, though unpublished, have been passed through the profit and loss account and which are accepted by the bank's supervisory authorities. They may be inherently of the same intrinsic quality as published retained earnings, but, in the context of an internationally agreed minimum standard, their lack of transparency, together with the fact that many countries do not recognise undisclosed reserves, either as an accepted accounting concept or as a legitimate element of capital, argue for excluding them from the core equity capital element.

(ii) Revaluation reserves

16. Some countries, under their national regulatory or accounting arrangements, allow certain assets to be revalued to reflect their current value, or something closer to their current value than historic cost, and the resultant revaluation reserves to be included in the capital base. Such revaluations can arise in two ways:

³ One member country, however, maintains the view that an international definition of capital should be confined to core capital elements and indicated that it would continue to press for the definition to be reconsidered by the Committee in the years ahead.

- (a) from a formal revaluation, carried through to the balance sheets of banks' own premises; or
- (b) from a notional addition to capital of hidden values which arise from the practice of holding securities in the balance sheet valued at historic costs.

Such reserves may be included within supplementary capital provided that the assets are considered by the supervisory authority to be prudently valued, fully reflecting the possibility of price fluctuations and forced sale.

17. Alternative (b) is relevant to those banks whose balance sheets traditionally include very substantial amounts of equities held in their portfolio at historic cost but which can be, and on occasions are, realised at current prices and used to offset losses. The Committee considers these "latent" revaluation reserves can be included among supplementary elements of capital since they can be used to absorb losses on a going-concern basis, provided they are subject to a substantial discount in order to reflect concerns both about market volatility and about the tax charge which would arise were such cases to be realised. A discount of 55% on the difference between the historic cost book value and market value is agreed to be appropriate in the light of these considerations. The Committee considered, but rejected, the proposition that latent reserves arising in respect of the undervaluation of banks' premises should also be included within the definition of supplementary capital.

(iii) General provisions/general loan-loss reserves

18. General provisions or general loan-loss reserves are created against the possibility of losses not yet identified. Where they do not reflect a known deterioration in the valuation of particular assets, these reserves qualify for inclusion in tier 2 capital. Where, however, provisions or reserves have been created against identified losses or in respect of an identified deterioration in the value of any asset or group of subsets of assets, they are not freely available to meet unidentified losses which may subsequently arise elsewhere in the portfolio and do not possess an essential characteristic of capital. Such provisions or reserves should therefore not be included in the capital base.

19. The supervisory authorities represented on the Committee undertake to ensure that the supervisory process takes due account of any identified deterioration in value. They will also ensure that general provisions or general loan-loss reserves will only be included in capital if they are not intended to deal with the deterioration of particular assets, whether individual or grouped.

20. This would mean that all elements in general provisions or general loan-loss reserves designed to protect a bank from identified deterioration in the quality of specific assets (whether foreign or domestic) should be ineligible for inclusion in capital. In particular, elements that reflect identified deterioration in assets subject to country risk, in real estate lending and in other problem sectors would be excluded from capital.

21. General provisions/general loan-loss reserves that qualify for inclusion in tier 2 under the terms described above do so subject to a limit of 1.25 percentage points of weighted risk assets.

(iv) Hybrid debt capital instruments

22. In this category fall a number of capital instruments which combine certain characteristics of equity and certain characteristics of debt. Each of these has particular features which can be considered to affect its quality as capital. It has been agreed that, where these instruments have close similarities to equity, in particular when they are able to support losses on an on-going basis without triggering liquidation, they may be included in supplementary capital. In addition to perpetual preference shares carrying a cumulative fixed charge, the following instruments, for example, may qualify for inclusion: long-term preferred shares in Canada, titres participatifs and titres subordonnés à durée indéterminée in France, Genussscheine in Germany, perpetual debt instruments in the United Kingdom and mandatory convertible debt instruments in the United States. The qualifying criteria for such instruments are set out in Annex 1.

(v) Subordinated term debt

23. The Committee is agreed that subordinated term debt instruments have significant deficiencies as constituents of capital in view of their fixed maturity and inability to absorb losses except in a liquidation. These deficiencies justify an additional restriction on the amount of such debt capital which is eligible for inclusion within the capital base. Consequently, it has been concluded that subordinated term debt instruments with a minimum original term to maturity of over five years may be included within the supplementary elements of capital, but only to a maximum of 50% of the core capital element and subject to adequate amortisation arrangements.

(c) Deductions from capital

24. It has been concluded that the following deductions should be made from the capital base for the purpose of calculating the risk-weighted capital ratio. The deductions will consist of:

- (i) goodwill, as a deduction from tier 1 capital elements;
- (ii) investments in subsidiaries engaged in banking and financial activities which are not consolidated in national systems. The normal practice will be to consolidate subsidiaries for the purpose of assessing the capital adequacy of banking groups. Where this is not done, deduction is essential to prevent the multiple use of the same capital resources in different parts of the group. The deduction for such investments will be made against the total capital base. The assets representing the investments in subsidiary companies whose capital had been deducted from that of

the parent would not be included in total assets for the purposes of computing the ratio.

25. The Committee carefully considered the possibility of requiring deduction of banks' holdings of capital issued by other banks or deposit-taking institutions, whether in the form of equity or of other capital instruments. Several G-10 supervisory authorities currently require such a deduction to be made in order to discourage the banking system as a whole from creating cross-holdings of capital, rather than drawing capital from outside investors. The Committee is very conscious that such double-gearing (or "double-leveraging") can have systemic dangers for the banking system by making it more vulnerable to the rapid transmission of problems from one institution to another and some members consider these dangers justify a policy of full deduction of such holdings.

26. Despite these concerns, however, the Committee as a whole is not presently in favour of a general policy of deducting all holdings of other banks' capital, on the grounds that to do so could impede certain significant and desirable changes taking place in the structure of domestic banking systems.

27. The Committee has nonetheless agreed that:

- (a) individual supervisory authorities should be free at their discretion to apply a policy of deduction, either for all holdings of other banks' capital, or for holdings which exceed material limits in relation to the holding bank's capital or the issuing bank's capital, or on a case-by-case basis;
- (b) where no deduction is applied, banks' holdings of other banks' capital instruments will bear a weight of 100%;
- (c) in applying these policies, member countries consider that reciprocal cross-holdings of bank capital designed artificially to inflate the capital position of the banks concerned should not be permitted;
- (d) the Committee will closely monitor the degree of double-gearing in the international banking system and does not preclude the possibility of introducing constraints at a later date. For this purpose, supervisory authorities intend to ensure that adequate statistics are made available to enable them and the Committee to monitor the development of banks' holdings of other banks' equity and debt instruments which rank as capital under the present agreement.

II. The risk weights

28. The Committee considers that a weighted risk ratio in which capital is related to different categories of asset or off-balance-sheet exposure, weighted according to broad categories of relative riskiness, is the preferred method for assessing the capital adequacy of banks. This is not to say that other methods of capital measurement are not also useful, but they are considered by the Committee to be supplementary to the risk-weight approach. The

Committee believes that a risk ratio has the following advantages over the simpler gearing ratio approach:

- (i) it provides a fairer basis for making international comparisons between banking systems whose structures may differ;
- (ii) it allows off-balance-sheet exposures to be incorporated more easily into the measure;
- (iii) it does not deter banks from holding liquid or other assets which carry low risk.

29. The framework of weights has been kept as simple as possible and only five weights are used - 0, 10, 20, 50 and 100%. There are inevitably some broad-brush judgements in deciding which weight should apply to different types of asset and the weightings should not be regarded as a substitute for commercial judgement for purposes of market pricing of the different instruments.

30. The weighting structure is set out in detail in Annexes 2 and 3. There are six aspects of the structure to which attention is particularly drawn.

(i) Categories of risk captured in the framework

31. There are many different kinds of risks against which banks' managements need to guard. For most banks the major risk is *credit risk*, that is to say the risk of counterparty failure, but there are many other kinds of risk - for example, investment risk, interest rate risk, exchange rate risk, concentration risk. The central focus of this framework is credit risk and, as a further aspect of credit risk, country transfer risk. In addition, individual supervisory authorities have discretion to build in certain other types of risk. Some countries, for example, will wish to retain a weighting for open foreign exchange positions or for some aspects of investment risk. No standardisation has been attempted in the treatment of these other kinds of risk in the framework at the present stage.

32. The Committee considered the desirability of seeking to incorporate additional weightings to reflect the investment risk in holdings of fixed rate government securities - one manifestation of interest rate risk which is of course present across the whole range of a bank's activities, on and off the balance sheet. For the present, it was concluded that individual supervisory authorities should be free to apply either a zero *or* a low weight to claims on governments (e.g. 10% for all securities or 10% for those maturing in under one year and 20% for one year and over). All members agreed, however, that interest rate risk generally required further study and that if, in due course, further work made it possible to develop a satisfactory method of measurement for this aspect of risk for the business as a whole, consideration should be given to applying some appropriate control alongside this credit risk framework. Work is already under way to explore the possibilities in this regard.

(ii) Country transfer risk

33. In addressing country transfer risk, the Committee has been very conscious of the difficulty of devising a satisfactory method for incorporating country transfer risk into the framework of measurement. In its earlier, consultative, paper two alternative approaches were put forward for consideration and comment. These were, firstly, a simple differentiation between claims on domestic institutions (central government, official sector and banks) and claims on all foreign countries; and, secondly, differentiation on the basis of an approach involving the selection of a defined grouping of countries considered to be of high credit standing.

34. The comments submitted to the Committee by banks and banking associations in G-10 countries during the consultative period were overwhelmingly in favour of the second alternative. In support of this view, three particular arguments were strongly represented to the Committee. Firstly, it was stressed that a simple domestic/foreign split effectively ignores the reality that transfer risk varies greatly between different countries and that this risk is of sufficient significance to make it necessary to ensure that broad distinctions in the credit standing of industrialised and non-industrialised countries should be made and captured in the system of measurement, particularly one designed for international banks. Secondly, it was argued that the domestic/foreign split does not reflect the global integration of financial markets, and the absence of some further refinement would discourage international banks from holding securities issued by central governments of major foreign countries as liquid cover against their Euro-currency liabilities. To that extent a domestic/foreign approach would run counter to an important objective of the risk-weighting framework, namely that it should encourage prudent liquidity management. Thirdly, and most importantly, the member states of the European Community are firmly committed to the principle that all claims on banks, central governments and the official sector within European Community countries should be treated in the same way. This means that, where such a principle is put into effect, there would be an undesirable asymmetry in the manner in which a domestic/foreign split was applied by the seven G-10 countries which are members of the Community compared with the manner in which it was applied by the non-Community countries.

35. In the light of these arguments, the Committee has concluded that a defined group of countries should be adopted as the basis for applying differential weighting coefficients, and that this group should be full members of the OECD or countries which have concluded special lending arrangements with the IMF associated with the Fund's General Arrangements to Borrow. This group of countries is referred to as the OECD in the rest of the report. Any country which reschedules its external sovereign debt is, however, precluded from the defined group for a period of five years.

36. This decision has the following consequences for the weighting structure. Claims on central governments within the OECD will attract a zero weight (or a low weight if the

national supervisory authority elects to incorporate interest rate risk); and claims on OECD non-central government public-sector entities will attract a low weight (see (iii) below). Claims on central governments and central banks outside the OECD will also attract a zero weight (or a low weight if the national supervisory authority elects to incorporate interest rate risk), provided such claims are denominated in the national currency and funded by liabilities in the same currency. This reflects the absence of risks relating to the availability and transfer of foreign exchange on such claims.

37. As regards the treatment of interbank claims, in order to preserve the efficiency and liquidity of the international interbank market there will be no differentiation between short-term claims on banks incorporated within or outside the OECD. However, the Committee draws a distinction between, on the one hand, short-term placements with other banks which is an accepted method of managing liquidity in the interbank market and carries a perception of low risk and, on the other, longer-term cross-border loans to banks which are often associated with particular transactions and carry greater transfer and/or credit risks. A 20% weight will therefore be applied to claims on all banks, wherever incorporated, with a residual maturity of up to and including one year; longer-term claims on OECD incorporated banks will be weighted at 20%; and longer-term claims on banks incorporated outside the OECD will be weighted at 100%.

(iii) Claims on non-central-government, public-sector entities (PSEs)

38. The Committee concluded that it was not possible to settle on a single common weight that can be applied to all claims on domestic public-sector entities below the level of central government (e.g. states, local authorities, etc.) in view of the special character and varying creditworthiness of these entities in different member countries. The Committee therefore opted to allow discretion to each national supervisory authority to determine the appropriate weighting factors for the PSEs within that country. In order to preserve a degree of convergence in the application of such discretion, the Committee agreed that the weights ascribed in this way should be 0, 10, 20 or 50% for domestic PSEs, but that PSEs in foreign countries within the OECD should attract a standard 20% weight. These arrangements will be subject to review by the Committee in pursuit of further convergence towards common weights and consistent definitions in member countries.

Commercial companies owned by the public sector will attract a uniform weight of 100% inter alia in order to avoid competitive inequality vis-à-vis similar private-sector commercial enterprises.

(iv) Collateral and guarantees

39. The framework recognises the importance of collateral in reducing credit risk, but only to a limited extent. In view of the varying practices among banks in different countries

for taking collateral and different experiences of the stability of physical or financial collateral values, it has not been found possible to develop a basis for recognising collateral generally in the weighting system. The more limited recognition of collateral will apply only to loans secured against cash, and against securities issued by OECD central governments, OECD non-central government public sector entities, or specified multilateral development banks. These will attract the weight given to cash or the securities used as collateral. Loans partially collateralised by these assets will also attract the equivalent weights on that part of the loan which is fully collateralised.

40. As regards loans or other exposures guaranteed by third parties, the Committee has agreed that loans guaranteed by OECD central governments, OECD public-sector entities, or OECD incorporated banks will attract the weight allocated to a direct claim on the guarantor (e.g. 20% in the case of banks). Loans guaranteed by non-OECD incorporated banks will also be recognised by the application of a 20% weight, but only where the underlying transaction has a residual maturity not exceeding one year. The Committee intends to monitor the application of this latter arrangement to ensure that it does not give rise to inappropriate weighting of commercial loans. In the case of loans covered by partial guarantees, only that part of the loan which is covered by the guarantee will attract the reduced weight. The contingent liability assumed by banks in respect of guarantees will attract a credit conversion factor of 100% (see sub-section (vi) below).

(v) Loans secured on residential property

41. Loans fully secured by mortgage on occupied residential property have a very low record of loss in most countries. The framework will recognise this by assigning a 50% weight to loans fully secured by mortgage on residential property which is rented or is (or is intended to be) occupied by the borrower. In applying the 50% weight, the supervisory authorities will satisfy themselves, according to their national arrangements for the provision of housing finance, that this concessionary weight is applied restrictively for residential purposes and in accordance with strict prudential criteria. This may mean, for example, that in some member countries the 50% weight will only apply to first mortgages, creating a first charge on the property; and that in other member countries it will only be applied where strict, legally-based, valuation rules ensure a substantial margin of additional security over the amount of the loan. The 50% weight will specifically not be applied to loans to companies engaged in speculative residential building or property development. Other collateral will not be regarded as justifying the reduction of the weightings that would otherwise apply.⁴

⁴ One member country feels strongly that the lower weight should also apply to other loans secured by mortgages on domestic property, provided that the amount of the loan does not exceed 60% of the value of the property as calculated according to strict legal valuation criteria.

(vi) Off-balance-sheet engagements

42. The Committee believes that it is of great importance that all off-balance-sheet activity should be caught within the capital adequacy framework. At the same time, it is recognised that there is only limited experience in assessing the risks in some of the activities; also that for some countries, a complex analytical approach and detailed and frequent reporting systems cannot easily be justified when the amounts of such business, particularly in the newer, more innovative instruments, are only small. The approach that has been agreed, which is on the same lines as that described in the Committee's report on the supervisory treatment of off-balance-sheet exposures issued to banks in March 1986, is comprehensive in that all categories of off-balance-sheet engagements, including recent innovations, will be converted to credit risk equivalents by multiplying the nominal principal amounts by a credit conversion factor, the resulting amounts then being weighted according to the nature of the counterparty. The different instruments and techniques are divided into five broad categories (within which member countries will have some limited discretion to allocate particular instruments according to their individual characteristics in national markets):

- (a) those which substitute for loans (e.g. general guarantees of indebtedness, bank acceptance guarantees and standby letters of credit serving as financial guarantees for loans and securities) - these will carry a 100% credit risk conversion factor;
- (b) certain transaction-related contingencies (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions) - a 50% credit risk conversion factor;
- (c) short-term, self-liquidating trade-related contingent liabilities arising from the movement of goods (e.g. documentary credits collateralised by the underlying shipments) - a 20% credit risk conversion factor;
- (d) commitments with an original maturity exceeding one year (the longer maturity serving broadly as a proxy for higher risk facilities) and all NIFs and RUFs - a 50% credit risk conversion factor. Shorter-term commitments or commitments which can be unconditionally cancelled at any time, it is agreed, generally carry only low risk and a nil weight for these is considered to be justified on de minimis grounds;
- (e) interest and exchange rate related items (e.g. swaps, options, futures) - the credit risk equivalent amount for these contracts will be calculated in one of two ways (see below and Annex 3).

43. Special treatment is needed for the items in (e) above because banks are not exposed to credit risk for the full face value of their contracts, but only to the cost of replacing the cash flow if a counterparty defaults. Most members of the Committee accept that the correct method of assessing the credit risk on these items is to calculate the current replacement cost by marking to market and to add a factor to represent potential exposure

during the remaining life of the contract. Some member countries, however, are concerned about the consistency of this method in relation to the rest of the system which only makes broad distinctions between relative risks for on-balance-sheet items, particularly for banks where these off-balance-sheet items currently constitute only a very small part of the total risks. They would prefer to apply an alternative approach consisting of conversion factors based on the nominal principal sum underlying each contract according to its type and maturity. The Committee has concluded that members will be allowed to choose either of the two methods. The details of the two alternative methods are set out in Annex 3.

III. A target standard ratio

44. In the light of consultations and preliminary testing of the framework, the Committee is agreed that a minimum standard should be set now which international banks generally will be expected to achieve. It is also agreed that this standard should be set at a level that is consistent with the objective of securing over time soundly-based and consistent capital ratios for all international banks. Accordingly, the Committee confirms that the target standard ratio of capital to weighted risk assets should be set at 8% (of which the core capital element will be at least 4%).

Annex 1

Definition of capital included in the capital base

A. Capital elements

Tier 1 (a) Paid-up share capital/common stock

(b) Disclosed reserves

Tier 2 (a) Undisclosed reserves

(b) Asset revaluation reserves

(c) General provisions/general loan-loss reserves

(d) Hybrid (debt/equity) capital instruments

(e) Subordinated debt

The sum of tier 1 and tier 2 elements will be eligible for inclusion in the capital base, subject to the following limits.

B. Limits and restrictions

(i) The total of tier 2 (supplementary) elements will be limited to a maximum of 100% of the total of tier 1 elements;

(ii) subordinated term debt will be limited to a maximum of 50% of tier 1 elements;

(iii) where general provisions/general loan-loss reserves include amounts reflecting lower valuations of asset or latent but unidentified losses present in the balance sheet, the amount of such provisions or reserves will be limited to a maximum of 1.25 percentage points;

(iv) asset revaluation reserves which take the form of latent gains on unrealised securities (see below) will be subject to a discount of 55%.

C. Deductions from the capital base

From tier 1: Goodwill

From total

capital: (i) Investments in unconsolidated banking and financial subsidiary companies.

N.B. The presumption is that the framework would be applied on a consolidated basis to banking groups.

(ii) Investments in the capital of other banks and financial institutions (at the discretion of national authorities).

D. Definition of capital elements

(i) **Tier 1:** includes only **permanent shareholders' equity** (issued and fully-paid ordinary shares/common stock and perpetual non-cumulative preference shares) and **disclosed**

reserves (created or increased by appropriations of retained earnings or other surplus, e.g. share premiums, retained profit, general reserves and legal reserves). Disclosed reserves also include general funds (such as a fund for general banking risks in certain EC countries) of the same quality that meet the following criteria:

- allocations to the funds must be made out of post-tax retained earnings or out of pre-tax earnings adjusted for all potential tax liabilities;
- the funds and movements into or out of them must be disclosed separately in the bank's published accounts;
- the funds must be available to a bank to meet losses for unrestricted and immediate use as soon as they occur;
- losses cannot be charged directly to the funds but must be taken through the profit and loss account.

In the case of consolidated accounts, this also includes minority interests in the equity of subsidiaries which are less than wholly-owned. This basic definition of capital excludes revaluation reserves and cumulative preference shares.

- (ii) **Tier 2: (a) undisclosed reserves** are eligible for inclusion within supplementary elements provided these reserves are accepted by the supervisor. Such reserves consist of that part of the accumulated after-tax surplus of retained profits which banks in some countries may be permitted to maintain as an undisclosed reserve. Apart from the fact that the reserve is not identified in the published balance sheet, it should have the same high quality and character as a disclosed capital reserve; as such, it should not be encumbered by any provision or other known liability but should be freely and immediately available to meet unforeseen future losses. This definition of undisclosed reserves excludes hidden values arising from holdings of securities in the balance sheet at below current market prices (see below).

(b) Revaluation reserves arise in two ways. Firstly, in some countries, banks (and other commercial companies) are permitted to revalue fixed assets, normally their own premises, from time to time in line with the change in market values. In some of these countries the amount of such revaluations is determined by law. Revaluations of this kind are reflected on the face of the balance sheet as a revaluation reserve.

Secondly, hidden values of "latent" revaluation reserves may be present as a result of long-term holdings of equity securities valued in the balance sheet at the historic cost of acquisition.

Both types of revaluation reserve may be included in tier 2 provided that the assets are prudently valued, fully reflecting the possibility of price fluctuation and forced sale. In the case of "latent" revaluation reserves a discount of 55% will be applied to the difference between historic cost book value and market value to reflect the potential volatility of this form of unrealised capital and the notional tax charge on it.

(c) General provisions/general loan-loss reserves: provisions or loan-loss reserves held against presently unidentified losses are freely available to meet losses which subsequently materialise and therefore qualify for inclusion within supplementary elements. Provisions ascribed to identified deterioration of particular assets or known liabilities, whether individual or grouped, should be excluded. Furthermore, general provisions/general loan-loss reserves eligible for inclusion in tier 2 will be limited to a maximum of 1.25 percentage points of weighted risk assets.

(d) Hybrid (debt/equity) capital instruments. This heading includes a range of instruments which combine characteristics of equity capital and of debt. Their precise specifications differ from country to country, but they should meet the following requirements:

- they are *unsecured, subordinated and fully paid-up*;
- they are *not redeemable* at the initiative of the holder or without the prior consent of the supervisory authority;
- they are *available to participate in losses* without the bank being obliged to cease trading (unlike conventional subordinated debt);
- although the capital instrument may carry an obligation to pay interest that cannot permanently be reduced or waived (unlike dividends on ordinary shareholders' equity), *it should allow service obligations to be deferred* (as with cumulative preference shares) where the profitability of the bank would not support payment.

Cumulative preference shares, having these characteristics, would be eligible for inclusion in this category. In addition, the following are examples of instruments that may be eligible for inclusion: long-term preferred shares in Canada, titres participatifs and titres subordonnés à durée indéterminée in France, Genussscheine in Germany, perpetual subordinated debt and preference shares in the United Kingdom and mandatory convertible debt instruments in the United States. Debt capital instruments which do not meet these criteria may be eligible for inclusion in item (e).

(e) Subordinated term debt: includes conventional unsecured subordinated debt capital instruments with a minimum original fixed term to maturity of over five years and limited life redeemable preference shares. During the last five years to maturity, a cumulative discount (or amortisation) factor of 20% per year will be applied to reflect the diminishing value of these instruments as a continuing source of strength. Unlike instruments included in item (d), these instruments are not normally available to participate in the losses of a bank which continues trading. For this reason these instruments will be limited to a maximum of 50% of tier 1.

Annex 2

Risk weights by category of on-balance-sheet asset

0%	<ul style="list-style-type: none"> (a) Cash¹ (b) Claims on central governments and central banks denominated in national currency and funded in that currency (c) Other claims on OECD² central governments³ and central banks (d) Claims collateralised by cash of OECD central-government securities³ or guaranteed by OECD central governments⁴
0, 10, 20 or 50% (at national discretion)	<ul style="list-style-type: none"> (a) Claims on domestic public-sector entities, excluding central government, and loans guaranteed by or collateralised by securities issued by such entities⁴
20%	<ul style="list-style-type: none"> (a) Claims on multilateral development banks (IBRD, IADB, AsDB, AfDB, EIB, EBRD)⁵ and claims guaranteed by, or collateralised by securities issued by such banks⁴ (b) Claims on banks incorporated in the OECD and claims guaranteed⁴ by OECD incorporated banks (c) Claims on securities firms incorporated in the OECD subject to comparable supervisory and regulatory arrangements, including in particular risk-based capital requirements,⁶ and claims guaranteed by these securities firms

¹ Includes (at national discretion) gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities.

² For the purpose of this exercise, the OECD group comprises countries which are full members of the OECD (or which have concluded special lending arrangements with the IMF associated with the Fund's General Arrangements to Borrow), but excludes any country within this group which has rescheduled its external sovereign debt in the previous five years.

³ Some member countries intend to apply weights to securities issued by OECD central governments to take account of investment risk. These weights would, for example, be 10% for all securities or 10% for those maturing in up to one year and 20% for those maturing in over one year.

⁴ Commercial claims partially guaranteed by these bodies will attract equivalent low weights on that part of the loan which is fully covered. Similarly, claims partially collateralised by cash, or by securities issued by OECD central governments, OECD non-central government public-sector entities, or multilateral development banks will attract low weights on that part of the loan which is fully covered.

⁵ Claims on other multilateral development banks in which G-10 countries are shareholding members may, at national discretion, also attract a 20% weight.

⁶ i.e. capital requirements that are comparable to those applied to banks in this Accord and its Amendment to incorporate market risks. Implicit in the meaning of the word "comparable" is that the securities firm (but not necessarily its parent) is subject to consolidated regulation and supervision with respect to any downstream affiliates.

- (d) Claims on banks incorporated in countries outside the OECD with a residual maturity of up to one year and claims with a residual maturity of up to one year guaranteed by banks incorporated in countries outside the OECD
 - (e) Claims on non-domestic OECD public-sector entities, excluding central government, and claims guaranteed by or collateralised by securities issued by such entities⁴
 - (f) Cash items in process of collection
- 50%**
- (a) Loans fully secured by mortgage on residential property that is or will be occupied by the borrower or that is rented
- 100%**
- (a) Claims on the private sector
 - (b) Claims on banks incorporated outside the OECD with a residual maturity of over one year
 - (c) Claims on central governments outside the OECD (unless denominated in national currency - and funded in that currency - see above)
 - (d) Claims on commercial companies owned by the public sector
 - (e) Premises, plant and equipment and other fixed assets
 - (f) Real estate and other investments (including non-consolidated investment participations in other companies)
 - (g) Capital instruments issued by other banks (unless deducted from capital)
 - (h) all other assets

Annex 3**Credit conversion factors for off-balance-sheet items**

The framework takes account of the credit risk on off-balance-sheet exposures by applying credit conversion factors to the different types of off-balance-sheet instrument or transaction. With the exception of foreign exchange and interest rate-related contingencies, the credit conversion factors are set out in the table below. They are derived from the estimated size and likely occurrence of the credit exposure, as well as the relative degree of credit risk as identified in the Committee's paper "*The management of banks' off-balance-sheet exposures: a supervisory perspective*" issued in March 1986. The credit conversion factors would be multiplied by the weights applicable to the category of the counterparty for an on-balance-sheet transaction (see Annex 2).

Instruments**Credit conversion factors**

1. Direct credit substitutes, e.g. general guarantees of indebtedness (including standby letters of credit serving as financial guarantees for loans and securities) and acceptances (including endorsements with the character of acceptances)	100%
2. Certain transaction-related contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions)	50%
3. Short-term self-liquidating trade-related contingencies (such as documentary credits collateralised by the underlying shipments)	20%
4. Sale and repurchase agreements and asset sales with recourse, ¹ where the credit risk remains with the bank	100%
5. Forward asset purchases, forward deposits and partly-paid shares and securities, ¹ which represent commitments with certain drawdown	100%

¹ These items are to be weighted according to the type of asset and not according to the type of counterparty with whom the transaction has been entered into. Reverse repos (i.e. purchase and resale agreement - where the bank is the receiver of the asset) are to be treated as collateralised loans, reflecting the economic reality of the transaction. The risk is therefore to be measured as an exposure on the counterparty. Where the asset temporarily acquired is a security which attracts a preferential risk weighting, this would be recognised as collateral and the risk weighting would be reduced accordingly.

6. Note issuance facilities and revolving underwriting facilities	50%
7. Other commitments (e.g. formal standby facilities and credit lines) with an original maturity of over one year	50%
8. Similar commitments with an original maturity of up to one year, or which can be unconditionally cancelled at any time	0%

(N.B. Member countries will have some limited discretion to allocate particular instruments into items 1 to 8 above according to the characteristics of the instrument in the national market.)

Forwards, swaps, purchased options and similar derivative contracts

The treatment of forwards, swaps, purchased options and similar derivative contracts needs special attention because banks are not exposed to credit risk for the full face value of their contracts, but only to the potential cost of replacing the cash flow (on contracts showing positive value) if the counterparty defaults. The credit equivalent amounts will depend inter alia on the maturity of the contract and on the volatility of the rates and prices underlying that type of instrument. Instruments traded on exchanges may be excluded where they are subject to daily receipt and payment of cash variation margin. Options purchased over the counter are included with the same conversion factors as other instruments.

Despite the wide range of different instruments in the market, the theoretical basis for assessing the credit risk on all of them has been the same. It has consisted of an analysis of the behaviour of matched pairs of swaps under different volatility assumptions. Interest rate contracts are defined to include single-currency interest rate swaps, basis swaps, forward rate agreements, interest rate futures, interest rate options purchased and similar instruments. Exchange rate contracts include cross-currency interest rate swaps, forward foreign exchange contracts, currency futures, currency options purchased and similar instruments. Exchange rate contracts with an original maturity of 14 calendar days or less may be excluded. Gold contracts are treated the same as exchange rate contracts for the purpose of calculating credit risk except that contracts with original maturity of 14 calendar days or less are included. Precious metals other than gold receive a separate treatment and include forwards, swaps, purchased options and similar derivative contracts that are based on precious metals (e.g. silver, platinum, and palladium). Other commodities are also treated separately and include forwards, swaps, purchased options and similar derivative contracts based on energy contracts, agricultural contracts, base metals (e.g. aluminium, copper, and zinc), and any other non-precious metal commodity contracts. Equity contracts include forwards, swaps, purchased options and similar derivative contracts based on individual equities or on equity indices.

The current exposure method

The G-10 supervisory authorities are of the view that the best way to assess the credit risk on these items is to ask banks to calculate the current replacement cost by marking contracts to market, thus capturing the current exposure without any need for estimation, and then adding a factor (the "add-on") to reflect the potential future exposure over the remaining life of the contract. It has been agreed that, in order to calculate the credit equivalent amount of these instruments under this current exposure method, a bank would sum:

- the total replacement cost (obtained by "marking to market") of all its contracts with positive value; and
- an amount for potential future credit exposure calculated on the basis of the total notional principal amount of its book, split by residual maturity as follows:

Residual Maturity	Interest rate	Exchange rate and gold	Equity	Precious metals except gold	Other commodities
One year or less	0.0%	1.0%	6.0%	7.0%	10.0%
Over one year to five years	0.5%	5.0%	8.0%	7.0%	12.0%
Over five years	1.5%	7.5%	10.0%	8.0%	15.0%

Notes:

1. For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract.
2. For contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity would be set equal to the time until the next reset date. In the case of interest rate contracts with remaining maturities of more than one year that meet the above criteria, the add-on factor is subject to a floor of 0.5%.
3. Forwards, swaps, purchased options and similar derivative contracts not covered by any of the columns of this matrix are to be treated as "other commodities".
4. No potential future credit exposure would be calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value.

Supervisors will take care to ensure that the add-ons are based on effective rather than apparent notional amounts. In the event that the stated notional amount is leveraged or enhanced by the structure of the transaction, banks must use the effective notional amount when determining potential future exposure.

The original exposure method

At national supervisory discretion,² banks may also use a simpler alternative method for interest rate and foreign exchange-related contracts, whereby the potential credit exposure is estimated against each type of contract and a notional capital weight allotted, no matter what the market value of the contract might be at a particular reporting date. The original exposure method may be used until market risk-related capital requirements are implemented, at which time the original exposure method will cease to be available for banks supervised according to this Accord.³ Banks that engage in forwards, swaps, purchased options or similar derivative contracts based on equities, precious metals except gold, or other commodities are required to apply the current exposure method.

In order to arrive at the credit equivalent amount using this **original exposure method**, a bank would simply apply one of the following two sets of conversion factors to the notional principal amounts of each instrument according to the nature of the instrument and its maturity:

Maturity⁴	Interest rate contracts	Exchange rate contracts and gold
One year or less	0.5%	2.0%
Over one year to two years	1.0%	5.0% (i.e. 2% + 3%)
For each additional year	1.0%	3.0%

Bilateral netting

Careful consideration has been given to the issue of **bilateral netting**, i.e., weighting the net rather than the gross claims with the same counterparties arising out of the full range of forwards, swaps, options and similar derivative contracts.⁵ The Committee is concerned that if a liquidator of a failed counterparty has (or may have) the right to unbundle netted contracts, demanding performance on those contracts favourable to the failed

² Some national authorities may permit individual banks to choose which method to adopt, it being understood that once a bank has chosen to apply the current exposure method, it would not be allowed to switch back to the original exposure method.

³ Where appropriate, national supervisors may allow an additional transition period, but in no case longer than 12 months.

⁴ For interest rate contracts, there is national discretion as to whether the conversion factors are to be based on original or residual maturity. For exchange rate contracts and gold, the conversion factors are to be calculated according to the original maturity of the instrument.

⁵ Payments netting, which is designed to reduce the operational costs of daily settlements, will not be recognised in the capital framework since the counterparty's gross obligations are not in any way affected.

counterparty and defaulting on unfavourable contracts, there is no reduction in counterparty risk.

Accordingly, it has been agreed for capital adequacy purposes that:

- (a) Banks may net transactions subject to novation under which any obligation between a bank and its counterparty to deliver a given currency on a given value date is automatically amalgamated with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations.
- (b) Banks may also net transactions subject to any legally valid form of bilateral netting not covered in (a), including other forms of novation.
- (c) In both cases (a) and (b), a bank will need to satisfy its national supervisor that it has:⁶
 - (1) a netting contract or agreement with the counterparty which creates a single legal obligation, covering all included transactions, such that the bank would have either a claim to receive or obligation to pay only the net sum of the positive and negative mark-to-market values of included individual transactions in the event a counterparty fails to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances;
 - (2) written and reasoned legal opinions that, in the event of a legal challenge, the relevant courts and administrative authorities would find the bank's exposure to be such a net amount under:
 - the law of the jurisdiction in which the counterparty is chartered and, if the foreign branch of a counterparty is involved, then also under the law of the jurisdiction in which the branch is located;
 - the law that governs the individual transactions; and
 - the law that governs any contract or agreement necessary to effect the netting.

The national supervisor, after consultation when necessary with other relevant supervisors, must be satisfied that the netting is enforceable under the laws of each of the relevant jurisdictions;⁷

- (3) procedures in place to ensure that the legal characteristics of netting arrangements are kept under review in the light of possible changes in relevant law.

⁶ In cases where an agreement as described in (a) has been recognised prior to July 1994, the supervisor will determine whether any additional steps are necessary to satisfy itself that the agreement meets the requirements set out below.

⁷ Thus, if any of these supervisors is dissatisfied about enforceability under its laws, the netting contract or agreement will not meet this condition and neither counterparty could obtain supervisory benefit.

Contracts containing walkaway clauses will not be eligible for netting for the purpose of calculating capital requirements pursuant to this Accord. A walkaway clause is a provision which permits a non-defaulting counterparty to make only limited payments, or no payment at all, to the estate of a defaulter, even if the defaulter is a net creditor.

For banks using the **current exposure** method, credit exposure on bilaterally netted forward transactions will be calculated as the sum of the net mark-to-market replacement cost, if positive, plus an add-on based on the notional underlying principal. The add-on for netted transactions (A_{Net}) will equal the weighted average of the gross add-on (A_{Gross})⁸ and the gross add-on adjusted by the ratio of net current replacement cost to gross current replacement cost (NGR). This is expressed through the following formula:

$$A_{Net}=0.4*A_{Gross}+0.6*NGR*A_{Gross}$$

where

NGR=level of net replacement cost/level of gross replacement cost for transactions subject to legally enforceable netting agreements⁹

The scale of the gross add-ons to apply in this formula will be the same as those for non-netted transactions as set out in this Annex. The Committee will continue to review the scale of add-ons to make sure they are appropriate. For purposes of calculating potential future credit exposure to a netting counterparty for forward foreign exchange contracts and other similar contracts in which notional principal is equivalent to cash flows, notional principal is defined as the net receipts falling due on each value date in each currency. The reason for this is that offsetting contracts in the same currency maturing on the same date will have lower potential future exposure as well as lower current exposure.

The **original exposure** method may also be used for transactions subject to netting agreements which meet the above legal requirements until market risk-related capital requirements are implemented. The conversion factors to be used during the transitional period when calculating the credit exposure of bilaterally netted transactions will be as follows:

⁸ A_{Gross} equals the sum of individual add-on amounts (calculated by multiplying the notional principal amount by the appropriate add-on factors set out in this Annex) of all transactions subject to legally enforceable netting agreements with one counterparty.

⁹ National authorities may permit a choice of calculating the NGR on a counterparty by counterparty or on an aggregate basis for all transactions subject to legally enforceable netting agreements. If supervisors permit a choice of methods, the method chosen by an institution is to be used consistently. Under the aggregate approach, net negative current exposures to individual counterparties cannot be used to offset net positive current exposures to others, i.e., for each counterparty the net current exposure used in calculating the NGR is the maximum of the net replacement cost or zero. Note that under the aggregate approach, the NGR is to be applied individually to each legally enforceable netting agreement so that the credit equivalent amount will be assigned to the appropriate counterparty risk weight category.

Maturity	Interest rate contracts	Exchange rate contracts
One year or less	0.35%	1.5%
Over one year to two years	0.75%	3.75% (i.e. 1.5% + 2.25%)
For each additional year	0.75%	2.25%

These factors represent a reduction of approximately 25% from those originally set out in the Accord when it was issued in 1988. For purposes of calculating the credit exposure to a netting counterparty during the transitional period for forward foreign exchange contracts and other similar contracts in which notional principal is equivalent to cash flows, the original credit conversion factors¹⁰ could be applied to the notional principal, which would be defined as the net receipts falling due on each value date in each currency. In no case could the reduced factors above be applied to net notional amounts.

Risk weighting

Once the bank has calculated the credit equivalent amounts, whether according to the current or the original exposure method, they are to be **weighted** according to the category of counterparty in the same way as in the main framework, including concessionary weighting in respect of exposures backed by eligible guarantees and collateral. In addition, since most counterparties in these markets, particularly for long-term contracts, tend to be first-class names, it has been agreed that a 50% weight will be applied in respect of counterparties which would otherwise attract a 100% weight.¹¹ However, the Committee will keep a close eye on the credit quality of participants in these markets and reserves the right to raise the weights if average credit quality deteriorates or if loss experience increases.

¹⁰ Which were: for a maturity of one year or less 0.5% for interest rate contracts and 2.0% for exchange rate contracts; for a maturity of over one year to two years 1.0% for interest rate contracts and 5.0% for exchange rate contracts; and for each additional year 1.0% for interest rate contracts and 3.0% for exchange rate contracts.

¹¹ Some member countries reserve the right to apply the full 100% weight.

