

**BASLE COMMITTEE
ON
BANKING SUPERVISION**

**INTERNATIONAL CONVERGENCE OF
CAPITAL MEASUREMENT AND CAPITAL STANDARDS**

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Table of Contents

	Page
Introduction	1
Part I The constituents of capital	3
Part II The risk weights	8
Part III A target standard ratio	14
Part IV Transitional and implementing arrangements	14
Annex 1 Definition of capital included in the capital base	17
Annex 2 Risk weights by category of on-balance-sheet asset	21
Annex 3 Credit conversion factors for off-balance-sheet items	23
Annex 4 Transitional arrangements	28

International Convergence of Capital Measurement and Capital Standards

Introduction

1. This report presents the outcome of the Committee's¹ 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. With a view to implementation as soon as possible, it is intended that national authorities should now prepare papers setting out their views on the timetable and the manner in which this accord will be implemented in their respective countries. This 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 in 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 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.

¹ The Basle Committee on Banking Supervision comprises representatives of the central banks and supervisory authorities of the Group of Ten countries (Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, United Kingdom, United States) and Luxembourg. The Committee meets at the Bank for International Settlements, Basle, Switzerland.

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 with banks undertaking international business in mind.

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. The framework provides for a transitional period so that the existing circumstances in different countries can be reflected in flexible arrangements that allow time for adjustment.

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 four 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; and Section IV with transitional and implementing arrangements.

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

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

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 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

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.

value than historic cost, and the resultant revaluation reserves to be included in the capital base. Such revaluations can arise in two ways:

- (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 future losses. Where they are not ascribed to particular assets and do not reflect a reduction in the valuation of particular assets, these reserves qualify for inclusion in capital and it has been agreed that they should be counted within tier 2. Where, however, provisions have been created against identified losses or in respect of a demonstrable deterioration in the value of particular 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 specific or earmarked provisions should therefore not be included in the capital base.

19. The Committee accepts, however, that, in practice, it is not always possible to distinguish clearly between general provisions (or general loan-loss reserves) which are genuinely freely available and those provisions which in reality are earmarked against assets already identified as impaired. This partly reflects the present diversity of accounting, supervisory, and, importantly, fiscal policies in respect of provisioning and in respect of national definitions of capital. This means, inevitably, that initially there will be a degree of

inconsistency in the characteristics of general provisions or general loan-loss reserves included by different member countries within the framework.

20. In the light of these uncertainties, the Committee intends during the transitional period (see paragraphs 45 to 50 below) to clarify the distinction made in member countries between those elements which should conceptually be regarded as part of capital and those which should not qualify. The Committee will aim to develop before the end of 1990 firm proposals applicable to all member countries, so as to ensure consistency in the definition of general provisions and general loan-loss reserves eligible for inclusion in the capital base by the time the interim and final minimum target standards fall to be observed.

21. As a further safeguard, in the event that agreement is not reached on the refined definition of unencumbered resources eligible for inclusion in supplementary capital, where general provisions and general loan-loss reserves may include amounts reflecting lower valuations for assets or latent but unidentified losses present in the balance sheet, the amount of such reserves or provisions that qualify as capital would be phased down so that, at the end of the transitional period, such items would constitute no more than 1.25 percentage points, or exceptionally and temporarily up to 2.0 percentage points, of risk assets within the secondary elements.

(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.

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 and in the light of decisions to be taken within the European Community on the specification of a common solvency ratio for credit institutions.

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 or against securities issued by OECD central governments and specified multilateral development banks. These will attract the weight given to the collateral (i.e. a zero or low weight). Loans partially collateralised by these assets will also attract the equivalent low 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

(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):

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.

- (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 maturity⁵ 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.

⁵ In order to facilitate data collection, during the transitional period up to end-1992, but not beyond, national supervisory authorities will have discretion to apply residual maturity as a basis for measuring commitments.

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 by the end of the transitional period. 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%). This is expressed as a common minimum standard which international banks in member countries will be expected to observe by the end of 1992, thus allowing a transitional period of some four-and-a-half years for any necessary adjustment by banks who need time to build up to those levels. The Committee fully recognises that the transition from existing, sometimes long-established, definitions of capital and methods of measurement towards a new internationally agreed standard will not necessarily be achieved easily or quickly. The full period to end-1992 is available to ensure progressive steps towards adjustment and banks whose ratios are presently below the 8% standard will not be required to take immediate or precipitate action.

IV. Transitional and implementing arrangements

(i) Transition

45. Certain transitional arrangements have been agreed upon to ensure that there are sustained efforts during the transitional period to build up individual banks' ratios towards the ultimate target standard; and to facilitate smooth adjustment and phasing in of the new arrangements within a wide variety of existing supervisory systems.

46. The transitional period will be from the date of this paper to the end of 1992, by which latter date all banks undertaking significant cross-border business will be expected to meet the standard in full (see paragraph 50 below). In addition, there will be an interim standard to be met by the end of 1990 (see paragraph 49 below).

47. Initially no formal standard or minimum level will be set. It is the general view of the Committee, however, that every encouragement should be given to those banks whose capital levels are at the low end of the range to build up their capital as quickly as possible and the Committee expects there to be no erosion of existing capital standards in individual member countries' banks. Thus, during the transitional period, all banks which need to improve capital levels up to the interim and final standards should not diminish even temporarily their current capital levels (subject to the fluctuations which can occur around the time new capital is raised). A level of 5% attained by application of the framework and transitional arrangements is considered by some countries to be a reasonable yardstick for the lower capitalised banks to seek to attain in the short term. Individual member countries will,

of course, be free to set, and announce, at the outset of the transitional period the level from which they would expect all their banks to move towards the interim and final target standard. In order to assess and compare progress during the initial period of adjustment to end-1990 in a manner which takes account both of existing supervisory systems and the new arrangements, the Committee and individual supervisory authorities will initially apply the basis of measurement set out in paragraph 48 below.

48. In measuring the capital position of banks at the start of the transitional period, a proportion of the core capital may be made up of supplementary elements up to a maximum of 25% of core capital elements, reducing to 10% by end-1990. In addition, throughout the transitional period up to end-1992, subject to more restrictive policies which individual authorities may wish to apply, term subordinated debt may be included without limit as a constituent of supplementary elements and the deduction from tier 1 capital elements in respect of goodwill may be waived.

49. At end-1990 there will be an interim minimum standard of 7.25% of which at least half should be core capital. However, between end-1990 and end-1992 up to 10% of the required core elements may be made up of supplementary elements. This means, in round figures, a minimum core capital element of 3.6%, of which tier 1 elements should total at least 3.25%, is to be achieved by the end of 1990. In addition, from end-1990, general loan-loss reserves or general provisions which include amounts reflecting lower valuations of assets or latent but unidentified losses present in the balance sheet will be limited to 1.5 percentage points, or exceptionally up to 2.0⁶ percentage points, of risk assets within supplementary elements.

50. At end-1992 the transitional period ends. The minimum standard will then be 8%, of which core capital (tier 1, equity and reserves) will be at least 4%, supplementary elements no more than core capital and term subordinated debt within supplementary elements no more than 50% of tier 1. In addition, general loan-loss reserves or general provisions (having the characteristics described in paragraph 49) will be limited at end-1992 to 1.25 percentage points, or exceptionally and temporarily up to 2.0⁶ percentage points, within supplementary elements.

For ease of reference, the arrangements described in paragraphs 45 to 50 are summarised in a table at Annex 4.

⁶ These limits would only apply in the event that no agreement is reached on a consistent basis for including unencumbered provisions or reserves in capital (see paragraphs 20 and 21).

(ii) Implementation

51. The arrangements described in this document will be implemented at national level at the earliest possible opportunity. Each country will decide the way in which the supervisory authorities will introduce and apply these recommendations in the light of their different legal structures and existing supervisory arrangements. In some countries, changes in the capital regime may be introduced, after consultation, relatively speedily without the need for legislation. Other countries may employ more lengthy procedures, and in some cases these may require legislation. In due course the member states of the European Community will also need to ensure that their own domestic regulations are compatible with the Community's own legislative proposals in this field. None of these factors needs result in any inconsistency in the timing of implementation among member countries. For example, some countries may apply the framework in this report, formally or informally, in parallel with their existing system, certainly during the initial period of transition. In this way banks can be assisted to start the necessary process of adjustment in good time before substantive changes in national systems are formally introduced.

July 1988

**Definition of capital included in the capital base
(To apply at end-1992 - see Annex 4
for transitional arrangements)**

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, or exceptionally and temporarily up to 2.0 percentage points, of risk assets;¹

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

¹ This limit would only apply in the event that no agreement is reached on a consistent basis for including unencumbered provisions or reserves in capital (see paragraphs 20 and 21).

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,² general reserves and legal reserves). 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.

² Including, at national discretion, allocations to or from reserve during the course of the year from current year's retained profit.

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 future, presently unidentified losses are freely available to meet losses which subsequently materialise and therefore qualify for inclusion within supplementary elements. Provisions ascribed to impairment of particular assets or known liabilities should be excluded. Furthermore, where general provisions/general loan-loss reserves include amounts reflecting lower valuations of assets or latent but unidentified losses already present in the balance sheet, the amount of such provisions or reserves eligible for inclusion will be limited to a maximum of 1.25 percentage points, or exceptionally and temporarily up to 2.0 percentage points.³

(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.

³ This limit would apply in the event that no agreement is reached on a consistent basis for including unencumbered provisions or reserves in capital (see paragraphs 20 and 21).

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.

Risk weights by category of on-balance-sheet asset

0%	(a) Cash ¹
	(b) Claims on central governments and central banks denominated in national currency and funded in that currency
	(c) Other claims on OECD ² central governments ³ and central banks
	(d) Claims collateralised by cash of OECD central-government securities ³ or guaranteed by OECD central governments ⁴
0, 10, 20 or 50% (at national discretion)	(a) Claims on domestic public-sector entities, excluding central government, and loans guaranteed ⁴ by such entities
20%	(a) Claims on multilateral development banks (IBRD, IADB, AsDB, AfDB, EIB) ⁵ and claims guaranteed by, or collateralised by securities issued by such banks ⁴
	(b) Claims on banks incorporated in the OECD and loans guaranteed ⁴ by OECD incorporated banks

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.

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 loans partially guaranteed by these bodies will attract equivalent low weights on that part of the loan which is fully covered. Similarly, loans partially collateralised by cash or securities issued by OECD central governments and 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.

- (c) Claims on banks incorporated in countries outside the OECD with a residual maturity of up to one year and loans with a residual maturity of up to one year guaranteed by banks incorporated in countries outside the OECD
 - (d) Claims on non-domestic OECD public-sector entities, excluding central government, and loans guaranteed⁴ by such entities
 - (e) 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

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 forward deposits and partly-paid shares and securities, ¹ which represent commitments with certain drawdown	100%
6. Note issuance facilities and revolving underwriting facilities	50%
7. Other commitments (e.g. formal standby facilities and credit lines) with an original ² maturity of over one year	50%
8. Similar commitments with an original ² 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.)

Foreign exchange and interest rate related contingencies

The treatment of foreign exchange and interest rate related items 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 underlying that type of instrument.

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. Since exchange rate contracts involve an exchange of principal on maturity, as well as being generally more volatile, higher conversion factors are proposed for those instruments which

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.

² But see footnote 5 in the main text.

feature exchange rate risk. Interest rate contracts³ 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 contracts³ 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 fourteen calendar days or less are excluded.

A majority of 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 marketing 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 its off-balance-sheet interest rate and foreign exchange rate 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 contracts	Exchange rate contracts
Less than one year	nil	1.0%
One year and over	0.5%	5.0%

No potential 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.

A few G-10 supervisors believe that this two-step approach, incorporating a "mark-to-market" element, is not consistent with the remainder of the capital framework. They favour a simpler method 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. It has therefore been agreed supervisory

³ Instruments traded on exchanges may be excluded where they are subject to daily margining requirements. Options purchased over the counter are included with the same conversion factors as other instruments, but this decision might be reviewed in the light of future experience.

authorities should have discretion⁴ to apply the alternative method of calculation described below, in which credit conversion factors are derived without reference to the current market price of the instruments. In deciding on what those notional credit conversion factors should be, it has been agreed that a slightly more cautious bias is justified since the current exposure is not being calculated on a regular basis.

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:

Maturity⁵	Interest rate contracts	Exchange rate contracts
Less than one year	0.5%	2.0%
One year and less than two years	1.0%	5.0% (i.e. 2% + 3%)
For each additional year	1.0%	3.0%

It is emphasised that the above conversion factors, as well as the "add-ons" for the current exposure method, should be regarded as provisional and may be subject to amendment as a result of changes in the volatility of exchange rates and interest rates.

Careful consideration has been given to the arguments put forward for recognising **netting**, i.e. for weighting the net rather than the gross claims arising out of swaps and similar contracts with the same counterparties. The criterion on which a decision has been based is the status of a netting contract under national bankruptcy regulations. If a liquidator of a failed counterparty has (or may have) the right to unbundle the netting contracts, demanding performance on those contracts favourable to his client and defaulting on unfavourable contracts, there is no reduction in counterparty risk. Accordingly, it has been agreed that:

- banks may net contracts subject to novation,⁶ since it appears that counterparty risk is genuinely reduced by the substitution of a novated contract which legally

⁴ Some national authorities may permit individual banks to choose which method to adopt, it being understood that once a bank had chosen to apply the current exposure method, it would not be allowed to switch back to the original exposure method.

⁵ 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, the conversion factors are to be calculated according to the original maturity of the instrument.

⁶ Netting by novation as defined in this context is a bilateral contract between two counterparties under which any obligation to each other to deliver a given currency on a given date is automatically

extinguishes the previous obligation. However, since under some national bankruptcy laws liquidators may have the right to unbundle transactions undertaken within a given period under a charge of fraudulent preference, supervisory authorities will have national discretion to require a phase-in period before a novation agreement can be recognised in the weighting framework;

- banks may not for the time being net contracts subject to close-out clauses.⁷ The effectiveness of such agreements in an insolvency has not yet been tested in the courts, nor has it been possible to obtain satisfactory legal opinion that liquidators would not be able to overturn them. However, the Committee does not wish to discourage market participants from employing clauses which might well afford protection in certain circumstances in some national jurisdictions and would be prepared to reverse its conclusion if subsequent decisions in the courts support the integrity of close-out netting agreements.⁸ In any event, the Committee will continue its work to assess the acceptability of various forms of netting.

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.⁹ 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.

amalgamated with all other obligations for the same currency and value date, legally substituting one single net amount for the previous gross obligations.

⁷ Close-out as defined in this context refers to a bilateral contract which provides that, if one of the counterparties is wound up, the outstanding obligations between the two are accelerated and netted to determine the counterparty's net exposure.

⁸ The other principal form of netting, payments netting, which is designed to reduce the counterparty risk arising out of daily settlements, will not be recognised in the capital framework since the counterparty's gross obligations are not in any way affected.

⁹ Some member countries reserve the right to apply the full 100% weight.

Transitional arrangements

	Initial	End-1990	End-1992
1. Minimum standard	The level prevailing at end-1987	7.25%	8.0%
2. Measurement formula	Core elements plus 100%	Core elements plus 100% (3.625% plus 3.625%)	Core elements plus 100% (4% plus 4%)
3. Supplementary elements included in core	Maximum of 25% of total core	Maximum 10% of total core (i.e. 0.36%)	None
4. Limit on general loan-loss reserves in supplementary elements*	No limit	1.5 percentage points or, exceptionally up to 2.0 percentage points	1.25 percentage points or, exceptionally and temporarily up to 2.0 percentage points
5. Limit on term subordinated debt in supplementary elements	No limit (at discretion)	No limit (at discretion)	Maximum of 50% of tier 1
6. Deduction for goodwill	Deducted from tier 1 (at discretion)	Deducted from tier 1 (at discretion)	Deducted from tier 1

* This limit would only apply in the event that no agreement is reached on a consistent basis for including unencumbered provisions or reserves in capital (see paragraphs 20 and 21).