Basel Committee
on Banking Supervision

International Convergence of Capital Measurement and Capital Standards

A Revised Framework

Updated November 2005

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Table of Contents

Abbreviations

ABCP	Asset-backed commercial paper
ADC	Acquisition, development and construction
AMA	Advanced measurement approaches
ASA	Alternative standardised approach
CCF	Credit conversion factor
CCR	Counterparty credit risk
CDR	Cumulative default rate
CEM	Current exposure method
CF	Commodities finance
CMV	Current market value
CRM	Credit risk mitigation
DvP	Delivery-versus-payment
EAD	Exposure at default
ECA	Export credit agency
ECAI	External credit assessment institution
EL	Expected loss
EPE	Expected positive exposure
FMI	Future margin income
HVCRE	High-volatility commercial real estate
IAA	Internal assessment approach
IMM	Internal model method
IPRE	Income-producing real estate
I/O	Interest-only strips
IRB	Internal ratings-based
LGD	Loss given default
M	Effective maturity
MDB	Multilateral development bank
NIF	Note issuance facility
OF	Object finance
PD	Probability of default
PF	Project finance
PSE	Public sector entity
PvP	Payment-versus-payment
QRRE	Qualifying revolving retail exposures
RBA	Ratings-based approach

RUF	Revolving underwriting facility
SF	Supervisory formula
SFT	Securities financing transaction
SL	Specialised lending
SM	Standard method
SME	Small- and medium-sized entity
SPE	Special purpose entity
UCITS	Undertakings for collective investments in transferable securities
UL	Unexpected loss

International Convergence of Capital Measurement and Capital Standards: A Revised Framework

(updated November 2005)

Introduction

1. This report presents the outcome of the Basel Committee on Banking Supervision's ("the Committee")[1] work over recent years to secure international convergence on revisions to supervisory regulations governing the capital adequacy of internationally active banks. Following the publication of the Committee's first round of proposals for revising the capital adequacy framework in June 1999, an extensive consultative process was set in train in all member countries and the proposals were also circulated to supervisory authorities worldwide. The Committee subsequently released additional proposals for consultation in January 2001 and April 2003 and furthermore conducted three quantitative impact studies related to its proposals. As a result of these efforts, many valuable improvements have been 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 will propose for adoption in their respective countries. This Framework and the standard it contains have been endorsed by the Central Bank Governors and Heads of Banking Supervision of the Group of Ten countries.

2. The Committee expects its members to move forward with the appropriate adoption procedures in their respective countries. In a number of instances, these procedures will include additional impact assessments of the Committee's Framework as well as further opportunities for comments by interested parties to be provided to national authorities. The Committee intends the Framework set out here to be available for implementation as of year-end 2006. However, the Committee feels that one further year of impact studies or parallel calculations will be needed for the most advanced approaches, and these therefore will be available for implementation as of year-end 2007. More details on the transition to the revised Framework and its relevance to particular approaches are set out in paragraphs 45 to 49.

3. This document is being circulated to supervisory authorities worldwide with a view to encouraging them to consider adopting this revised Framework at such time as they believe is consistent with their broader supervisory priorities. While the revised Framework has been designed to provide options for banks and banking systems worldwide, the Committee acknowledges that moving toward its adoption in the near future may not be a first priority for all non-G10 supervisory authorities in terms of what is needed to strengthen their supervision. Where this is the case, each national supervisor should consider carefully the benefits of the revised Framework in the context of its domestic banking system when developing a timetable and approach to implementation.

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

4. The fundamental objective of the Committee's work to revise the 1988 Accord[2] has been to develop a framework that would further strengthen the soundness and stability of the international banking system while maintaining sufficient consistency that capital adequacy regulation will not be a significant source of competitive inequality among internationally active banks. The Committee believes that the revised Framework will promote the adoption of stronger risk management practices by the banking industry, and views this as one of its major benefits. The Committee notes that, in their comments on the proposals, banks and other interested parties have welcomed the concept and rationale of the three pillars (minimum capital requirements, supervisory review, and market discipline) approach on which the revised Framework is based. More generally, they have expressed support for improving capital regulation to take into account changes in banking and risk management practices while at the same time preserving the benefits of a framework that can be applied as uniformly as possible at the national level.

5. In developing the revised Framework, the Committee has sought to arrive at significantly more risk-sensitive capital requirements that 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 Committee is also retaining key elements of the 1988 capital adequacy framework, including the general requirement for banks to hold total capital equivalent to at least 8% of their risk-weighted assets; the basic structure of the 1996 Market Risk Amendment regarding the treatment of market risk; and the definition of eligible capital.

6. A significant innovation of the revised Framework is the greater use of assessments of risk provided by banks' internal systems as inputs to capital calculations. In taking this step, the Committee is also putting forward a detailed set of minimum requirements designed to ensure the integrity of these internal risk assessments. It is not the Committee's intention to dictate the form or operational detail of banks' risk management policies and practices. Each supervisor will develop a set of review procedures for ensuring that banks' systems and controls are adequate to serve as the basis for the capital calculations. Supervisors will need to exercise sound judgements when determining a bank's state of readiness, particularly during the implementation process. The Committee expects national supervisors will focus on compliance with the minimum requirements as a means of ensuring the overall integrity of a bank's ability to provide prudential inputs to the capital calculations and not as an end in itself.

7. The revised Framework provides a range of options for determining the capital requirements for credit risk and operational risk to allow banks and supervisors to select approaches that are most appropriate for their operations and their financial market infrastructure. In addition, the Framework also allows for a limited degree of national discretion in the way in which each of these options may be applied, to adapt the standards to different conditions of national markets. These features, however, will necessitate substantial efforts by national authorities to ensure sufficient consistency in application. The Committee intends to monitor and review the application of the Framework in the period ahead with a view to achieving even greater consistency. In particular, its Accord Implementation Group (AIG) was established to promote consistency in the Framework's application by encouraging supervisors to exchange information on implementation approaches.

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2 *International Convergence of Capital Measurement and Capital Standards*, Basel Committee on Banking Supervision (July 1988), as amended.

8. The Committee has also recognised that home country supervisors have an important role in leading the enhanced cooperation between home and host country supervisors that will be required for effective implementation. The AIG is developing practical arrangements for cooperation and coordination that reduce implementation burden on banks and conserve supervisory resources. Based on the work of the AIG, and based on its interactions with supervisors and the industry, the Committee has issued general principles for the cross-border implementation of the revised Framework and more focused principles for the recognition of operational risk capital charges under advanced measurement approaches for home and host supervisors.

9. It should be stressed that the revised Framework is designed to establish *minimum* levels of capital for internationally active banks. As under the 1988 Accord, national authorities will be free to adopt arrangements that set higher levels of minimum capital. Moreover, they are free to put in place supplementary measures of capital adequacy for the banking organisations they charter. National authorities may use a supplementary capital measure as a way to address, for example, the potential uncertainties in the accuracy of the measure of risk exposures inherent in any capital rule or to constrain the extent to which an organisation may fund itself with debt. Where a jurisdiction employs a supplementary capital measure (such as a leverage ratio or a large exposure limit) in conjunction with the measure set forth in this Framework, in some instances the capital required under the supplementary measure may be more binding. More generally, under the second pillar, supervisors should expect banks to operate above minimum regulatory capital levels.

10. The revised Framework is more risk sensitive than the 1988 Accord, but countries where risks in the local banking market are relatively high nonetheless need to consider if banks should be required to hold additional capital over and above the Basel minimum. This is particularly the case with the more broad brush standardised approach, but, even in the case of the internal ratings-based (IRB) approach, the risk of major loss events may be higher than allowed for in this Framework.

11. The Committee also wishes to highlight the need for banks and supervisors to give appropriate attention to the second (supervisory review) and third (market discipline) pillars of the revised Framework. It is critical that the minimum capital requirements of the first pillar be accompanied by a robust implementation of the second, including efforts by banks to assess their capital adequacy and by supervisors to review such assessments. In addition, the disclosures provided under the third pillar of this Framework will be essential in ensuring that market discipline is an effective complement to the other two pillars.

12. The Committee is aware that interactions between regulatory and accounting approaches at both the national and international level can have significant consequences for the comparability of the resulting measures of capital adequacy and for the costs associated with the implementation of these approaches. The Committee believes that its decisions with respect to unexpected and expected losses represent a major step forward in this regard. The Committee and its members intend to continue playing a pro-active role in the dialogue with accounting authorities in an effort to reduce, wherever possible, inappropriate disparities between regulatory and accounting standards.

13. The revised Framework presented here reflects several significant changes relative to the Committee's most recent consultative proposal in April 2003. A number of these changes have already been described in the Committee's press statements of October 2003, January 2004 and May 2004. These include the changes in the approach to the treatment of expected losses (EL) and unexpected losses (UL) and to the treatment of securitisation exposures. In addition to these, changes in the treatments of credit risk mitigation and qualifying revolving retail exposures, among others, are also being incorporated. The Committee also has sought to clarify its expectations regarding the need for banks using the

advanced IRB approach to incorporate the effects arising from economic downturns into their loss-given-default (LGD) parameters.

14. The Committee believes it is important to reiterate its objectives regarding the overall level of minimum capital requirements. These are to broadly maintain the aggregate level of such requirements, while also providing incentives to adopt the more advanced risk-sensitive approaches of the revised Framework. The Committee has confirmed the need to further review the calibration of the revised Framework prior to its implementation. Should the information available at the time of such review reveal that the Committee's objectives on overall capital would not be achieved, the Committee is prepared to take actions necessary to address the situation. In particular, and consistent with the principle that such actions should be separated from the design of the Framework itself, this would entail the application of a single scaling factor ─ which could be either greater than or less than one ─ to the IRB capital requirement resulting from the revised Framework. The current best estimate of the scaling factor using Quantitative Impact Study 3 data adjusted for the EL-UL decisions is 1.06. The final determination of any scaling factor will be based on the parallel running results, which will reflect all of the elements of the Framework to be implemented.

15. The Committee has designed the revised Framework to be a more forward-looking approach to capital adequacy supervision, one that has the capacity to evolve with time. This evolution is necessary to ensure that the Framework keeps pace with market developments and advances in risk management practices, and the Committee intends to monitor these developments and to make revisions when necessary. In this regard, the Committee has benefited greatly from its frequent interactions with industry participants and looks forward to enhanced opportunities for dialogue. The Committee also intends to keep the industry apprised of its future work agenda.

16. In July 2005, the Committee published additional guidance in the document *The Application of Basel II to Treading Activities and the Treatment of Double Default Effects*. That guidance was developed jointly with the International Organization of Securities Commissions (IOSCO) and demonstrates the capacity of the revised Framework to evolve with time. It refined the treatments of counterparty credit risk, double default effects, short-term maturity adjustment and failed transactions, and improved the trading book regime.[3]

17. One area where the Committee intends to undertake additional work of a longer-term nature is in relation to the definition of eligible capital. One motivation for this is the fact that the changes in the treatment of expected and unexpected losses and related changes in the treatment of provisions in the Framework set out here generally tend to reduce Tier 1 capital requirements relative to total capital requirements. Moreover, converging on a uniform international capital standard under this Framework will ultimately require the identification of an agreed set of capital instruments that are available to absorb unanticipated losses on a going-concern basis. The Committee announced its intention to review the definition of capital as a follow-up to the revised approach to Tier 1 eligibility as announced in its October 1998 press release, "Instruments eligible for inclusion in Tier 1 capital". It will explore further issues surrounding the definition of regulatory capital, but does not intend to propose changes as a result of this longer-term review prior to the implementation of the revised Framework set out in this document. In the meantime, the Committee will continue its efforts

[3] The additional guidance does not modify the definition of trading book set forth in the revised Framework. Rather, it focuses on policies and procedures that banks must have in place to book exposures in their trading book. However, it is the Committee's view that, at the present time, open equity stakes in hedge funds, private equity investments and real estate holdings do not meet the definition of trading book, owing to significant constraints on the ability of banks to liquidate these positions and value them reliably on a daily basis.

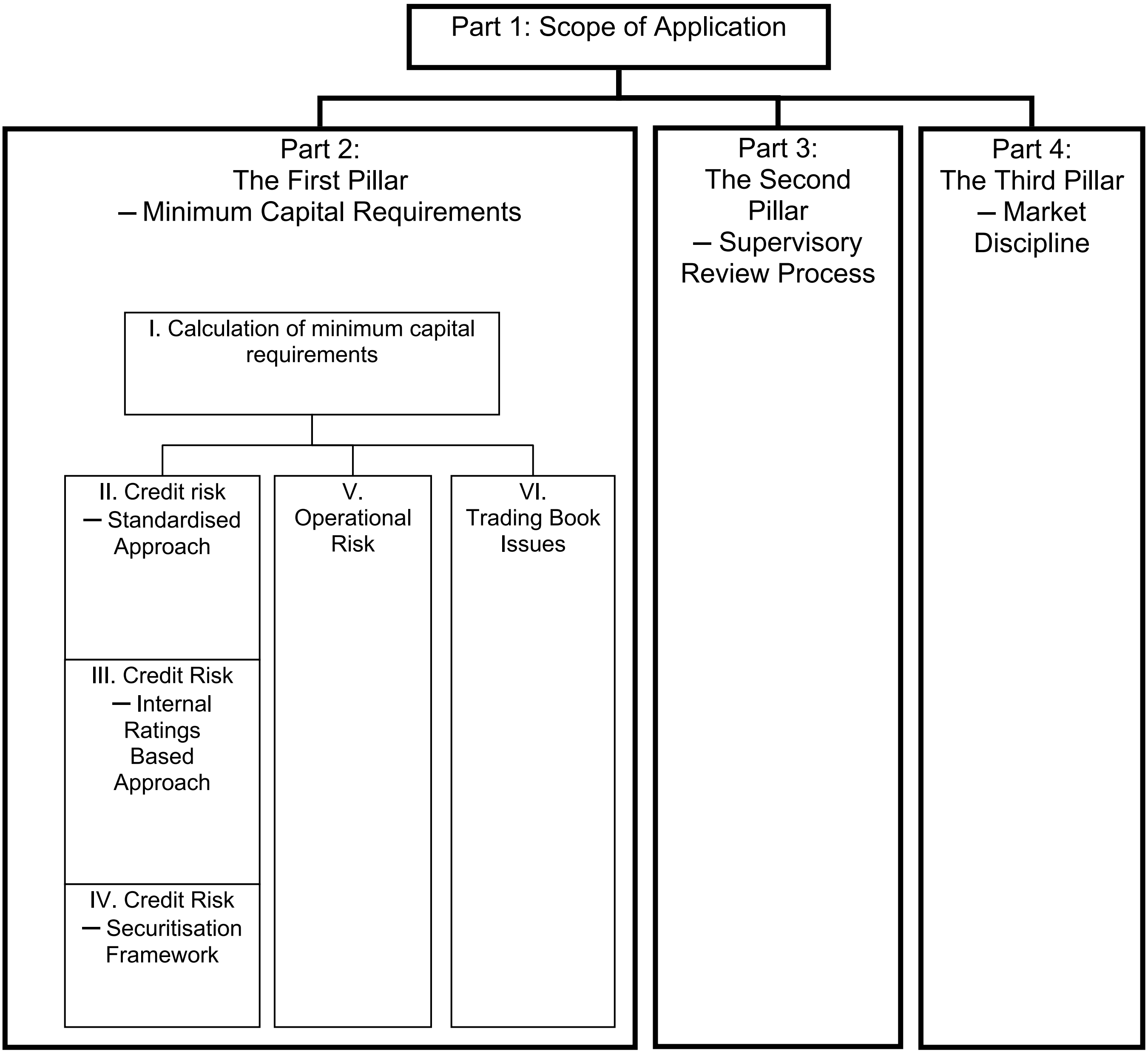
to ensure the consistent application of its 1998 decisions regarding the composition of regulatory capital across jurisdictions.

18. The Committee also seeks to continue to engage the banking industry in a discussion of prevailing risk management practices, including those practices aiming to produce quantified measures of risk and economic capital. Over the last decade, a number of banking organisations have invested resources in modelling the credit risk arising from their significant business operations. Such models are intended to assist banks in quantifying, aggregating and managing credit risk across geographic and product lines. While the Framework presented in this document stops short of allowing the results of such credit risk models to be used for regulatory capital purposes, the Committee recognises the importance of continued active dialogue regarding both the performance of such models and their comparability across banks. Moreover, the Committee believes that a successful implementation of the revised Framework will provide banks and supervisors with critical experience necessary to address such challenges. The Committee understands that the IRB approach represents a point on the continuum between purely regulatory measures of credit risk and an approach that builds more fully on internal credit risk models. In principle, further movements along that continuum are foreseeable, subject to an ability to address adequately concerns about reliability, comparability, validation, and competitive equity. In the meantime, the Committee believes that additional attention to the results of internal credit risk models in the supervisory review process and in banks' disclosures will be highly beneficial for the accumulation of information on the relevant issues.

19. This document is divided into four parts as illustrated in the following chart. The first part, scope of application, details how the capital requirements are to be applied within a banking group. Calculation of the minimum capital requirements for credit risk and operational risk, as well as certain trading book issues are provided in part two. The third and fourth parts outline expectations concerning supervisory review and market discipline, respectively.

19 (i). This updated version of the revised Framework, which was initially released in June 2004, incorporates the additional guidance set forth in the Committee's paper *The Application of Basel II to Trading Activities and the Treatment of Double Default Effects* (July 2005). The Amendment to the Capital Accord to incorporate Market Risks (January 1996) has also been updated to reflect the changes introduced by the revised Framework and the above-mentioned document.

Structure of this document



Part 1: Scope of Application

I. Introduction

20. This Framework will be applied on a consolidated basis to internationally active banks. This is the best means to preserve the integrity of capital in banks with subsidiaries by eliminating double gearing.

21. The scope of application of the Framework will include, on a fully consolidated basis, any holding company that is the parent entity within a banking group to ensure that it captures the risk of the whole banking group.[4] Banking groups are groups that engage predominantly in banking activities and, in some countries, a banking group may be registered as a bank.

22. The Framework will also apply to all internationally active banks at every tier within a banking group, also on a fully consolidated basis (see illustrative chart at the end of this section).[5] A three-year transitional period for applying full sub-consolidation will be provided for those countries where this is not currently a requirement.

23. Further, as one of the principal objectives of supervision is the protection of depositors, it is essential to ensure that capital recognised in capital adequacy measures is readily available for those depositors. Accordingly, supervisors should test that individual banks are adequately capitalised on a stand-alone basis.

II. Banking, securities and other financial subsidiaries

24. To the greatest extent possible, all banking and other relevant financial activities[6] (both regulated and unregulated) conducted within a group containing an internationally active bank will be captured through consolidation. Thus, majority-owned or -controlled banking entities, securities entities (where subject to broadly similar regulation or where securities activities are deemed banking activities) and other financial entities[7] should generally be fully consolidated.

25. Supervisors will assess the appropriateness of recognising in consolidated capital the minority interests that arise from the consolidation of less than wholly owned banking,

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4 A holding company that is a parent of a banking group may itself have a parent holding company. In some structures, this parent holding company may not be subject to this Framework because it is not considered a parent of a banking group.

5 As an alternative to full sub-consolidation, the application of this Framework to the stand-alone bank (i.e. on a basis that does not consolidate assets and liabilities of subsidiaries) would achieve the same objective, providing the full book value of any investments in subsidiaries and significant minority-owned stakes is deducted from the bank's capital.

6 "Financial activities" do not include insurance activities and "financial entities" do not include insurance entities.

7 Examples of the types of activities that financial entities might be involved in include financial leasing, issuing credit cards, portfolio management, investment advisory, custodial and safekeeping services and other similar activities that are ancillary to the business of banking.

securities or other financial entities. Supervisors will adjust the amount of such minority interests that may be included in capital in the event the capital from such minority interests is not readily available to other group entities.

26. There may be instances where it is not feasible or desirable to consolidate certain securities or other regulated financial entities. This would be only in cases where such holdings are acquired through debt previously contracted and held on a temporary basis, are subject to different regulation, or where non-consolidation for regulatory capital purposes is otherwise required by law. In such cases, it is imperative for the bank supervisor to obtain sufficient information from supervisors responsible for such entities.

27. If any majority-owned securities and other financial subsidiaries are not consolidated for capital purposes, all equity and other regulatory capital investments in those entities attributable to the group will be deducted, and the assets and liabilities, as well as third-party capital investments in the subsidiary will be removed from the bank's balance sheet. Supervisors will ensure that the entity that is not consolidated and for which the capital investment is deducted meets regulatory capital requirements. Supervisors will monitor actions taken by the subsidiary to correct any capital shortfall and, if it is not corrected in a timely manner, the shortfall will also be deducted from the parent bank's capital.

III. Significant minority investments in banking, securities and other financial entities

28. Significant minority investments in banking, securities and other financial entities, where control does not exist, will be excluded from the banking group's capital by deduction of the equity and other regulatory investments. Alternatively, such investments might be, under certain conditions, consolidated on a pro rata basis. For example, pro rata consolidation may be appropriate for joint ventures or where the supervisor is satisfied that the parent is legally or de facto expected to support the entity on a proportionate basis only and the other significant shareholders have the means and the willingness to proportionately support it. The threshold above which minority investments will be deemed significant and be thus either deducted or consolidated on a pro-rata basis is to be determined by national accounting and/or regulatory practices. As an example, the threshold for pro-rata inclusion in the European Union is defined as equity interests of between 20% and 50%.

29. The Committee reaffirms the view set out in the 1988 Accord that reciprocal cross-holdings of bank capital artificially designed to inflate the capital position of banks will be deducted for capital adequacy purposes.

IV. Insurance entities

30. A bank that owns an insurance subsidiary bears the full entrepreneurial risks of the subsidiary and should recognise on a group-wide basis the risks included in the whole group. When measuring regulatory capital for banks, the Committee believes that at this stage it is, in principle, appropriate to deduct banks' equity and other regulatory capital investments in insurance subsidiaries and also significant minority investments in insurance entities. Under this approach the bank would remove from its balance sheet assets and liabilities, as well as third party capital investments in an insurance subsidiary. Alternative approaches that can be

applied should, in any case, include a group-wide perspective for determining capital adequacy and avoid double counting of capital.

31. Due to issues of competitive equality, some G10 countries will retain their existing risk weighting treatment[8] as an exception to the approaches described above and introduce risk aggregation only on a consistent basis to that applied domestically by insurance supervisors for insurance firms with banking subsidiaries.[9] The Committee invites insurance supervisors to develop further and adopt approaches that comply with the above standards.

32. Banks should disclose the national regulatory approach used with respect to insurance entities in determining their reported capital positions.

33. The capital invested in a majority-owned or controlled insurance entity may exceed the amount of regulatory capital required for such an entity (surplus capital). Supervisors may permit the recognition of such surplus capital in calculating a bank's capital adequacy, under limited circumstances.[10] National regulatory practices will determine the parameters and criteria, such as legal transferability, for assessing the amount and availability of surplus capital that could be recognised in bank capital. Other examples of availability criteria include: restrictions on transferability due to regulatory constraints, to tax implications and to adverse impacts on external credit assessment institutions' ratings. Banks recognising surplus capital in insurance subsidiaries will publicly disclose the amount of such surplus capital recognised in their capital. Where a bank does not have a full ownership interest in an insurance entity (e.g. 50% or more but less than 100% interest), surplus capital recognised should be proportionate to the percentage interest held. Surplus capital in significant minority-owned insurance entities will not be recognised, as the bank would not be in a position to direct the transfer of the capital in an entity which it does not control.

34. Supervisors will ensure that majority-owned or controlled insurance subsidiaries, which are not consolidated and for which capital investments are deducted or subject to an alternative group-wide approach, are themselves adequately capitalised to reduce the possibility of future potential losses to the bank. Supervisors will monitor actions taken by the subsidiary to correct any capital shortfall and, if it is not corrected in a timely manner, the shortfall will also be deducted from the parent bank's capital.

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8 For banks using the standardised approach this would mean applying no less than a 100% risk weight, while for banks on the IRB approach, the appropriate risk weight based on the IRB rules shall apply to such investments.

9 Where the existing treatment is retained, third party capital invested in the insurance subsidiary (i.e. minority interests) cannot be included in the bank's capital adequacy measurement.

10 In a deduction approach, the amount deducted for all equity and other regulatory capital investments will be adjusted to reflect the amount of capital in those entities that is in surplus to regulatory requirements, i.e. the amount deducted would be the lesser of the investment or the regulatory capital requirement. The amount representing the surplus capital, i.e. the difference between the amount of the investment in those entities and their regulatory capital requirement, would be risk-weighted as an equity investment. If using an alternative group-wide approach, an equivalent treatment of surplus capital will be made.

V. Significant investments in commercial entities

35. Significant minority and majority investments in commercial entities which exceed certain materiality levels will be deducted from banks' capital. Materiality levels will be determined by national accounting and/or regulatory practices. Materiality levels of 15% of the bank's capital for individual significant investments in commercial entities and 60% of the bank's capital for the aggregate of such investments, or stricter levels, will be applied. The amount to be deducted will be that portion of the investment that exceeds the materiality level.

36. Investments in significant minority- and majority-owned and -controlled commercial entities below the materiality levels noted above will be risk-weighted at no lower than 100% for banks using the standardised approach. For banks using the IRB approach, the investment would be risk weighted in accordance with the methodology the Committee is developing for equities and would not be less than 100%.

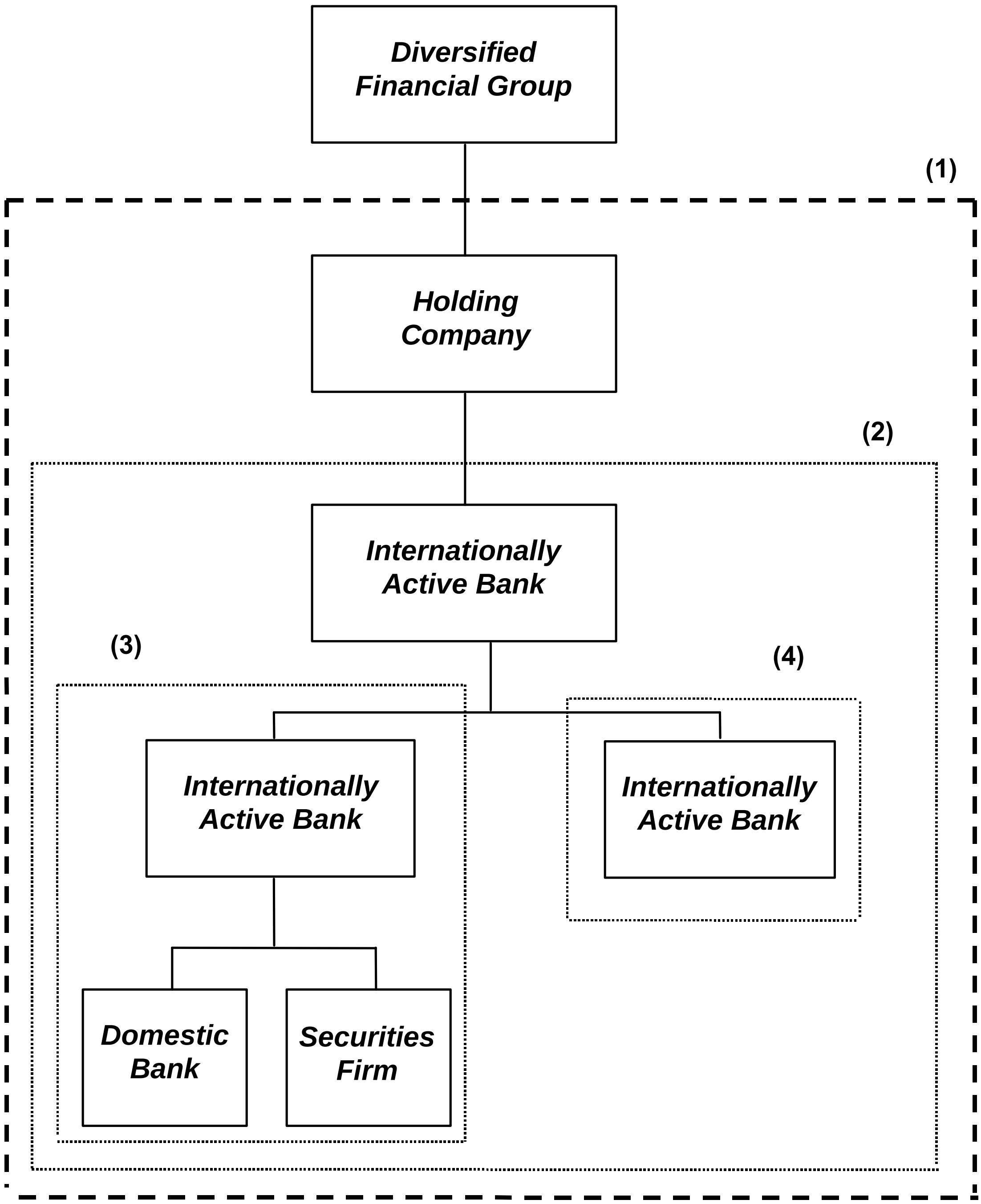
VI. Deduction of investments pursuant to this part

37. Where deductions of investments are made pursuant to this part on scope of application, the deductions will be 50% from Tier 1 and 50% from Tier 2 capital.

38. Goodwill relating to entities subject to a deduction approach pursuant to this part should be deducted from Tier 1 in the same manner as goodwill relating to consolidated subsidiaries, and the remainder of the investments should be deducted as provided for in this part. A similar treatment of goodwill should be applied, if using an alternative group-wide approach pursuant to paragraph 30.

39. The limits on Tier 2 and Tier 3 capital and on innovative Tier 1 instruments will be based on the amount of Tier 1 capital after deduction of goodwill but before the deductions of investments pursuant to this part on scope of application (see Annex 1 for an example how to calculate the 15% limit for innovative Tier 1 instruments).

ILLUSTRATION OF NEW SCOPE OF APPLICATION OF THIS FRAMEWORK



(1): Boundary of predominant banking group. The Framework is to be applied at this level on a consolidated basis, i.e. up to holding company level (paragraph 21).

(2), (3) and **(4)**: The Framework is also to be applied at lower levels to all internationally active banks on a consolidated basis.